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The Educator

A journal of educational matters

The objective of this annual, peer-reviewed journal is to publish research on any aspect of education. It seeks to attract contributions which help to promote debate on educational matters and present new or updated research in the field of education. Such areas of study include human development, learning, formal and informal education, vocational and tertiary education, lifelong learning, the sociology of education, the philosophy of education, the history of education, curriculum studies, the psychology of education, and any other area which is related to the field of education including teacher trade unionism.

This journal accepts articles from teachers, academics, administrators, graduate students, policy-makers, education specialists and any other author or researcher whose work contributes to the different facets of education and related areas.

It is the aim of ***The Educator*** to publish articles which cover particular dimensions such as:

a. The integration of education with other academic disciplines including history, law, linguistics, anthropology, demography, philosophy, economics, psychology, political science, and sociology, among others.
b. The examination of educational issues from a cross-cultural perspective.
c. The inclusion of substantive findings that may be of help to policy-makers and practice.
d. The examination of information technology in the field of education.
e. The implementation of research methods and measurement processes which are clearly presented.
f. The presentation of theories, models or conceptual frameworks in the field of education.
g. The exposition of research findings derived from comparative and cross-national studies in education.
h. The presentation and discussion of material derived from primary sources including archival documents, primary data and resource persons.
i. Any other dimension which the editorial board deems compatible with the overall objectives of the journal.

Authors who are interested in having their work published in ***The Educator*** may contact the editor on **george.cassar@um.edu.mt**

Water and early childhood experiences

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Introduction

Sustainability is an important factor which must be universally addressed. All the important resources such as water and any other material related to the environment must be safeguarded to ensure a better quality of life. The natural environment depends on the actions of humananity. Thus, if there is unsustainable living, the problems and impacts generated will affect the children who are still growing because they are amongst the most vulnerable. Therefore, in order to attain a sustainable future, sustainable choices must become an established way of life for all citizens and this must start in the early years. Young children have a right for a sustainable future. Pramling Samuelsson and Kaga (2008) state that every child has the right to be sheltered, have adequate care, to learn, develop and to be protected. Sustainable society is where everyone's rights are acknowledged. Furthermore, young children not only need to know about sustainability, but should also be allowed to follow up on this information and to bring about positive change for sustainability (Hydon, 2007).

Early childhood education

Early childhood education (ECE) is normally seen as an education that occurs for very young children between birth and eight years of age. As practitioners themselves, the present authors believe that at this age, it is the utmost significant period for children to learn more, both for immediate use and to implement it later on in their lives.

Roopnarine and Johnson (2005) argue that even though there is still a lack of consistency in the early years, early childhood education is a vital key to progress and social change. Furthermore, sustainability is an important issue in education, thus it can be argued that to have a sustainable future this should be introduced in early childhood education. From a very young age, children should be taught the importance of sustainability by implementing a variety of hands-on experiences. Although there have been many changes, many times education for sustainability is implemented through worksheets or workbooks. It may be suggested that children should be given real, tangible things from a very young age for them to be excited about their experience today, and to give them something positive to remember in later life.

In the Australian context, education for sustainability is acknowledged and promoted by policy makers. They believe that education for sustainability must also be incorporated into all levels of education in order to ease successful actions that guarantee the endurance of all life forms (Tilbury

et al., 2005). MacNaughton states that "early childhood educators act in particular ways with young children and develop curriculum for them based on their understandings of how children learn, how they make sense of their surroundings and how they form relationships" (2003, p.9).

One of the approaches the present authors learned to use during their studies with young children, and which they have been practising during these last years, is the 'project approach' where children are involved in topics of their interest. Furthermore, in project approach, children are encouraged to use their creativity and discover the answers themselves through inquiry rather than having the answers prepared by adults. This approach falls under the umbrella of co-constructivism, based on Vygotsky's (1997) notion that young children co-construct knowledge in social contexts. It may be argued that children need to be exposed to more meaningful hands-on and minds-on experiences to further their knowledge about sustainability.

Early childhood education for sustainability

Education for sustainability permits all human beings to obtain the values, abilities, understanding and attitudes to outline a sustainable future. This includes the significant sustainable development substances which include: lessening the danger of disaster, climate change, decreasing poverty, biodiversity, and sustainable consumption. It also necessitates hands-on teaching and learning methods that permit learners to change their behaviour and act in favour of sustainable development. Education for sustainability therefore endorses skills like finding conclusions cooperatively, planning for future situations and using critical thinking (Combes, 2005).

Learning in the natural environment has been considered an important aspect in the education of young children for many decades. Lately, many schools have begun to focus on 'green' where it comes to environmental education in the early years (Elliott & Davis, 2009). For instance, many classes teaching the early years have a 'nature table' where natural objects are collected and children can observe, touch and learn about the objects displayed. Many times children are also encouraged to use a magnifying glass to observe features, like insects for example, in the playground. Moreover, there has lately been a strong emphasis on recycling where children are encouraged to separate waste and also make use of recycled materials. Although environmental education is seen as an important element to teach young children, and there has been much improvement in teaching children about sustainability, there is still a great deal more to be done especially in the Maltese context.

Elliott (2007) observes that "while governments and policy-makers have key roles in climate-change regulation, building and nurturing ecologically sustainable communities must begin with the education and care we provide" (p.2). It is thus not only the government's responsibility to ensure a sustainable future, as education for sustainability needs to start from the home. Care-givers should make their children aware about species which are being endangered and this knowledge should continue to be reinforced in school. In fact, many children are becoming aware of species which are threatened due to water shortages and global warming (Louv, 2006). Hence, the importance of experiencing the environment through hands-on activity. Pramling Samuelsson and Kaga (2008) observe that in the early years there are already many familiar elements connected with education for sustainability which include nature education, outdoor play and tangible learning. However, there is little research on the responsibility of early childhood education in sustainability and there is still much to learn about this – how this type of learning can be implemented by practitioners in the early years (Pramling Samuelsson & Kaga, 2008). Davis (2007) persuades practitioners in early years education to engage in "transformative education that values, encourages and supports children to be problem-solvers, problem-seekers and action-takers in their own environments" (p.2). To facilitate such transformative environmental learning, children should be provided with important opportunities to have first-hand experiences (Meyers, 2006). Meyers also suggests that children should be engaged in meaningful investigations into the natural environment that will help them become critical thinkers, action-takers and analysers. One of the aims of the authors' research project was to give the children hands-on experiences to allow them to take part in positive change for sustainability by exploring water usage. This has helped them to co-construct knowledge about sustainability issues. Indeed, Jenkins (2009) recommends that to build an education for sustainability one needs to draw on transformative models and constructive theory of education.

Early childhood and water sustainability

Without water, there would be no life on our planet. Water is a valuable resource which we must all conserve for the future. Water conservation, in particular, is an area of concern. It is not only the quality of water which is an issue, but also the volume of water that we need which is alarming. To assure that we have an adequate amount of water available, we must teach and practise good water safeguarding methods. "Awareness of the natural environment should begin during the most important developmental stage – in the years before children start school. Learning about land, water and biodiversity throughout a child's education will help embed sustainable behaviours" (Department of Sustainability and Environment, 2009, p.58.).

Although environmental education has been around since the late 1970s, its focal point has largely been on primary, secondary and tertiary level education. Early Childhood Education for Sustainability is a growing field that merges the aims of Education for Sustainable Development with early childhood education principles (Davis, 2010). The early childhood years are often viewed as underpinning the rest of a person's life. "Several authors in the field of early childhood environmental education refer to the importance of the early childhood years for the quality of life for future generations and the development of environmentally responsible adults" (Elliott, 2003, p.6). Davis (2010) states that education for sustainability in the early years is still considered to be an insignificant area. It is believed that when children are brought in on environmental issues in the early years, they learn to think and learn differently with regard to environmental and sustainability concerns, areas and practices. From a very young age, children can be problem solvers, therefore they are able to deal with limited resources such as water. Hart (2013) claims that even very young children have the abilities for dynamic participation and the acquisition of political knowledge skills, however it is unfortunate that children are not seen as the "redemptive vehicles" who can heal the social and environmental harms of the world (Press & Woodrow, 2005). Thus, investments in early childhood education for sustainability are worth it, since children will not just learn about environmental issues, but they can work to change their behaviours and attitudes. Furthermore, the adults around them can learn from their behaviour. Research about behaviour and attitude has vital implications for environmental conservation (Newhouse, 1990, p.31). Kostka (1976, cited in Newhouse, 1990) found that a number of forms of environmental education can have negative effects on the formation of positive attitudes toward the environment.

On the other hand, Dighe (1993, cited in Davis, 2010, p.68) argues that "one can hardly imagine a generation of persons with neither interest nor knowledge of the outdoors making responsible decisions about the environment". "The factors identified as having a positive influence on environmentally responsible behaviour include an internal locus of control, a strong sense of responsibility, a solid understanding of the issues and action strategies and a positive attitude" (Newhouse, 1990, p.31). Pupils who are energetically involved in their own learning demonstrate an improved responsible behaviour.

Young children merit early education that takes them and their capabilities seriously, since they are human beings now, not human becoming (Bandura, 2001). Water sustainability issues are already part of the children's lives, since they may hear conversations about these themes in their families and in the news. Avoiding learning about water sustainability issues exposes a

'blind spot' (Elliott and Davis, 2009) about the truths of children's lives and the capabilities of young children to comprehend. The 'blind spot' supports beliefs that young children are unaware of and disconnected from the world in which they live; that they cannot understand compound ideas, and are unable to explain problems and perform within the environments in which they live. Children benefit from practical involvements. At a very early age, children explore the world around them by seeing, hearing and touching. By experiencing challenges and adventures, children find out how, and what they learn at school, relates to their life outside it. According to Piaget (2013), exposing children to tangible materials gives them first-hand experience that helps in their intellectual development. Thus the aim is not to replace learning through play activities, which are the characteristics of early childhood, with those focused on environmental and sustainability issues. All the activities, such as story-telling, outdoor play, puppet shows, water play, painting activities, role plays and more, will still persist in early childhood education, but children should be motivated to improve their experiences and enhance their knowledge about sustainable issues (such as water conservation) and develop related skills to improve their lives for both the present and the future. "If you are thinking a year ahead, sow a seed. If you are thinking ten years ahead, plant a tree. If you are thinking a hundred years ahead, educate the people" (Kuan Tzu, 500BC, cited in Peacock, 2011, p.22). This type of education helps young children to challenge unsustainable thinking and practices, and motivates them to put ideas into action.

Water holds a fascination for young children and the majority will be able to remember several experiences connected with it. It is, therefore, an outstanding starting point from which to move children on from their personal experiences to explore the experiences of others. Concepts of responsibility in relation to sustainability, conservation and personal safety, are also accessible for young children within an exploration of water. Water play is very important in the early years, moreover, one should ensure that children have sufficient access to water, whilst developing responsible habits surrounding water consumption and conservation. This will also provide the opportunity to explore and discuss water, such as from where it comes, how we should use it, and, how it can be re-used after they finish from their water-play time. Elliott and Emmett hold that "water, in its pure form unadulterated by soap and colour, is to be valued and enjoyed. It is a precious substance with many interesting properties for young children to investigate" (1997, p.46). Throughout activities with young children it is essential that they are asked to reason beyond just recall. Different types of questions require young children to use diverse types or levels of thinking. According to Bloom's Taxonomy (as cited in Anderson & Sosniak, 1994), human thinking skills can be assembled into the following six classifications:

1. **Knowledge**: memorising or educing suitable, previously learned information to draw out honest answers. The adult should use expressions such as: when, how many, where, tell, describe, identify, etc., to motivate children to say their answers while testing students' recall and recognition.
2. **Comprehension**: understanding the meaning of informational resources. Words such as: estimate, identify, describe, explain, predict, differentiate, etc., encourage students to interpret and reason things out.
3. **Application**: spread on earlier learned knowledge to fresh and unacquainted circumstances. Use of the words: show, explore, categorise, test, etc., encourage students to apply knowledge to situations that are new and unfamiliar.

Water holds a fascination for young children
(source: http://earlylearningatiszl.blogspot.com.mt)

4. **Analysis**: breaking down the data into parts and trying to understand the evidence. Use words and phrases such as: what are the differences, explain, compare, arrange, separate, categorise, etc., to encourage students to break information down into parts.
5. **Synthesis**: relating to previous knowledge and skills to associate elements into a pattern which was not clearly noticed before. The words and phrases which should be used to encourage this skill are: reposition, create, design, what if, etc.
6. **Evaluation**: deciding to give a set of principles, deprived of actual right or wrong answers. The ideal words to be used are: evaluate, decide, select, explain, compare, etc. (Huitt, 2004).

Whole settings approach

Research by Henderson and Tilbury (2004) indicates that the most likely way to bring about change in educational settings and their practices is through 'whole setting approaches'. In 2010, Davis noted that much still needed to be done to turn this opportunity for early childhood education into a reality. To help address this gap, Davis proposed three strategies to promote the development of education for sustainability into early childhood schooling. Thus:

1. The adoption of the whole school approach to education for sustainability;
2. The use of action research to explore and bring about change in an early childhood setting;
3. The acceptance of systems thinking to support change across the wider early childhood education system (Davis, 2010).

Each of these strategies provides useful levers that can help guide Early Childcare Education providers in providing an effective approach to sustainability. Davis (2010) offers a holistic model of a sustainable early childhood educational setting. As regards this model, the three fundamentals which need to be addressed by an early childhood education setting in order to become sustainable are:

1. Curriculum teaching and learning approach – including play-based, integrated learning and teaching projects where children are lively learners reacting to actual environmental issues which interest them.

2. Environment – including equally physical and social environments which provide opportunities to interact with and learn from nature.

3. Partnerships and community – secure relationships with families and the

centre's wider community and local organisations to ensure that learning and teaching for sustainability is a constant, two-way process.

Davis (2010) argues that all three elements must be in place in order to attain a 'culture of sustainability'. "This is where sustainability practices and habits, such as careful use of water and energy and democratic decision-making processes between all those involved in the centre, become part of every-day learning, routines and relationships" (Davis, 2010, p.5). To achieve this culture change, an early childhood education contributor must "practise what she preaches" by looking beyond the learning she provides for the children. This could include dealing with waste issues, plus water and energy usage, through to professional development opportunities for the practitioners (Davis, 2010).

Project approach

It is believed that successful education for sustainability prepares the learner for transformational change in learning, thinking and proactive environmental action. Hopwood observes that, "if we are to understand how environmental learning takes place, and what its outcomes are, we must pay greater attention to the role of the learner as an active agent in environmental education" (2007, p.462). In the early years, children develop their habits, basic values, skills, behaviours and attitudes and it is believed that all these support sustainability (Pramling Samuelsson & Kaga, 2008). Furthermore, when young children are engaged in transformative teaching and learning, it will encourage them to take action for the environment, thus motivating children to follow open-ended actions (MacNaughton, 2003). In all education, the teacher is the enabler, the stimulus and also the restraint, thus no matter which sustainable development subjects are chosen, the teacher's strategies will potentially affect the students' learning skills and the goals attained (Fien, 2004).

Dewey (1944) believed that children ought to be taught through a small project approach as opposed to an entire class errand. Moreover, he believed that education is consistent with knowledge emerging from everyday inquiry, significance making and comprehension. MacNaughton (2003) argues that implementing a Project Approach facilitates learning because the role of the teacher is to scaffold learning which is initiated by children rather than teaching directly. Practitioners act as guides while the learning environment provides for self-discovery because the practitioner prepares the environment to facilitate children's learning.

The Project Approach mirrors a dynamic philosophy as reflected in the

work of Dewey. Within the Project Approach the practitioner's role is that of co-learner and partner alongside children, with the young viewed as experienced, skilled and ready to direct their own particular learning. Comprehensively, exploration of significant topics that help reinforce the child's interest through the use of social, investigative, proficiency, inventive and numeracy skills, are advocated (Bullard & Bullock, 2002). Many times a Project Approach starts with a child's interest and with the practitioner helping the children to explore this interest comprehensively through a number of ways as proposed by the children themselves. Moreover, artefacts developed during the project, such as photos, are kept as records of learning and discovery.

The Project Approach offers a prospective educational means for implementing education for sustainability in early childhood education (Elliott, 2007). For instance, to learn about water conservation, children could take part in project work which involves water. Consequently, children will find out about the significance of water (co-constructivism) and afterwards will carry out activities related to what they have learned (transformative education). Indeed, this sort of learning will help the children to make wise decisions and see sustainable living displayed within their early childhood settings (Elliott, 2007).

Out of classroom experiences

Nowadays, children are spending less time in outdoor environments compared to children from earlier generations who were less exposed to technology (Louv, 2006). On the other hand, one main way through which young children acquire environmental awareness and learning is by engaging in activities, such as climbing, digging and balancing, in outdoor environments. Outdoor play helps establish connections with nature and combats the development of a stationary lifestyle in the future (Cosco, 2007).

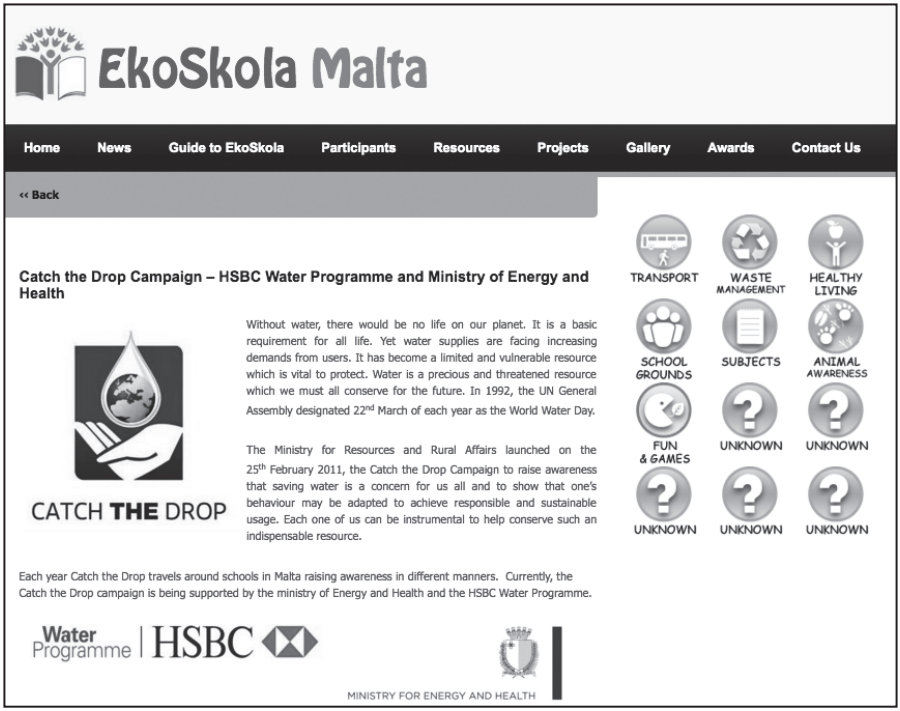
There is a need to change indoor learning and expose children to a wider experience of nature. Thus, education for sustainability needs to give opportunity to children to experience hands-on learning (Davis & Elliott, 2003). Young children need to have positive connections with the natural environment. It is believed that positive interactions with the natural environment are a vital part of child development and leads to an overall improvement in the quality of life (Wilson, 2008). Kinsella adds that "there is mounting evidence that connecting children to the natural world through early education programs and environments enhances and enriches learning, and is essential for healthy development" (2007, p.1).

It has been argued that it is very important that young children need to develop a sense of respect towards the environment as this will help them to develop such attitudes in their adulthood years (Chawla & Flanders Cushing, 2007). Moreover, children should not be expected to 'watch and listen', but to be involved in activities related to respect and care for the natural environment and in addition to watching realistic practices which involve sustainability as demonstrated by others (Wilson 2008).

Since it is known that children are spending less time outdoors and are given less opportunities to obtain environmental knowledge, it would be ideal to include education for sustainability in the curriculum of the early years. However, Elliott and Davis (2009) argue that early childhood educators see education for sustainability as a massive topic for young children. This is due to the fact that many practitioners are not trained enough to deliver education for sustainability.

Water sustainability projects in schools

Malta is one of the driest countries in the world. It is classified as one of the countries with the least water resources on the globe. Locally, on 25 February 2011, the Ministry for Resources and Rural Affairs, launched the 'Catch the Drop Campaign' in schools in order to raise awareness on the importance of saving water. In 2013, this project was partly funded by HSBC Bank. To promote this awareness, HSBC staff members visited schools around Malta and Gozo making this a national three-year environment and educational campaign on a volunteer basis (The WaterHub, 2014). Its aim was to raise awareness that saving water was a concern for all, to show that one's behaviour may be adapted to achieve responsible and sustainable water usage, as well as to increase the consciousness of the challenges of water shortage and drought in Malta and other countries. This campaign helped towards educating children in Maltese schools about water conservation. It was officially aimed at children who attended the primary schools, but some schools took the initiative and included the kindergarten classes in their activities. This campaign included a large container in the form of a drop, a sculpture made out of recycled plastic bottles and the children were offered the opportunity of posting their messages and poems related to water in this attractive container. This drop was to pass from one school to another and when it arrived at a particular school, the teachers were to plan specific activities which promoted water conservation. Activities for young children (ages: 3 to 5 years) related to the 'Catch the Drop Campaign' were rather limited, however; the children were told to avoid wasting water by closing the tap after using it and handed out colouring booklets about water conservation.



Catch the Drop Campaign on the EkoSkola Malta website
http://www.ekoskola.org.mt/resource/catch-the-drop-campaign-mrra/

On the other hand, in other countries different programmes were being implemented for the early years. In Australia, for example, children were engaged in a variety of water education and water conservation projects from an early age as water consumption and water conservation are very important issues in Australia. One of the projects which were implemented in Australia, before the children started the formal years, is 'Rous Water Program'. The aim of this project was to integrate awareness amongst young children towards sustainable water use. In this programme the children became enthusiastically involved, they learned about environmental issues related to water conservation and improved management of other resources which led to wider changes focussed on sustainability. Several activities were implemented in order to improve water management. This project was not only targeted at young children, but also at the adults connected to them. This study indicated that while parents were involved, it helped to learn new ways of thinking and acting about water conservation. Therefore, this project proved that young children are able to respond to environmental issues and to adapt to water conservation actions and strategies (Davis, Miller, Boyd &

Gibson, 2008). It also changed the children's ideas and actions about water conservation – in fact they gained new information about water and about new water preservation procedures. This project shows that even very young children are able to critically respond to environmental issues. With good guidance from practitioners, the children learned that water is precious, noticed that they were using a lot of it, recognized community concern about water use, and did something about it. Furthermore, water conservation habits also shifted to the home. During this programme a child said: "We need to save water in the whole wide world because we need to drink and wash our hands, and showers and baths" (Peacock, 2011, p.34). In our project, parents were not involved, but there were parents who reported that their children became quite aware of the use of water; one child constantly alerted her parents to close the taps especially when they washed their teeth. Such instances confirmed that the children were transferring their learning to their home environment. Similar to the 'Rous Water Program', we also could have involved the parents in our project so as to help them understand better what was being done, and encourage them to support water awareness in their home.

Another project that was delivered in a kinder class was that of Bloomington, Indiana. A set of activities on water were done with young children. Once again, in this project, the children became very confident in explaining about their water awareness project, since they were exposed to hands-on experiences. The teacher argued that in this project, it would have helped the children more had they gone on field trips (Dixon, 2001). However they were restricted in taking the children on field trips since school outings were planned before-hand in the first term and were to be linked to the curriculum, and this, therefore, disallowed them to go on an outing related to 'Little Water Explorers Project'.

These projects have underlined the importance of engaging children in hands-on experiences. Aristotle is quoted as saying that, "What we have to learn to do, we learn by doing" (as cited in Wolfe, 2010, p. 217). In fact, 'Little Water Explorers Project' and other similar projects, which are carried out in various countries, have shown that children learned more by doing the activities themselves than by just listening to what the teacher had to say. As teachers, we need to allow the students to experience what they want to do. In their research Nabors, Edwards and Murray (2009) argue that field trips are essential for young children to gain experience. They believe that such trips are a sort of experiential discovering and help children to engage in a new approach to learning rather than learning in a traditional classroom. Such outings not only develop children's learning and knowledge by provide them with active encounters; they likewise build children's

acquaintance and understanding of the world in which they live. Having outings involving hands-on experiences strengthens learning by increasing a child's sphere of experiences and by scaffolding learning. Moreover, these trips reinforce perception abilities by inundating children in tactile exercises (Nabors, Edwards & Murray, 2009). Although we had positive results during our project, we believe that a field trip related to water would have helped the children to ask about different aspects of the theme by making inquiries, observing and coming up with their own particular clarifications for how and what they are learning.

Parental involvement in schools' projects

During the first years of life, practically everything a child learns depends on situation experiences in the family, since the parents and what they do exerts an influence on children's learning (OECD, 2012). There is research which relates the home learning environment, including parenting behaviours and values, to children's learning results. Practitioners who discuss with parents can use the data to build upon their knowledge of how children learn through everyday activities with their parents. Partnerships between parents and teachers help children in their learning and can encourage parents to motivate their children to practise at home that which they had learned at school. Baekelmans (1994) referred to parental participation as being related to the democratic performance of society. It is about "openness to defend one's own interests but at the same time shows consideration of other people" (Beakelmans, 1994, p.58). Ten years later, Prott and Hautumm (2004) supported the case for 'cooperation' rather than, a stepping stone to 'partnership' between parents and services given.

Parental involvement in school can help to resolve problems by emphasising the importance of a worthy education, and getting their children excited about learning. Interest must be with what happens on a daily basis, because this is how children live, and this is how they understand their lives.

Conclusion

Many researchers claim that education for sustainability needs to start in early childhood. Davis (2007) and Pramling Samuelsson and Kaga (2008) suggest that the implementation of education for sustainability in the early years can progress through an introduction of research projects. It is believed that young children learn about sustainability by being active and participatory, and thus, by being involved in hands-on experiences. Buchan (2004) suggests that education ought to support teaching and learning that engages present and future generations to live sustainably as a matter of

survival. Furthermore, MacNaughton (2003) argues that the most suitable approach to address education for sustainability is the transformative approach because it seeks to change existing practices, traditions and rules to achieve greater fairness. Indeed, teaching through the Project Approach helps young children to better understand what education for sustainability is.

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Bridging the home-school gap: the relationship between the home and school reading experiences

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Introduction

Children's reading experiences differ considerably in relation to the different reading practices and resources to which they are exposed. McCarthey (2000), states that children interact with print much before they enter school. Luongo-Orlando (2010) believes that children's first reading skills develop from simple childhood experiences such as banging on pots and pans, reciting songs and verses, to climbing on to an adult's lap to listen to a story. This article examines different reading experiences and resources children engage in, such as environmental print, digital-text and printed-text. It then looks into different perspectives on children's attitudes towards reading. Drawing on previous studies, the discussion tackles separately the home and the school reading environments and their effects on children's reading attitudes, which is then followed by an exploration of the interplay between the two settings. The second part of the article presents the findings that emerged from the reading experiences of three children in their home and school activities. (The names mentioned in this article are not the actual names of the persons involved in the research.)

What is reading?

Different studies interpret reading in different ways. Nuttall (2005) affirms that reading is a process during which one spells out and articulates words which, when decoded, lead to understanding. Hall (1987) describes reading as a performance using mechanical skills to turn print into linguistic sounds. Contrastingly, Braunger and Lewis (2006) explain how reading transmits different messages which might not always make sense to children. PIRLS (Progress in International Reading Literacy Study, 2011), defines the ability to read as an ability to reflect on what is read and to use it as a means to achieve individual or common goals.

Types of reading experiences and resources

Environmental Print

We are living in a world imbued with text, images and print that transmit a wide variety of messages, which we read unknowingly. The reading of print that surrounds us, which is describe as environmental print (Masonheimer, Drum and Ehri, 1984), includes the reading from labels, shop signs, graffiti, logos and stickers, advertising posters, controls on household appliances and digital technology (Nutbrown & Hannon, 2011). When engaging with print on a regular basis we understand better the concepts of reading (Luongo-Orlando, 2010). Children go through reading experiences which do not include spelling letter by letter and reading word by word. Jones and Hendrickson (1970, cited in Nutbrown & Hannon, 2011), explain how children

often identify the form of the logo or sign without really reading the print. In a local study, Cachia (1999) revealed that children do not need to have a hypothesis about particular print, as they tend to visually remember a text and communicate its meaning without reading the text itself. Nathenson-Mejia (1994) explained how a young child, who was not able to sound letters or read words, identified the McDonald's sign in the street. Through environmental print children become more aware of print and text before they enter formal schooling (Goodman, 1980, cited in Millard and Marsh, 2010).

Digital Reading Experiences

The National Curriculum Framework (Ministry of Education and Employment, 2012) observes that children's reading habits are changing and increasingly involving more engagement with electronic text such as games, sites and blogs on the computer. On-going developments in technology provide children with different reading experiences such as reading from electronic billboards and digital screens (Nutbrown, Clough & Selbie, 2008). On-screen reading is gradually becoming the norm. Pressley (2002) believes that technology is a great tool for beginning readers to improve word recognition, widen their vocabulary, and enhance comprehension. Very young children enter school with different reading experiences in digital texts (Carrington, 2001). Despite the variety in reading practices to which children are exposed outside school, Hall claims that schools still regard printed text as the "primary form of communication" (1987, p.78). Educators interviewed in 1998 for an Early Literacy and Social Justice Project (Makin et. al., 1999), criticised the role of technology in children's lives and found that popular media and digital culture might not affect children's reading development in a positive way. In a study conducted with young children, Arthur, Beecher, Harrison and Morandini (2003) found that parents regarded technology as an unimportant tool for reading, whereas educators believed that television, videos and computers were positive tools that could significantly enhance children's reading experiences. In support of the benefits to learning of the new technologies, Gee (2003) also promoted the use of video games as a great reading tool for children.

Children are also gaining reading digital experiences through e-mails, online newspapers and by communicating with other people via social networking sites and instant messages (Magid, 2008). Through onscreen browsing children are interacting with animation, hypertext, sounds and continuity from one icon to another, making it a different reading experience to linear, left to right reading from printed text (Bearne, et. al., 2007; Walsh, 2010). One can conclude that reading is changing its form and medium, and is strongly influenced by the continual development in technology.

Reading printed text and the influence of popular culture

As has been argued by Naughtie (1998, cited in Bearne and Watson, 2000), currently, printed text has been taken over by more attractive and enticing technologies. Yet, Bearne and Waston (2000) themselves believe that there is nothing more valuable than printed books. When reading skills are being developed, interaction with books and printed text is very important (Marsh, 2005). Thus, as Cull (2011) recommends, we should leave space for printed text in our lives. Anbar (2004) found that when children engage with printed books, they develop their awareness of books and print. Harrison and Coles (2002) claim that different genres offer children different reading opportunities. Picture books help children become skilled at distinguishing between text and pictures, while books incorporating texts help children develop linguistic skills such as grammar, vocabulary, style and structure. When reading stories from books, children will have the opportunity to move from one sentence to another and turn from one page to another, which thus allows for the opportunity to think and imagine (Bearne & Watson, 2000).

According to Nutbrown, Clough and Selbie (2008) children's literature has witnessed a growth in books based on themes, stories and characters drawn from popular culture. Children's popular culture is made up of ideas, attitudes and images that relate to different cartoon characters presented by the media in the form of advertisements, toys, slogans and posters, which influence children's lives, interests and preferences. Findings from a study by Kenway and Bullen (2001) indicate that when new media and popular culture form part of children's early literacy, their interest in reading increases. Buckingham and Scallon, (2001) believe that at home, popular culture forms a massive part of children's lives, while McNaught et. al. (2001) found that parents view popular culture positively and consider it as a valuable and motivating resource that helps arouse children's interest. Unfortunately, it is rarely used as a teaching resource at school. In order to motivate children to read at school, teachers should try including books and stories which build on children's popular culture (Marsh, 2003; 2005) which increases children's motivation and interest in reading (Millard, 1997).

Children's attitudes towards reading

Worthy, Broaddus and Ivey (2001) found that positive attitudes depend on the different reading opportunities and materials available. Contrastingly, Braugner and Lewis (2006) argue that positive attitudes to reading depend on children's understanding of the value of reading and confidence in decoding and extracting meaning from words. According to McKenna, Kear and Ellsworth (1995) and Schembri (2004), children's attitudes towards reading

develop over time and are moulded on the norms, beliefs, and outcome of reading and most importantly, on the reading experiences they are exposed to (Harris, Turbill, Fitzsimmons & McKenzie, 2005). Lockwood (2008) claims that when children have positive attitudes towards reading, they carry out the activity for the pleasure derived from it.

Motivation differs from one student to another (Guthrie, 2001). Children who are motivated to read, "enjoy books, happily read independently, and intend to gain meaning from whatever they are reading" (PIRLS, 2011, p. 49). In other words, they engage with reading voluntarily (Martin, 2003). This is what is referred to as intrinsic motivation – reading for personal satisfaction (Wyse, Andrews & Hoffman, 2010). According to Baker (2003), intrinsic motivation can be related to the yearning to learn more about a topic of interest while extrinsic motivation is when satisfaction lies in a reward or a grade (Baker & Wigfield, 1999). Gambrell (2011) explains how practitioners can use incentives like books, bookmarks, and extra-time reading for pleasure to help children value the importance of engagement in reading. A teacher can also praise and provide positive feedback which, according to Wang and Holcombe (2010), provides a very powerful incentive for children to learn. Martin (2003) believes that attitudes towards reading depend on the availability and type of text provided. When children engage with overly difficult texts they tend to give up, while those who interact with text which is too easy, they might get bored (Gambrell, 2011). Strickland and Riley-Ayers (2006) explain how children with limited resources and experiences find it more difficult to engage with texts than those with easy access. Frequency of interaction with text at home is another important factor (Baker, Sher & Mackler, 1997). Baker (2003) holds that communication between parents and teachers helps to link home reading activities with those at school. In both these settings this communication supports children and reinforces their reading experiences while it increases their motivation to read.

Different reading environments

Home reading experiences and resources

Children start developing their 'roots of literacy' at home (Goodman, 1980, cited in Nutbrown, Hannon & Morgan, 2005 p. 39) which facilitates towards gaining a good start in reading at school (Nutbrown & Hannon, 2011). The home environment provides children with modelling; sharing of books and direct guidance for effective reading practices (PIRLS, 2011). Similarly, Frijters et al., (2000) claim that home reading experiences are not only affected by children's own interest but also by the reading activities parents carry out at home. According to Baker (2003), demographic factors such as parents'

educational status and income levels affect the quantity and quality of children's reading experiences and resources at home. Locally, Herrera (2003) found that the mother's educational level affected the children's performance in literacy acquisition. In line with these conclusions, Baker (2003) sustains that children's willingness to read also depends on the way parents arouse motivation. Various studies (Baker, 2003; Kennan, Betjamann, Wadsworth, DeFries & Olson, 2006; Sènèchal & Young, 2008) explain how children's outlook towards reading depends on the parents' reading habits, beliefs and attitudes. Indeed, developing a passion for reading and regular engagement with reading material are more beneficial than having well educated parents with high status jobs (PISA, 2000). Nathenson-Meija (1994) explains, how a variety of studies (Holdaway, 1979; Buttler, 1980; Lamme, 1985) established that reading with children every day is one of the best ways to usher children smoothly and winningly into the world of reading and literacy. Peterson (2007) believes that when parents read stories to children they learn new vocabulary in context. They also experience a sense of excitement and become more interested in reading especially if they observe similar enjoyment by their parents (Baker et al., 1997). Frijters et al. (2000) identified five factors which affect reading experiences at home: the frequency with which parents read to their children; the regularity with which children share their reading experiences; the reading resources available at home; regular visits to the library; and, the time children spend interacting with books and other reading material.

According to Baker, Dreher and Guthrie (2000), the resources available at home affect children's reading practices. Herrera (2003) explains how children may have a variety of books at home such as encyclopaedias, magazines, newspapers and storybooks, which are not accessible. Junk mail such as catalogues, newspapers, leaflets and advertisements are, however, an added opportunity for children to interact with text (Weinberger, 1996). Children can also interact with text without using books or papers, which, according to Hodgson (2008), can include electronic entertainment, mobile phones and computer. These activities generate interaction with text, albeit in a different way from sharing a story and listening to it read-aloud. Indeed, as Herrera (2003) claims, reading experiences provided at home may affect children's reading abilities and knowledge.

School reading experiences and resources

When children start formal education, they take with them an ample range of reading experiences (Marsh, Brooks, Hughes, Ritchie & Roberts, 2005) which schools should value and build on (Minns, 1997; Marsh, 2003; Luongo-Orlando, 2010). Taylor, et al., (1990), state that time spent reading at school

affects children's reading achievement. Results from PIRLS (2011) suggest that the classroom environment affects children's reading development. Gambrell explains how innovative and appealing books and other reading materials presented in the classroom enhance the quality of reading experiences; subsequently, "providing a rich variety of reading materials communicates to students that reading is worthwhile and a valuable activity and sets the stage for students to develop the reading habit" (2011 p. 173).

The National Minimum Curriculum, recommends that schools should be supported with a library that includes the most "up-to-date books on the market" (NMC, 1999, p. 34) and in every classroom there should be a book corner to facilitate children's reading development. In line with this recommendation, PIRLS found that, "the presence of a classroom library or a special place for independent reading fosters positive reading habits and attitudes, giving students access to read a wide variety of texts and texts types" (2011, p. 50). On the other hand, Kim and White (2008) concluded that although classroom library books are important, these do not always affect children's motivation, improvement and achievement in reading. Gambrell (2011) suggests that the teacher should motivate children to read by raising their curiosity in books; to help children chose library books, teachers should adopt a "bounded choice" (p. 175) approach, where, based on the teacher's suggestions as informed by the children's reading level, they would be able to choose a book they want. Another issue highlighted by Gambrell is the relevance and state of the books: students, similar to adults, like to read books and materials that are new and up to date. Although there is always a place for the classics, in any classroom library there are probably a fair number of books that should be removed from the shelves (2011, p. 177). Educators should respond to the challenges presented by society and develop curricula and pedagogies which allow children to engage confidently with technological knowledge (Moll, Amanti, Neff & Gonzalez, 1992). According to PIRLS (2011), the role of web-based reading has widened within the school curricula and standards. Currently, the word 'reading' is being used to refer to a more complex process, and schools should accept these advances and constant changes in electronic and digital technology (Turbill, 2002). Since, outside school, children are continually engaging with on-screen activities, thus, when teachers provide the same experiences at school, they are more likely to increase children's motivation to read and carry out activities which are more relevant to their lives (Gambrell, 2011).

Sollars and Ylinen (2002) argue that both the classroom environment and the teacher's planning and preparation are important in stimulating motivation and interest in children to read. Mazzoni and Gambrell (2003) found that reading could be enhanced through a balanced programme including

multiple texts, discussions, guided instructions, group and comprehension and different assessment strategies through independent and shared reading. Ross, McKechnie, and Rothbauer (2006) explain how teachers are more into reading for education and mainly focus on the mechanics of teaching children to read, even if the experiences are not necessarily enjoyable. Various researchers (Baker, Dreher & Guthrie, 2000; Worthy, 2001; Guthrie et. al., 2006) suggest that teachers create a student-centred classroom by keeping students' interest in mind when planning, choosing texts and developing reading activities. Graves and Fitzgerald (2003) explain how in successful classrooms children carry out hands-on experiences related to reading, and get extended reading time to help spark their interest in this activity. Additionally, Darling-Hammond (2007) believes that effective teachers are trained to teach reading and are passionate for reading themselves.

The relationship between the home and the school environment

The National Education Association (2008) highlights the importance of establishing a home-school relationship by building a cooperative attitude between parents and teachers. Lockwood has defined the home and the school as "two separate planets on orbits that could never meet" (2008, p. xi). At school reading is presented as part of the curriculum, with set objectives and specified learning outcomes (Hannon, 1995). On the other hand, home reading experiences tend to be more pleasurable with story books, comics and newspapers related to popular culture (Graves & Fitzgerald, 2003). Guthrie et. al. (2006) explain how the best reading experiences are made up of a connection between both settings which, following Gambrell (2011), are relevant to children's lives.

Early and Gunderson (1993) explain how the gap between the school and the home reading experiences may not be totally based on whether the child is read to, but on children's different perceptions of reading and reading activities. When reading at home children participate by turning pages, co-telling passages, asking questions, adding comments and relating positive emotional feelings to the story. While home reading practices are vital for developing reading, most children still see the school as the main location for formal learning and educational activities. At school, children have the opportunity to read individually and in groups (Guthrie, et. al., 2006; Sollars and Ylinen, 2002). Levy (2009) claims that school reading mainly focuses on developing reading skills through textbooks. Reading in the classroom can take up different strategies. Shared reading in the classroom can be round robin, where the teacher asks the children to read one by one orally while the others follow from the textbook (Rasinski, 2003). Another reading strategy is "repetition drill" (Baker & Westrup, 2003, p. 71) where children repeatedly

read the same words and sentences. Strickland and Schickedanz (2009) believe that children develop reading skills from such an approach, yet these repeated reading exercises keep children away from a wider range of texts (Morrow, Rueda & Lapp, 2009). During shared reading, children can also read together as a whole class during chorus reading, where they read the same text together (Vacca, Vacca & Gove, 2000). According to Rasinski (2003) such an approach entails having one or two children reading while the rest follow along. In order to bridge the gap between the two settings, "parents should be supportive of school efforts just as schools need to reach out to inform, encourage and show receptivity to parents' input" (PIRLS, 2011, pp. 41-42). High parental involvement in children's learning helps improve children's achievement and overall attitudes towards learning (Schickendanz, 1978, cited in Persky & Golubchick, 1991). Another important factor is for teachers to know from where the children come, their family background and their perspective on reading, so as to be able to adapt to the different reading perspectives brought by the children to the classroom (Graves & Fitzgerald, 2003; Darling & Westberg, 2004).

Three case studies

The remaining part of the article looks at the findings from fieldwork done with three children. An analysis of the results obtained from the data collection exercise evaluates the type of school and home reading activities experienced by these three children

The classroom

The physical setting of the classroom

With three big windows adorned with lightly coloured curtains, the classroom looked bright and welcoming. Entering the classroom for my observation, I noticed that it was relatively spacious with desks organised in a traditional two-row layout. The teacher's desk was on the side while at the front there was the interactive whiteboard. The classroom walls were covered with different charts and wall displays, which could be described as old, faded and dull. Some were handwritten, while others were of the ready-made commercial type. Children's work which they carried out during art lessons, was also displayed.

It can be stated that innovative resources were limited. Colourful and innovative resources, tailor-made charts and flashcards that relate to the current content being taught would, as indicated by several scholars (Bucholz & Sheffler, 2009; Kalra & Gupta, 2012), have helped in enriching the classroom environment and spark children's interest in literacy.

The reading area

The 'Reading Corner' as named by the teacher, was, in my view, made up of an uninspiring compilation of books. The books were presented on two, relatively old tables, organised next to each other, on one side of the classroom. One of the tables displayed books in Maltese, while the other table displayed books in English. No labelling was used to distinguish the two sets. Many of the books belonged to the same series of publications, and the genre did not vary much. The publication dates spanned between the 1990s and the 2000s. There were few books that related to current children's popular culture. While the books might appear colourful, some of them were frayed, with pictures that were not attractive enough to encourage children to read. Fig. 1 shows the list of books that was available in the reading corner.

A reading corner that encourages children to read should, as Gambrell (2011) has suggested, contain both classic books, that must be given prominence, and those with more recent themes, to encourage children to read. Ms Tonna's library lacked recent publications; as a result, she asked the children to donate a book on their birthday, an initiative also suggested by Paratore and McCormack (2005). The new, donated books were from children's popular culture and included titles such as *Noddy* and the Disney publication *Beauty and the Beast*. The reading area also lacked soft furnishings which, according to Rutter, et al. (1979, cited in Bucholz & Sheffler, 2009), create a sense of comfort and warmth to the environment. There were no carpet or cushions on which children could spend some time reading comfortably. When opting to read library books, children had to sit in their place, making the activity much less attractive and exciting.

Reading experiences observed in the classroom

The main common reading experiences that were observed followed a repetitive pattern of reading sentences and lists of words from basal readers, handouts and textbooks in both the English and Maltese languages. Fig. 2 illustrates the type of reading activities conducted during the six observation sessions. Throughout the observations, the teacher read stories from real books, twice. The other sessions focused more on spelling and learning to read words and sentences. It was only on one occasion that the teacher referred to the library books asking the children to talk about their favourite book. She used it as a time-filler activity. Engagement with text sometimes included reading word-flashcards or words displayed on the interactive whiteboard (IWB). The IWB was used on a daily basis during different lessons, but the computers at the back of the classroom, were rarely used as a source of reading.

The recently published English set-reader included reading a number of storybooks from the Oxford Reading Tree (ORT) collection (Fig.3). Similar to

Maltese Books				English Books			
No. of Books	**Name**	**Date**	**Genre**	**No. of Books**	**Name**	**Date**	**Genre**
7	'Buxu' Collection (ex. 'Buxu Jinqabad', 'Buxu u n-nanniet')	2005	Fiction	10	Oxford Reading Tree books (ex. Silly Races, Look out)	2003-2008	Fiction
6	'L-Istejjer ta' Ġiġi' Collection (ex. 'Ġiġi jmur l-Iskola', 'Ġiġi l-Artist')	n/a	Fiction	8	Read Away Collection (ex. Paul's Birthday, Red Jelly)	n/a	Fiction / Picture word
3	Trevor Zahra Collection: (ex. 'Passiġata', 'Borma Minestra', 'Mar id-Dawl').	1999	Picture Book	7	Large Print (ex. Learn to Read, My First Picture Dictionary)	1995-2007	Non-Fiction
1	'Ojnk Ojnk'	2005	Picture Book	4	Little Owl Collection (ex. Counting , My Home)	1989-1990	Non-Fiction
1	'Buġi, Miki u Jake'	2011	Fiction	8	Collins Big Cat Collection (ex. Cars Pushing and Pulling)	2004-2010	Non-Fiction
1	'Krispella '	2005	Poetry	6	Oxford Literacy Web Collection (ex. A Windy Day, Two the Same)	1999	Fiction
1	'Ġużeppina'	2010	Picture Book	5	Lady Bird Collection (ex. Hansel and Gretel, Puss and Boots)	1994-2005	Fiction
1	'Pinokkjo'	1994	Fiction		The Flying Boot Collection (ex.Yellow Boots, The Box)	2004	Fiction
1	'Bongi Wongi'		Fiction	1	Beauty and The Beast	2007	Fiction
4	'Nieħu gost naqra ma' Tina u Luka' Collection (ex. 'Fufi', 'Id-Dar tal-Pupi')	2005-2006	Fiction	1	Noddy the Rainbow Chaser	2003	Fiction
6	'Naqra Storja Żgħira' Collection by Trevor Zahra (ex. 'Iż-żarbun li jtir', 'Il-Libsa ta' Sina')	1997-1999	Fiction				
1	'Kemm Naf Inpinġi'	2005	Fiction				
5	'Mixa u Rufu' Collection by Marika Borg (ex. 'Il-Kompetizzjoni',, 'Id-Dar Il-Qadima')	2007	Fiction				

Fig. 1: The books found in the classroom library

Interaction with Text/Reading experience	Observation 1: 26th January 2012	Observation 2: 27th January 2012	Observation 3: 30th January 2012	Observation 4: 31st January 2012	Observation 5: 1st February 2012	Observation 6: 6th February 2012
Reading-Aloud a story			✔		✔	
Maltese Set-Reader	✔			✔		✔
English Set-Reader	✔			✔		
English Sentences/ Words		✔	✔		✔	✔
Maltese Sentences/ Words	✔	✔	✔	✔		✔
English Exercises						✔
Mathematical Exercises	✔					
Maltese Exercises		✔	✔	✔		
Flashcards		✔		✔	✔	✔
Computer				✔		
IWB	✔		✔	✔		
Books from Library				✔		
other...		Religion Book			Religion Book	

Fig. 2: A record of the reading experiences observed in the classroom

Six in a Bed, the ORT books had brightly coloured pictures, short sentences and an interesting storyline with a happy ending. In sharp contrast, the Maltese set-reader used, *Nimxu Flimkien* (Fig. 4) was a relatively old book published in 1989, with colour-faded pictures, lists of words and short sentences which were anything but appealing to children. As indicated by the teacher during my interview with her, and as I also had observed, reading lessons in both languages were conducted every day, in chorus by repeating words, or individually in a round robin fashion.

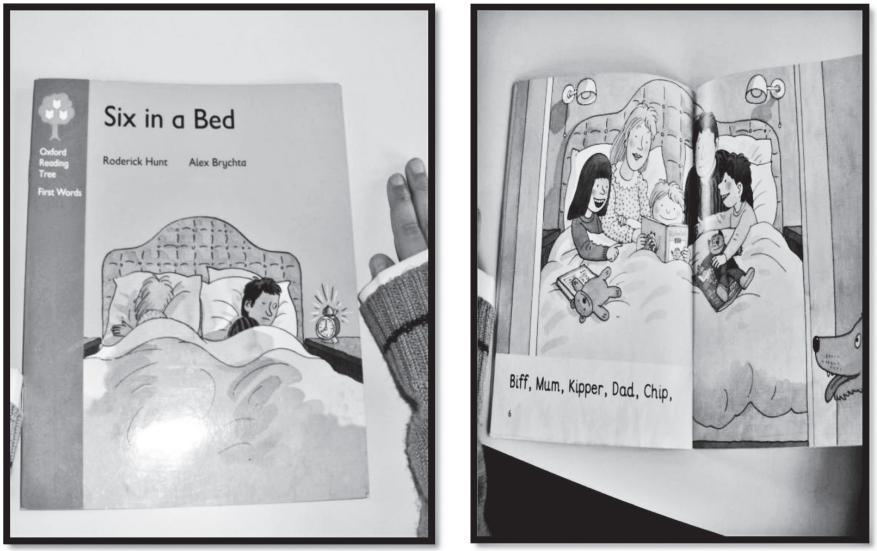

Fig. 3: The book *Six in a Bed* (left) and a page from the book (right)

Fig. 4: The reader *Nimxu Flimkien* (left), and a page from the book (right)

Ms Tonna claimed that the school also provided another Maltese set-reader, *Senduq Maġiku*, which was more recent and attractive. However, she complained that the reader is too flimsy:

> I have to use books such as *Nimxu Flimkien* as those provided by the school such as *Senduq Maġiku* are limiting. While *Senduq Maġiku* is made of colourful pictures and it is attractive to children, it has fewer words for children to read and I find it dry. *Nimxu Flimkien* on the other hand is not attractive and seems dull to children but it provides them with more words to read. (Ms Tonna, 8th February 2012)

During my third observation (30th January 2012), I observed a reading session based on the Maltese reader *Nimxu Flimkien*. There was no introductory activity; the lesson started off with the teacher asking different children to read from a list of words. When all of the students had their turn, she asked them to read a set of sentences from the same book in chorus. The following is an excerpt from my reflective journal of the day:

> I observed that some students knew the sentences from the book by heart as they were repeating them without even looking at the book. They did not seem to be learning anything from this exercise. (My Reflective Journal, Day 3: 30th January 2012)

As soon as they finished reading the sentences, the students were asked to take out a handout that included words from the textbook *Senduq Maġiku*. Adopting the previous procedure, the teacher asked individual children to read words in round robin fashion, followed by chorus reading of the same words. In my view this was limiting the children's reading experiences. At no particular time did the teacher address the children's reading abilities. While this appeared to be a routine reading activity, struggling readers still seemed to find it hard to keep up with the rest of the children. My observation was that:

> Some of the children were just saying the words without even looking at the paper, while those who were struggling readers were simply mimic reading by moving their lips. Roughly an average of one out of every four children were reading and following the teacher. They read the words twice, which I found quite boring and unnecessary because children who were not able to read at the beginning of the lesson still were unable to read, despite the repetition. The resources used during this reading lesson were not attractive to students. The instant and pertinent thought that came to mind was to ask why schools had outdated books such as *Nimxu Flimkien* and lists of words on papers which endorse reading as an uninteresting and boring activity when there are more recently published books that present reading as an exciting experience through real texts and different genres. (My Reflective Journal, Day 3: 30th January 2012)

The English lesson that followed was likewise void of any introductory activity. It started with a revision of the words from the Jolly Phonics wordbook. Afterwards the children revised phonic words by singing and spelling from the Big Cat Software uploaded on the interactive whiteboard which created a different aura:

> The children looked interested and seemed to have really enjoyed this form of reading even if it was still somewhat repetitive. They were enjoying the sounds and could read along with the animator on the IWB. One could see that they did not wish to stop and as soon as the teacher announced that it was time to write the diary, they all began to protest. (My Reflective Journal, Day 3: 30th January 2012)

This reading activity was similar to reading single words on papers, but the children were reading from the screen and it included animation and sound. It was noticeable that those children who found it difficult to keep up with the rest of the children when reading from printed text were actively participating by blending words with the animator.

All the reading activities carried out during the day followed the same pattern and were based on "repetition drill" (Baker & Westrup, 2003, p. 71) which entails repeatedly reading words and sentences. This might be beneficial for students with lower reading ability in the short term (Just Read Florida, 2008), however, from my observations I concluded that struggling readers found it hard to keep up with fluent readers while repeating words. Unsurprisingly, they ended up disengaged. This is in line with Allington's (1984, cited in Cunningham & Stanovich, 1997) position who claimed that when children are not exposed to different types of texts and varied reading activities, they tend to lose interest. As indicated by Ms Tonna herself, she seemed aware of this disengagement; nonetheless she persisted with her approach:

> Unsurprisingly some of them find reading long lists of words in the class boring. I try to make reading fun, but since by the end of the year I have to make sure that all of the children are reading, I try to present as many reading lessons from the set-reader as possible. (Ms. Tonna, 8th February 2012)

After conducting a reading lesson in each of the languages as described above, the teacher carried out a reading-aloud lesson using the Maltese story book *Bongi Wongi* (Fig. 5). This was not a textbook and had appealing pictures and colours. The teacher began the lesson by showing the book and reading the title to the students. Subsequently she asked a number of questions in order to help children predict the story. It was disappointing to observe that the teacher managed to read only a few pages before the bell rang. Her aim was to narrowly use the story as a time-filler. The following is an excerpt from my journal:

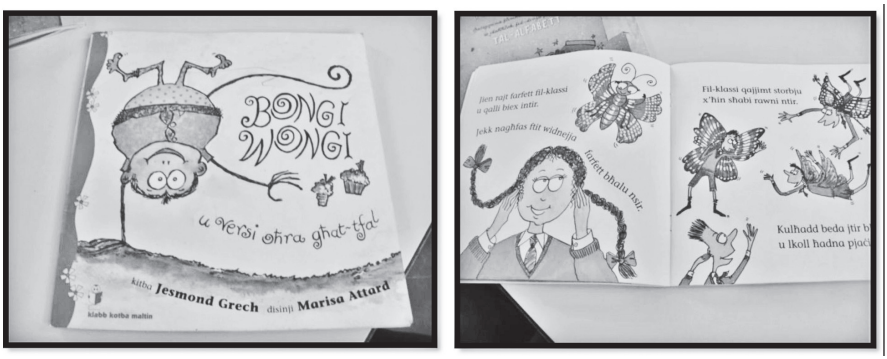

Fig. 5: The book *Bongi Wongi* (left), and a page from the book (right)

> The students were very attentive and engaged in the prediction of the story, reading and laughing at the funny verses. When the bell rang the children complained and insisted with the teacher to finish off the book before they went home. (My Reflective Journal, Day 3: 30th January 2012)

The fact that the students were reluctant to go home because their interest was fully engaged in the story bears testimony to students' abiding eagerness to read a riveting tale. The effect of a well-told tale embellished by the teacher's gestures, facial expressions and changes in intonation at climatic moments was impressive. Moon (2000) indicates that intensive reading-aloud sessions in conjunction with playful activities, expose children to the concept of print, story structure, and language and conversation skills in an enjoyable way that can instil a love for reading. Ms Tonna was conscious of the benefits of such reading experiences, yet, she rarely included them in her reading programme. This self-imposed limitation was justified, according to her, due to the demands of the syllabus:

> I enjoy reading storybooks to children. I enjoy the story myself even though I already know the ending. The most astonishing feeling when reading to children is to see their curious face and wide-opened eyes looking at me. Children seem to learn a lot from such reading experiences. Unfortunately, time in the classroom is tight and to carry out a story read-aloud session I would have to put everything else on hold, forget about the timetable and scheme of work that need to be covered by the end of the week, and enjoy those few minutes. (Ms Tonna, 8th February 2012)

She defended the repetitive reading of lists of words as necessary, as some children lacked enriching reading experiences at home.

> If all parents helped their children with reading the words at home, the process of learning to read would be much more fun and exciting,

> because the majority of the children will be able to read in less time. In reality there are children who only get to practise reading when they are in class, so I have to make sure that I provide them with as much book reading and repetition as possible. (Ms Tonna, 8th February, 2012)

Ms Tonna's comment implies that when children do not revise the repetitive words at home, they influenced the reading experiences at school. This, according to Ms Tonna, was making it less likely for her to include interesting reading experiences. In contrast to this, Moon (2000) claims that children find enjoyment in reading when it is presented as a playful activity, rather than as a task. This is likely to help children develop a positive attitude towards reading, which, according to Martin (2003), will then help them engage in voluntary reading. Ms Tonna could, for example, increase the use of computers, interactive and innovative reading texts, as well as hands-on related activities, in order to motivate children to read. The teacher's greatest satisfaction at the end of the year should not simply be in seeing children being able to write and read, as Ms Tonna had stated, but in seeing these children developing a love towards reading and learning (Martin, 2003). Enthusiasm and development in reading does not only depend on the school reading activities; the home reading practices play as well a crucial part. In the case studies that now follow there is an analysis and discussion of the home reading environment and experiences of three children, and this is related to their school reading experiences as discussed above.

Case Study 1: Frankie

Child's profile

At the age of 5 years 6 months, Frankie was the elder of two siblings. He had a younger, 14 month old brother. Frankie was a very sociable and outgoing boy who liked interacting with others. He was very passionate about animals, especially horses. His father's family owned a farm where they had a number of stallions, which they trained for horseracing. Frankie used to spend many hours at the farm riding ponies.

Frankie's parents Maria and Mario only had a secondary level education. They differed in their views towards education. Mario was a ship steward and rarely got interested in reading. Maria worked as a secretary in an office, and she used to read in her free time, as she regarded this a source of relaxation. However, due to lack of free time, her reading experiences were limited to reading recipes, newspaper articles, bulletins and letters that came from school.

Home Environment

On entering Frankie's house, I immediately observed a small number of books in the living area, including an encyclopaedia, a dictionary and a bible, neatly stacked on a shelf. This was too high to be accessed by children.

Unsurprisingly, his mother claimed that they rarely used them. In Frankie's room there was a small collection of books, which he received as presents from his aunts and uncles. Maria specifically stated that she hardly ever bought him books:

> He has a lot of books to choose from when he wants to read a story, and every week we also get four books from the library. He always prefers to read the books from the library other than the ones he has at home, but sometimes he asks me to read him a story from one of the books he has here. (Maria, 7th February 2012)

In my view, Frankie did not have enough books to choose from. Most of the fiction storybooks he owned had attractive pictures but the lexical level was higher than he could handle. While Maria stated that Frankie's favourite characters were 'Ben 10', 'Fireman Sam' and 'Cars', he did not own any storybooks that dealt with these characters. Of all his books, his favourite was *Now I Can Read Collection* which included a collection of stories that were related to animals and farms, subjects which he was very interested in.

Maria claimed that Frankie preferred to read books in Maltese rather than in English. His favourite Maltese stories were those from the *Ġiġi* collection, which he borrowed from the library every week and were the same as the ones they had at school. Fig. 6 provides a list of the books Frankie had at home – the left column includes common books found both at school and at home. His mother explained that Frankie liked to read the same stories more than once. Freidberg and Strong (1989) believe that by engaging in the same story children develop a sense of familiarity with its language story line, and this helps them to become confident readers. During the interview Maria explained how Frankie read the books borrowed from the library repetitively:

> He asks me to read him the same stories over and over again. Then when he is on his own I notice him trying to read the stories again by himself. He mostly does this with the books he gets from the library. (Maria, 7th February 2012)

Frankie was more interested in books he was used to reading at school, probably because this instilled a sense of security. The library books were more age-appropriate. This could have been the reason why he was more inclined to read library books than the ones he had at home, as the latter were quite challenging for him.

Frankie was confident when reading with the other students at school especially when the teacher asked him to read words independently during reading lessons. He always engaged eagerly in lessons and read with passion. His positive attitude can be largely attributed to the exposure to reading that he experienced at home, which is in line with the conclusions reached by a number of studies (Frijters et al., 2000; Tizard & Hughes, 2002; Herrera, 2003).

Common Reading Books found both at school and at Frankie's home		Reading Books at Home			
Name	**Genre**	**Name**	**Genre**	**Name**	**Genre**
'Ġiġi l-Artist'	Fiction	Now I Can Read	Fiction	Baby Animals	Picture Book
'Ġiġi Bravu'	Fiction	ABC and Counting	Fiction	On the Farm	Fiction
'Robi r-Robot'	Fiction	123 Counting on the Farm	Picture Book	My Favorite Nursery Rhymes	Fiction
'Id-Dar ta' Pupi'	Fiction	Jungle Colours	Non-Fiction	My Animal Counting	Number book
'Il-Libsa ta' Sina'	Fiction	'Ir-Razzett ta' Ġianni'	Fiction		
Read with me: Puss and boots	Fiction	'Kukku l-Kukkudrill'	Fiction		

Fig. 6: The left column lists the reading books that Frankie had at home which were also available at school. The two columns on the right list the reading books available only at home.

Home reading experiences

Frankie had plenty of support from his mother who spent ample time helping him with his homework and reading tasks assigned by the teacher. Maria considered helping her son as more important than doing household chores. I can attest to this because during my observation visit, dinner was not ready and some housework needed attending to, yet Maria was sitting at the kitchen table reading to her son. As Harris & Goodall (2009) argue, parents' effort and perspectives on reading affect children's lives. Similarly, Nathenson-Meija (1994) believes that the more time parents spend reading with their children the better the chance for children to be absorbed by the world of reading.

Maria also used flashcards to revise the letters and read words with her son. Fig. 7 provides an overview of the different reading experiences Frankie engaged in as part of his daily routine. During the interview, his mother explained that she encouraged Frankie to help her by reading the shopping list. She also encouraged him to read the print on the food labels. This took the form of a game where he would read out the name of the food item and she would place the tin or packet in the cupboard. These types of reading experiences were perceived and presented by Maria as fun activities.

To help her son to regard reading as an integral part of life, Maria regularly asked Frankie to read road signs and shop names. She also took books with her to different places and encouraged him to read whenever the opportunity arose:

> I like to keep books in the car and in my handbag so that while we are waiting in a queue or when we are going somewhere he will have a book to read. (Maria, 7th February 2012)

Reading experiences carried out at home help to develop skilled readers. Baker (2003), Hewison and Tizard (1980), and Hannon (1987) (the latter two cited in Evans, Shaw & Bell, 2000) claim that when parents listen to their children read, such children would do better in school.

School Reading Practices	Frankie's Engagement in Reading	Home Reading Experiences	Voluntary Reading	Shared Reading
Reading-Aloud a story	✓	Read-aloud sessions	✓	✓
Maltese Set-Reader	✓	Shopping lists	✓	
English Set-Reader	✓	SMS	✓	
English Sentences/ Words	✓	Signs	✓	
Maltese Sentences/ Words	✓	Advertisements		
English Exercises	✓	Labels on packages	✓	
Mathematical Exercises	✓	Homework	✓	✓
Maltese Exercises	✓	Game Consoles		
Computer	✓			
Flashcards	✓		✓	✓
IWB	✓	Board Games		
Books from Library	✓		✓	✓
Other...	Religion book			

Fig. 7: The left hand column lists the type of reading experiences Frankie engaged in at school, while the right column lists the reading experiences he engaged in at home, either with his mother or on his own.

Home-school reading relationship

My observations convinced me that the limited reading resources Frankie had at home were offset with the library books he regularly borrowed and which provided him with adequate exposure to reading experiences. The books he liked and borrowed from the library such as *Ġiġi,* might have appealed to Frankie because he was used to seeing them at school. These provided him with familiarity, security and assurance when reading the text. His mother believed that at school Frankie had a variety of reading resources, which were more age-appropriate and within Frankie's reading ability. During the interview, she observed:

> At school children have more books and reading resources than at home. The reading materials they have at school are more adequate to the students' abilities. The ones he has at home are stories which are fun to read. Sometimes at home he receives books which may be above his reading ability; therefore I will read them for him. At school the books available vary and he can get books which he can read by himself. (Maria, 7th February 2012)

I believed that the readers Frankie had at home still promoted reading when his mother read from them. Admittedly, the reading experiences to which he was exposed at home were not always fun and were frequently similar to what his teacher presented in the classroom. After homework, he regularly revised the words from the *Jolly Phonics* and *Nimxu Flimkien* which supported and consolidated the reading done in the classroom. His reading experiences at home were a balance between 'repetition drill' (Baker and Westrup, 2003) and read aloud story sessions from storybooks. This continued to confirm my impression that reading at home was not always fun.

In the classroom Frankie was considered as a fluent reader. The teacher described Frankie as:

> ... one of the best readers in the classroom and it is very clear that his mother helps him and reads with him at home. He always participates during the lessons, and when the children are reading together his voice can be easily heard. The reading at home is going to be very beneficial for him as he grows up, when compared to students who rarely read a word at home. (Ms Tonna, 8th February 2012)

The fact that Frankie was reading the same books and word lists at home as those read at school might have helped him to feel more secure to read in class. Such reading experiences at home could be seen as an extension of homework tasks. It may be that, if his mother did not try to make the reading sessions more attractive and enjoyable, in the long term Frankie's motivation might be blunted. Perhaps Maria should expose him to read real books because as Weinberger (1996) explains, if children are not exposed

to reading from real books at home with their parents at a young age, they might experience reading difficulties as they grow older. School was giving Frankie the opportunity to connect with onscreen texts, an opportunity which he did not have at home. Yet, having a computer did not stop him from engaging with printed text. He mainly spent his free time at school reading books from the library and playing computer games on the internet, according to availability.

Case Study 2: Natalie

Child's profile

Natalie was the elder of two siblings; she had a younger brother aged five months. During the time of the study Natalie was 5 years 3 months old, the youngest of the three children of this study. Natalie was shy and introvert. Her voice was rarely heard in the classroom. She was also very emotional and sensitive; she cried easily especially when she was corrected or prevented from doing something. Natalie was a 'girly' girl: all of her belongings were pink with a touch of glitter, illustrating princesses and fairies. Natalie attended ballet classes, which she totally enjoyed. According to her mother ballet helped Natalie boost her self-esteem and encouraged her to interact more with others. She had a very negative attitude towards reading, which was evident by the lack of interest in books and the absence of a motivation to read.

Rose, Natalie's mum, was a learning support assistant in the same school her daughter attended. Mike, her father, was a clerk. Both Rose and Mike valued reading. Mike was interested in sports and liked to read articles that related to bodybuilding and football. Rose was an avid reader. She constantly engaged with novels and read stories to her children, besides the everyday reading of e-mails and recipes.

Home environment

The living room reflected a passion for reading in the number of novels, magazines and newspapers placed on the shelves and the coffee table. Rose expressed her strong interest in books:

> I have books stored in every room in the house, even in the kitchen cabinets. We only have reading books and resources which we use; we do not have an encyclopaedia because I find it boring and not very useful. I prefer to search on the internet rather than browse in that endless book. (Rose, 9th February 2012)

Natalie's father bought sports magazines and the newspaper on a weekly basis. Rose claimed that they also had a substantial amount of children's books,

which they had bought for Natalie since she was very young. Sometimes, Natalie also received books as presents from family members or as a reward for a good deed. In her room, Natalie had some reading books on shelves which included classic children's stories such as *Peter Pan*, *Sleeping Beauty* and the *Ugly Duckling*. Her latest addition was, however, a book that related to her real-life experiences: *Look and Say Baby Brother*. As Rose explained, she bought the book for Natalie to show pictures and carry out shared reading experiences with her baby brother. A series of other books were stored in two plastic chests that were easily accessible to Natalie. From Fig. 8, one could note the variety of books Natalie had, which belonged to different genres that related to children's popular culture and her interests. The majority of

Common Reading Books found both at school and at Natalie's home		**Reading Books at Home**			
Name	**Genre**	**Name**	**Genre**	**Name**	**Genre**
Learn to Read	Non-Fiction	Barney: The best Christmas eve	Fiction	What's the time	Non-Fiction
'Buxu jħossu waħdu'	Non-Fiction	Barney: Chat that hat	Fiction	My first word book at Nursery School	word book
'Buxu u n-nanniet'	Fiction	A Bug's life	Fiction	A Baby's first word book of animals	word book
'Ġigi jilgħab man-Nar'	Fiction	Five Baby Bears	Fiction	Now I can read: 15 Goodnight Stories	Fiction
'Ġiġi jgħid il-verita''	Fiction	Easy to Read Christmas Stories	Fiction	The Night before Christmas	Fiction
'Ġiġi Tuġġħu Darstu'	Fiction	Teddy Bears 123	Fiction	Look and say Baby Brother	word-book
'Borma Minestra'	Picture Book	Animals on the Farm	Fiction	Wee Willie Winkie and other best-loved rhymes	Fiction
'Il-Libsa ta' Sina'	Fiction	Baby's first counting book	Number book	Christmas Magic (Dora the Explorer)	Fiction
'Kemm Naf Inpinġi'	Fiction	Cinderella	Fiction	Dora's Birthday surprise	Fiction
'Mixa bil-ġuħ'	Fiction	Tallulah's Tutu	Fiction	Princess Dreams (Dora the Explorer)	Fiction

Fig. 8: The left column shows the reading books that Natalie had at home which were also available at school, the two columns on the right indicate the reading books available only at home.

the books were in English while the ones in Maltese were borrowed from the public library. Rose explained how visiting the public library was an ordeal for Natalie as she was not the least interested in reading. Frequently her mother ended up choosing books for her: "Books are absolutely not her forte, on the contrary she despises them".

Natalie's lack of motivation to borrow books from the public library and hence to read, could be attributed to the fact that the books available at the public library, just as in Frankie's case, were the same as those at school. However, while for Frankie the same books served as a motivation and enhanced a sense of security, in Natalie's case this may have proved to be boring and demotivating. Due to this, even the books she had at home, which catered for her special interests in princesses and ballet, may have still missed generating any enthusiasm to read.

School Reading Experiences	Natalie's Engagement in Reading	Home Reading Experiences	Voluntary Reading	Shared Reading
Reading-Aloud story	✓			✓
Maltese Set-Reader	✓	Shopping lists	✓	✓
English Set-Reader	✓	Short Message Service (SMS)	✓	✓
English Sentences/ Words	✓	Signs		
Maltese Sentences/ Words	✓	Advertisements		
English Exercises	✓	Labels on packages		✓
Mathematical Exercises	✓	Television		
Maltese Exercises	✓	Game Consoles		
Flashcards	✓		✓	✓
Computer	✓		✓	
IWB	✓	Board Games	✓	
Books from Library			✓	✓
Other...	Religion book	Homework	✓	

Fig. 9: Natalie's reading experiences at home and at school

Home reading experiences

Natalie engaged in different reading experiences at home (Fig. 9). Her mother claimed that she did her best to motivate Natalie to read. She explained how she encouraged her daughter to read different texts, including shopping lists and names of products on packages while shopping. She also encouraged her daughter to read short message service (SMS) from her mobile phone.

Additionally, she tried to engage Natalie to read by playing flashcards games with her. Natalie also liked to play games on the computer, which Rose believed served as a motivating source of reading. Rose also liked to read bedtime stories to her daughter. Natalie's parents valued reading and were providing her with a broader range of reading experiences when compared to Frankie, yet, she struggled to read.

While Rose clearly highlighted her daughter's lack of interest in books, she mentioned a particular event that took place the week before we held the interview when Natalie demonstrated interest in a book:

> Natalie insisted on getting this book *Borma Minestra*. The book looked new, which enhanced her interest. I was intrigued that, for once, she knew which book she wanted. As soon as we arrived home, she began to go through the book while I was cooking. As soon as I was free, she asked me to read the story to her. I felt so happy. This was the first time in a long time that she swapped watching television with a book. We snuggled on the sofa and I read the whole story to her. She looked engaged in the narration and laughed at humorous moments because the story line was funny. For once she did not grumble or ask me how many more pages till the end. She simply enjoyed it. When I was reading, I sometimes asked her to read a sentence here and there, but she preferred to listen to me reading for her. When her father sat on the sofa she wanted to read it to him as well. She did not read the text but she repeated the story in her own words from the pictures. (Rose, 9th February 2012)

Natalie was motivated to read *Borma Minestra* because she had heard about it at school from a friend. While Holdaway (1979), Buttler (1980) and Lamme (1985) (all cited in Nathenson-Mejia, 1994) argued that home reading experiences affect children's attitude towards reading, in this case, Natalie wanted to read motivated by her own interest (Frijters et al., 2000). As pointed out by Martin (2003), reading is best when carried out voluntarily. Unlike other times, Natalie had not been forced to read *Borma Minestra* and was utterly engaged with the storybook on her own initiative and through her own interest.

Home-school reading relationship

Baker (2003), Harris et. al. (2005), Byrne et. al., (2006) and Sènèchal and Young (2008), have claimed that children's attitudes towards reading depended on parents' reading habits, beliefs and attitudes. Natalie's parents promoted reading as an interesting activity at home, yet Natalie still regarded it as an unpleasant task. During observations at school, Natalie rarely participated in reading activities. She seemed bored most of the time. When they read lists of words and sentences Natalie would yawn, stare at charts, or gaze outside the window, and rarely followed or joined in, even when it was her turn.

Reading materials presented by the teacher as part of their routine, led Natalie to see reading as a tedious activity packed with drilling exercises and decoding skills without meaning (Schickendanz, 1978, cited in Persky & Golbuchick, 1991). Rose found the reading of such material as an "uphill struggle which both of us detest". She explained how when she tried to read word lists from handouts at home, Natalie would yawn and doze off on the table. Rose explained how:

> The lists of words seem never ending to her. I am sure that many times she does not even know what she is reading. I try to encourage her and praise her but she still does not find motivation and interest in them... for Natalie they are simply boring! (Rose, 9th February 2012)

It was difficult to explain Natalie's negative attitude towards reading. Natalie had an ideal reading environment, rich in reading resources and yet her parents' support had minimal effect on her reading ability at school.

Case Study 3: Karen

Child's profile

Karen was 5 years 8 months old at the time of this study. She was the younger child in her family with one older sibling. Her sister Thea was 13 years old. Karen was regarded as a very smart, independent and helpful girl, both at school and at home. She was highly organised and was regarded as a perfectionist. She thrived on movement. This could be clearly observed in the classroom where she preferred dancing and moving around to grabbing a book or sitting at the computer. One could describe her as a girl who participated in different after-school activities including dancing and drama lessons. Being a responsible girl, at school she frequently took the role of a leader with her peers willingly following her. Karen's mother and father both had full time manual jobs. Her father, James, was a builder and worked in the family construction business with his brothers. Patricia, her mother, was a caretaker in a respite centre. Both parents worked very long hours. Her mother claimed that lately she was working night shifts so that during the day she would stay with her children. Karen's father dropped out of secondary school when he was only 14 years old, and her mother moved from secondary to trade school when she was 15. Both parents had poor reading skills. Her mother was able to read text only in Maltese, while her father was illiterate. Considering reading as a waste of time, Patricia developed a negative attitude towards reading, which could be attributed to her lack of ability to read. This translated itself to the lack of support she provided Karen related to her reading tasks. Patricia admitted that she never helped her oldest daughter Thea with her homework. Nonetheless, Thea still managed to do relatively well at school. Patricia believed that Karen was lucky to have her sister who could

help her, a role which the mother could not carry out:

Thea (oħt Karen) tqatta' ħafna ħin tikteb u tistudja. Tħobb tgħin lil oħtha fix-xogħol tal-iskola, iżda jien ma tantx insib għajnuna minnha fix-xogħol tad-dar. Karen minn naħa l-oħra, għalkemm għadha żgħira, tħobb tnaddaf u tirranġa d-dar.	Thea (Karen's sister), spends considerable time writing and studying. She also helps her little sister with school work but she rarely helps me with housework. On the other hand, despite her young age, Karen helps me clean and keep the house in order.

(Patricia, 8th February 2012)

Home environment

When I walked into Karen's home, I immediately observed the lack of reading material. The only books I saw were stored in Karen's bedroom, out of sight, inside a cupboard. The cupboard contained various children's books, some of which belonged to Karen's older sister. Patricia rarely bought books out of choice, but she did not hesitate to buy books for her daughter if requested. She stated:

Meta Karen jogħġobha xi ktieb qatt ma ngħidilha le, iżda qatt ma naf li mort nixtri u għażiltilha ktieb jien.	When Karen puts her eyes on a book, I never say no, but I do not remember me ever going to buy her a book or choosing a book for her.

(Patricia, 8th February 2012)

This clearly showed that while Patricia did not regard reading as important as housework, she still wanted her daughter to learn to read. Consequently, she tried to support her in the way she thought best, that is, by buying her books and flashcards. Unsurprisingly, since Patricia was unable to identify books that were age-appropriate, many of Karen's books contained text that was too difficult to read.

As listed in Fig. 10, Karen had a variety of books that ranged from classics like, *The Ugly Duckling, Rapunzel* and *Snow White,* to more recent popular culture books with characters such as *Dora the Explorer* and *Bratz*. She also had non-fiction books such as *My First book of Words and Pictures* and *Enċiklopedija għat-tfal* (Children's encyclopaedia). Similar to Frankie, Karen's all-time favourite books were the ones about *Ġiġi* which she borrowed from the public library every week and which were identical to the ones they had at school. Patricia admitted that sometimes Karen, just like Frankie, leafed through the library books twenty times before returning them to the library.

Common Reading Books found both at school and at Karen's home		Reading Books at Home			
Name	**Genre**	**Name**	**Genre**	**Name**	**Genre**
Lady Bird: Little Red Riding Hood	Fiction	The Things I love about School	Non-Fiction	Goldilocks and the three bears	Fiction
Lady Bird: Hansel and Gretel	Fiction	My first book of Words and Pictures	Non-Fiction	Alice in Wonderland	Fiction
Lady Bird: Let's Play	Fiction	Sleeping Beauty	Fiction	Aladdin-Peter Pan	Fiction
Big Cat: In the Boat	Fiction	The Elves and the Shoemaker	Fiction	Bratz	Fiction
'Il-Fellus L-ikrah'	Fiction	Flora's Fantastic Revenge	Fiction	Times Table for School	Non-Fiction
'Iż-Żarbun li Jtir'	Fiction	The Ugly Duckling	Fiction	Lady and the Tramp	Fiction
'It-Toqba tal-ġurdien'	Fiction	The king's Shoes	Fiction	Bouncy Tigger	Fiction
'Ġiġi jgħid il-verta''	Fiction	The Beautiful Pattern	Fiction	Farm Yard Shapes	Non-Fiction
'Ġiġi Bravu'	Fiction	50 Bed Time Stories	Fiction	Sly, Fox and the Red Hen	Fiction
'Buxu jirbaħ premju '	Fiction	Dora the Explorer (set of 4)	Fiction	The Gingerbread Man	Fiction
		Dumbo	Fiction	Bartimore Aboard In The Dark	Fiction
		The Little tin Solider	Fiction	'Naqraw ma' Mario u Lisa'	Fiction
		The Brave Little Solider	Fiction	'Hrejjef popolari bil-Malti'	Fiction
		Rapunzel	Fiction	'It-Tlett Qżieqeż'	Fiction
		The Emporer's New Clothes	Fiction	'Enċiklopedija għat-tfal'	Non-Fiction
		The Ugly Duckling	Fiction	'Naqraw ma Mark u Tania'	Fiction
		Snow White	Fiction	'Id-Denfil'	Fiction
		Sly Fox and Red Hen	Fiction	'Il-Ħallelin tal-ħelu'	Fiction

Fig. 10: The left column indicates the books Karen had both at school and at home, while on the right are listed the books she had only at home.

As already stated above, the public library books were more age-appropriate than the ones she had at home, which is why Karen could easily read the simple words from these books. This motivated her to read more. Just as in Frankie's case, the library books created a sense of commonality with those at school. Karen's mother did not consider environmental print as a reading tool. Patricia stated that the computer was not one of Karen's pastime activities. This illustrates the limitation in Karen's exposure to the different reading resources and genres, mainly defined by her parents' attitudes to reading and learning.

Home reading experiences

Karen engaged in voluntary reading experiences at different times during the day. As can be seen from Fig. 11, she engaged in similar reading experiences as those portrayed at school. This might have indicated the school's influence on the type of reading experiences Karen conducted at home.

School Reading Practices	Karen's Engagement in Reading	**Home Reading Experiences**	Home Voluntary Reading	Home Shared Reading
Read-Aloud story session	✓		✓	✓
Maltese Set-Reader	✓	Shopping lists		
English Set-Reader	✓	SMS		
English Sentences/ Words	✓	Signs		
Maltese Sentences/ Words	✓	Advertisements		
English Exercises	✓	Labels on packages		
Mathematical Exercises	✓	Television		
Maltese Exercises	✓	Game Consoles	✓	
Flashcards	✓		✓	✓
Computer			✓	
IWB	✓	Board Games	✓	
Books from Library			✓	✓
Other...	Religion book	Homework	✓	✓

Fig. 11: Karen's reading experiences at school and at home

Her mother explained how during cold weekends Karen liked to snuggle up on the sofa in her pyjamas and read different storybooks. She also played with flashcards with her sister, which indicates that Karen's interest in reading could have been prompted by her older sister's love for books. Thea, who was an avid reader, served as a role model for Karen who emulated her attitudes. For Karen, Thea was assuming her parents' role and provided a salutary example of good reading for her younger sister. Patricia stated that Thea would also help Karen when she encountered a difficulty in homework, especially in the English language. Thea, also spent free time reading storybooks with her sister.

Karen's parents did not stay with her while she did her homework. However, her mother listened to her reading and praised her:

Karen tlesti x-xogħol tal-iskola waħedha u taqra l-kliem li tkun għamlitilhom l-għalliema fil-klassi. Jien ma noqgħodx fejnha bilqegħda, imma ġieli nkun qed insajjar u noqgħod nismaha u ngħidilha kemm hi brava.	Karen does her homework alone and reads through all the words that they would have covered at school with the teacher. I never stay next her, but sometimes when I am cooking I listen to her reading and praise her.

(Patricia, 8th February 2012)

Karen imitated her sister by reading to her younger cousins when she visited her grandma's house. She even read to her dog when she was at home. Before going to bed she regularly read a bedtime story to her father. Patricia explained how Karen never listened to a bedtime story from her parents, but she always read one for them.

Minflok aħna naqraw lil Karen, Karen tħobb taqra lilna. Hija tħobb torqod fejn missierha meta ma jkunx hemm jien u minflok jaqralha storja hu, tispiċċa taqralu storja hi u jorqod qabilha.	Instead of listening to us reading her a bedtime story, Karen ends up reading a story to us. She likes to sleep near her father when I am not there and instead of he reading a story to her, it is she who reads a story to him and he dozes off before her.

(Patricia, 8th February 2012)

Wright, Griffiths and Pratt (2011) believe that children tend to imitate real life scenes as play. On occasions when Karen read to her father and role-played with her cousins, she was not just developing creativity and imaginative skills but she was also developing her reading skills and enhancing vocabulary acquisition. Despite the fact that Karen's parents were not avid readers and did not have enough linguistic proficiency to help her, yet, unconsciously they still supported

her in becoming a proficient reader by listening to her read. As Tizard and Hughes (2002) claim, listening to children read is an effective strategy that can help them develop their reading skills. This view is also supported by Cunningham and Stanovich (1997) who affirm that children who read a lot are more mentally alert, have a larger bank of vocabulary and are more knowledgeable. This explains why, regardless of the lack of support from her parents, Karen was still highly motivated to learn to read and to read to others.

Home-school reading relationship

According to Dickson, MsCabe and Essex (2006), children from low social status families are more likely to lag behind at school when compared with children from more privileged homes. When compared to Frankie's and Natalie's home environments, Karen's home did not promote reading as a positive activity. While her parents were struggling readers and writers, at the same time Karen managed to develop good reading skills at school. Driven by her own intrinsic motivation and a caring sister who served as a role model, Karen read word lists from school books on her own initiative. However, Karen's attitudes at home and at school were not the same. At school, Karen was more interested in running around and playing with her friends while at home she preferred to read a storybook during her free time. Thus, she had developed different attitudes in each context. It may be that at school Karen preferred playing as opposed to engaging in books from the classroom library because, while at home she could model her reading on her sister's, at school none of her close friends engaged in reading a book from the class library. Moreover, she knew that at home she could read the same books by borrowing them from the public library.

Karen was considered by the teacher as one of the most fluent readers in class. Ms Tonna explained how she was impressed when Patricia told her that they rarely helped Karen when doing her homework:

> Karen's homework is always correct without a hitch, but what really impresses me every day is how good she is at reading. One can always hear her voice in the classroom during chorus reading and she knows how to blend the sounds of words and read short sentences without any difficulty. I consider her as one of the best readers for her age and I really hope she remains like this. (Ms Tonna, 8th February 2012)

Findings from various studies (Baker et al., 1997; Frijters et al., 2000) indicate that, children experience a sense of excitement and became more interested in reading when they observe enjoyment on the face of their parents. Karen's parents did not model reading in an enjoyable way, yet, they showed interest when Karen read to them which was likely one of the reasons why Karen showed interest and enthusiasm in reading.

Conclusion

Children's home reading experiences differ and many a time these reflect their performance in school. The relationship between home and school is evident in the childrens' performance and motivation related to reading skills and attitudes. The love of books is a gradual process which develops with time and is dependent most of the time on exposure to books and reading as also to the socialisation process and role models.

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Education for sustainable development in the early years: waste management

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What is sustainability?

The term 'sustainability' has become quite popular and one finds a number of definitions that attempt to describe its substance (Huckle & Sterling, 1996). Sustainable Development has been defined by the World Commission on Environment and Development (1987) as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." In other words, sustainable development is about maintaining the needs of today while supporting the needs of future generations to develop (Salonen & Tast, 2013). A basic principle in the discourses of sustainable development is that environmental, social equity and economic development are interrelated issues (Briguglio & Pace, 2004; Chan, Choy, & Lee, 2009; Drexhage & Murphy, 2010; Johansson, 2009; Kahriman-Ozturk, Olgan & Guler, 2012; Salonen & Tast, 2013).

Despite all the discourse about sustainability, it is now widely recognised, that the Earth's limited natural resources are not being replenished at the same pace as they are being consumed (El Haggar, 2010; Elliott & Davis, 2009; Martínez Agut, Ull, & Minguet, 2013; UNESCO, 2004). Waste disposal, global warming, depletion of our natural resources (such as soil and water) and the risk of contamination of the air, are all creating an ecological imbalance and loss of biodiversity (Siraj-Blatchford, 2009). We are borrowing our planet from the future generations and if we do not plan carefully for sustainability we risk leaving a wasteland to our children (Davis, 2007; Elliott, 2010; Johansson, 2009).

Children's right to be heard and participate

Even though young children will inevitably reap the consequences of our actions and inactions on issues related to sustainability, education for sustainability is under practised (Davis, 2009). Awareness and interest about the state of the world's environment is unquestionably on the rise (Davis, 2010). Although it has been recognised that crucial learning for child development takes place between birth and six years, this realisation has not up to now found itself in the programme of Education for Sustainable Development. The Early Years' sector is an indispensable vehicle in the drive to improve the possibilities for a sustainable society because it is of utmost importance that children are acknowledged as environmental stakeholders in environmental issues (Ärlemalm-Hagser, 2013; Engdahl & Rabušicová, 2011a; Siraj-Blatchford, 2009) with a right to a meaningful participation (Alderson, 2008; Engdahl & Rabušicová, 2011a; Engdahl & Rabušicová, 2011b; Johansson, 2009; Mackey, 2012). UNICEF holds that, in matters related to social and environmental issues, children need to be seen and heard, and

observes that one cannot expect a person to become a responsible citizen once the biological clock marks eighteen years of age (Bellamy, 2002).

The UN Convention on the Rights of the Child (UNCRC) affirms that children have the right to be involved and to be heard in matters that are affecting them. With their informed participation, support, protection and education, the young learners will participate and be directly engaged to help improve the chances of a more sustainable future for all (Engdahl & Rabušicová, 2011a; Mackey, 2012; McDonald & Dominguez, 2010; Spies, 2011). Consequently, young children can become responsible adults fostering care and responsibility about others with an embedded disposition of care for the environment (Alderson, 2008; Duhn, 2012; Elliott, 2010; Engdahl & Rabušicová, 2011a; Mackey, 2012; Martínez Agut, Ull, & Minguet, 2013; Ofei-Manu & Shimano, 2012). This is a great challenge for the early childhood educators. Various researchers point out that fostering positive attitude towards environmental issues in the early years is crucial, as otherwise there is a high risk that these attitudes will not be developed later on in life (Duhn, 2012; Mackey, 2012; Salonen & Tast, 2013; Wilson, 1994).

Early childhood education has the potential to promote change and enhance the lives of communities on a global scale by developing the learning dispositions of young children (Davis, 2007; Degotardi, 2009; Engdahl & Rabušicová, 2011a; Siraj-Blatchford, 2009; Spies, 2011). Although researchers highlight children's capacity for active participation, children are not "redemptive vehicles" (Caiman & Lundegård, 2013; Davis, 2008; Moss, 2006; Saba Siddiqui & Aqil, 2014) where all the environmental misfortunes are restored through children. If we are to move towards more sustainable thinking and living, we should embrace the opportunity to empower children's capacities to influence others in their social circles to generate changes in attitude and practices (Armstrong, 2011; Saba Siddiqui & Aqil, 2014; Sheridan & Pramling Samuelsson, 2001; Wells, 2013). After all it is the right of the child to participate in the communities in which they reside, "not as future citizens, but as citizens of the present" (Hall & Rudkin, 2011, p.2).

Children are individuals with competences; it is the responsibility of the educator to raise awarness in the early childhood, as this can transform children significantly into better seasonsed citizens (Ärlemalm-Hagser, 2013; Caiman & Lundegård, 2013; Saba Siddiqui & Aqil, 2014; Salonen & Tast, 2013; Wells, 2013). The educator is responsible for developing the environment in which children can be encouraged to develop foundational values, skills and strategies. This can be done through active engagement in decision making processes and practices whilst stimulating the children's desire for learning (Armstrong, 2011; Davis et al., 2009; Engdahl & Rabušicová, 2011a; Martínez

Agut, Ull, & Minguet, 2013; Saba Siddiqui & Aqil, 2014; Salonen & Tast, 2013; Wells, 2013). Providing supportive conditions for the child's involvement, with the children's initiated, direct participation, and shared decisions with those of the adults, constitutes one of the highest rungs in Hart's ladder of participation (Howe & Covell, 2005; Sheridan & Pramling Samuelsson, 2001).

The National Curriculum Framework and the Early Years

Early childhood educators are being increasingly acknowledged and appreciated. Such trends can also be seen in Maltese *A National Curriculum Framework for All* (NCF). The NCF (Ministry of Education Employment and the Family, 2012) recognises that, in the early years children develop themselves as individuals and establish themselves within society through interaction with others. It is essential that young children are exposed to programmes which promote active involvement and experiential learning. Moreover, it is imperative that the holistic development of the child is undertaken, as this will contribute to the achievement of the competences mentioned in the NCF (Ministry of Education Employment and the Family, 2012, p.49). These competences are translated into learning outcomes and it is expected that by the time children move to formal obligatory schooling they would have acquired these skills (Ministry of Education Employment and the Family, 2012; Ministry for Education & Employment, 2013). It is evident that education for sustainable development is becoming an increasingly important area in the early childhood sector (Degotardi, 2009; Caiman & Lundegård, 2013).

Environmental education in the early years

Environmental education in the early childhood years enriches the child's development as it influences healthy interactions with the environment (Spies, 2011). The early childhood years are also crucial in the development of positive environmental attitudes (Engdahl & Rabušicová, 2011b; Martínez Agut, Ull, & Minguet, 2013; Salonen & Tast, 2013; Spies, 2011; Wilson, 1996). Research highlights that there is a link between environmental education and early childhood education. Nature and children have been entwined since the Enlightenment (Ärlemalm-Hagser, 2013). Rousseau introduced the term 'naturalism' (Chandra & Sharma, 2006) and stressed that the interaction between nature and people was important. Furthermore, the naturalist philosopher contended that education was to be based on the notion of nature as the raw material for future development (Rousseau, 1979). Piaget, a constructivist theorist advocated that children learned by doing and that the environment enriched and influenced children (Essa, Young, & Lehne, 1998; Furth & Wachs, 1974). In other words, children derive their reality by exploring the world while they create beliefs, values and attitudes

(Biriukova, 2005; Engdahl & Rabušicová, 2011b; Nikolaeva, 2008) which are crucial towards gaining an ability to foster sustainability aptitudes. Bandura, claimed that children were influenced by experiences and observations and went on to propose modelling for children so as to establish the process of acquisition. Dewey, Frobel and Steiner promoted the holistic approach and virtue of outdoor play in natural settings (Davis, 2010; Elliott & Davis, 2009). These educational thinkers suggested that early childhood education should encompass play in natural environments as a human potential. Malaguzzi advocated the sense of self and held that co-construction of knowledge is of utmost importance, in the early childhood years (Smidt, 2013). Bronfenbrenner (1986) valued the environment and pointed out that the child's development is influenced by the social structures, culture and the larger society.

Why the early childhood sector has been slow to engage with education for sustainability

Despite all the environmental issues that were brought to light, yet early childhood education for sustainability has gained the least attention from the education world (OECD, 2006). Considering that historians linked the child to nature (Duhn, 2012; McDonald & Dominguez, 2010) it is baffling to critically analyse 'the research hole' (Davis, 2009) linking discourses of sustainability and environmental issues in the early childhood sector. Davis (2009) carried out a survey on a number of Australian journals in order to identify the studies which intersected environmental education and early childhood education. Sadly, over a twelve year period, less than five percent of published articles were found. From those studies, little reference was found to contribute to sustainability in the early childhood sector (Davis, 2009; Elliott & Davis, 2009). In the international arena, Sweden hosted the first UNESCO-supported event dedicated to the role of early childhood education and sustainability. This event brought together a small number of participants from around the globe (Davis, 2009). Nevertheless, responses about uptake and interest in Early Childhood Education for Sustainability (ECEfS) are still very patchy. Elliot and Davis (2009) contend that some members of the educational field are already exposing the notion of education for sustainability to the children. Davis (2008) claims that there are some centres that have engaged in education for sustainable development as they recognise that the early years are the pivotal period when the very young child can be a proactive participant (Davis, 2008; Salonen & Tast, 2013; Spies, 2011). Since research is scarce in the early years, it is important that the educators are able to research, investigate and interrogate their work and most importantly make their work available to a wider audience (Davis, 2008; Edwards & Cutter Mackenzie, 2011). It is the absence of such studies that underpin ECEfS that further contributes to the research hole (Davis, 2009; Salonen & Tast, 2013).

If this hole is not attended to it will impact negatively on the prospect of development of the field (Davis, 2009).

Barriers towards education for sustainable development

Despite uptake by other educational sectors, the early childhood education sector has been slow to engage in the field of environmental education (Davis et al., 2009; Elliott & Davis, 2009; Martínez Agut, Ull, & Minguet, 2013; Saba Siddiqui & Aqil, 2014; Salonen & Tast, 2013). This can be traced to specific barriers to young children's participation. The literature has identified various factors which affect the promotion of ESD during early childhood.

Children viewed as vulnerable human beings

Discourses of protection, vulnerability and innocence are quite accepted and welcomed in the early childhood settings (Duhn, 2012). Play in the natural environment is being eroded as concerns about outdoor safety are always prime issues (Pronczuk de Garbino, 2004). The desire to create a special safe place for these 'bubble wrapped' (Duhn, 2012; Malone, 2007) children surrounded by 'helicopter parents' (Davis, 2010) is evident in the child over protected by a dominant adult (Duhn, 2012). While it is of utmost importance that the parents promote children's safety, Furedi (2001) and Duhn (2012) point out that the perceptions of risk in everyday childhood have been exaggerated. Furthermore, Furedi (2001) stresses that play in the natural environment is well worth the risk as it stimulates the child's development.

Real learning takes place indoors

New learning technologies are widely available which offer attractive alternatives rather than experiential learning in the natural outdoors (Elliott & Davis, 2009). There are various ways that Information and Communication Technologies can be introduced to children to help them learn about various topics. Children who are exposed to ever increasing screen based technologies are on the rise. More often than not, the children opt to play with digital technology inside the house rather than to venture outdoors. To this end, the children's behaviour, well being, social skills and eyesight, are deteriorating due to the overuse of technologies (Hoban, 2005; Moore & Cooper Marcus, 2008; Palmer, 2006; Rose et al., 2008).

Traditions – play in nature

Some educators often attribute education for sustainability with outdoor play with no educational value (Elliott & Davis, 2009). While playing outdoors, young

children are assumed to be making connections with the natural environment. In reality, children are exploring values, enhancing their problem solving skills, engaging in participatory decision making whilst developing a sense of place and local relevance (Elliott & Davis, 2009; Samuelsson, 2011). Various developmental theorists have heightened awareness that children learn through active physical and sensory engagement. Furthermore, Davis and Elliott (2004) argue that children need to be engrossed in "a sea of natural stimuli" (p.5) and not play in synthetic spaces with an overwhelming smell of hot asphalt. Experiential play in an outdoor environment is often seen as the third teacher (Davis, 2009).

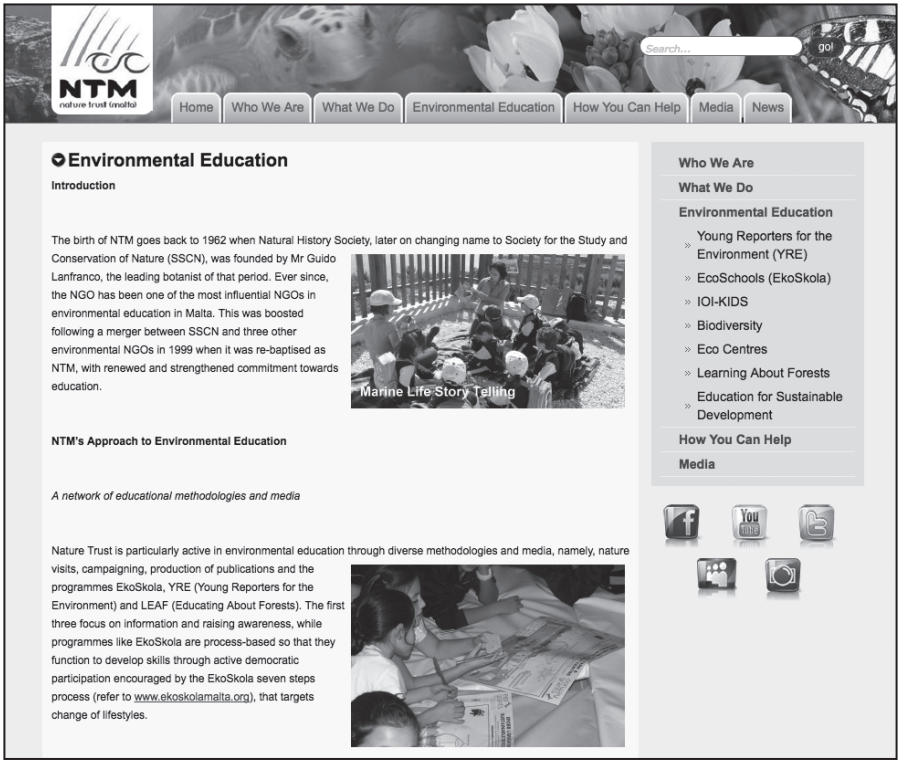
Doom and gloom

Childhood is very often seen as a transition time proceeding to adulthood. More often than not children are viewed as innocent, vulnerable and immature (Elliott & Davis, 2009; Mackey, 2012). From this viewpoint, it is assumed that the world issues are too grim to be presented to young children who, at this age, are still very young and also incapable to understand. Children in the early years are very often seen as vulnerable human beings, and are given few opportunities where they can genuinely and actively participate (Mackey, 2012). Furthermore, time and again children are viewed as ignorant and incompetent young persons who have not yet attained the citizen status in their society (Mackey, 2012). While the adult grapples with the notion whether one should be introducing real world issues in the Early Years, in actual fact these issues are already part of the children's everyday lives no matter how much we wish this to be otherwise (Davis, 2010; Edwards & Cutter Mackenzie, 2011).

Berg, Raven and Hassenzahl (2009) address the need to focus on the real problems as individuals whilst solving problems as a society. To overcome these barriers it is crucial that children are empowered to participate, encouraged to learn democratic ways to make decisions, and to experience the power of community in bringing about change. Even very young children can play an active role, under the guide of an educator who attends closely to their play (Hall & Rudkin, 2011), scaffolds learning, provides resources and acts as a role model (Davis, 2010). Considering what the NCF states about early childhood education, the barriers towards environmental education can and should be easily overcome.

Features of a pedagogy that can support education for sustainable development

Although there is ample research about pedagogy for young children, Samuelsson (2011) presents six important features that need to be considered when choosing a pedagogy to support education for sustainable development.



Educating children for the environment is offered by NGOs such as Nature Trust Malta as also announced on its website (http://www.naturetrustmalta.org/environmental-education/)

Starting point – the children must be viewed as competent human beings with the ability to solve complex tasks (Davis et al., 2008).

Children's everyday lives and experiences – children come from different walks of life, different backgrounds, different cultures and different experiences. Although children might be exposed to the same situation, they might be experiencing that situation in different ways (Samuelsson & Pramling, 2009)

Children are playing learning individuals – meaningful play with supported strategies will prompt the children to participate in the experience. A rich experience in a meaningful context will expose children to materials for exploring new facts. This experience might result in the production of new objects and ideas (Edwards & Cutter Mackenzie, 2011; Samuelsson, 2011).

Challenge children without threatening them – it is important to create a secure environment where children feel safe to try out their own ideas and have a positive attitude to take initiatives. In the Early Years it is especially important for children to be empowered to try their ideas rather than just remember facts (Samuelsson, 2011). Children need to be empowered to believe in their potential and capabilities.

To communicate and interact – maximum interaction and communication between the educator and children is crucial in Early Years settings. Motivating the children to broaden their knowledge by arousing curiosity, perseverance and imagination will help the children to interact with their peers.

Support children to be participants – although this is related to interaction and communication, the educator should trust in the children's capabilities that they fully believe in themselves and are aware of their potential and capabilities (Ministry of Education Employment and the Family, 2012).

These six features closely resonate Hart's ladder of participation (Hart, 1992) and are at the core of the UN Convention of the Rights of the Child (UNCRC, 1989).

Sustainable development in practice and available literature

Leading by example is essential since much learning occurs by observing models. Children tend to follow the early childhood educator's steps, hence it is important that the educator sets a good example (Armstrong, 2011; Davis, 2009). Practising sustainability in early childhood settings is crucial as this allows the setting to examine the 'ecological footprints' while working to reduce waste, energy, water and materials. All these practices could be easily included in class as part of the daily routine (Armstrong, 2011; Ofei-Manu & Shimano, 2012; Spies, 2011). Modelling behaviour such as closing the water tap after washing one's hands, switching off the lights when going out of the class, and reusing cardboard and other materials, is quite easy and practical in the Early Years setting. The need for education for sustainability is so urgent that the United Nations declared 2005-2014 to be the 'Decade of Education for Sustainable Development' (UNESCO, 2010). Challenging thinking and actions helps to arouse a culture of sustainability and must be a lived journey which should begin without delay (Armstrong, 2011; Elliott, 2010).

Literature exploring children's attitudes in preschool settings towards environmental issues is on the increase (Martínez Agut, Ull & Minguet, 2013). Browsing through the literature one comes across a selection of research projects which were carried out on the Early Years. Although the Early Years cover the age

range from birth to seven years, very few studies seem to have been carried out with three year olds. On the other hand, various researchers did projects within the Early Years sector focusing on children aged between four and seven.

Palmer and Suggate (2004) have researched the acquisition and development of environmental knowledge, awareness and concern of children whose ages were between four and ten. The report discussed the children's ideas about distant places and environmental issues. The researchers found that children as young as 4 years of age are capable of understanding and making accurate statements about change of environmental habitats and living creatures.

Davis (2008) provides a short case study of how an early childhood setting in Australia has encouraged sustainability throughout all its practices

Researchers have found that young children can understand and connect the change of environmental habitats and living creatures

with children ages 2.5 to 5 years. Through this 'Sustainable Planet Project' children were the main initiators of new projects which dealt with water conservation, waste management and recycling. Furthermore, through the project the children developed curiosity about the natural environment, were more interested to learn about natural processes, and were more sensitive to the environment and socially responsible, which is an essential quality for sustainable living.

Another research project was carried out at a campus-based kindergarten. A number of topics were included and explored in the research carried out by Pratt (2010). This were: waste and resource management, connecting with nature, efficient use of natural resources, wise use of chemicals and green cleaning, and sustaining sustainability. Pratt (2010) built his programme of study on the basis that children are able and competent students who are capable of solving problems and take actions to deal with environmental and sustainability issues which are relevant to their lives. Throughout the project Pratt (2010) explored a multitude of teaching possibilities that teachers can work out with three and four year olds.

Conclusion

Indeed, work with young children in the Early Age category can bring about awareness and help such children to become dedicated workers for a better and more sustainable world. Education can begin from when people are very young as it is the methods used that make the difference more than the content itself. Knowing how to teach and what to teach according to the age group can bring about the desired results as recent research has been indicating and reinforcing.

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On-going professional development of teachers: the case of Malta

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Introduction

This article gives a general overview of teachers' professional development (PD) by looking closely at the different definitions and types of PD. It also highlights the advantages that teachers benefit from when continuing their PD. Furthermore, key factors are identified which encourage teachers' participation in further PD, as will also be underlined the different barriers which teachers encounter when continuing their PD. The article also looks at teachers' PD in a number of countries, especially those of Europe, by comparing and contrasting different studies. Finally, there is a focussed analysis of the various PD opportunities offered to Maltese teachers with special reference to the INSET programme which is commonly practised in Malta.

Professional Development

What is teachers' professional development?

Since many years PD has been a main field of research in the field of education because its structure continuously changes (Bezzina, 2002; Friedman, Durkin and Phillips, 2000). It is imperative to provide teachers with enough opportunities to further their PD, and this for a number of reasons. Such an imperative is reflected in various educational policy documents, such as in the National Curriculum Framework (Ministry of Education and Employment, 2012) proposed in Malta, where it is stated that PD caters for students' learning but it also helps teachers to be able to put the curriculum successfully and constructively into practice. Thus, school stakeholders, especially "teachers require adequate and on-going support, including continuous professional development" (Directorate for Quality and Standards in Education, 2009, p.14). PD works hand in hand with the cultural changes of a society. Vescio, Ross and Adams emphasize the importance of "collaboration that promotes changes in teaching cultures" (2008, p.84). It thus transpires that, when teachers and other educational institutions work together, they are investing in their expansion of learning.

Different definitions are used to define the teachers' PD. Neil and Morgan regard on-going PD as "developmental activities that take place following the induction period" (2003, p.39). Bezzina and Camilleri present a more detailed account of PD when focusing on its advantages, as they emphasise "the on-going learning opportunities that all educators pursue in order to grow personally and collectively" (2001, p.158).

PD should be perceived as an ongoing process which helps teachers to develop holistically, that is, for their personal growth as also for advancement

in their profession; this brings about effective learning. As stated by OECD, "professional development is defined as activities that develop an individual's skills, knowledge, expertise and other characteristics as a teacher" (2009, p.49). All teachers need motivation to help them grow personally and to adequately develop their teaching skills. Therefore, ongoing training is of utmost importance to teachers. Marzano (2003, cited in Kentucky Board of Education, 2012, p.68) has argued that, "in order for professional development to be effective, it should be a deliberate process that occurs within the context of a teacher's daily activities in the classroom/school environment and connects back to student learning."

Different types of professional development

"There are a variety of methods, techniques, and venues for professional growth and development" (Kentucky Board of Education, 2012, p.70). PD can take place directly through seminars, training, courses, scholarships and school meetings, among others, and indirectly through reading educational sources, watching educational programmes and such like (Ganser, 2000, cited in Villegas-Reimers, 2003). However, the most common PD method which teachers experience "involves the direct transmission of knowledge or skill" which is quite traditional (Hayes, 2010, p.3). Amongst other professional training offered, teachers need to involve themselves in school based training which nurtures a sense of belonging to the school environment and supports their professional growth and facilitates learning (European Union, 2010). Hargreaves (1992) points out, that teachers can become professionally developed through different techniques especially through critical thinking. Most teachers reflect on their classroom practices by thinking around what could be improved and what went right since, "the overall outcome of reflective thinking is learning" (Rogers, 2000, p.138). According to Rogers, "as individuals learn through reflection, they are able to enhance their overall personal and professional effectiveness" (2000, p.137). Other teachers may prefer to read from different sources, such as books and journals, to help them build new understanding based on concepts or ideas of experienced teachers, however, it is sometimes difficult to interact with the reading source without real contact with people (Neil and Morgan, 2003). According to O'Hara and O'Hara, "the lack of editorial control means that the quality and suitability of material can vary widely" (2001, cited in Neil and Morgan, 2003, p.106). Furthermore, some online sources are not accessible for everyone and libraries are not always updated with recent publications, but it is considered to be the "the cheapest and easiest (if loneliest) form of professional development" (Neil and Morgan, 2003, p.106).

PD can be compulsory or on a voluntary basis. Compulsory courses are given to teachers since "the skills and knowledge the development activities

aim to enhance are considered important for teacher quality" (OECD, 2009, p.74). Neil and Morgan (2003) believe that such ongoing courses which are compulsory should be planned adequately in a way that the material taught has to do with the teaching reality of classrooms and it has to be inter-related with the necessities of each teacher and school environment. Apart from the content taught, knowledgeable trainers can also be very helpful to teachers in the sense that they can share their own experiences, knowledge and understanding of certain issues which are common nowadays such as behaviour management, handling the curriculum, assessment and many others. According to Hargreaves (1992) social contact is crucial in teachers' PD through peer-tutoring and structured courses which focus on dialogue and feedback. Nevertheless, students are also considered important contributors to teachers since they can provide feedback to help them improve their teaching styles used in the classroom.

According to the Teaching and Learning International Survey (TALIS) done by the OECD (2009), teachers stated that those courses which they paid for where much more beneficial for their professional growth than those courses which were compulsory. The different types of professional training undertaken by teachers in Malta between 2007 and 2008 are shown in Table 1.

Different types of professional development undertaken by teachers	The level of participation of Maltese teachers in 2007-2008
1. Courses and Workshops	73.9%
2. Education Conferences and Seminars	70%
3. Qualification programmes	94.4%
4. Observation visits to other schools	69.8%
5. Professional development network	75.2%
6. Individual and collaborative research	89.8%
7. Mentoring and Peer Observation	67.8%
8. Reading professional literature	78.1%
9. Informal dialogue to improve teaching	84.3%

Table 1: Different Types of Professional Development (adapted from the OECD study carried out in 2009 as cited in European Union, 2010, p.92)

Why on-going professional development is important in teaching

Many educators emphasize the importance of continuing one's PD especially with regard to teachers since some of them may feel that they are not trained well. Villegas-Reimers indeed holds that, "a significant number of teachers throughout the world are under-prepared for their profession" (2003, p.19). There is a constant urge to train teachers to offer "the conditions and opportunities for all learners to achieve their full potential" (Ministry of Education and Employment, 2012, p.16). Teachers need to be adequately trained to make it possible for all students to learn in the best classroom environment possible. Therefore, student learning is dependent mostly on teachers' performance (Hawley and Valli, 1999). From the study carried out by Bolam et al. (2005, cited in Vescio, Ross and Adams, 2008) it emerged that teachers identified a correlation between their ongoing professional training and student learning and changes in their teaching methods.

Professionals are there to guide teachers and give appropriate feedback when the need arises since "teachers do not develop their strategies and styles of teaching entirely alone" (Hargreaves, 1992, p.217). This would mean that all teachers need training to gain specific needs or tools that are considered assets in today's schools, such as the use of interactive whiteboard, and other common issues which teachers face, such as adapting learning and resources to support children with special needs (Kosko and Wilkins, 2009). Collaboration between teachers is another important aspect in the teaching profession which needs to be practised by teachers. Attard Tonna and Calleja stress that, "one of the most effective ways to promote professional collaboration is through in-service teacher education and training" (2010, p.38).

Nowadays, society has become a fundamental agent in teachers' education since it demands more from their professional role, thus increasing their responsibilities (European Union, 2010). This brings about more training carried out by teachers in order to broaden their knowledge and cope with challenging situations that they may encounter to make teaching a successful learning experience. However, teaching has become a more complex task due to a number of reasons such as the increased responsibility and workload which lead to exhaustion and eventually to burn-out to which numerous teachers fall victims. These realities demand that teachers have to be as well-prepared as possible, equipped with the right teaching tools and an adequate level of expertise which empowers them towards making learning more accessible to students (Eurydice, 2008).

Advantages of professional development

Researchers argue that on-going training and lifelong learning are two vital mechanisms which work towards the formation of the teacher and bring about change in schools (Putnam and Borko, 2000; Sleegers, Bolhuis and Geijsel, 2005; Smylie and Hart, 1999, all cited in European Union, 2010). Adey underlines the importance of educational change through focusing on "human teachers [who] are and will remain at the centre of the educational system, and thus the continuing professional development of teachers remains the most important force in the quest for educational improvement" (2004, p.3). Indeed, Villegas-Reimers believes that, "successful professional-development experiences have a noticeable impact on teachers' work, both in and out of the classroom" as teachers' attitudes and values are influenced by the PD taken (2003, p.19). Borko and Putnam (1995, cited in Villegas-Reimers, 2003) emphasized the notion that PD greatly influences and eventually changes the teaching methods of teachers which have a positive impact on students' learning. However, Calleja and Montebello opine that "it is only through reflective practice, in which teachers critically reflect on the strategies and methods they use, that a transformation can come about" (2006, p.59).

Baker and Smith (1999, cited in Villegas-Reimers, 2003) gave importance to a list of characteristics present in PD which mostly help teachers develop their teaching skills and improve learning in the classroom. These characteristics include emphasizing realistic and achievable targets, "support from colleagues", a myriad of opportunities available to teachers to evaluate the outcomes of learners when improving teacher education and "activities that include both technical and conceptual aspects of instructions" (p.21). Ongoing PD should eventually be evaluated in relation to improved student attainment (Neil and Morgan, 2003). In the study carried out by Supovitz, it emerged that "giving teachers the power to be decision makers in their own learning process was essential to improving students' learning" ((2002, cited in Vescio, Ross and Adams, 2008, p.85). Another determinant factor in assessing the correlation between student achievement and the level of teacher professional development "is whether teachers are teaching a subject for which they were prepared to teach" (Villegas-Reimers, 2003, p.23). This will greatly affect the performance of teachers and the learning outcomes of learners.

Factors that encourage more professional development amongst teachers

One important aspect of PD is that all teachers need to undergo training for making progress in schools more attainable. Thus, many stakeholders

emphasize the importance of training teachers to improve teaching and learning in schools. This is also pointed out by Adey who states that there is a "continuing demand from society…for improvements in the quality of education" (2004, p.2). Villegas-Reimers adds that, "the depth of knowledge and practice expected of a teacher has increased over the past few years" (2003, p.125).

For educational change to take place, teachers need to be intrinsically motivated to seek more training. Schools are considered to be "the most immediate sources of internal support for teacher professional growth"; therefore, schools should aim to develop structures of support which help teachers keep up with their PD (Bezzina, 2002, p.69). Heads of school are highly influential in supporting teachers' PD. There are a number of ways how this can be encouraged. However, it is essential that heads of school are committed and active in organising in-school PD throughout the whole scholastic year as this meets teachers' needs best. In-school PD is important since it is specifically planned by the head of school to cater for the needs of teachers in the particular school context. Therefore, teachers are expected to be more involved as the PD programme is more focused and structured in line with their specific needs. This makes it more interesting since it is assumed that there will be more participation from teachers thus reducing the chance of these being passive recipients (Bezzina, 2002). Furthermore, PD courses need "to directly address immediate and long-term needs at the school site" (ibid., p.71).

Nowadays, teachers can communicate with each other with greater facility by means of new technology which is continuously evolving especially through School Online Sites. This environment helps to draw schools closer together and enables teachers to share resources and other useful material, thus facilitating learning. This new system in schools is brought about by further PD and specialization in ICT skills together with school policies which encourage the use of ICT and collaboration amongst teachers (Ministry of Education and Employment, 2012). According to Crawley et al. (2009, cited in Vuorikari, 2010), from 1,308 teachers who took part in a survey carried out in 2008, one third of these stated that they enhanced their teaching skills through eTwinning, which is an online platform that promotes collaboration between schools in Europe. Additionally, more than 75% of teachers surveyed stated that through the eTwinning project they improved in many key areas including ICT skills, teaching and communication skills, interdisciplinary skills, together with gaining more knowledge about innovative teaching approaches (Vuorikari, 2010). Thus, through the eTwinning project which is an international organization established in 2005, teachers are trained and supported all the way

In today's educational environment it is quite beneficial for teachers to become accustomed in the use of ICT

through and are given a "wide range of awards" which serve as extrinsic motivation (Gilleran, 2007, p.5). Therefore, motivation can also be present through external rewards which serve as an incentive that triggers more PD amongst teachers. Apart from being an eTwinning project which embraces lifelong learning, more than 90% of teachers admitted that "it was fun" (Vuorikari, 2010, p.7).

Teachers may also feel motivated to learn more about particular topics which they find interesting. Such would especially include those which are mostly encountered during their teaching experience in schools. Therefore, motivation has to come from within. When progress is made in particular subjects, they feel more at ease when handling certain issues or problems, and this leads to improving students' learning and needs. Teachers need to put into practice what they have learnt during PD courses so that "they will enhance the quality of the teaching and learning taking place in their classrooms and they will benefit the schools in which they are working" (Neil and Morgan, 2003, p.40).

"In seeking to meet teachers' professional development requirements, policy makers and practitioners need to consider both how to support and encourage participation and how to ensure that opportunities match

teachers' perceived needs" (OECD, 2009, p.78). One way of encouraging participation of teachers is by offering "incentives such as salary increases or credits for promotion". However, "not all kinds of professional development activity may result in a salary increase" (European Union, 2010, pp. 47–48). Teachers in Iceland have a teachers' wage contract which states that a salary increase is given when they possess master's degrees and doctorates (European Union, 2010). In Spain, teachers are given remuneration "for civil service teaching staff after a minimum of five or six years of teaching" and have to prove that they attended a minimum amount of hours of professional training. Policies are also another tool in raising teachers' participation (European Union, 2010, p.48).

Teachers in Estonia are given an incentive when continuing their PD. There are four different professional levels which are attributed to teachers according to their amount of PD courses taken after completing their initial teaching training. These are "junior teacher", "teacher", "senior teacher" and "teacher methodologist" (Vuorikari, 2010, p.25). Teachers are extrinsically motivated to take PD courses to help them move up from one level to the next by improving their professional career status which is eventually reflected in their salary (ibid, p.26). Therefore, there is a correlation between the professional status of teachers and the amount of PD taken.

Difficulties to continue with professional development

Time and financial resources are the most common barriers which teachers encounter (Villegas-Reimers, 2003). Other barriers to PD are also highlighted by Bezzina (2002) who points out that INSET is usually given to a small number of teachers. Teachers may not find enough support to develop professionally. Attard Tonna and Calleja observe that, "not all professional learning processes manage to create the ambience and the adequate support structures for these communities to develop" (2010, p.38). Another drawback is that heads of school and teachers are not offered opportunities to choose and prioritize their needs which could be addressed in the INSET organised by different organisations (Bezzina, 2002). Consequently their needs are not adequately addressed.

There should also be appropriate "follow-up procedures" to establish the relevance and quality of the in-service training (Bezzina, 2002, p.65). Furthermore, PD is usually limited to out-of-school courses with little reference being made to in-school PD activities. A crucial lacking factor in the planning of INSET given to teachers is the element of continuity which is very important when dealing with educational needs (Bezzina, 2002). As a result, its effectiveness in the classroom is downgraded since PD is not on-going.

PD courses should reflect the reality in schools rather than being considered as a separate entity. Lack of collaboration between different organizations is another barrier to the efficient planning of INSET (Bezzina, 2002).

From the Teaching and Learning International Survey (TALIS) carried out in 2007 and 2008 by OECD (2009), teachers who were willing to do more PD where asked to give reasons for discontinuing their PD. The most common motivations given were "conflict with work schedule" with 47% of teachers, and "no suitable professional development" with 42% (OECD, 2009, p.72). These two reasons where the most common barriers cited by teachers in all of the OECD countries except four – Hungary, Mexico, Poland and Malta – where teachers cited a different barrier to PD. Teachers in Hungary, Mexico and Poland reported that the cost of PD was the most problematic of all barriers with 47%, 49% and 51% respectively (OECD, 2009). Teachers in Malta (45%) cited that "family responsibilities" was the most common barrier which effected their participation in more PD (OECD, 2009, p.72). More than one third of teachers in Denmark reported that "lack of employer support" was another barrier to PD (OECD, 2009, p.72). A small number of teachers in Bulgaria, Italy and Spain also cited the latter as a barrier (OECD, 2009). Another common barrier mentioned by teachers in Malaysia was the lack of requirements needed for the appropriate development to take place (OECD, 2009).

The European Union has observed that "not only are there few incentives to encourage teachers' participation in continuous professional development, but penalties for failure to participate appear to be uncommon". However, particular countries, which include Belgium, Malta and Portugal, penalize teachers for not participating, as this is "regarded as a negative element in the appraisal of teachers" (European Union, 2010, p.49).

A further barrier is that teachers' status in certain countries, including Malta, remains the same even when teachers continue their PD. On the other hand, in Estonia, for example, "if a senior-level teacher fails to engage in continuous professional development, he or she may fall back in status level" (Vuorikari, 2010, p.26).

Teachers' professional development in various countries

On-going PD is offered to teachers in diverse areas. These include pedagogy, structure and other important factors established by education policies. In various counties training may be paid for by the teachers themselves or by specific organisations; it can also be compulsory or on a voluntary basis (European Union, 2010). In most of the EU countries, the budget for PD is

managed by the education authorities. This happens in Bulgaria, France, Germany, Hungary, Ireland, Malta, Portugal and Spain. However, in other countries PD is not funded by the education authorities but is handled by teachers themselves (European Union, 2010). Teachers in Estonia who receive their salary from the state budget, have to forward at least 3% from their teachers' salary to fund their local authorities to be used for teachers' PD (Eurydice, 2008, cited in European Union, 2010). Therefore, not all countries offer teachers free PD courses. In Finland, on-going PD which is organised at school is free of charge since it is planned and financed by the education sector (European Union, 2010).

PD in Luxembourg, Poland, Portugal, Slovakia, Slovenia and Spain is optional; however, it is tied with career advancement and salary increase. Teachers in Luxembourg and Spain are entitled to a salary bonus when they attend an amount of PD courses. Teachers in the other four countries are given special credits for attending PD courses which are taken into consideration when applying for promotions (European Union, 2010). On the other hand, ongoing PD in Cyprus, Greece and Italy is considered compulsory for newly qualified teachers (Eurydice, 2008, and European Commission, 2009, cited in European Union, 2010). According to the TALIS survey carried out by OECD in twenty-three countries, "on average across countries, more than half of the teachers surveyed reported having wanted more professional development than they had received" (2009, p.59). The highest percentage of teachers who requested more professional training were those in Mexico, Brazil and Malaysia with over 80%. Belgium had the lowest percentage of teachers, 31%, who did not demand more professional training (ibid., 2009).

The European Union (2010) found that on average, 89% of teachers from the 23 contributing countries had stated that they engaged in PD for at least one day during a period of 18 months prior to when the survey was carried out. This is quite impressing since it indicated the high percentage of teachers who involved themselves in on-going training. From the fifteen EU countries participating in this study, Spain had the highest percentage with all teachers having participated in PD during the chosen 18 month period, whereas Slovakia had the lowest percentage with less than 75% of teachers. From eight non-EU countries, Australia had the highest percentage of teachers participating in PD with more than 95%; however, Turkey had the least number of trained teachers with less than 75% (European Union, 2010).

According to the TALIS survey carried out in 2007 and 2008, teachers were asked to rate different areas for which they considered the need of more training towards their professional growth. In the 23 participating countries, nearly one third of teachers rated "teaching special learning

needs students" as a high development need which meant that teachers felt that more training was required in certain areas (OECD, 2009, p.60). The second area indicated for more PD was "Information and communication technology (ICT) teaching skills" with 25% of responses (OECD, 2009, p.60). A further important area was "student discipline and behaviour" with 21% of responses (ibid., p.61).

It transpires that organisations have to cater for teachers' priority needs related to more professional growth. Teachers should be consulted regularly with regard to organised courses, especially INSET, and this so as to achieve effective learning. "Ongoing professional development in classroom management is essential for all teachers but especially important for new teachers" (Oliver and Reschly, 2007, p.3).

Factors which greatly influence teachers' participation in PD are age, qualification level and gender. It is also indicative that, on average, the amount of professional development received by teachers decreased with age, and according to data that emerged from the TALIS participating countries female teachers participated in slightly more PD than males (European Union, 2010).

On-going professional development in Malta

INSET was primarily established in Malta in 1988 by Prof. Christopher Bezzina (who is currently a member of staff at the Faculty of Education of the University of Malta). INSET was first given to teachers on a voluntary basis and which was for one week, but which later became a three-day compulsory course in 1994.

While Attard Tonna and Calleja were writing, there were two types of INSET in Malta organised by the two Directorates within the Ministry of Education, Youth and Employment, but mainly by the Directorate for Quality and Standards in Education (DQSE) under the supervision of the Director Curriculum Management and e-Learning (DCMeL). However, teachers could also opt to "engage in professional education by undertaking post-graduate courses organized by the University of Malta and the various institutions which offer distance education opportunities" (Attard Tonna and Calleja, 2010, p.38).

The education officers within the DQSE are responsible for the INSET which is offered to all teachers in state schools on a compulsory basis. It is costly for the Maltese Government since it is offered free of charge. The present system of INSET caters for a large number of teachers, therefore, it is effective when it comes to planning. However, "the three-day format of training is too short

for any teacher educator to succeed in propagating a sense of community within the group" (Attard Tonna and Calleja, 2010, p.40). Bezzina criticises the present PD of teachers since "there is no link between the pre-service and ongoing PD of teachers" (2002, p.59). Attard Tonna and Calleja continue that, "the design of these courses purports individualism because teachers are asked to attend solely on the basis of their respective duties/responsibilities within their classroom" (2010, p.40). Moreover, teachers who attend INSET do not have the opportunity to meet the same cohort of teachers every year; therefore, it is more challenging to build collegial relationships, while it is also difficult for teachers to build a close bond with the education officers responsible for the training programme (Attard Tonna and Calleja, 2010).

INSET in Malta is not constructed on teachers' experience and knowledge level since "training is often disconnected from real teaching experience as teachers are not given the opportunity to experiment and return with feedback, or receive support". In fact, the "training objectives and knowledge imparted do not originate from the teachers themselves" but are derived from policy makers who may not be aware of the challenges that teachers currently face (Attard Tonna and Calleja, 2010, p.50).

Teachers working in State schools are obliged to attend INSET if called by education officers and they are not remunerated for their attendance. Teachers in Malta can, however, also attend INSET voluntarily if they are not called by the education authorities for compulsory courses. Secondary teachers have recently attending the Fronter training courses to equip themselves with the necessary skills and knowledge in order to use the Fronter Learning platform. The latter is an online platform used mainly by teachers, children and parents where teaching resources and other useful material are shared between schools. Teachers attended six sessions of PD about the Fronter Learning platform, consisting of two hours each which formed part of INSET. Primary school teachers have also finished the Fronter training.

Teachers in Maltese Independent and Church schools can also apply for INSET, however, training is usually organised by the Independent and Church Schools' administration. Schools can also decide to organise in-school training which is more focused on the school or college where these are specifically oriented to cater for teachers' needs in that particular environments. This type of training may help to increase the level of effectiveness of the teachers involved as this allows them to organise and provide part of the training themselves. Yet it cannot be excluded that in-school based training may not always include and give importance to teachers' experience which eventually affects the intended outcomes (Attard Tonna and Calleja, 2010).

PROFESSIONAL LEARNING SESSIONS CATALOGUE

COURSES ORGANISED BY THE INSTITUTE FOR EDUCATION

JULY / SEPTEMBER 2016

Maltese teachers have the opportunity for continuous professional development offered by the Institute for Education

Apart from the on-going training, such as INSET, teachers could opt to further their studies through scholarship schemes, such as The Malta Government Scholarship Scheme (MGSS) and the former Strategic Educational Pathways Scholarships (STEPS). MGSS was established in 2006; it is Government funded and focuses more on the personal development

of teachers. On the other hand, STEPS was a European Union (EU) funded scheme which ended in 2015 and had the objective of helping teachers grow professionally.

Other courses are offered by the University of Malta such as the Let Me Learn in-service training where teachers attend a structured course during the scholastic year. The Let Me Learn in-service training is a PD programme "which is built on reflection and exchange of ideas between teachers, and on collaborative work between teachers and learners in their classrooms" (Calleja and Montebello, 2006, p.55). In this way, "teachers are exposed to a much longer period to the training involved, and the teaching community that accompanies them during the training" (Attard Tonna and Calleja, 2010, p.42). Once the training is over, teachers can choose to be mentored along the following scholastic year which serves as a support structure to develop their newly learnt pedagogy in the classroom. One teacher stated that it helped her develop both professionally and on a personal level since it is about "reflection and

The Let Me Learn Programme offers additional professional formation to teachers

exchange of ideas between teachers, and on collaborative work between teachers and learners in their classrooms" (ibid., p.55). Another teacher "experienced the LML process as a process of creative changes brought about in her methodology" (ibid., p.59).

Bezzina has argued that "Maltese schools need to develop supervision and evaluation systems as part of the culture of the schools in order to promote professional growth experiences of teachers" (2002, p.69). According to the NCF, "regular curricular support as well as re-skilling and up-skilling of teachers and school leaders is needed to ensure that they have the necessary understanding, skills and tools" (Ministry of Education and Employment, 2012, p.18). Therefore, it is essential for teachers to delve deeper in more professional training since "the NCF supports a pedagogy that requires teachers to have a wider repertoire of skills" (ibid., p.18). Unfortunately, as has emerged from the TALIS survey, many teachers in Malta do not continue their PD due to family responsibilities (OECD, 2009). In fact, teachers in Malta reported 7.3 intensive days which is amongst the lowest average number of days when compared with other EU countries (European Union, 2010).

Heads of schools have the duty to organise PD sessions as part of INSET. According to the 2007 (MUT, 2007) and 2010 (MUT, 2010) agreements between the Government of Malta and the Malta Union of Teachers (MUT), teachers were to be required to attend three sessions of two hours each, after school hours, during one scholastic year. Teachers attending these sessions would be "remunerated at overtime rates" (MUT, 2010, p.48). According to the agreement of 2010, the Government and the MUT agreed that if needed, more "intensive" PD sessions could be offered to teaching staff (MUT, 2010, p.48). However, college principals were required to request permission from the DQSE and DES prior to starting such intensive training. Heads of school were required to organise three PD sessions about the use of the interactive whiteboard since it was at the time a new teaching tool which required focussed training. Teachers had to attend these PD sessions after-school hours and were remunerated. This was still in place until December 2012.

The Agreement between the Government and the MUT of 2010 showed a build-up on the Agreement of 2007 regarding PD. In addition, schools are dedicating more time to reflect on and design the School Development Plan (SDP) where teachers are considered key players in decision-making. It is crucial for teachers to participate in decision making because this helps them to form a positive attitude towards change (Smylie, Lazarus and Brownlee-Conyers, 1996; Jongmans et al., 2004; Geijsel et al., 2001,

2009, cited in European Union, 2010). However, as Attard Tonna and Calleja have observed, in Malta, "although efforts are being made for schools to become more autonomous, this is not always being reflected in the development of professional development programmes for the teachers concerned" (2010, p.40).

Ingvarson (1998) makes a distinction between the traditional PD offered to teachers which is usually referred to as 'in-service training' and the 'standard-base system' where teachers identify their own needs together with professionals (cited in Villegas-Reimers, 2003, p.16). In Malta, the ongoing training given to teachers is still referred to as 'in-service training' or INSET rather than 'standard-base system'. Teachers should stand up for their voice to be heard and to their participation in decision-making since they are more knowledgeable about children's needs as also about the school needs (Ingvarson, 1998, cited in Villegas-Reimers, 2003; Attard Tonna and Calleja, 2010). Although there is a "variety of training opportunities, teachers are still not sufficiently supported to address the several changes they are experiencing within their schools and classrooms" (Attard Tonna and Calleja, 2010, p.39). These authors further note that, although teachers are facing difficulties with differentiation in their classroom and the implementation of inclusive strategies, they are not given any training on differentiation since this need is not given importance on a national level. The present INSET does not encourage teachers to participate and respond to the learning needs of their profession (Attard Tonna and Calleja, 2010).

The Government-MUT agreements of 2007 and 2010 have emphasized the importance of embracing lifelong learning. Therefore, teachers were required to continue to update themselves and to improve in their skills so as to fulfil the needs of the education system for better learning. Furthermore, teachers became obliged to attend in-service training for three working days either at the end of a scholastic year or at the beginning of the next. This implies that PD in Malta is not an on-going exercise it being given only during a stipulated time period and not distributed throughout the scholastic year. Thus, "the level of re-skilling and up-skilling programmes" that need to be taken by teachers and heads of school "require more time than the current structure for continuous professional development training permits" (Ministry of Education and Employment, 2012, p.19). The working group within the Ministry of Education and Employment have stressed that Directorates should consult with the MUT "in order to find a solution to this urgent matter that includes ways of encouraging teachers to invest in their own continuous professional development" (ibid., p.19).

Nowadays INSET is part of teachers' PD, but other higher courses and scholarships are also available to teachers which can be taken part-time to help them cope with their teaching career, family and also with their studies. These include Diplomas, Bachelor Degrees, Master Degrees and Doctorates, which are further qualifications that follow the initial training given to teachers to get their teaching warrant. The Government-MUT Agreements of 2007 and 2010 have established that teachers in possession of one of the further qualifications should receive an extra annual allowance when this is not the basic qualification by which the teacher had gained his position. Therefore, apart from obtaining further knowledge in the field of teaching, teachers are given an incentive to continue their studies to obtain an extra allowance. One must point out that the rates established for this allowance have not changed since 2007.

As it is the need to fulfil their personal growth and the necessity to learn new things that encourages teachers to continue their PD, the increment in their salary may only serve as an extrinsic motivation and it is less influential than the intrinsic motivation which gives teachers their empowerment. This enablement gives teachers a stronger sense of belonging together with "increased professionalism as teachers assume responsibility for an involvement in the decision-making process" (Bezzina, 2002, p.65).

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SHORT COMMUNICATIONS

Scientix – Where Science Education matters

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If I were to describe Scientix in a few words, I would say that it is a very bold initiative with eyes fixed towards the horizon, recognizing the important roles Science and Science Education have at the core of economic growth across all Europe. It is an initiative that saw its beginnings in 2009. Scientix is managed by European Schoolnet (EUN) on behalf of the European Commission and set to offer a common front for science education across Europe. It is portrayed by an easily accessible web portal, which is exemplified with a fully loaded but user-friendly interface at **www.scientix.eu**. On the portal one can find resources that are directed towards science educators, policy makers and any other individual, group or entity interested in science education.

Scientix happens to represent the tip of a complex and strategic scheme rooted within the recent history of the European Union. It is motivated towards fostering a healthy scientific community that can actively work at the heart of economies in the member states. It goes without saying that every country thrives well on a solid economy and that a major ingredient for such an economy is a scientifically educated workforce. Unfortunately, over the years, the declining interest by the younger generation towards science education and science related careers has sparked several actions from the European Union's side to design learning and education policies that move away from traditional methodologies deeply rooted in the regurgitation and testing of knowledge and repetitive skills to more innovative inquiry-based models. Subsequently, since the publication in 2007 of the report 'Science education now: a renewed pedagogy for the future of Europe', FP7 projects have focused on the uptake of Inquiry Based Learning as the most appropriate method to address the problem, attract more young people into science and technology careers, paving the way to future responsible innovators and science-active citizens. But when the simultaneously discrete and interoperable nature of the member countries that constitute the EU is taken in perspective of the whole Union, one is inadvertently greeted with a fragmented European educational system. As it is, although working towards the welfare of the European Union, each and every nation within the EU has deeply embedded allegiances within nationally contextualized economic values. Thus, any embarked enterprise targeting the benefit of the economic welfare of the EU at large could only be considered as being a wishfully thought of, long-term investment.

Thus within these action parameters and as part of the first phase of implementation, in 2009 the Scientix portal was created. Through the portal, Scientix facilitated the healthy inspiration and dissemination of know-how and best practices in Science Education across the European Union. With an adopted Open Educational Resources (OER) policy, Scientix aimed towards the free provision and sharing of information, knowledge and experience gained from EU funded initiatives. It was also set to create and enhance networking between European teachers consequently generating new opportunities through which teachers' knowledge and experience could

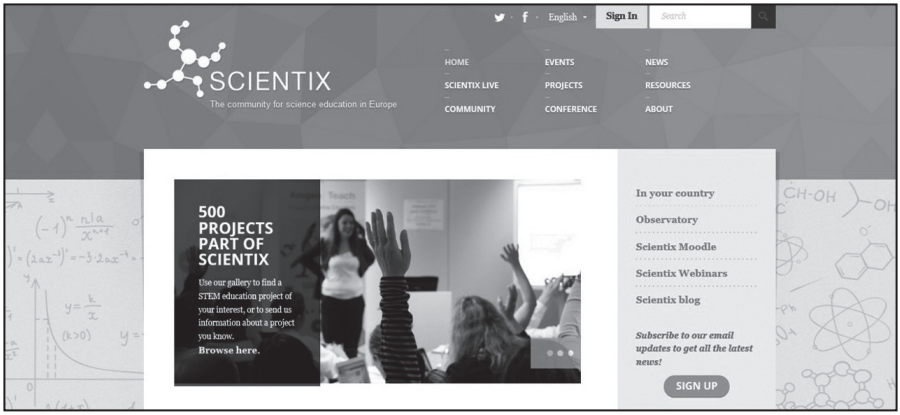
flourish within a friendly atmosphere of dialogue, exchange of ideas and experiences.

The first phase successfully culminated with a conference that witnessed the gathering of science educators and other science-oriented entities under one roof. But the initiative did not sit on its laurels. It was immediately followed by a second innovative and bold phase set to run over a two-year window. In a ploy to see and understand things from a national context, this subsequent phase saw Scientix expanding inwards into each and every member state. It was marked by the deployment of a network of locally based nodes or National Contact Points (NCPs) and the engagement of Scientix Ambassadors and Deputy Ambassadors for the teachers' panel.

The NCPs, one for each European Union member state, form a node of a larger network that links each member state directly to Scientix at a European level. In Malta, the NCP is represented by the DQSE (Directorate for Quality and Standards in Education) at the Ministry of Education and Employment. The NCPs are actively involved in a healthy two-way dialogue with Scientix. They organize Scientix related activities that include the organization of workshops and conferences at local levels. In the process they are actively engaged with the local STEM community, monitor national science education initiatives and analyse national science education policies and practices. Ultimately, all this intelligentsia is harvested and relayed back to Scientix in Brussels, assisting the central organization to create, publish and portray a better macroscopic representation of the science education climate to a wider audience across the entire EU, through the Scientix portal.

To complement the philosophy embraced by Scientix, local teachers acting as Scientix Ambassadors, were engaged from each member state and duly trained at the EUN Schoolnet premises in Brussels. In Malta between 2013 and 2016, there were two of us, myself and Ms Elaine Muscat. Duties entailed ambassadors and deputies to promote and disseminate information about Scientix to local STEM peers through, write-ups and by being invited to contribute in workshops, school meetings and locally organized conferences. We were also required to assist in the development of digitally mediated tools and services on the portal.

From my personal point of view, working and driven by a young and energetic management team at Scientix is always a demanding but also fulfilling experience. Over the past 30 months or so since my engagement, I was rewarded with a unique experience. I wrote a lot, attended meetings that allowed me to liaise with teachers, heads and principals of schools, contributed in workshops, and conferences, delivered presentations on Scientix and networked with other ambassadors and deputies. I cannot say if the initiative's aims have been fulfilled in full or not, but from what I can say after the 2nd Scientix conference held in October 2015 in Brussels, Scientix seems to be moving in the right direction. With a turnout of 600



The homepage of SCIENTIX (www.scientix.eu)

participants from 43 countries gathered to discuss innovations in STEM education, policy and research and more than 800 aspiring attendees on the waiting list, the conference was a major success. While the convention was complimentary for all, more than 250 participants (including a group of Maltese educators) and 95% of all attendees benefitted from having their flight, food and accommodation entirely financed by Scientix. Within the purpose of fostering awareness towards the importance of Science Education in a European perspective, STEM educators from all over Europe, policy makers in the field, a healthy representation from the Industry and a Rocket Scientist, populated the conference. The conference had several important highlights including the launch of the Scientix Publication (freely available on the Scientix Portal), the Scientix video on YouTube, and the Scientix Awards set up with the ultimate aim of supporting, sharing and disseminating innovative material to all those who understand the importance of STEM education. But in my opinion what has distinguished this conference most has been the tangible enthusiasm that only teachers in the field know how to confer. Without them the conference would not have taken place. One had to be there to be see the volume of work these teachers exhibited to populate the 70 talks, 14 workshops, 7 round-tables and 25 exhibition stands. In my opinion it was the proud showoff and epitome of EU funded projects and initiatives that these experts participated in. During these activities, teachers from all over Europe were discussing and presenting their work in Science and Mathematics, spanning across various dimensions and levels in STEM Education including curriculum, assessment, innovative and digitally mediated methods, augmented reality, authentic learning experiences and continuous learning, actively providing a panoramic view of what was taking place in their schools across all Europe.

With the end of the 2nd phase of Scientix and the initiation of the 3rd we can only speculate what is coming next. Definitely the future seems bright

and full of opportunities for STEM educators and Europe. Thus as I express my gratitude to all those who have helped me at national and international levels, I cordially invite local interested entities to visit the portal. There, one does not only find information on past and ongoing EU funded projects but opportunities to contribute and be more involved through Communities of Practice, webinars, the provision and attendance of courses on Moodle and other forms of web enabled activities aimed towards bringing all those inclined to STEM closer together.

At the time of writing Dr Patrick Camilleri is the current Scientix Ambassador for Malta. He is a senior lecturer at the Faculty of Education, University of Malta.

Disclaimer

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