



The science behind the **Marco** reading scheme

Reading is an automated skill. Skills only become automated through continual rehearsal and in terms of reading, exposure to text. As adult readers we often forget the effort that was put in to master the ability to read and have absolutely no idea how many words we read every day, mostly unintentionally. Try walking into any public area and attempting to ignore everything that is written around you. It is impossible and so therefore the skill of reading is being rehearsed often at a subconscious level. Then imagine a world where all text was totally unfamiliar in an identical public place in a foreign land. This second scenario is the world of the untrained/unsupported reader.

How much of the written language could a motivated person retain, let alone reproduce without a systematic introduction to it? The language introduction would need to build on the individual's capacity to take on board new information, retain it, and re-recognise it as meaningful when applied to a new context? And yet this is what we expect of many children who have limited access to adult support for reading at home. In these houses the bookshelves are filled with DVDs and CDs and in place of the daily newspaper, weekly magazines or comics are electronic games; and so bedtime stories are restricted to the same old boring dog-eared school books. We then say that these children who are deprived of written text have 'dyslexia', 'learning difficulties' or 'special educational needs'. Sometimes these young people are placed into a school where the written language is not their first language or that of their parents, which can result in bright minds under-achieving, with all the social implications of that scenario.

Educators generally underestimate the extreme challenge that teachers find when trying to teach reading to thirty souls all of whom are learning at their own individual pace. No one expects drivers to learn to operate a car in a classroom whilst being instructed by someone standing in front of a board. Those who are exposed to text frequently and consistently will stride ahead of the rest because of the constant rehearsal effect.

The Marco scheme is systematic and aims to get people reading fluently very quickly. All new skills need to be 'kick-started' so that progress is experienced very quickly and before boredom or despair set in. No expert performer at a high level was ever shown the mountain that had to be climbed when they first started to acquire a skill. Neither was the skill completely taught to them because all skills need practice, feedback, monitoring and self-regulation. The new learner also needs

to see the purpose of the final outcome for which they are making a huge effort, and sacrificing time which could be used to do something more enjoyable.

Learning any skill need not be a solitary occupation and doing something “together” with a more able person who can guide the learner by praising the achievements and the determination to master the more difficult bits, can be mutually very rewarding. Motivation and confidence are the best two emotional elements to gain the determination needed to become fluent when reading unfamiliar text. The books produce motivation through likeable cartoon characters and stories aimed to please the new reader. In addition the books can be used for paired reading with a fluent reader of the language which helps to keep the book interesting to the new reader. To help the reader, or the supporting adult, the auditory version of the book can help promote correct pronunciation and is particularly useful for the supporting adult who may not be a confident reader in any language, but with the book available in many languages it is a useful resource for supporting adults who may not be native readers of the language being required of the child in their current school.

The words chosen were found by Warwick University to make up 53% of all English written text. The first 16 make up 25% of all text of practically every page. By learning to recognise these words the confidence of the new reader builds very quickly. The reader is then shown how the words fit together into sentences and begins to learn the skills needed for fluent reading by building in predictability. Once the reader can recognise very frequently used written words, the reader can concentrate on identification of unfamiliar words, which will also have an element of predictability due to the illustrations and the fluent adult-read storyline.

By introducing new words whilst rehearsing the previously learnt words, the difficulty of forgetting pre-learnt words can be limited. The words are first introduced through isolated presentation in the suggested order and combinations of the scheme. The words are then seen again in sentences which only contain pre-learnt words situated on a page in the book. The third presentation method is that of interspersed previously learnt words within a more detailed story and description using paired reading with an adult. The already learnt words are emboldened in the adult text. The adult can point and pause at each of these words for the child to read out loud. The adult should track all words read out to the children using a finger so the child then remembers in which direction the text runs. Teachers will be surprised to hear how many of the children I see read words backwards, so “was” and “saw” are confused and so phonics make no sense to these children at all.

The scheme will be available in several languages beginning with those languages that lack accurate bilingual translation. Therefore the book will contain illustrations which can be used for both a selection of short sentences and the adult-guided stories. The adult-guided story pages will not only have the already learnt words emboldened, but at the bottom of the page the first introduction of the word into the story line will be identifiable. Where possible the translations will be word by word as close as possible to each other. Where words have been used which are not identical but the sense would be lost by literal translation, these will be listed on the Marco The Malta Bus website. The books will be available in electronic form as well as hard copy. The language pack for each book will consist of the relevant flash

cards, pages of simple sentences and an audio version read by a native speaker of the language.

In addition small toys, puzzles and games will be available to purchase. All goods are made exclusively for Marco The Malta Bus Ltd and conform to EU standards of safety.

The science of phonology and reading according to Professor Usha Goswami of Centre for Neuroscience in Education, University of Cambridge:

Reading acquisition requires the combination of several senses. The development of literacy skills has been shown to be correlated with language skills and phonological awareness. Types of activities which can identify phonological awareness include the recognition of alliteration and rhymes.

The development of speech processing, phonological awareness and word representation requires the brain to input auditory information and code it (with the support of visual dynamics) into a phonological representation which links that to a semantic representation which is then communicated through the motor system for speech output.

Recent neurologically based research has shown three important findings.

1. Speech rhythm and syllable structure are the building blocks for effective listening to occur. Early developmental research has shown that newly born babies can discriminate a familiar language from a novel one.
2. Rhythmic perception and accurate stress perception play a key role in phonological development.
3. Perception on a simple musical rhythm task is a strong predictor of reading development.

At the preschool stage the development of language/phonological awareness requires large units such as onset/rime (c-at; s-at) and syllables. The next developmental stage can utilise smaller units such as phonemes.

For example for reading development the word “wig wam” can be presented as wig wam (2 syllables) or w-ig, w-am on/set and rime. Or phonologically as “w-i-g-w-a-m”.

Therefore there are three important activities which need to be rehearsed and will facilitate early literacy acquisition.

1. Over learning of language games and nursery rhymes which will promote ‘brain language’.
2. Auditory organisation of sounds which will support phonological processing.
3. The connection of phonological representations (sounds) to orthographical representations (script) which develops into the skill of reading.

The adult can scaffold the child through interleaved learning. “That is; I say; we say; you say”. Genuine praise and overt demonstrations of excitement will produce motivation as the child learns to succeed even if progress is slow.

Relevant information for Maltese readers

The Centre for Literacy in Malta is a research and development Centre that focuses on the area of literacy and other basic skills. The Centre views literacy as fundamental to all forms of personal learning and intellectual growth. Their view is that in today's global society, a literate population is essential for a nation's social and economic development.

Ruth Falzon (2012) states that the Maltese National Statistics Office (NSO, 2010) quotes 11.24% illiteracy in 1995 and 7.2% illiteracy in 2005, with 1.7% illiteracy among 11- to 19-year olds in 2008. A baseline reading assessment for 7-year olds outlined 18-20% literacy difficulties (Mifsud, Milton, & Brooks, 1998; Mifsud, Milton, Hutchinson & Brooks, 2000). In Europe, one in seven people leave education or training without adequate qualifications, whilst in Malta, although rates have declined over a nine-year period from 54.2% in 2000 to 36.8% in 2009, early school leavers (ESL) remain the highest in the EU (EU commission, 2011) whilst 40% do not attain the School Leaving Certification (NSO, 2010).

According to Indexmundi (2010), Malta ranks 92nd in the world. Defining literacy as people aged ten and over who can read and write, Indexmundi notes that according to the 2005 Census 92.8% Maltese - 91.7% males and 93.9% females - are literate, leaving nearly 10% of the population who are illiterate. Furthermore, the just published PISA 2009+ report (Walker, 2011) reveals that 36% of Maltese 15-year olds leave school without baseline functional literacy, while the figure is 19% in OECD countries.