

# A study of the effects Multimedia Books have on developing reading skills among Portuguese young learners of English as a Foreign Language

HELENA MENEZES

Escola Superior de Educação de Castelo Branco

Centro de Investigação em Educação da Faculdade de Ciências da Universidade de Lisboa  
PORTUGAL

*Abstract* - The growing importance of technology in today's society makes it important for educators to integrate the tools it provides into all areas of education because the new and emerging technologies are challenging the traditional process of teaching and learning.

My research adopted a case study approach, which provided rich descriptions, in particular of:

Will multimedia technology prove to be more efficient or at least as efficient as traditional methods when developing extensive reading?

Will multimedia CD-ROMs improve reading?

Will multimedia CD-ROMs motivate children to read?

The answer to these questions was also object of my research.

There are a few examples outside Portugal about the motivating power of multimedia books among students. Will this be the case in Portugal?

The main purpose of the study was to determine whether Multimedia Books fostered pupils to read and whether there were any gains in the reading performance and language accuracy when pupils worked with a computer-based storybook vs. those who worked with a normal paper book.

*Key-Words* – Multimedia, CD-Rom, Reading, Living Books.

## 1 Introduction

The growing importance of technology in today's society makes it important for educators to integrate the tools it provides into all areas of education because the new and emerging technologies are challenging the traditional process of teaching and learning.

Computers are being used in educational settings all over the world and in spite of the Portuguese governmental policy having tried to follow the widely international policy according to European recommendations, teachers in general seem not to use computers as regular tools in their classes.

It is important for teachers to raise literacy levels because greater literacy will lead to higher employment, high economic and industrial output, and wealth creation. It is therefore important to use the range of strategies available to the classroom teacher to foster positive attitudes towards reading. However some

children develop a negative attitude to reading and tend to avoid reading and this affects their

ability to read effectively and develops a negative attitude to reading.

There is an urgent need to change this.

We do not seem to be moving from - literacy to a purely visual literacy, but towards a world of multimodal- a world of complex texts where pictures increasingly interact with words, where pictures and words work together and reinterpret each other [2].

Most of the teachers involved with literacy find themselves in a state of metamorphosis as they realise they are no longer in a predominant print-based society.

## 2 Methodology

This study researched for the first time the use of multimedia books in modern foreign languages

education in Portugal. The originality of this research is in three interrelating findings:

The value of multimedia books in learning ESL in Portugal, as an example of a Southern European country in the first stage of ICT applications.

This study observed groups of children as they worked through the storybook (both in traditional classroom and computer room), collecting verbal and non-verbal activity measures. Marks obtained from reading activities (done in paper and on the computer) were also collected. Changing the mode of delivery of a standardized test such as from a paper-and-pencil format to a computerised format brings with it both “promises and threats” [3]. These measures were with the aim of determining whether the type of support (print or computer) was related to learning gains.

Four different classes participated in the research. Each class had English four times a week. Half of each class worked with two multimedia books during two weeks. The other half worked with the same story in paper format. Sixty-four classes were observed.

Through the analysis of interactions it was possible to assess the educational value of multimedia books and to reflect on how they contribute to learning and teaching.

Data was coded by two different people (the researcher and a colleague) and compared to determine the stability of categories across observations. Each verbal statement was coded into one of 12 categories according to the Bales (1950) process interaction analysis. Because I had small numbers of comments in some of these categories I classified all positive socio-emotional comments together, all task specific helping comments, all task specific requests, all negative socio-emotional comments together and all the cognitive interactions, to reduce the 12 categories to just four: (1). Positive socio-emotional; (2). Negative socio-emotional; (3). Interactive – task specific help and task specific requests; (4). Cognitive.

Analysis of the videotaped work with the CD-ROM storybook was used to deliver measures of interaction with the computer and between the members of each group.

A number of salient features emerged from the analysis of data. These related to the cognitive, social-emotional and interactive dimensions used for analysis of content. The categories social and interactive accounted for the majority of

exchanges. In the category cognitive, there were some exchanges which could be clearly identified as related directly to the learning process. Many students asked questions, or responded when asked.:

“How do we say this word?” (CR - P5)

“Click on it! Let’s listen again!” (CR - P2)

In the two following extracts, for example the pupils attach the meaning of a word to the picture:

“ It means ‘cold’. Can’t you see he is shivering?” (CR - P10)

“‘angry’ means ‘not pleased’” (CR - P10)

“No it is not! It’s ‘hungry’” (CR - P9)

“Look at his face! Papa Bear is angry” (CR - P10)

“You are right” (CR - P9)

According to [1] the reading errors of this kind made by the pupils may allow the teacher to infer which cueing systems a reader is using.

## 2.1 Conventional reading classroom versus computer room – some descriptions of the classes (Extracts from video and audio tapes)

There were differences among the classes observed but I now provide descriptions of the most typical moments with extracts taken from the video and audio tapes.

In the conventional classroom the teacher explained the objectives of the lesson in the beginning of the class and presented the characters of the story as shown in figure 1 and students read the text silently as shown in figure 2:



Fig 1 – Teacher stating the objectives of the lesson



Fig 2 – Pupils reading silently in the conventional classroom

While reading some pupils asked the teacher or their peers the meaning of difficult words. The teacher helped. It appeared that the meaning of some words was not easily understood even when accompanied by images in the text, for example the word ‘shivering’ was not understood even with the accompanied image.

After seven minutes the pupils were not paying attention. They talked to one another. The teacher had to shout to get the pupils' attention. As the class was inattentive the teacher had to change the strategy and then asked one pupil to read the whole story aloud. Many words were mispronounced. At first the teacher did not want to correct them in order not to interrupt the pupil who was reading. Five minutes later the teacher decided to read herself the story and explained new vocabulary. Again not many pupils paid attention. The teacher constantly intervened in the class.

The teacher's role in the computer room was completely different - helped the class when asked, what is in accordance with the literature that says that when computer are used the teacher becomes a tutor and only intervenes when asked.

In the computer room the pupils had fun while reading, they were interested.

Most of the groups went through the multimedia book once and then ran through it again, usually discussing the animation and hotspots. They repeated reading after the computer, pointing to the images.



Fig 3 – Pupils reading in the computer classroom



Fig 4– Pupils pointing to the images

“It’s so funny!” (CR – P2)  
 “Let’s see what he does” (CR - P4)  
 “So funny! It seems real!” (CR - P2)  
 “Can you imagine all the classes like this!” (CR - P5)  
 “Look He’s snoring!” (CR - P4)

They were anxious to turn the page in order to see what happened. The difficult words were grasped by the actions the characters performed: “He’s sleepy, not angry! Can’t you see he is snoring?” (CR – P5).

## 2.2 Activities

After having read the story a series of different activities were proposed to the pupils. In spite of being seated in groups of three in the conventional classroom the pupils did the

activities individually. There was collaboration in the computer room. However the group work in the activities had advantages and disadvantages in both rooms. In the computer room everyone wanted to participate, the work was active

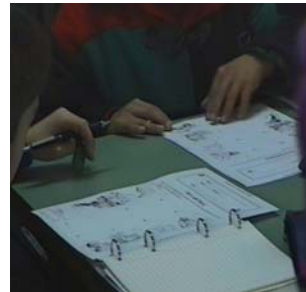


Fig 5– Activity sheets



Fig 6– Pupils doing activities in the computer room

The pupils helped each other:

“Yes, that is right” (CR - P9)  
 “No, it is not! Write ‘was’. I remember she (Goldilocks) said ‘was’.” (CR - P8)  
 “You wrote mine. Now it is my turn.” (CR - P5)  
 All the activities were done rapidly in the computer but very slowly in the normal classroom. Just to give an example, ten minutes were necessary to complete the first exercise - true/false activity in the computer room while in the traditional classroom it was done without enthusiasm and even one of the groups had to re-write it as homework.  
 “Twenty minutes to do it! With a pencil!” (T - CC)



Fig 7 – Pupils doing activities in the conventional classroom



Fig 8 – Hands together on the keyboard, showing enthusiasm.

It was not necessary to set limit time for the same activity in the computer room. And if they were wrong or changed their minds they could delete without problem in the computer.

The pupils in the conventional class got bored and inattentive. The pupils talked to one another. The teacher had to shout in order to get the pupils' attention.

“Be quiet! Please, pay attention!” (CC - T2).





Fig 9 – Pupils not paying attention in the conventional classroom



Fig 10 – Pupils concentrated in doing the activities

In the conventional classroom the activity, ordering the story, was explained by the teacher. After several trials the explanation had to be in Portuguese.

In the computer room the activity proceeded according to plan. The pupils were very concentrated in the tasks.

Pupils finished the activities sooner in the computer room. They all wanted to listen to the story again:

“We have finished!” (CR - P5)

“Aren’t there any more activities? We could do some more.” (CR - P8)

“This way the classes are much more interesting. We do not feel the time go by!” (CR - P3).

“And we learn a lot more. I still remember everything.” (CR - P4)

“Can we listen to the story again? We’ve already finished.” (CR - P5)

“All the classes should be like this. I learn more!” (CR - P3)

“And I can remember everything.” (CR - P2).

### 2.3 General remarks

Another aspect that is worth referring is that in the traditional classroom the pupils were always looking forward to leaving the class, as seen in these quotations taken from the audiotapes:

“We can finish that tomorrow!” (CC - P6)

“It’s ringing, thanks God” (CC - P7)

“All these activities in the computer are much more ‘cool’!” (CC - P9)

Computers because of their novelty were exciting and motivating. Perhaps that was the reason why in the computer room everything was the other way round. The pupils did not want to leave the class. They wanted to stay during the break.

“Can we stay during the break?” (CR - P6)

“Please, let us do another exercise!” (CR - P2)

It was at the pronunciation level that the differences were huge. Pupils in the computer did not show difficulties. On the other hand pupils in the conventional classroom mispronounced many words.

Words like ‘bear’, ‘tiny’, ‘porridge’ were mispronounced in the conventional class. The same didn’t happen in the computer class. Pupils corrected one another when a word was not well pronounced.

“ [B.....] not [b.....s]! Do you want to listen to it again?” (CR - P5)

“You are right [bia:] means ‘beer’, doesn’t it?” (CR - P3).

Dialogues like this one occurred in Portuguese and were easily understood by a native speaker; when translated into English some of their meaning is lost.

There were occasional disputes concerning possession of the mouse. At first in the computer room all wanted to control the mouse but after the first minutes all the groups agreed to share it. An eagerness in wanting to know what would happen next was a constant.

### 3 Conclusion

The pupils stated that they preferred to work with other pupils rather than on their own as this helped them to successfully complete the required tasks more quickly and easily and to share more ideas and suggestions. In contrast the groups in the conventional classroom did not act as a group. In spite of being seated in groups with permission to interact, the pupils read the story individually as they were accustomed to.

In the computer room all were highly motivated throughout the project and maintained a high level of enthusiasm and motivation. To them, the action research was seen as something different from their regular classroom work and an opportunity to use computers in class.

multimedia books can be used within the framework of any teaching methodology.

The results of this study support previous claims concerning the benefits of using multimedia to facilitate language learning which in turn resulted in more language production. The results were visually impressive and the capacity of multimedia to engage young people was in no doubt. Both pupils and teachers in the study showed clear evidence that they were stimulated and motivated by the features of the books. This motivation resulted in positive attitudes toward

the multimedia books, and fostered productive collaborative work among the pupils.

The Multimedia books also acted as a powerful provider of a constructive approach to classroom teaching by providing support and tools for constructing meaning 'facilitating learning through collaboration, context and construction of knowledge' [5].

The multimedia books had a significant effect on pupils' performance and outcome. The official teacher assessment at the end of the second term was significantly superior among the pupils who had worked in the computer room with the multimedia books than the contrast group who were taught traditionally

The talk between the learners fostered reading growth because each student brought certain strengths and knowledge to the activity. Working in small groups at the computer also supported metacognition as students verbalised their thinking to negotiate responses to the software.

However, it would be of interest to review the effects of CD-ROM storybooks on pupils' attitudes in the future as it might be expected that these storybooks need to be used over a much longer time frame in order to have a more permanent impact on reluctant readers' attitudes to reading.

These findings suggest that it is possible and urgent to make changes in classroom reading contexts and how such changes can be effective. With the present findings I could state that once reading procedures changed to multimedia books, the pupils' academic language achievement and reading ability improved, and the teachers' attitudes towards technology became more positive.

The action research group, though not exposed to the traditional trend, present in Portugal at the moment, of a teacher/textbook centred EFL teaching, performed significantly above their peers in language academic tests, which may imply that the exposure to multimedia books was positive. This relation between theory, the methodology and the outcomes demonstrated that the pupils in the action research group improved their reading, motivation to read and even developed their language skills.

My research findings indicate that there is a place in the classroom for the use of CD-ROM storybooks as a strategy in the development of positive attitudes towards reading for some children, at least in Portugal where it was proved successful and if multimedia books are to

become an integral part of a school's reading programme, rather than something which exists as an interesting reading activity then there needs to be sufficient material at different levels to support developing readers of all ages because these books have a salutary effect on reading and can be used to foster literacy.

"Technology is going to be our 'modus operandi', our academic 'tool box' of the coming millennium" [4] and if educators perceive technologies not as a threat but as powerful tools for learning and living, then a shift towards tomorrow's world will be achieved in Portugal as well in other countries.

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