

THE USE OF THE INTERACTIVE WHITEBOARD IN PRIMARY SCHOOL

(STUDENT MOTIVATION)

Tània BATLLORI i LLINÀS

Quart curs del grau en Mestra d'Educació Primària

Tutor: Àngel Raluy Alonso

Assignatura: Treball Final de Grau

Facultat d'Educació, Traducció i Ciències Humanes Universitat de Vic – Universitat Central de Catalunya

13th May, 2016



1 Acknowledgments

I would like to express my gratitude to all the teachers that help me during the process of this work. Especially to my tutor Angel Raluy for his suggestions and the support that he has provided me. His contributions and guidance helped me in the writing process; also his careful reading of this work and his help with some documentation about my research. I would also like to thank the teachers Anna Vallbona and Núria Camps for her contributions and guidance on the previous work based on the same topic.

També agraeixo a la meva família la seva paciència, els ànims i per motivar-me sempre que ho he necessitat. Per aguantar-me durant els sis anys que han durat els meus estudis, per recolzar-me quan havia acabat el grau de mestra d'educació infantil i vaig decidir continuar estudiant. Dedico especialment aquest treball als meus avis paterns, que no han pogut veure com he arribat a convertir-me en mestra.

2 Table of contents

1 Acknowledgments	3
2 Table of contents	4
3 Abstract	5
4 Introduction	7
5 Theoretical framework	8
6 Methods	19
7 Study	21
8 Conclusions	34
9 References	36
10 Annex	39
10.1 Activities created for the sessions	39
10.1.1 First session: Interactive Whiteboard games 1	39
10.1.2 Second session: Caterpillar puppet	43
10.1.3 Third session: Minibook	44
10.1.4 Fourth session: Story games	46
10.1.5 Fifth session: Interactive Whiteboard games 2	48
10.1.6 Sixth session: The caterpillar	51
10.1.7 Extra activities	53
10.2 Evaluation	58
10.2.1 Assessment instrument	58
10.2.2 Self-assessment instrument	59
10.3 Results of the assessment and self-assessment	66
10.3.1 Assessment	66
10.3.2 Self-assessment	69
10.4 Interview	84

3 Abstract

The purpose of this study is to analyse if the pupils of first grade of primary education are more motivated to learn the English language through the use of the Interactive Whiteboard (IWB). To start with, and as an indispensable element to contextualize my study, it has been necessary to carry out a thorough theoretical research about the use of the IWB in the primary class, about the advantages and disadvantages that has this instrument in the school. Subsequently, I created a didactic unit organized in six sessions where we used the IWB in most of the class. In the same section, I have explained how I created the instruments to collect the data, how I carried out the activities in class and how I evaluated the pupils. This didactic unit has been carried out with pupils of six and seven years old by means of vocabulary related to the food and the story «The very hungry caterpillar». During the different sessions I could observe how the pupils seemed motivated to learn and interact in the class through the IWB; behaviours that I subsequently compared with the observations that I made in a class with no use of the IWB.

Key words: Primary education, motivation, foreign language, English, Interactive Whiteboard (IWB), Information and Communication Technologies (ICT).

Aquest estudi pretén analitzar si els alumnes de primer de primària estan més motivats per aprendre la llengua anglesa a partir de la utilització de la Pissarra Digital Interactiva (PDI). Previ al desenvolupament del treball pràctic ha calgut una recerca teòrica sobre l'ús de la PDI a les aules, sobre els avantatges i desavantatges que té aquesta eina a l'escola. Posteriorment, he creat una unitat didàctica organitzada en sis sessions en les quals utilitzàvem la PDI en la major part de la classe. En aquest apartat explico com vaig crear la part pràctica, com ho vaig portar a terme i com vaig avaluar als alumnes. Aquesta unitat didàctica s'ha dut a terme amb infants de sis i set anys presentant els temes del menjar i la història «L'erugueta goluda». Durant les diverses sessions vaig observar com els infants es mostraven motivats per aprendre i interactuar a la classe a través de la PDI; comportaments que vaig comparar posteriorment amb les observacions que vaig realitzar en una classe on no s'utilitzava la PDI.

Paraules clau: Educació primària, motivació, llengua estrangera, anglès, Pissarra Digital Interactiva (PDI), Tecnologies de la Informació i la Comunicació (TIC).

4 Introduction

Continuing the previous research that I did for my pre-school degree TFG, entitled «The use of the interactive whiteboard in pre-school (student motivation)», I have considered that it would be interesting to extend the research to primary education. In this way, we can have a more general overview that would include from pre-school to primary. Therefore, once enrolled at the TFG of the degree on primary education I decided that I would follow the same research as in pre-school. This way, based on the investigations and the research that I made, I elaborated a practical part appropriate to primary. I also think that this topic is really interesting because nowadays we are in the era of the information technology, so the school has to adapt to the reality of today's pupils.

My research is focused on the use of the Interactive Whiteboard (IWB) because nowadays it is very important to teach in a more dynamic way in order to increase the motivation of the students. I have been interested in the use of new technologies in class and I studied double minor in Information and Communication Technology (ICT) and in English. Consequently, I strongly support the need for those areas correlation. This project is about the use of the Interactive Whiteboard (IWB) in primary, specifically in a class with pupils of first year. The main objectives are to identify the advantages and the disadvantages of the use of the IWB; design a didactic proposal for primary using the IWB; and analyse the students' motivation in a class using the IWB through some instruments (a self assessment, an assessment and the teacher's point of view).

Once I chose the topic I started to search literature about the use of Interactive Whiteboards in school, about the different advantages and disadvantages that this instrument brings to the school practice. For the practical work I prepared six sessions that I carried out in «Escola Marta Mata», in Girona (it was also the school where I did my internship) with pupils of first grade. The different didactic units were about food and the story «The very hungry caterpillar». During the different activities, I observed the pupils to see if they seemed motivated to learn and interact in the class through the IWB. To make these observations I elaborated a grid with the items to evaluate of each pupil (I assessed the listening, the

speaking and the attitudes of the pupils). I also gave them a self assessment grid to check their motivation and finally I asked the teacher some aspects related to the motivation of her pupils. To complement the observation I also took some photos of the pupils while they were doing the activities and I also recorded the entire lesson with a camcorder.

Based on the results that I obtained of the different observations I elaborated some final conclusions based on the attitudes that the pupils showed during a class made with the IWB. Of course, these results cannot be generalized because I made the observation with only fifty pupils of one certain school, so we could not extrapolate the results to other schools or situations. In these results, we can appreciate the motivation of the pupils in a class taught through the IWB, focusing on the listening, the speaking and the attitudes of the pupils.

5 Theoretical framework

Over the recent years, the advances in technology have affected the way of teaching and learning methodologies. Nowadays we are in the era of the information technology, so the schools have to adapt their methods to this technology. During the past few years, the Interactive Whiteboards (IWB) has started to be installed in schools, and nowadays more and more schools are interested in this new Information and Communication Technology (ICT). According to Roza (2011, p. 28), quoting Betcher and Lee (2009), the Interactive Whiteboard (IWB) is the first electronic instrument designed specifically for education, to be used both by teachers and by pupils. It is formed by a computer, a projector and a whiteboard. Some IWBs are operated with a stylus (a special pen to write on its surface) and others are operated with the finger. The IWB brings to the school the opportunity to change from the traditional models of teaching to a more integrated digital way of teaching. Although the schools are using the IWB, this not means that they stop using the pen, the paper and the normal board; it is only an extra digital instrument to make the class.

The British Educational Communications and Technology Agency (Becta) defines the Interactive Whiteboard (IWB) as follows: «An Interactive Whiteboard is a large, touch-sensitive board which is connected to a digital projector and a computer. The computer can then be controlled

by touching the board, either directly or with a special pen» (Becta; 2003, p. 1). The potential applications that Becta assign to the IWB are the following: «Using web-based resources in whole-class teaching, showing video clips to help explain concepts, demonstrating a piece of software, presenting students' work to the rest of the class, creating digital flipcharts, manipulating text and practising handwriting, saving notes written on the board for future use, quick and seamless revision.» (Becta; 2003, p. 1)

As Roza (2011, p. 16), quoting Dudeney and Hockly (2007), explains, in the recent years, the importance of the use of new technology in the English classroom is increasing. This is happening because of some reasons such as the natural interaction that young learners have with technology, the use of English in technologically mediated contexts, or the possibilities that technology brings to education among others. The natural interaction that young learners have with technology is caused because, like Roza (2011, p. 26), quoting Prensky (2001), points out, people are classified into two groups: the digital natives and the digital immigrants. Digital natives refer to everybody who was born in the digital era and digital immigrants are those who were not born into the digital world. So nowadays, the pupils of the schools are digital natives because they were born in a technological society.

Roza (2011, p. 17), quoting Ybarra and Green (2003), explains that technology can be used as a teaching tool for the English class because the different materials that the teachers could use can provide a language-rich environment in the classroom in order to make the pupils engage in language activities. Through these new technology instruments, both teachers and students can take part in the learning process and participate in the class; and both of them profit from this relationship (because teachers can achieve a more dynamic class and pupils can participate in the class). As Fatih (2008, p. 12), quoting Lee (2000), Warschauer and Healey (1998), states, with the use of the technology it is possible to teach real language within meaningful and authentic contexts (working on listening, speaking, writing and reading skills).

We know that, as Roza (2011, p. 12), quoting Silva (2009), explains, pupils learn in a dynamic and interactive way (especially very young learners). However, there are teachers that still offer little interactivity to

the pupils. Therefore, it is important for the teachers to start by rethinking the teaching pedagogies that they use in the class. Offering little interactivity to the pupils while doing the class brings as a lack of motivation and active participation. We know that in general the pupils are dynamic and visual, so they will learn much more when teaching and learning is associated with these aspects. Roza (2011, p. 24), quoting Haynes' article (2009), claims that it is important to take into account the different learning styles (the different ways to learn) that pupils have. Roza (2011, p. 24), quoting Kinsella (1995), explains that there are four different types of learning styles:

- Visual learning: learn by seeing, looking and observing.
- Auditory learning: learn by listening, repeating or discussing.
- Tactile learning: learn by handling and touching.
- Kinaesthetic learning: learn by moving, doing and experiencing.

This is why teachers have to try to use all the different learning styles to elaborate the different activities, to make sure that all the pupils could learn from it. According to Haynes (2009):

It is especially crucial to take your students' learning styles into account when you are teaching English language learners. It is always important for teachers to teach to their students' learning styles but this becomes crucial when teaching English language learners. English language learners may be highly literate in their own language but experience difficulties when acquiring English because they are accustomed to learning through a different style. In any case, most ELLs are visual or kinaesthetic learners when they first learn English.

There are many advantages in the use of an IWB in the class because of its many functions. Now I am going to explain the different advantages that scholars point out of the IWB. First, we can say that it allows students to interact with the board in an easy way (with the finger or the stylus) and it is quite intuitive. Secondly, it is not limited because the teacher or the pupil can write or create everything that they want for the class. Thirdly, a teacher can put multiple sensory inputs in multimedia forms such as text, images, audio, video, animation, games, and many other things. Roza,

(2011, p. 33), quoting Martín's book *Activities for Interactive Whiteboards* (2009), explains that we can find a list with some advantages such as being able to work with things that are happening at the moment in the world using the internet, breaking news websites that can also include videos, social networks and others, using authentic experiences and realia to develop the class.

The Interactive Whiteboard provides some benefits for students and for teachers. On the one hand, as Fatih (2008, p. 24 - 26), quoting Levy (2002), Schmid (2006), Bell (2002) and Walker (2002), argues, some of the benefits for the students are an increase in the motivation and enjoyment, more opportunities to participate and collaborate and to learn through different learning styles. It also reduces the need to take notes, it increases the degree of understanding, it provides a variety of resources, it makes lessons more enjoyable and entertaining, it brings authentic experiences in the class, it helps to attract and retain pupils' attention and many others. On the other hand, as Fatih (2008, p. 27 and 28), quoting Smith (2001), Kennewell (2001), Walker (2002), Levy (2002) and Kennewell and Beauchamp (2007), explains, some of the benefits for the teachers are the following: using the IWB is a useful way to integrate Information and Communication Technology (ICT) in the class because the teachers can make dynamic presentations. It also provides more attractive materials to use in class, the teacher can personalize and create different materials, it reduces the time spent in writing and the materials generated during the class can be saved, printed and reused. Moreover, the IWB allows spontaneity and flexibility, teachers can teach pupils with different learning styles, they are more creative and effective in their explanations, teachers can keep students' attention longer and can motivate them because they can focus on individual problems and they have the opportunity to be more flexible during the class and others. As Roza (2011, p. 34 and 35), quoting Gage (2005), states, teachers can make lessons closer to the reality of the students because of that and with some methodological changes the teachers can organize the class in a more interesting, interactive and engaging way and also with more quality of teaching and learning.

Chart to summarize the most important aspects of the paragraphs above										
Advantages of the Interactive Whiteboard										
For students	For teachers									
- Increase motivation.	- Allows interaction.									
- Opportunities to participate.	- Integrate ICT in class.									
- Allows interaction.	- Dynamic presentations.									
- Increase the degree of	- Can use multiple sensory									
understanding.	inputs.									
- Lessons are more enjoyable.	- Attractive materials.									
- Attract pupils' attention.	- Personalize and create									
- Up-to-the-minute information.	materials.									
	- There is no limitation									
	- Teach to different learning									
	styles.									
	- Keep students attention.									

There are also some disadvantages of using an IWB in the class. First, as Roza (2011, p. 37), quoting Betcher and Lee (2009), explains that with the use of the IWB the teacher also needs a change in the pedagogy that she/he is using, because it is a different way to teach. The methodologies required to teach by means of an IWB are quite different from those that were used by teachers traditionally, before the implementation of the ICTs. The use of the IWB implies the use of new teaching methodologies. It is important to change the methodologies to elaborate and create things specifically based on this new instrument. Not only should the teachers adapt the methodologies used before the implementation of the ICTs, but also it means a change in the way to present the activities to the pupils, to create new activities and not to use the same ones but in the new instrument. So teachers have to be predisposed to change their way of teaching with the implementation of the IWB, otherwise, they will not use all the possibilities of it. Secondly, another difficult aspect for teachers is to be familiar with this new tool, to be willing to create new materials and not only to repeat the same activities in the old way. The success of the IWB will depend on teachers' curiosity and

predisposition to create new things, to experiment and to work using the IWB.

We can also state some drawbacks in the use of the IWB that may affect students and teachers. First of all, as Fatih (2008, p. 29 and 30), quoting Glover and Miller (2001), Hall and Higgins (2005), Levy (2002), Wall (2005), Gray (2005) and Moss (2007), explains, if we want to make the teachers capable of using the Interactive Whiteboard in all its potential and to avoid common problems, they need a fair amount of training and technical support. The teachers have to be confident in using this technology and they can only achieve this with some special training on the area. Without this training, the benefits that we are talking about before may not be experienced in class. Secondly, Fatih, (2008, p. 4), quoting Glover and Miller (2001), points out that there are many teachers in the schools that do not have any competence in Information Communication Technology (ICT). So without this ICT competence it is really difficult to implement the IWBs in different classrooms. It is necessary to have some basic knowledge on technology. Thirdly, the financial situation of the school is a very important aspect on the implementation of this instrument, because they have to spend a considerable amount of money to equip the different classrooms.

Chart to summarize the most important aspects of the paragraphs above

Disadvantages of the Interactive Whiteboard

Affect both teachers and students

- Involve new teaching methodologies.
- Need to change the pedagogy and the way to present the activities.
- Be familiar with the IWB.
- Create new activities.
- Training and technical support.
- Be confident using this technology.
- ICT competence.
- Technical problems.
- Financial situation of the school.

In conclusion, and based on what researchers claim, we can say that a class given using an Interactive Whiteboard is perceived as more interesting by the students and the teachers. The different studies point out that the use of the IWB technology in the class offers a large amount of benefits. However, it is important for teachers to acquire an adequate level of knowledge of ICT to use this technology. As some researchers say, students and teachers have positive opinions about the benefits of the use of the IWB in the schools. Nevertheless, the schools need time to incorporate the new technologies in the class because of financial difficulties, training of the teachers and others. In general, in a class taught through the IWB, students are more motivated and consequently they participate more in the activities that the teacher offers to them. Teachers feel more enthusiastic when they start to use the IWB and feel the difference while they are using it. Even so, the IWB may have some technical problems so teachers have to receive some training about this instrument. In addition, they need adequate training and technical support to create the different lessons. In general, both students and teachers valuate positively the Interactive Whiteboard because it brings some benefits to the class.

One of the aims of this study is to see the motivation of the pupils during a class taught with the Interactive Whiteboard. To do this, I did some research on the motivation theories. So based on what I found I have adapted the different aspects that the researchers highlight about motivation to the specific project that I created and for first grade pupils.

As Ioannou-Georgiou and Pavlou (2003) state on their book Assessing young learners, the term assessment is «a general term which includes all methods used to gather information about children's knowledge, ability, understanding, attitudes and motivation» (Ioannou-Georgiou and Pavlou; 2003, p. 4). In addition, they highlight that assessment is different from the term evaluation and the term testing, they do not mean the same. Evaluation is «the process of gathering information in order to determine the extent to which a language programme meets its goals» and testing is «one of the procedures that can be used to assess a child's performance» (Ioannou-Georgiou and Pavlou; 2003, p. 4).

These researchers say that teachers have to assess young pupils for the following purposes:

- To monitor and aid their progress: what the pupils know, what they have difficulties in and how we can help them.
- To provide an evidence of their own progress: establish shortterm goals to point out their own progress and consequently make them feel more motivated and encouraged to learn.
- To monitor teachers' performance: it can help the teacher to evaluate his/her own work.
- To provide information to parents and school authorities: to keep the parents and the school informed about the pupils' progress.

Another aspect that Ioannou-Georgiou and Pavlou (2003, p. 6 – 8) mention in their study are the skills and attitudes that teachers have to assess. First, they talk about the different skills: listening, speaking, reading, writing and the integrated skills. Focusing on my personal study, I have only assessed listening and speaking (because I had six-year-old pupils in my class). The listening includes predicting content, understand the meaning of the content, listening for gist and listening for detailed information. The speaking includes pronunciation, intonation, turn-taking and the achievement of oral communication. Secondly, they talk about the attitudes of pupils, because it is basic to achieve positive attitudes in the class to foster a better attitude while learning the foreign language and the culture. The attitude assessment was carried out through questionnaires and observation.

Ioannou-Georgiou and Pavlou (2003, p. 8 – 12) also point out how we can assess the pupils, and they highlight that it is very important to establish a motivating and positive atmosphere in the class. This positive atmosphere could be damaged depending on what the teachers did when they had to carry out an assessment activity. It is important to carry out an assessment in a way that does not break this positive atmosphere towards the English language. Some of the methods proposed by them are structured assessment activities, take-home assessment tasks, make a self-assessment, make a portfolio assessment, make an observation and others. Focusing on what I need to make my own assessment in the school, I chose

to make an assessment of the pupils (observation) and a self-assessment. As Ioannou-Georgiou and Pavlou say, self-assessment promotes learning skills such as monitoring one's own progress and reflecting one's abilities; and the observation is a continuous assessment of the pupils' behaviour, attitudes and performance.

Ioannou-Georgiou and Pavlou (2003) give a detailed account of the activities we can do with the students for a good assessment. However, most of the activities that they offer are designed for older primary school children, so I had to adapt the items for first grade. One of the things that I had to adjust was that the self-assessment for primary students is also based on reading and writing. But for the project that I carried out I only wanted to assess listening and speaking, because reading and writing were not developed at this age. Therefore, I wrote the minimum things and I put some icons to make it more understandable (happy and sad faces, for example, instead of writing it). Related to the assessment (the observation) that I did, I also have had to adapt some things because the items related to the listening and the speaking were for pupils whose level of English was too high.

Another researcher that talks about motivation in her study is Emma Fuentes. Fuentes (2012, p. 7), quoting Tapia (2005), explains the strategies that teachers have to follow to promote the motivation of the pupils. He divides the strategies depending on the learning moment.

- Strategies to carry out before the activity: arouse their curiosity and highlight the aims of the activities.
- Strategies to carry out during the activity: keep the interest of the pupils (asking for their previous knowledge, following their rate of learning, answering their questions, using a diversity of strategies and others).
- Strategies to carry out after the activity: reflect on the process.
- Strategies to carry out every time: interact with the pupils, making the pupils interact between them, assessing, avoiding demotivation and favouring their self-autonomy.

Fuentes (2012, p. 6), quoting Escaño and Serna (2008) and Tapia (2005), points out that there are some reasons that may cause demotivation in pupils. First of all, because they do not know how to learn;

secondly, because they think that being good while learning is something innate; and thirdly, because teachers (in general) do not give opportunities to the pupils to learn from their mistakes. So teachers have to avoid these actions and have to try to involve the pupils in their learning process and help them to learn.

Another scholar that talks about motivation is Martha Carlton in her article *Motivating learning in young children* (2003). Carlton points out that children have two types of motivation: intrinsic motivation, when they make their own choice about something because they want to do it; and extrinsic motivation, when the adults choose something for them. On the intrinsically motivated activities the child is motivated by itself so she/he learns and retains information better. On the extrinsically motivated activities the reward comes from outside the child (from their parents or teacher); and it is difficult for the child to keep her/his attention and motivation on what is doing. As Carlton (2003) explains, there are some behavioural characteristics that are indicators of high motivation.

- Persistence: is the ability to do a task during a long period of time. A highly motivated pupil will keep on doing the activity for a long time whereas a demotivated pupil will give up. As teachers, we have to offer tasks that are just challenging enough for the level of the pupils but not too overwhelming.
- Choice of challenge: pupils that experience success in an activity will become motivated, ready for another activity. These pupils will choose the activities which are slightly difficult for them.
 Demotivated pupils will choose the activities that are too easy for them.
- Dependency on adults: pupils that are motivated do not need an adult watching and helping them with the activities. On the contrary, pupils that are demotivated need constant attention from adults.
- Emotion: pupils that are motivated are satisfied with their work and are interested in doing more activities. Demotivated pupils feel bored and a bit uncommunicative during the activities.

Carlton (2003) also highlights that young pupils use oral communication to solve problems. We can often hear pupils talking to themselves (talking out loud) to find the solution of a problem. These pupils have more self confidence so they can solve problems easily because they are motivated in front of challenging situations. Adults can enhance the motivation of the pupils, but they have to be very cautious about the use of extrinsic rewards (because it can interfere with the intrinsic motivation of the pupils). There are some strategies that adults can use to motivate the pupils:

- Provide a good environment to explore and see the effect of their actions.
- · Give enough time to finish their work.
- Respond to their needs but let them some independency.
- Provide opportunities to explore together.
- Provide adequate challenges.
- Give the opportunity to evaluate their work.
- Do not use excessive rewards.

Another research that talks about motivation is Dörnyei in his book *Motivational strategies in the language classroom* (2001). In his book he explains the Williams and Burden's framework of L2 motivation (1997). These researchers consider L2 motivation as something complex, and they divide the motivation influence into internal or external. Some internal factors on motivation are the intrinsic interest on the activity, perceived value of the activity, the self-concept, the attitudes, other affective states, and others. Some external factors on motivation are the significant others (parents, teachers and peers), the nature of interaction, the learning environment and the broader context. All these items are an important part to value about the pupils' motivation, because there is not only one aspect to take into account to recognize if the pupils are motivated or not. As teachers, we should change and promote the external factors of the motivation, but we may not be able to change the internal factors that each pupil has.

Some motivational strategies that Dörnyei states are the following. First, he explains that we can focus on the internal structure of a language class (present material, give feedback...); secondly, design a primarily

trouble-shooting guide (write the motivational problems and make suggestions to solve them); thirdly, focus on key motivational concepts (intrinsic interest, self-confidence or student autonomy); fourthly, centre the discussion on the main types of teacher behaviour that have motivating effects; and finally, comprehensiveness, focused on the different phases of the process-oriented model. These five ways to organize the motivational strategies are quite useful before starting the sessions. Following these approaches we can highlight the problems in the class in terms of motivation and we can start choosing the best strategies to motivate our pupils. Some of the key aspects in the motivational teaching practice are creating the basic motivational conditions (for example, appropriate teacher behaviours and pleasant and supportive atmosphere), generating initial motivation (for example, making teaching materials relevant for learners, enhance the learners' values and attitudes), maintaining and protecting motivation (for example, presenting tasks in a motivating way, making learning stimulating and enjoyable) and encouraging positive retrospective self-evaluation (for example, providing motivational feedback, increasing learner satisfaction). All these key units are really useful for teachers to create and prepare a didactic unit according to some motivational practice, to involve students into the teaching-learning process and eventually motivate them to learn.

6 Methods

To elaborate the practical part of this study I elaborated a project that I implemented with the pupils of the school where I carried out my internship. This school was the «Escola Marta Mata», in Girona. The school has pupils from six to twelve years old. I did my internship with the English teacher in first and second year of primary, Lídia Comas, who teaches English to the youngest ones and Arts and Crafts to the pupils in third and fifth year. To do this project, I specifically focused my attention on first graders.

The project that I elaborated consists of different activities created specifically to teach by using the Interactive Whiteboard in the English classroom. As I explained before there are two types of IWB: the ones that are operated with a stylus and the others that are operated with the finger;

the IWB of the school belongs to the first category (a special pen to write on its surface). Based on the topic that I have to focus to elaborate my didactic unit (food, based on the story «The very hungry caterpillar») I created a series of activities and games designed for the six year old children. The games where created by me using the application Notebook, and it was specifically focused on the objectives that I wanted the pupils to achieve. I created and prepared six different oral sessions1: in the first one we played some Interactive Whiteboard games, in the second and the third one we made a caterpillar puppet and a minibook about the story, in the fourth session students learned some Interactive Whiteboard games related to the story, in the fifth session we also saw some other Interactive Whiteboard games and in the sixth one we feed the caterpillar and we made a poster. During these sessions, the pupils were getting familiar with the vocabulary related to the story. During the first activities, the new vocabulary was presented by reading the book «The very hungry caterpillar» and the first Interactive Whiteboard games. Later on, these language items were practiced with other activities using the IWB. I also repeat the story at the beginning of each class. All the activities were created with the aim that the pupils had to participate, to stand up and get closer to the IWB to solve it.

One of the main objectives of this study was to check the motivation of the pupils while they were using the Interactive Whiteboard. So to evaluate the progress of the pupils I elaborated two instruments. One instrument was an assessment grid² for each pupil. In this assessment grid, I focused on listening, speaking and the attitudes of the different pupils. The main objective of this grid was to see if the pupils get involved in the class and if they participated. The second instrument was a self-assessment checklist³ for each one. After every lesson, I gave each pupil the self-assessment grid to know the degree of motivation and satisfaction during the activity. On these grids I asked them specifically their opinion about each activity (if they liked it a lot, if they liked it a little or if they did not like it). The brief description and analysis of the two instruments is included on the next section.

_

¹ The pictures of each activity are in the annex 10.1

² The example of the assessment is in the annex 10.2.1

³ The example of the self-assessment is in the annex 10.2.2

7 Study

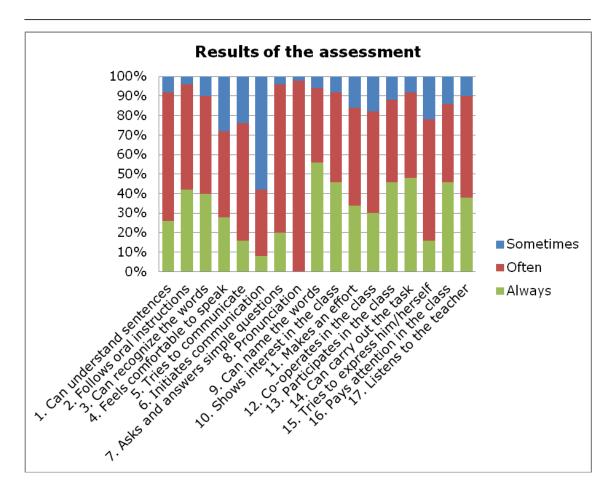
I evaluated the pupils using two ways, as I explained before. One instrument was an assessment grid on each child and the second instrument was a self-assessment document, where each pupil had to answer some questions related to their own motivation and satisfaction about the activities. Consequently, in this section I am going to explain the conclusions of both instruments. The general results/conclusions are expressed in rounded percentages. I also asked the English teacher some interesting questions about her students' motivation during my sessions, to take a different point of view. This would be interesting to see how the teacher sees the pupils in a class.

To start with, I am going to describe the results of the individual assessment⁴. Although the assessment is divided into two different grids (because there are two different groups of first grade in the school: group A and group B), to reach a conclusion I've put together the two groups to analyze the results in general. In this grid we can see the percentage of pupils that did each item always, often or sometimes. The items from one to three refer to listening; the items from four to nine refer to speaking and the items from ten to seventeen refer to their attitudes.

	1. Can underse	2. Follows Ord Sentences		4. Feels comference	5. Tries to con-	6. Initiates con		8. Pronunciation	/	10. Shows int.	ž / &		13. Participate.	14. Can carry	15. Tries to ex.	16. Pays attenti	i roution i	of the teacher	
Always	26%	42%	40%	28%	16%	8%	20%	0%	56%	46%	34%	30%	46%	48%	16%	46%	38%		
Often	66%	54%	50%	44%	60%	34%	76%	98%	38%	46%	50%	52%	42%	44%	62%	40%	52%		
Sometimes	8%	4%	10%	28%	24%	58%	4%	2%	6%	8%	16%	18%	12%	8%	22%	14%	10%		

_

 $^{^{\}rm 4}$ The complete grids and the statistics of the assessments of each group are in the annex 10.3.1



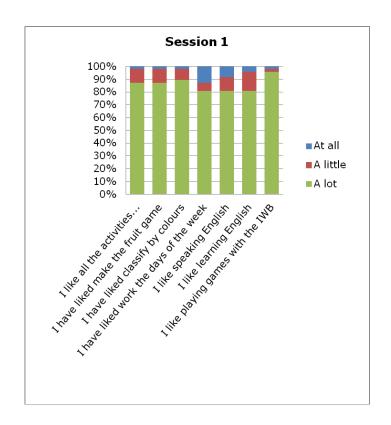
In this graph we can see that the listening of the pupils is good, because most of them can often understand sentences (66% of the pupils), can often follow oral instructions (54% of the pupils) and can often recognize the words that we are working on (50%). About 40% of the pupils can always recognize the different words. In terms of speaking, some of the pupils feel comfortable to speak most of the times (44%) but they are still very shy speaking in English. We can see that most of the pupils often try to communicate (60%) but only sometimes they initiate communication (58% of the pupils). Most of them can often ask and answer simple questions (How are you? Which food is that? What's this?) (76%) and in general the pronunciation is good. Pupils only have some difficulties with the sound θ in the words θ and θ and θ in the words θ because they pronounce it like the «f» in Catalan. But with the correct input they will solve that problem. Most of them can always name the words of the vocabulary that have been taught without problems (56% of the pupils). About their attitudes, we can see that there is the same percentage of pupils that show interest in the class always and often (46%), make

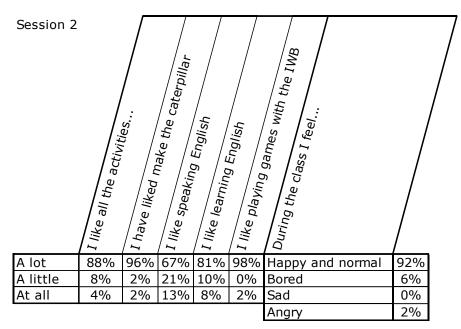
often the effort to pay attention (50%) and to co-operate (52%). We can see that the pupils always participate in the class (46%) and can carry out the task (48% of the pupils). Most of the pupils try often to express themselves (62%) and the rest of the class only try sometimes to express themselves (22%); as I said before, because they do not know enough English vocabulary and they do not feel enough comfortable to speak in the foreign language. In general, during a class with the IWB, most pupils always pay attention to the class (46%) and only half of the pupils listen often to the teacher (52%).

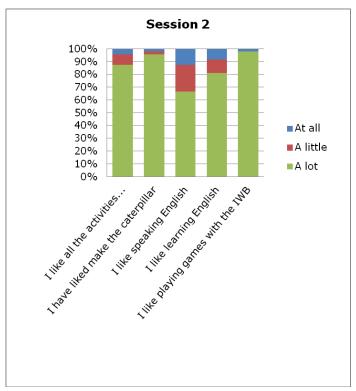
Moreover, I would also like to present the results of the different self-assessment grids that the pupils answered during the different lessons with the IWB⁵. I will talk about the conclusions on their own motivation and satisfaction about the different class activities. Although self-assessment is shown in two different grids (because there are two different groups of 1st grade in the school: group A and group B), to reach a conclusion I have combined both groups to explain the results in general. The self-assessments that I gave to the pupils where in Catalan.

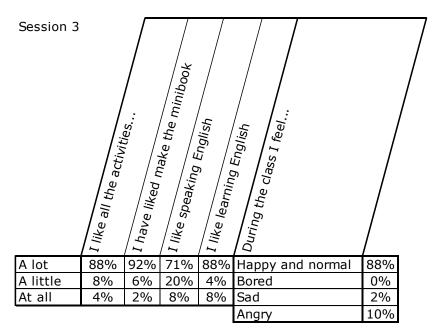
 $^{^{5}}$ The complete grids and the statistics of the self-assessments of each group are in the annex 10.3.2

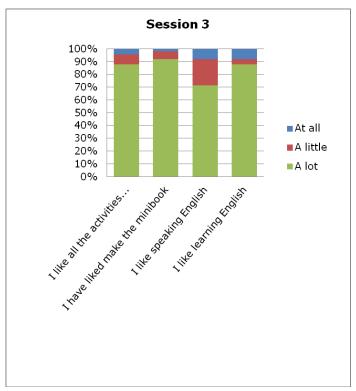
Session 1	I like all the activitie	I have liked med	I have liked ci.	I have liked world	I like speaking 5	I like learning r	I like playing S	During the class I feel	
A lot	87%	0770	0970	0170	0170	0170	90%	Happy and normal	85%
A little	11%	11%	9%	6%	11%	15%	2%	Bored	9%
At all	2%	2%	2%	13%	9%	4%	2%	Sad	4%
								Angry	2%



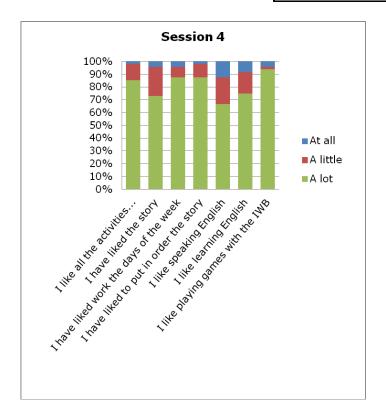




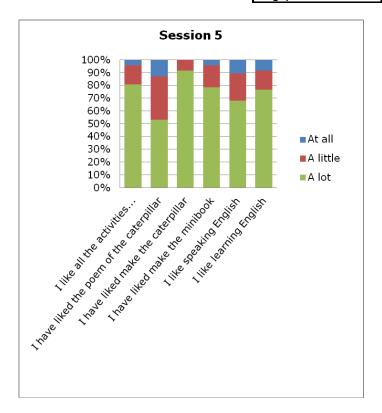




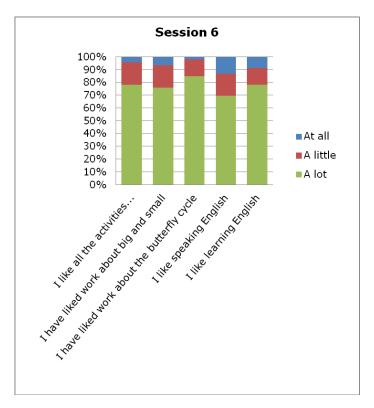
Session 4	I like all the activities	I have liked the	I have liked way	I have liked to go	I like speaking to order the story		I like playing 2	During the class I feel	
A lot	85%	73%	00%	00%	0/%	75%	94%	Happy and normal	88%
A little	13%	23%	8%	10%	21%	17%	2%	Bored	10%
At all	2%	4%	4%	2%	13%	8%	4%	Sad	0%
								Angry	2%

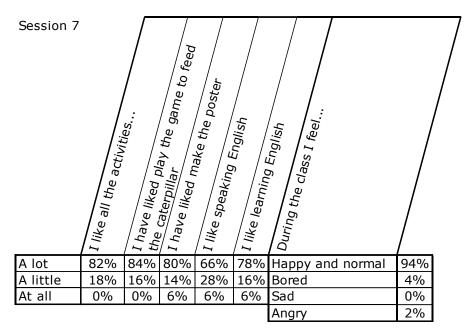


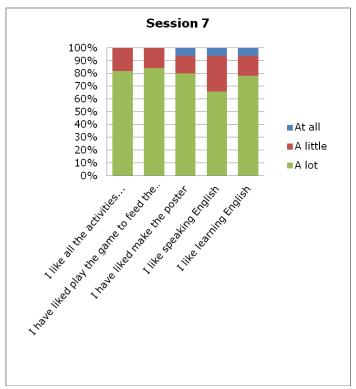
Session 5	I like all the activiti.	I have liked the	I have liked med	I have liked may.	I like speaking the minibook	I like learning r	During the class I feel		
A lot	81%	53%	91%	79%	08%	77%	Happy and normal	85%	
A little	15%	34%	9%	17%	21%	15%	Bored	9%	
At all	4%	13%	0%	4%	11%	9%	Sad	2%	
							Angry	4%	



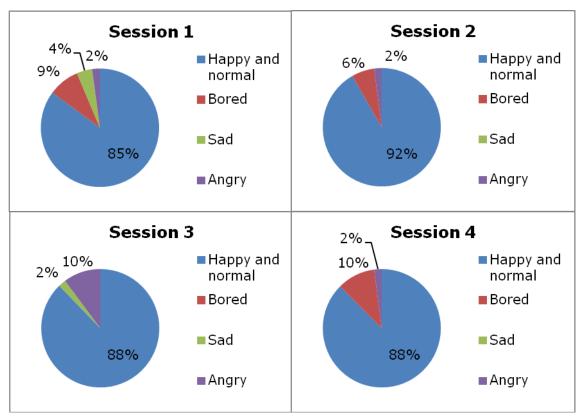
Session 6	I like all the activiti	I have liked w.	I have liked wo	I like speaking	I like learning English	During the class I feel		
A lot	78%	76%	85%	70%	78%	Happy and normal	83%	
A little	17%	17%	13%	17%	13%		9%	
At all	4%	7%	2%	13%	9%	Sad	4%	
	-					Angry	4%	

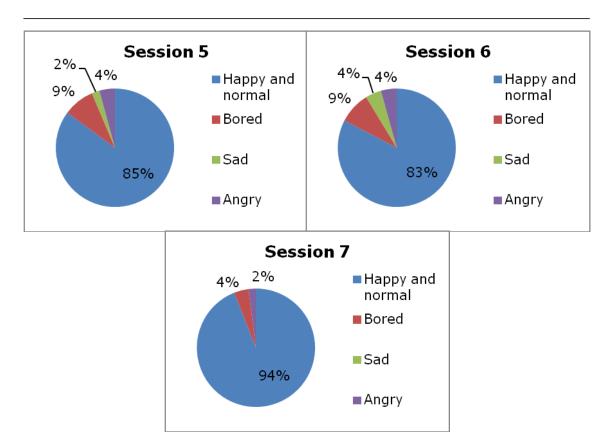






In general, all the pupils seemed to like the different activities a lot. When I asked them their own opinion about the class in general, they gave a very positive overall opinion. In all the sessions, more or less 80% of the pupils liked the class a lot. When I asked them if they enjoyed speaking English, more than 65% of the class liked it a lot, and in some sessions a 20% of the class answered that they liked it just a little. And when I asked them if they liked to learn English, most of them answered that they liked it a lot (more than 75% of the pupils in all the cases). About the different activities, most of pupils liked them a lot. The different activities were: the story, game about the fruits, colours, days of the week, make a caterpillar, colour a minibook, put in order the story, a poem, big and small, butterfly cycle, feed the caterpillar and the poster. The games that they liked the most were when they made the caterpillar (96% of the class like it a lot) and when they coloured the minibook (92% of the class). They also liked the IWB games, particularly the fruit, the colour game, the days of the week, the game where they had to put the story in order and the butterfly cycle (more than 85% of the pupils). They enjoyed playing games with the IWB, because it is an instrument that allows pupils to participate actively in the class. More than 90% of the pupils answer that they like to play games with it.





About their state of mind, I asked them how they felt during the class (represented by faces: happy, normal, bored, sad and angry). Most of the pupils answered that they were happy during the sessions. There were some pupils that felt bored during the activities, some of them felt sad, and some of them felt angry. And when I asked them why they felt like this, in general they answered that it was because they had to wait until it was their turn and they had to keep seated. This was caused because only one pupil could go to the IWB each time, and they did not want to wait. They also felt like this because some other pupils were annoying them during the class or because of some things not related to the class. I have to say that these opinions of the pupils about the activities and their state of mind are not completely correct, because I hear some pupils in the class discussing about what they can mark (which face) and they did it together; so it cannot be taken as undisputable truth.

To have a different point of view I also asked the English teacher in the class if she can answer some questions related to the motivation of the pupils during the sessions⁶. Based on her answers, it can be stated that she sees the activities as more motivating for the pupils, as they are born in a

_

⁶ The interview with the teacher is in the annex 10.4

digital society. The teacher thinks that the Interactive Whiteboard is more motivating because it allows interaction, so they feel more important during the class and they become a part of the teaching-learning process. So in general, the aspects that the teacher highlights as positive in the use of the IWB are more or less the aspects that the researchers point out about that tool. As researchers say, the positive aspects in the use of the IWB are that the pupils can participate actively in a class (so they feel more motivated as a part of the learning process), both teachers and pupils can have access to all the information that they want or need in that moment and the teacher can prepare her own material for the class. About the negative aspects, the most important ones could be the lack of time to prepare the materials to use in the IWB, the difficulty to work with small groups and the internet connection (that sometimes was really slow). About the first one, it is true that teaching with the IWB needs some more preparation time, but this only happens the first times that a teacher is using that tool, because a teacher gets more familiar through the practice. The beginnings are always difficult, but if they get training on how to use the IWB, it would be easy to prepare the materials. About the internet connection, I also think that the schools are not really prepared to use all that technology in the class. The internet connection is slow, it stops sometimes, and the computers do not always work. There are some problems with those new technologies. But in general she perceived the IWB quite positive and she thinks that it really motivates the pupils.

8 Conclusions

This study reflects the advantages and disadvantages of the Interactive Whiteboard (IWB) in the school context. In general, and according to the researchers, we can state that there are more advantages than disadvantages. About the advantages of the IWB we can highlight the ones that refer to the pupils. The use of the IWB in the class allows the pupils to learn and be more interested in what is being taught. Therefore, we can say that in general they are more motivated and interested in learning and, at the same time, they participate and collaborate in the class because the IWB promotes interaction between the teachers, the pupils and the lesson. Related to the teachers, with the use of the IWB they can achieve more interesting, entertaining, interactive and dynamic lessons (and this influences pupils' attitudes as well); also, the teacher can personalize the materials that she/he is going to use in the class. About the disadvantages of the Interactive Whiteboard, the most important ones are the following: the methodology that teachers use while they were using the IWB (because they cannot use the same methodology as in a traditional class); the predisposition that they have to have to be confident with this new tool and the financial problems (because it is an expensive instrument).

To observe the degree of motivation that the pupils feel, I have read some studies related to primary education pupils and then I have adapted the different aspects to the specific things that I wanted to highlight. I created several items to identify the motivation that pupils felt during the class. During the different sessions that I carried out in the school with the pupils, I could prove that they were more motivated while they were doing activities that needed interaction. As we can see in this study, pupils feel more interested and motivated in class when teachers offer them interactive activities; activities that allow them to participate and collaborate. With the use of the Interactive Whiteboard I see the different aspects that the researchers highlight from their studies. The pupils were more motivated to participate in the games that I had created because I offered them the possibility to collaborate in the lesson that I was teaching. This was important for them because they felt part of the class and of course they were motivated. The opinions of the teacher are quite similar to the

opinions that the researchers have. There are some positive aspects (motivation and participation, for example) but also some negative aspects (bad internet connection, lack of training in the use of the tool and others). And she also thinks that the pupils where more motivated with the IWB than without it, since the pupils were able to participate more.

In conclusion, and focusing on what I have seen during my intervention in the school and during my research, in general pupils collaborate and participate more in a class with the IWB, and consequently they try to express themselves in English. Another aspect that the teacher should take into account is classroom management since only one student can come up to the board and interact with it. I have to say that the obtained results of the school are not absolute because I only carried out the activities in one school and with a reduced number of pupils. So we cannot extrapolate these results in other contexts or situations. In the school, most of the pupils felt more motivated to learn while we were using the Interactive Whiteboard. They focus their attention on what the teacher was teaching because the activities were dynamic, visual and needed their collaboration.

9 References

- BELL, Mary Ann. Why use an Interactive Whiteboard? A baker's dozen reasons! [online]. Teachers Gazette, 2002. Accessed on: April 2016. Available at: http://www.teachers.net/gazette/JAN02/mabell.html
- BETCHER, Chris; LEE, Mal. *The interactive Whiteboard revolution. Teaching with IWBs*. Australia: Acer Press, 2009.
- BRITISH EDUCATIONAL COMMUNICATIONS AND TECHNOLOGY AGENCY (BECTA). What the research says about Interactive Whiteboards [online]. Coventry: Becta, 2003. Accessed on: April 2016. Available at: http://www.hpedsb.on.ca/ec/services/cst/elementary/math/documents/whiteboards_research.pdf>
- CARLTON, Martha. *Motivating Learning in Young Children* [online]. Southern Illinois University (Edwardsville): National Association of School Psychologists (NASP), 2003. Accessed on: April 2016. Available at: http://www.naspcenter.org/parents/earlychildmotiv_ho.html
- CHENG, Hsing-Fu; DÖRNYEI, Zoltán. The use of motivational strategies in language instruction: the case of EFL teaching in Taiwan. *Innovation in Language Learning and Teaching*, pages 153 to 174, 2007.
- DÖRNYEI, Zoltán. *Motivational strategies in the language classroom*. United Kingdom: Cambridge University Press, 2001.
- DUDENEY, Gavin; HOCKLY, Nicky. *How to teah English with technology*. England: Pearson Education Limited, 2007.
- FATIH, M. Attitudes of students and teachers towards the use of interactive Whiteboards in EFL classrooms. Turkey, 2008.
- FUENTES, Emma. Influència de les característiques de les activitats educatives en el nivell de motivació i d'aprenentatge de l'alumnat. Barcelona, 2012.
- GAGE, Jenny. How to use an interactive Whiteboard really effectively in your primary classroom. London: David Fulton Publishers, 2005.
- GLOVER, Derek; MILLER, David. Running with technology: the pedagogic impact of the large scale introduction of Interactive Whiteboards in one secondary school. Journal of information technology for teacher education, 2001.

- GRAY, C; HAGGER-VAUGHAN, L; PILKINGTON, R; TOMKINS, S. A. The pros and cons of Interactive Whiteboards in relation to the key stage 3 strategy and framework. Philadelphia: Language learning Journal, 2005.
- HALL, Ian; HIGGINS, Steven. *Primary school students' perceptions of Interactive Whiteboards*. Journal of computer assisted learning, 2005
- HAYNES, Judie. *Teach to sudents' learning styles* [online]. New Jersey; 2009.

 Accessed on: April 2016. Available at:

 http://www.everythingesl.net/inservices/learningstyle.php
- IOANNOU-GEORGIOU, Sophie; PAVLOU, Pavlos. *Assessing young learners*. Oxford: Oxford University Press, 2003.
- Kennewell, Steve. *Interactive Whiteboards Yet another solution looking* for a problem to solve? Information technology in teacher education, 2001.
- KENNEWELL, Steve; BEAUCHAMP, Gary. The features of interactive Whiteboards and their influence on learning. London: Learning, media and technology, 2007.
- KINSELLA, Kate. «Understanding and empowering diverse learners in ESL classrooms». In Reid, Joy. *Learning styles in the ESL/EFL classroom*. Boston: Heinle & Heinle, 1995.
- LEE, Kuang-wu. English teachers' barriers to the use of computer-assisted language learning [online]. The internet TESL Journal, 2000.

 Accessed on: April 2016. Available at: http://iteslj.org/Articles/Lee-CALLbarriers.html
- LEVY, Philippa. *Interactive whiteboards in learning and teaching in two Sheffield schools: a developmental study*. University of Sheffield: Department of information studies, 2002.
- MARTÍN, Daniel. *Activities for Interactive Whiteboards*. Cambridge: Heblbling languages, 2009.
- Moss, Gemma; Jewitt, Carey; Levaâiç, Ros; Armstrong, Vicky; Cardini, Alejandra; Castle, Frances. *The Interactive Whiteboards, pedagogy and pupil performance evaluation* [online]. Nottingham: DfES publications, 2007. Accessed on: April 2016. Available at: http://eprints.ioe.ac.uk/905/1/Moss2007whiteboardsRR816.pdf

Notes of the English Language speciality.

- Notes of the Information and Communication Technologies (ICT) speciality.
- PRENSKY, Marc. *Digital natives, digital immigrants* [online]. University Press, 2001. Accessed on: April 2016. Available at: http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Immigrants%20-%20Part1.pdf
- ROZA, Daniela. *Incorporating technology among young learners: the use of the Interactive Whiteboard in the English classroom*. Portugal, 2011.
- SCHMID, Euline Cutrim. *Investigating the use of interactive Whiteboard technology in the English language classroom through the lens of a critical theory of technology*. Germany: Routledge, 2006.
- SILVA, Marcus. «Interactive Whiteboard technology and EFL Brazilian teachers: an investigation into the role of mentoring as a gateway to professional development». In SARMENTO, Simone; FREITAS, Ana Luiza.

 O ensino de Inglês como língua estrangeira Estudos e relfexôes II.

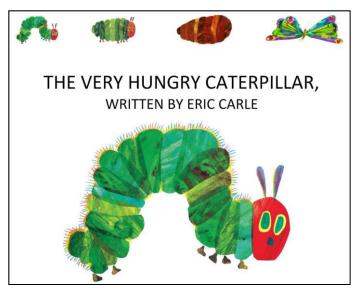
 Porto Alegre: EdiPUCRS, 2009.
- SMITH, H. Smartboard evaluation: final report. Kent NGfL, 2001.
- Wall, Kate; Higgins, Steven; Smith, Heather. *The visual helps me understand the complicated things: pupil views of teaching and learning with Interactive Whiteboards*. British journal of educational technology, 2005.
- WALKER, D. White enlightening. London: Times educational supplement, 2002.
- Warschauer, Mark; Healey, Deborah. *Computers and language learning: an overview* [online]. Language teaching, 1998. Accessed on: April 2016. Available at: http://hstrik.ruhosting.nl/wordpress/wp-content/uploads/2013/03/Warschauer-Healey-1998.pdf>
- YBARRA, Renee; GREEN, Tim. *Using Technology to help ESL/EFL students develop language skills* [online]. The internet TESL Journal, 2003.

 Accessed on: April 2016. Available at: http://iteslj.org/Articles/Ybarra-Technology.html

10 Annex

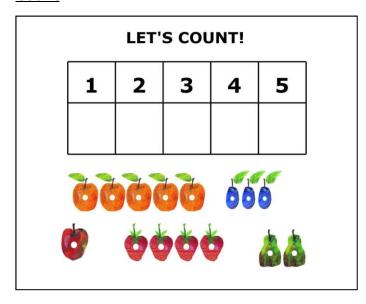
10.1 Activities created for the sessions

In this section you can find the different activities that I create for the Interactive Whiteboard and for some sessions. All the activities have the same home screen, which is this one:



10.1.1 First session: Interactive Whiteboard games 1

Count



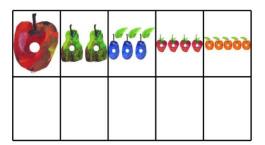
The pupils have to place the fruit under the correct number.

LET'S COUNT!



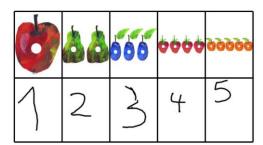
An example of the activity solved

WRITE THE CORRECT NUMBERS

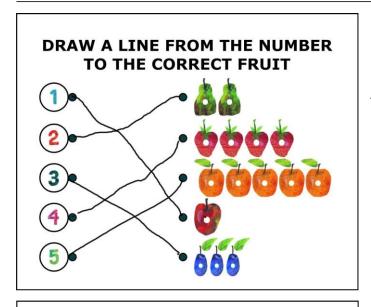


The pupils have to write the correct number under each amount of fruit

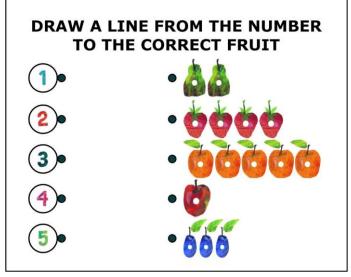
WRITE THE CORRECT NUMBERS



An example of the activity solved

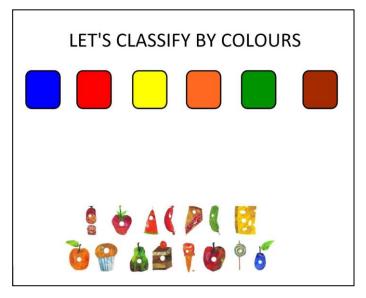


The pupils have to draw a line from the number to the correct amount of fruit

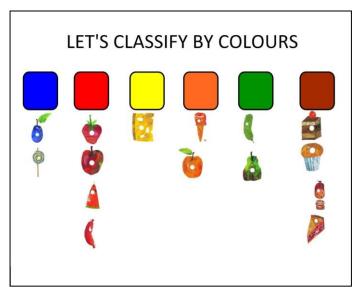


An example of the activity solved

<u>Colours</u>



The pupils have to place each piece of food under the correct colour

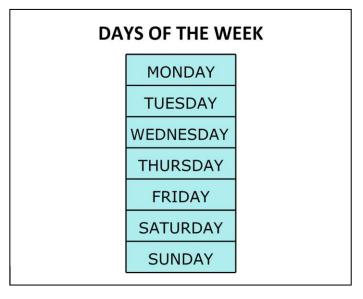


An example of the activity solved

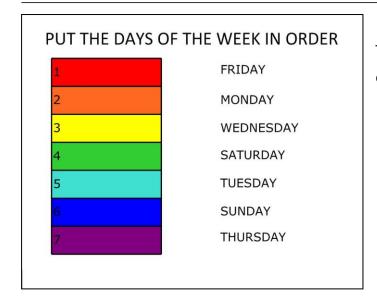
Days of the week



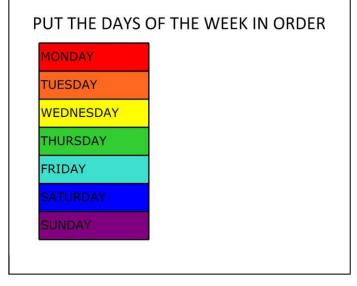
The pupils have to listen and sing the song about the days of the week



The pupils have to listen and repeat the days of the week in order



The pupils have to put in order the days of the week



An example of the activity solved

10.1.2 Second session: Caterpillar puppet

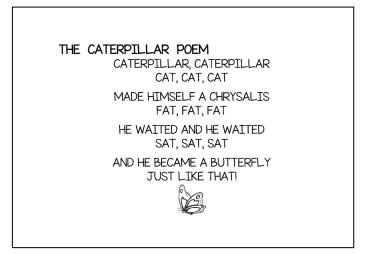
Make a caterpillar puppet



The pupils have to make the caterpillar puppet painting the cartoon eggs and making the face

10.1.3 Third session: Minibook

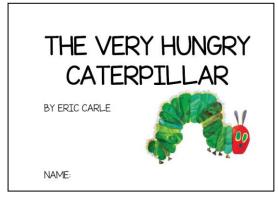
Caterpillar poem

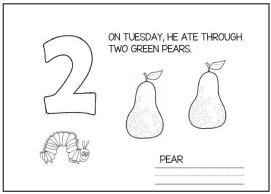


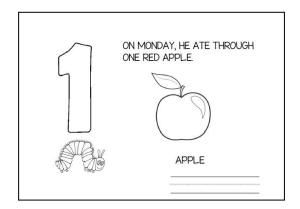
The pupils have to listen to the whole poem. Then the teacher says it sentence by sentence making the gestures and the pupils have to repeat it

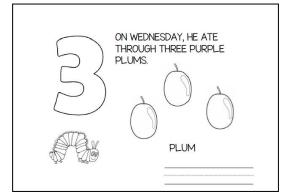
Colour the minibook

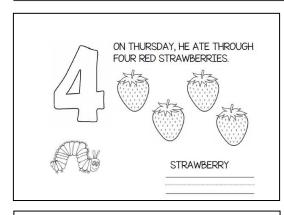
The pupils have to colour the minibook and write the words of the different things

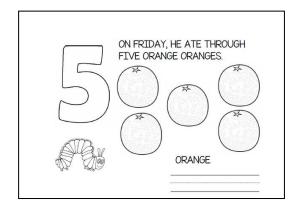




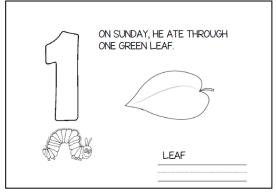


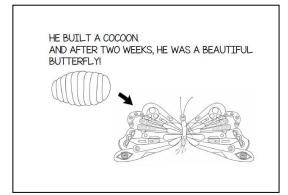












THE CATERPILLAR POEM
CATERPILLAR, CATERPILLAR
CAT, CAT, CAT

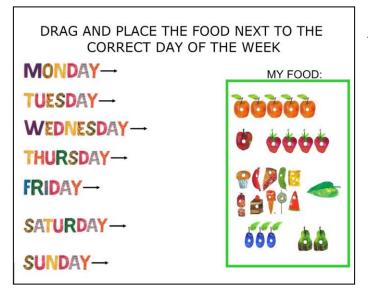
MADE HIMSELF A CHRYSALIS
FAT, FAT, FAT
HE WAITED AND HE WAITED
SAT, SAT, SAT
AND HE BECAME A BUTTERFLY
JUST LIKE THATI



10.1.4 Fourth session: Story games

<u>Days of the week</u>: the same activity explained before

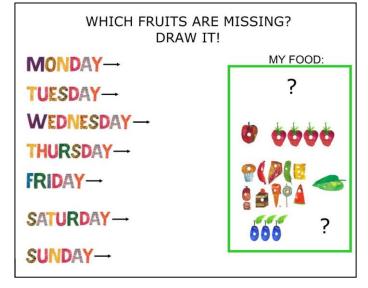
Put in order the story



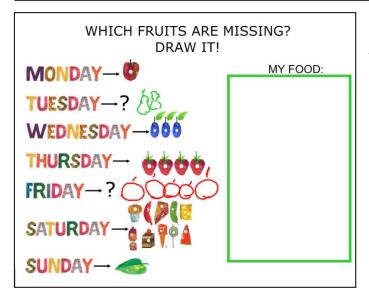
The pupils have to drag and place the food next to the correct day of the week



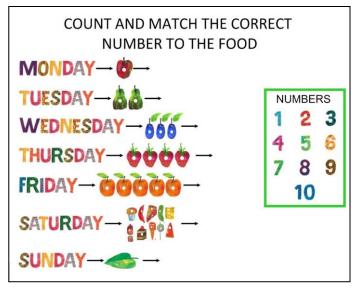
An example of the activity solved



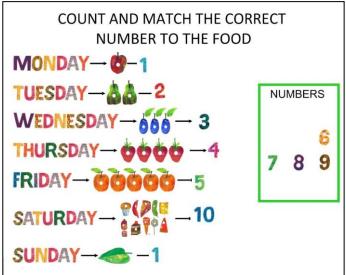
The pupils have to drag and place the food next to the correct day of the week and draw the ones that are missing



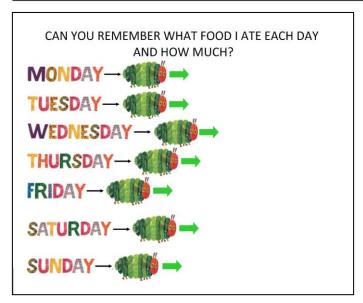
An example of the activity solved



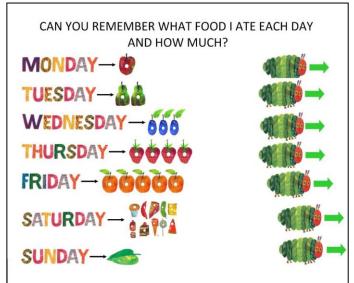
The pupils have to count and put the correct number next to the correct number of food



An example of the activity solved



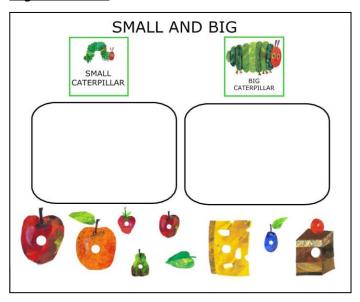
The pupils have to remember and guess what food the caterpillar eat each day and how much



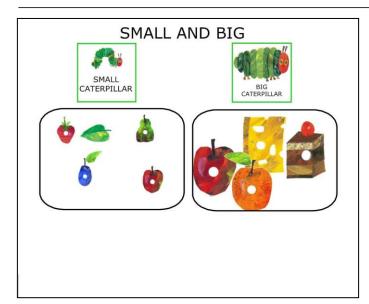
The pupils can drag the caterpillar to show what food the caterpillar ate.

10.1.5 Fifth session: Interactive Whiteboard games 2

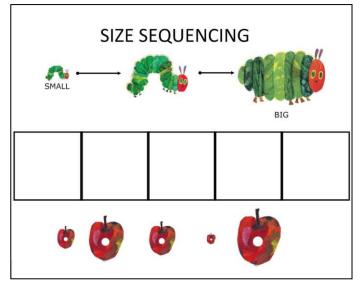
Big and small



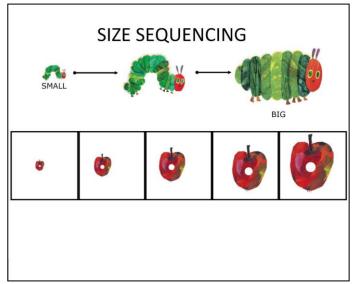
The pupils have to place each piece of food in the correct place, depending if they are small or big



An example of the activity solved

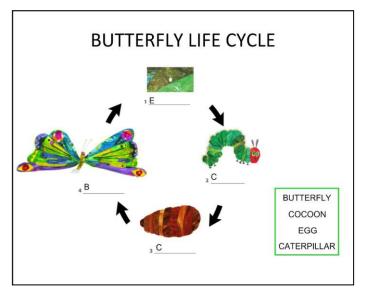


The pupils have to put the fruit in the correct order, from small to big

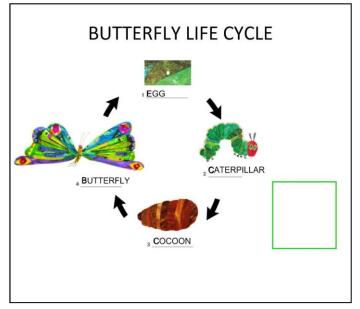


An example of the activity solved

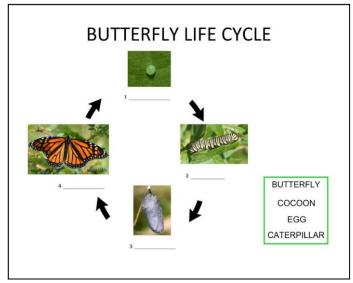
Life cycle of a butterfly



The pupils have to drag and place the words under the correct picture

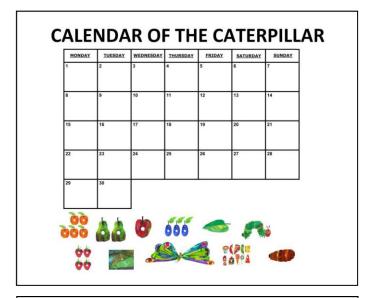


An example of the activity solved

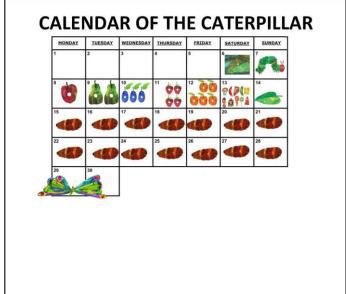


The same activity with real pictures of the life cycle of a butterfly

Butterfly calendar



The pupils have to drag and place each picture in the correct day of the calendar to follow the story

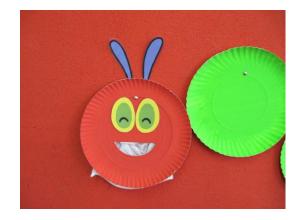


An example of the activity solved

10.1.6 Sixth session: The caterpillar

Feed the caterpillar







Each pupil has two pieces of food and they have to put them into the mouth of the caterpillar in the same order than in the story

Caterpillar poster

Each pupil has a couple of pictures to stick on the wall. They have to stand up and stick them in order.





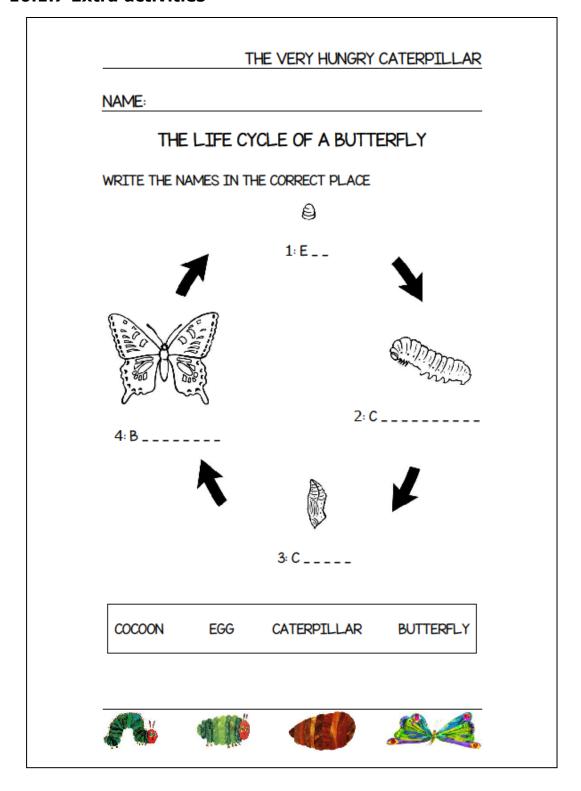


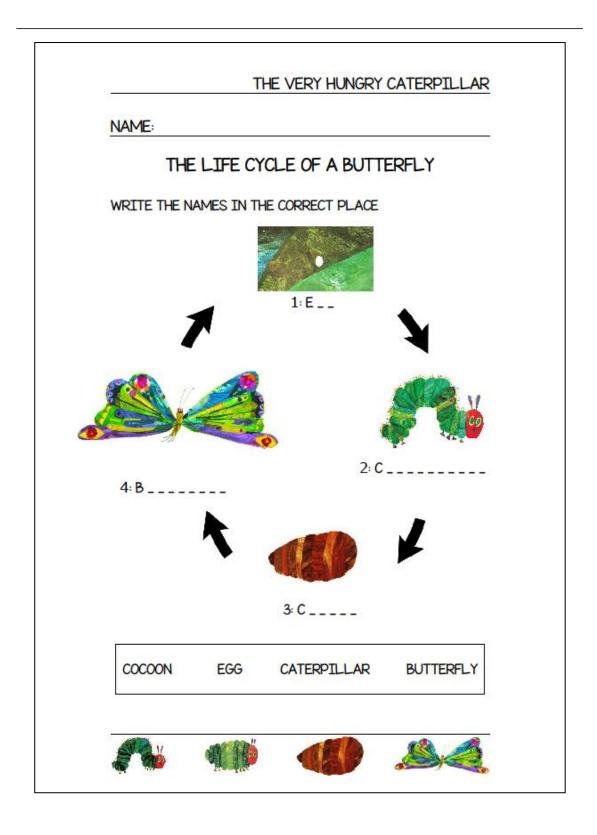






10.1.7 Extra activities





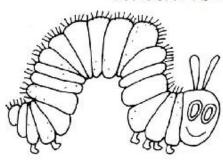
	THE VERY F	HUNGRY CATERPILL
NAME:		
	LET'S DRA	W!
DRAW SOMETHIN CATERPILLAR»	IG ABOUT THE STO	ORY «THE VERY HUNG

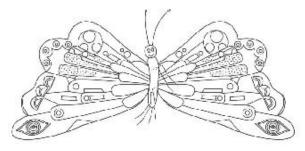
THE VERY HUNGRY CATERPILLAR NAME: LET'S COUNT! DRAW A LINE FROM THE NUMBER TO THE CORRECT FRUIT

THE VERY HUNGRY CATERPILLAR

NAME:

COLOUR AND WRITE





THE C _____ BECAME
A BEAUTIFUL B _____!

BUTTERFLY

CATERPILLAR









10.2 Evaluation

10.2.1 Assessment instrument

	Listening 1. Can	2. Follows Oral is	Speat:	4. Feels	5. Tries to	6. Initiates	/ Asks and answ.	9. Car.	Attit: the War	10. Sh.	11. Mail.	12. Co. San effort the class	13. Part:	14. Can the class	15. Tri	16. Part of express to	17. List attention in til	Other Co. The teach	Somments Siler	
1		/ (, <i>, o,</i>	/ 4 /	4)		7 40	/ 01	\vdash	7	7	7	7	7	7	7	7	\exists	/	
3																				
4	1																			
5																				
6																				
7	┨		4		-			-												
8	1		-		+		-													
10	1																			
11																				
12			_																	
13	l		_																	
14	1 -		-		+	_	-	\vdash												
14 15 16 17 18 19 20	1		1				+													
17]																	
18			4																	
19	$H \models$		4			_	-	-												
21	$H \vdash H$		+		-		-	1												
22	1		1		+	\dashv		1												
23] []			ҵ		L												
24																				
21 22 23 24 25 26	\bot		4		_	_		-												
26			<u> </u>					1	.											
Alw O Sometir	ays A ften O nes S																			

10.2.2 Self-assessment instrument

The following documents are the different self-assessment checklists that I gave to the pupils in the different sessions.

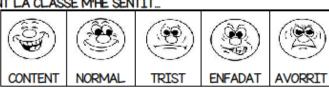
LES ACTIVITATS QUE HEM FET			
M'HAN AGRADAT MOLT			
M'HAN AGRADAT UNA MICA			
NO MHAN AGRADAT			
	MOLT	UNA MICA	GENS
M'HA AGRADAT EL JOC DE LES FRUITES	٩	\odot	(F)
M'HA AGRADAT CLASSIFICAR PER COLORS	(3)	\odot	((;
M'HA AGRADAT TREBALLAR ELS DIES DE LA SETMANA	(4)	(3)	
M'HA AGRADAT EL JOC D'ORDENAR EL CONTE	(4)	(;)	(;;)
M'AGRADA PARLAR EN ANGLÈS	(4)	\odot	(2)
M'AGRADA APRENDRE ANGLÈS	(3)	\odot	(E)
M'AGRADA JUGAR A JOCS AMB LA PISSARRA DIGITAL INTERACTIVA (PDI)	(4)	\odot	(3)
DURANT LA CLASSE M'HE SENTIT			•
CONTENT NORMAL TRIST E	ENFADAT	AVORRIT	

NOM:	

LES ACTIVITATS QUE HEM FET						
(M'HAN AGRADAT MOLT					
(i)	M'HAN AGRADAT UNA MICA					
	NO M'HAN AGRADAT					

	MOLT	UNA MICA	GENS
M'HA AGRADAT FER EL CATERPILLAR		\bigcirc	(\vec{c})
M'HA AGRADAT TREBALLAR ELS DIES DE LA SETMANA	(3)	\odot	(3)
M'HA AGRADAT EL JOC D'ORDENAR EL CONTE		\odot	

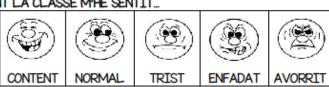
M'AGRADA PARLAR EN ANGLÈS		\odot	$(\vec{\epsilon})$
M'AGRADA APRENDRE ANGLÈS	(C)	\odot	(\vec{c})
M'AGRADA JUGAR A JOCS AMB LA PISSARRA DIGITAL INTERACTIVA (PDI)		(<u>©</u>	(\vec{c})



LES ACT	IVITATS QUE HEM FET
	M'HAN AGRADAT MOLT
(i)	M'HAN AGRADAT UNA MICA
	NO M'HAN AGRADAT

	MOLT	UNA MICA	GENS
M'HA AGRADAT EL CONTE		\odot	(\vec{c})
M'HA AGRADAT TREBALLAR ELS DIES DE LA SETMANA		(ⓒ)	$(\vec{\epsilon};\vec{\epsilon})$
M'HA AGRADAT EL JOC D'ORDENAR EL CONTE		(<u>©</u>	$(\vec{\epsilon};\vec{j})$
M'HA AGRADAT TREBALLAR GRAN I PETIT		(c)	$(\vec{\epsilon};\vec{\epsilon})$

M'AGRADA PARLAR EN ANGLÈS	(3)	(ⓒ)	
M'AGRADA APRENDRE ANGLÈS		\bigcirc	(\vec{c})
M'AGRADA JUGAR A JOCS AMB LA PISSARRA DIGITAL INTERACTIVA (PDI)		\odot	

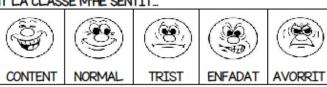


NOM:	

LES ACT	IVITATS QUE HEM FET
	M'HAN AGRADAT MOLT
(i)	M'HAN AGRADAT UNA MICA
	NO M'HAN AGRADAT

	MOLT	UNA MICA	GENS
M'HA AGRADAT FER EL MINIBOOK	(C)	\bigcirc	$(i\vec{s})$
M'HA AGRADAT FER EL CATERPILLAR		\bigcirc	

M'AGRADA PARLAR EN ANGLÈS		(ⓒ)	
M'AGRADA APRENDRE ANGLÈS	(3)	\odot	$(\vec{\epsilon})$

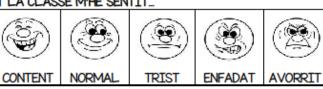


NOM:	
INCAPAL:	

LES ACT	IVITATS QUE HEM FET
	M'HAN AGRADAT MOLT
(i)	M'HAN AGRADAT UNA MICA
(3)	NO M'HAN AGRADAT

	MOLT	UNA MICA	GENS
M'HA AGRADAT EL POEMA DEL CATERPILLAR	(C)	\bigcirc	(\vec{G})
M'HA AGRADAT FER EL CATERPILLAR		\odot	(\vec{x})
M'HA AGRADAT FER EL MINIBOOK		\odot	(\vec{c})

M'AGRADA PARLAR EN ANGLÈS	(3)	(ⓒ)	
M'AGRADA APRENDRE ANGLÈS		\bigcirc	(\vec{c})

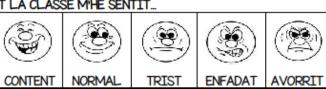


NION 4			
NOM:	 	 	

LES ACT	CVITATS QUE HEM FET
	M'HAN AGRADAT MOLT
(((M'HAN AGRADAT UNA MICA
	NO M'HAN AGRADAT

	MOLT	UNA MICA	GENS
M'HA AGRADAT TREBALLAR GRAN I PETIT	(\mathbb{C})	\bigcirc	(\vec{G})
M'HA AGRADAT TREBALLAR EL CICLE DE LA PAPALLONA	(3)	\odot	(\vec{x})
M'HA AGRADAT TREBALLAR EL MENJAR SAULDABLE	(C)	(c)	(\vec{c})

M'AGRADA PARLAR EN ANGLÈS	(3)	(ⓒ)	
M'AGRADA APRENDRE ANGLÈS		\bigcirc	(\vec{c})

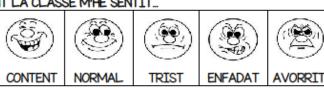


NOM:	
1401-1	

LES ACT	LES ACTIVITATS QUE HEM FET									
(3)	M'HAN AGRADAT MOLT									
(i)	M'HAN AGRADAT UNA MICA									
	NO M'HAN AGRADAT									

	MOLT	UNA MICA	GENS
M'HA AGRADAT EL JOC D'ALIMENTAR EL CATERPILLAR	(C)	\bigcirc	(\vec{G})
M'HA AGRADAT FER EL MURAL		\odot	

M'AGRADA PARLAR EN ANGLÈS	(3)	(i)	
M'AGRADA APRENDRE ANGLÈS		\odot	(\vec{x})



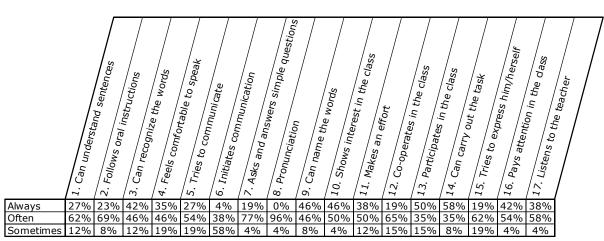
10.3 Results of the assessment and self-assessment

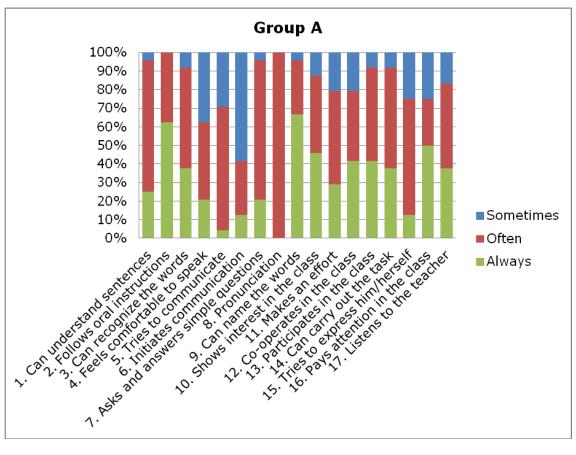
In this section you can find all the results of the assessment and the self-assessments that I made during my didactic unit.

10.3.1 Assessment

Here you can find the results of the assessment that I made of each pupil (the complete chart of each class), the statistics and the bar chart.

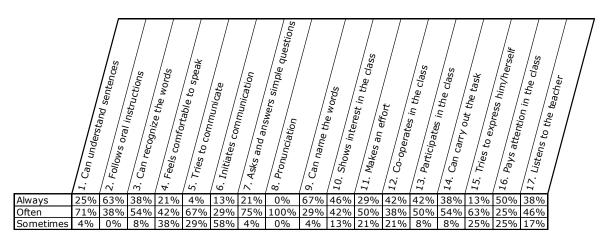
Group A Signature Signatu	Group A	
2	<u>/</u> :	1. Can understand sentences 3. Can recognize the words 4. Feels comfortable to speak 5. Tries to communicate 7. Asks and answers simple quee 7. Asks and answers simple quee 9. Can name the words 10. Shows interest in the class 11. Makes an effort 12. Co-operates in the class 14. Can carry out the task 16. Pays attention in the dass 16. Pays attention in the dass 17. Listens to the teacher
Always A Often O Sometimes S Number of pupils of each item Always	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	O O A A O A O A O A O A O A O A O A O A
Always 7 6 11 9 7 1 5 0 12 12 10 5 13 15 5 11 10 Often 16 18 12 12 14 10 20 25 12 13 13 17 9 9 16 14 15 Sometimes 3 2 3 5 5 15 1 1 2 1 3 4 4 2 5 1 1	Ofter	10
Always 7 6 11 9 7 1 5 0 12 12 10 5 13 15 5 11 10 Often 16 18 12 12 14 10 20 25 12 13 13 17 9 9 16 14 15 Sometimes 3 2 3 5 5 15 1 1 2 1 3 4 4 2 5 1 1		Number of nunils of each item
Often 16 18 12 12 14 10 20 25 12 13 13 17 9 9 16 14 15 Sometimes 3 2 3 5 5 15 1 1 2 1 3 4 4 2 5 1 1	Alwaye	
Sometimes 3 2 3 5 5 15 1 1 2 1 3 4 4 2 5 1 1		
10tai 20 26 26 26 26 26 26 26 26 26 26 26 26 26 26		
	lotal	[26]26]26] [26]26]26]26]26]26] [26]26]26]26]26]26]26]

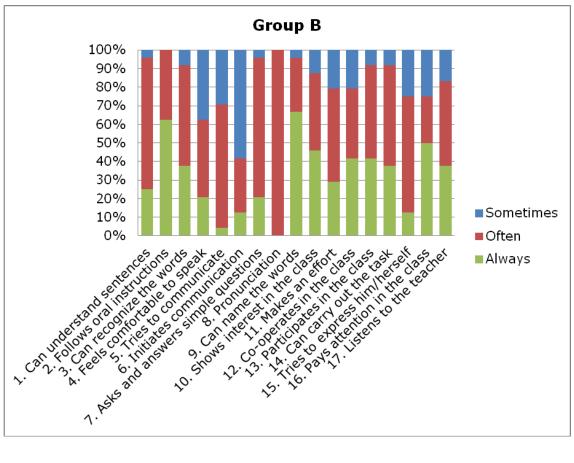




Group B	
	nd sentences Instructions Instructions able to speak Munication Wers simple q a words a words in the class on in the class on in the class lie teacher
/	1. Can understand sentences 2. Follows oral instructions Speaking 4. Feels comfortable to speak 5. Tries to communication 6. Initiates communication 7. Asks and answers simple questions 8. Pronunciation 9. Can name the words 10. Shows interest in the class 11. Makes an effort 12. Co-operates in the class 13. Participates in the class 14. Can carry out the task 16. Pays attention in the class 17. Listens to the teacher
	0 A 0
2	0 A 0 S 0 S 0 0 A A 0 0 0 S 0 0 +
3	O A S S S S S O O A O O O O S S O O A O S S O O S S S -
5	A A A O A O A O A O A O A O +
7	O O O A A S O S O A A O A S O S O A A O A
8	O O A O O A A O O O A A + O
10	A O A A O O O A S O O A A O O O -
11 -	O O A O O S O O O O A A A A A A A A A A
13	A A A O O O O O A A A A O A O A A +
14 15	A A A A A A A A A A A A A A A A A A A
16 17	0 0 0 0 S S O 0 0 0 O S S O + O S S O - O S S O - O S S O S S O - O S S O S O S O S S O S O S S O S O S S O S S O S S O S S O S S O S S O S O S S O S O S S O S O S S O S O S S O S O S S O S O S S O S O S O S S
18	A A A A A A A A A A A B O +
19 20	O O O S S S S O O S S O S S S S O O S O S S S S S O O S
21	A A O O O O A A O O A O A A - O A O A O
23	0 A 0 0 0 0 0 A A 0 0 0 0 0 0 +
24	0 A 0 0 0 S 0 0 A A A A 0 A 0 A A -
Always	
Often Sometimes	
	Number of pupils of each item
Always	6 15 9 5 1 3 5 0 16 11 7 10 10 9 3 12 9
Often Sometimes	17 9 13 1 0 2 9 7 14 1 0 1 3 5 5 2 2 6 6 4
Total	24 24 24 24 24 24 24 24 24 24 24 24 24 2

68





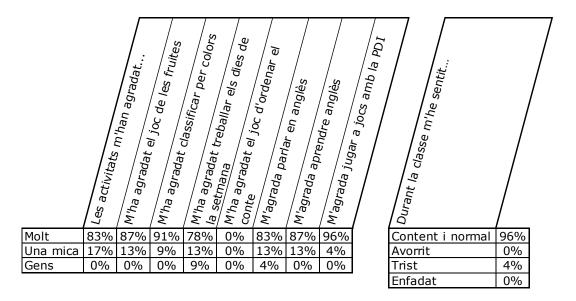
10.3.2 Self-assessment

Here you can find the results of the self-assessment that the pupils answer (the complete chart of each class) and the statistics.

GLond B 11-11 A Mha agradat el joc de les fruites la setmana la											
	[e	E	E	Z 6	8 3	Σ	2	Z	70		
1 Martin 5.		2	2	1	1	•	ı	2	normal		
2	2	2	2	2	ı	2	2	2	contenta		
3	2	2	2	2	-	2	2	2	contenta		
4	2	2	2	2	-	2	2	2	content		
5	2	1	2	2	-	2	2	1	normal		
6	2	2	2	2	-	2	2	2	content		
7	2	2	2	2	-	2	2	2	content		
8	2	2	2	2 2 2	-	1	2	2	contenta		
9	2	2	2	2	-	2	2	2	content		
10	2	2	1		-	2	2	2	content		
11	2	2	2	1	-	1	2	2	normal		
12	1	2	1	1	-	0	1	2	content		
13	2	2	2	2	ı	2	2	2	content		
14	2	2	2	0	-	2	2	2	normal		
15	1	1	2	2	-	2	1	2	contenta		
16	2	2	2	2	ı	2	2	2	contenta		
17	-	ı	-	ı	ı	ı	ı	ı	-		
18	1	1	2	2	-	2	1	2	trist		
19	2	2	2	2	-	2	2	2	normal		
20	2	2	2	2	-	2	2	2	content		
21	1	2	2	2	-	2	2	2	content		
22	2	2	2	2	-	2	2	2	content		
23	2	2	2	0	-	2	2	2	normal		
24	2	2	2	2	-	2	2	2	normal		

Molt	2
Una mica	1
Gens	0

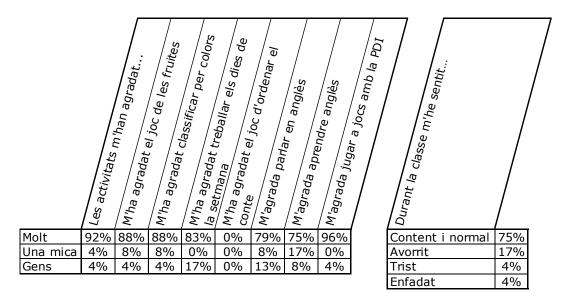
	Number of pupils											
Molt 19 20 21 18 0 19 20 22												
Una mica	4	3	2	3	0	3	3	1				
Gens	0	0	0	2	0	1	0	0				
Total	23	23	23	23	0	23	23	23				



Group A 12-11 12-11											
	Les act	M'ha ac	M'ha 32	M'ha agra la set re	M'ha agra conte	M'agrad	M'agrad	M'agrad	Durant la		
1 19000	2	2	2	2	-	2	1	2	contenta		
2	2	2	2	2	_	2	2	2	content		
3	2	2	2	2	-	0	0	2	enfadat	perquè em molestaven	
4	2	2	1	0	_	2	1	2	content	porque em morestavem	
5	2	1	2	0	_	2	1	2			
6	2	2	2	2	_	2	2	2	contenta		
7	1	1	2	0	-	0	1		trista	perquè no tenia ganes de fer anglès	
8	2	2	2	2	-	2	2	2	content	Forque no sense gance ao sen angres	
9	2	2	2	2	-	1	2	2	content		
10	2	2	2	2	-	2	2	2	contenta		
11 1-2-	2	2	1	2	-	2	2	2	avorrit	perquè no m'ha agradat la cançó	
12	2	2	2	2	-	2	2	2	content		
13	2	2	2	2	-	2	2	2	contenta		
14	2	2	2	2	-	2	2	2	content		
15	2	2	2	2	-	2	2	2	contenta		
16	2	2	2	2	-	2	2	2	content		
17	-	-	-	-	-	-	-	-	-		
18	-	-	-	-	-	-	-	-	-		
19	2	2	2	2	-	1	2	2	content		
20	2	2	2	2	-	2	2	2	avorrida	perquè quan no em tocava m'havia d'esperar	
21	2	2	2	2	-	2	2	2	contenta		
22	2	2	2	2	-	2	2	2	content		
23	0	0	0	0	-	0	0		avorrit	perquè tenia gana i no m'agrada anar a l'escola	
24	2	2	2	2	-	2	2	2	content		
25	2	2	2	2	-	2	2	2	avorrida	perquè m'havia d'esperar quan no em tocava	
26	2	2	2	2	-	2	2	2	content		

Molt	2
Una mica	1
Gens	0

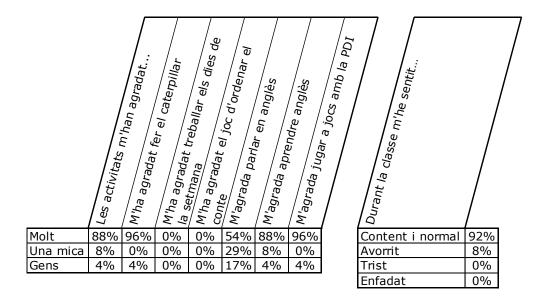
Number of pupils											
Molt	22	21	21	20	0	19	18	23			
Una mica	1	2	2	0	0	2	4	0			
Gens	1	1	1	4	0	3	2	1			
Total	24	24	24	24	0	24	24	24			



Group B 18-11		s m'han s	M'ha agradat fer el Caterpillar la ser con a s	M'ha agradat el si	Joc d'ordenar of	M'agrad parlar en an	M'agrada aprendre a l'iglès	Durant la classe m'he sentit	
	Les acti	M'ha ac	M'ha agrada la set m	M'ha agrada Conta	M'agrad	M'agrad	M'agrad	Durant la cl	
1 Martinia 5.	2	2	-	-	1	2	2	contenta	
2	2	2	-	-	2	2	2	contenta	
3	2	2	-	-	2	2	2	contenta	
4	2	2	-	-	1	1	2	content	
5	2	2	-	-	2	2	2	normal	
6	0	0	-	-	0	2	0	avorrit	perquè hem repetit el conte
7 14	2	2	-	-	1	2	2	content	
8	2	2	-	-	1	2	2	contenta	
9	2	2	-	-	0	2	2	normal	
10	2	2	-	-	1	2	2	normal	
11	2	2	-	-	1	2	2	normal	
12	1	2	-	-	0	2	2	normal	
13	2	2	-	-	2	2	2	content	
14	2	2	-	-	2	2	2	contenta	
15	2	2	-	-	2	2	2	contenta	
16	2	2	-	-	2	2	2	contenta	
17	1	2	-	-	1	1	2	avorrit	perquè he estat quiet
18	2	2	-	-	2	2	2	content	
19	2	2	-	-	2	2	2	normal	
20	2	2	-	-	2	2	2	content	
21	2	2	-	-	0	0	2	normal	
22	2	2	-	-	2	2	2	content	
23	2	2	-	-	2	2	2	normal	
24	2	2	-	-	2	2	2	contenta	

Molt	2
Una mica	1
Gens	0

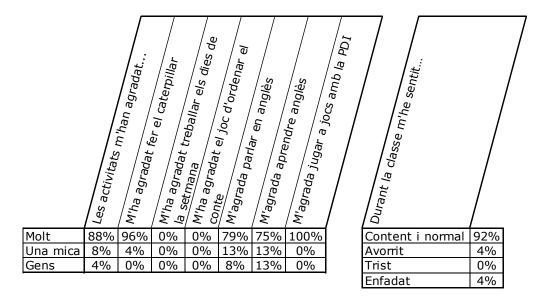
Number of pupils									
Molt	21	23	0	0	13	21	23		
Una mica	2	0	0	0	7	2	0		
Gens	1	1	0	0	4	1	1		
Total	24	24	0	0	24	24	24		



Group A			T /		/		T	111	
19-11			/ /	/ e	/_			/ /~/	
			/:/.	/ 8	/ .	Ū	/	/ /4/	. /
		- /	at.	<i>di</i> / <i>i</i>	/ jg	· /	′,	/ /₾/₺	; <u> </u>
		_ /	je je	\s\[\s\[\s\[\]	/e/	/	·s /	\$\fr\\ti	
		- / :	\$\\#\	, a /	9	- / ;	<u>6</u> /	b e 3	
		1 6	0 / 0 /	/ /a	Ò	/ å	5 / č	# \ \? \ \4	
		ha	/ @ / ₄	Pa /.,	õ	/ &	18	, / , 2 / E	
		E	\@\\£) a	,	is	ج /	\ ₹ \ 8	
	/	\$	#/#	<i>∀</i> /	/	He/	a l	/ ₉	1
		₽/	De De	na ad	/	ď	ō/	ج/ 'د م	
	- / ;	<u>}</u> / €	5/5,	g/g	/ 2	ğ/3	ğ/;	t / d	
	/ 6	מין ל	/ o t	7 ° 4	? / ä	5/8	5/ 5	a) (a)	
	/ ୫	15	14.	14.6	1,2	./ 'n	./.j	7 5	/
	1~	ځ ٰ	M'ha agradat fer el Caterpillar la set rocaterpillar	M'ha agradat el s dies de conta	<u> </u>	Magrad Parlar en ar	<u> ~</u>	Durant la classe m'he sentit.	
1 13000	_	_			1				
3	2	2	-	-	2	2	2	content	, , , , , , , , , , , , , , , , , , , ,
3	_ 2	2	-	-	0	2	2	enfadat	perquè tothom cridava
4 5	2	2	-	-	2	2	2	content	
5	1	2	-	-	1	0	2	normal	
6 7	2	2	-	-	2	2	2	contenta	
7	1	2	-	-	1	1	2	normal	
8 9	2	2	-	-	2	2	2	content	
9	2	2	-	-	0	2	2	avorrit	perquè l'Anaïs em molestava
10	2	2	-	-	2	2	2	contenta	
11	2	2	-	-	2	2	2	normal	
12	2	2	-	-	2	2	2	content	
13	2	2	-	-	2	2	2	contenta	
14	2	2	-	-	2	2	2	content	
15		-	-	-	-	-	-	-	
16		-	-	-	-	-	-	-	
17	0	2	-	-	2	0	2	normal	
18	2	2	-	-	2	2	2	contenta	
19	2	2	-	-	2	2	2	content	
20	2	2	-	-	2	2	2	normal	
21	2	2	-	-	2	2	2	contenta	
22	2	2	-	-	2	2	2	content	
23	2	1	-	-	2	0	2	normal	
24	2	2	-	-	2	1	2	content	
25	2	2	-	-	2	2	2	normal	
26	2	2	-	-	2	1	2	content	

Molt	2
Una mica	1
Gens	0

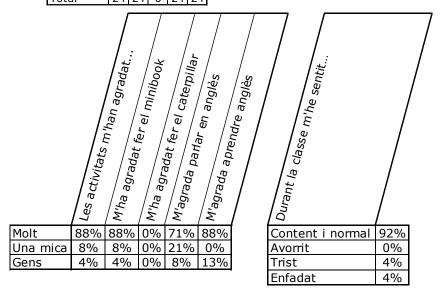
Number of pupils													
Molt 21 23 0 0 19 18 24													
Una mica	2	1	0	0	3	3	0						
Gens	1	0	0	0	2	3	0						
Total	24	24	Λ	Λ	24	24	24						



Group B 25-11													
	es a	, ha	"ha"	l'agr.	3/1/8	uran	/						
1	/ ~	2	1 5.	1	2	Q							
1 Martine 5.	2	2		2	2								
3	2	2	-	2	2	contenta normal							
4	2	2	-	0	0	content							
5	2	2		2	2	normal							
6	2	2	-	2	2	content							
7	2	1	-	1	2	content							
8	2	2	-	2	2	contenta							
9	2	2	-	2	2	normal							
10	2	2	-	2	2	content							
11	1	2	_	1	2	contenta							
12	2	2	_	0	0	content							
13	2	2	-	2	2	normal							
14	2	0	-	2	2	contenta							
15	2	2	-	2	2	normal							
16	2	2	-	2	2	contenta							
17	0	1	-	1	0	trist							
18	2	2	-	2	2	normal							
19	2	2	-	2	2	contenta							
20	2	2	-	2	2	content							
21	2	2	-	2	2	content							
22	2	2	-	2	2	content							
23	1	2	-	1	2	enfadat	perquè m'han empès						
24	2	2	-	2	2	contenta							

Molt	2
Una mica	1
Gens	0

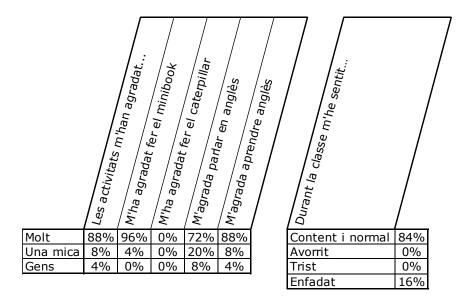
Number of pupils												
Molt 21 21 0 17 21												
Una mica	2	2	0	5	0							
Gens	1	1	0	2	3							
Total	24	24	0	24	24							



Group A 25-11	Les art	M'na se m'han s	M'ha agradat fer el mi	M'agradat fer el Car	M'agrad parlar en acceptillar	Durant la classe m'he sentit.	
1	2	2	-	1	2	contenta	
2	2	2	_	2	2	content	
3	2	2	-	0	1	enfadat	perquè volia beure aigua
4	2	2	_	2	2	content	porque roma pouro argua
5	2	2	-	2	2	content	
6	2	2	-	2	2	contenta	
7	1	2	-	1	2	normal	
8	2	2	-	2	2	content	
9	2	2	-	2	2	content	
10	2	2	-	2	2	contenta	
11	2	1	-	2	2	normal	
12	2	2	-	2	2	content	
13	2	2	-	2	2	contenta	
14	2	2	-	2	2	normal	
15	-	-	-	-	-	-	
16	2	2	-	2	2	content	
17	0	2	-	0	1	enfadat	perquè em molestàven
18	2	2	-	2	2	contenta	
19	2	2	-	1	0	content	
20	2	2	-	2	2	normal	
21	2	2	-	2	2	contenta	
22	1	2	-	1	2	normal	
23	2	2	-	2	2	enfadat	perquè no hem pogut fer el caterpillar
24	2	2	-	1	2	normal	
25	2	2	-	2	2		perquè en Nil no parava de molestar-me
26	2	2	-	2	2	content	

Molt	2
Una mica	1
Gens	0

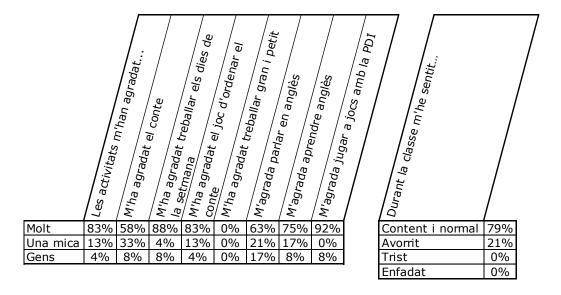
Number of pupils												
Molt 22 24 0 18 22												
Una mica	2	1	0	5	2							
Gens	1	0	0	2	1							
Total	25	25	Ω	25	25							



Group I 23-11	В		M'ha sa m'han s	M'ha agradat el conte la set agradat troi	M'ha agradat el s dies de Conta	Joc d'ordenar ci	adat treballa	N'agradiante n'ar gran i petit	M'agrada aprendre	Durant la classe m'he sentit	
		Sack	ha ac	ha agr	ha agr	7/2 Pd	agr _{2,1}	agradi.	agr. J	ırant l	
		[F	E	\$ 5	8 3	Ž	Σ	2	Σ	70	/
1 100	Sec. 2.	_	_			-				contenta	
2		2	2	2	2	-	2	2	2	contenta	
3	1	2	2	2	2	-	2	2	2	contenta	
4	n like	2	2	2	2	-	0	1	2	content	
DECOME LINE	- O.	2	2	2	2	-	2	2	2	normal	
6	_	2	2	2	2	-	2	2	2	content	
7		2	1	2 2 0	0	-	1	1	2	normal	
8	N. H.	2	2	2	2	-	2	2	2	contenta	
9	nd.	2	1	0	2	-	0	0	2	avorrit	
10		2	2	2	2	-	2	2	2	content	
11		2	1	2	2	-	0	2	2	contenta	
12		2	1	0	2	-	0	0	2	avorrit	perquè no m'he mogut gaire
13		1	0	2	2	-	2	2	2	normal	
14	in .	2	1	2	2	-	2	2	2	normal	
10		0	1	2	1	-	2	1	0	avorrida	perquè he hagut d'esperar
16		2	2	2	2	-	2	2	2	contenta	
17		1	1	1	2	-	1	2	2	normal	
18		2	2	2	1	-	2	1	0	avorrit	perquè no hem fet una fitxa
19	_	2		2	2	-		2	2	contenta	
20	_	2	2	2	2	-	2	2	2	content	
21	_	2	2	2	2	-	2	2	2	content	
22	_	1	0	2	1	-	2	2	2	content	
23	-	2	2	2	2	-	1	2	2	avorrit	perquè he estat l'últim
24		2	2	2	2	-	1	2	2	contenta	

Molt	2
Una mica	1
Gens	0

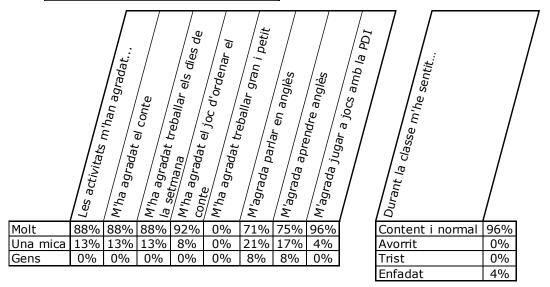
Number of pupils													
Molt	20	14	21	20	0	15	18	22					
Una mica	3	8	1	3	0	5	4	0					
Gens	1	2	2	1	0	4	2	2					
Total	24	24	24	24	0	24	24	24					



Group A 26-11			\int_{\cdot}	de	/2	ชั	Detit	./	$\left \begin{array}{c} POI \end{array}\right $				
	Gronb A 26-11 Wha agradat el conte (a setmana (b) M'ha agradat treballar els dies de (conte												
			p/a/	ar e	7,0'E	/ /	9 4	ğ/ ;	s al				
M'ha agradat el conte la setmana deronte la setmana treballar e conte M'ha agradat treballar general treballar general treballar general de													
train at train at the last of													
Tadaja Ta													
	\ s	,\ ¹ 1	1'ha	1'ha ont	1,2	1,30	1'ag	1'a	ura	/			
1 = :	1	2	1	2	_	2	2	2	normal				
2	2	2	2	2	-	2	2	2	content				
3	2	2	2	2	_	2	2	2	enfadat	perquè em molestàven			
4	2	2	2	2	-	2	2	2	content	perque em morestavem			
5	1	1	1	1	-	1	1	2	normal				
6	2	2	2	2	-	2	2	2	contenta				
7	1	1	1	1	-	1	2	2	normal				
8	2	2	2	2	-	2	2	2	content				
9	2	2	2	2	-	2	2	2	content				
10	2	2	2	2	-	2	2	2	contenta				
11	2	2	2	2	-	2	2	2	content				
12	2	2	2	2	-	2	2	2	content				
13	2	2	2	2	-	2	2	2	contenta				
14	2	1	2	2	-	2	2	2	content				
15	-	-	- 0	-	-	-	-	-	-				
16	2	2	2	2	-	2	2	2	content				
17 18	-	2	2	2	-	2	2	2	- contonto				
19	2	2	2	2	-	0	0	2	contenta				
20	2	2	2	2	-	1	2	2	content normal				
21	2	2	2	2	-	2	2	2	contenta				
22	2	2	2	2	-	2	1	2	normal				
23	2	2	2	2	-	1	0	1	content				
24	2	2	2	2	-	1	1	2	normal				
25	2	2	2	2	-	2	2	2	normal				
26	2	2	2	2	1	0	1	2	content				

Molt	2
Una mica	1
Gens	0

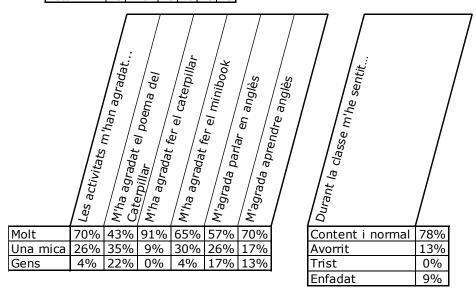
	Ŋ	3 3 2 0 5 4 3 0 0 0 0 2 2 0						
Molt	21	21	21	22	0	17	18	23
Una mica	3	თ	3	2	0	5	4	1
Gens	0	0	0	0	0	2	2	0
Total	24	24	24	24	0	24	24	24



Group B 30-11		M'ha agradat ed	gipillar Si Poema del	M'ha agradat fer el Col	M'agradat fer el mi	Grad parlar en ar	Durant la classe m'he sentit.	
	Les/	$\mathbb{A}_{T_{p}}$	NA	$\mathbb{A}_{T_{P}}$	\mathcal{N}_{A}	Na	D^{nL}	/
1 Martin 5.	2	1	2	2	1	2	normal	
2	2	2	2	2	2	2	contenta	
3	1	1	1	1	1	1	normal	
4	2	2	2	2	0	0	content	
5	2	1	2	2	2	2	normal	
6	2	2	2	2	2	2	enfadat	perquè no m'agrada fer anglès
7	2	1	2	1	1	2	content	
8	2	2	2	2	2	2	contenta	
9	2	0	2	0	0	0	content	
10	2	0	2	1	2	1	content	
11	1	1	2	2	1	2	normal	
12	1	1	2	2	0	1	enfadat	
13	1	0	2	1	2	2	avorrit	perquè tardava molt per pintar
14	2	2	2	2	2	2	contenta	
15	2	2	2	2	2	2	contenta	
16	0	0	2	2	2	2	contenta	
17	1	1	1	1	2	2	normal	
18	2	2	2	2	2	2	content	
19	2	2	2	2	2	2	contenta	
20	-	-	-	-	-	-	-	,
21	2	2	2	2	0	0	avorrit	perquè no he pogut fer el caterpillar
22	2	0	2	1	2	1	content	
23	1	1	2	1	1	2	avorrit	
24	2	2	2	2	1	2	normal	

Molt	2
Una mica	1
Gens	0

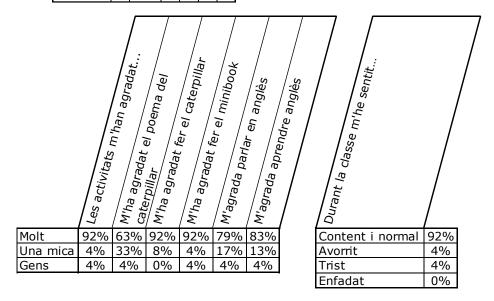
Νι	ımb	er of p	oupi	ls		
Molt	16	10	21	15	13	16
Una mica	6	8	2	7	6	4
Gens	1	5	0	1	4	3
Total	23	23	23	23	23	23



Group A 2-12		/	_/				/ / /					
2-12			. /		/	/	/ / /	/				
		[#	:/	/	ar	13	ني.	; /				
	The social factor of the socia											
na da la												
		[= /	e.	/ _	٤/ ٤	: / 6	9/9/9	/				
		[4]	9	/ 5	/ 2	/ b	4 4	/				
	1	[E a	i,	/ æ	\@	4	SSe la	1				
	_ /	ats dat	/	Jat	Jat/)a,	apr Cla	/				
	- /:	<u> </u>	ė/,	Ē/,	<u>,</u>	œ/.	g / g	/				
	1 5	3 / 6 E	<u> </u>	ઈ/ તે	કેં/ ફે	\vec{s} / \vec{z}	₹/₹	1				
	18	, ha' h	, h	, \ _r	9,	9, /8	E 1	/				
	<u> </u>	\ ≥ \ \(\frac{10}{2}\)	2	Σ	Σ	2	Q					
1	2		_	_	_		correction					
2	-	-	-	-	-	-	-					
3	2	2	2	2	2	0	content					
4	2	1	2	2	2	2	content					
5	2	2	2	2	2	2	content					
6	2	2	2	2	2	2	contenta					
7 5 4	2	1	2	2	1	2	normal					
8	2	2	2	2	2	2	content					
9	2	2	2	2	2	2	content					
10	1	1		2	2	2	normal					
12	2	1	1	0	2	2	avorrit	no sé per què				
	2	2	2	2	2	2	content					
14	2	2		2		2	contenta					
15	2	2	2	2	2	2	content contenta					
16	0	1	2	2	0	1	normal					
17	2	2	2	2	2	2	content					
18	2	1	2	2	2	2	normal					
19	2	0	2	2	1	1	content					
20	2	2	2	2	2	2	normal					
21	2	2	2	2	2	2	contenta					
22	2	2	1	2	1	2	normal					
23	2	2	2	2	2	2	content					
24	2	1	2	1	1	2	content					
25	2	2	2	2	2	2	trista	perquè em fa mal la panxa				
26	-	-	-	-	-	-	-					

Molt	2
Una mica	1
Gens	0

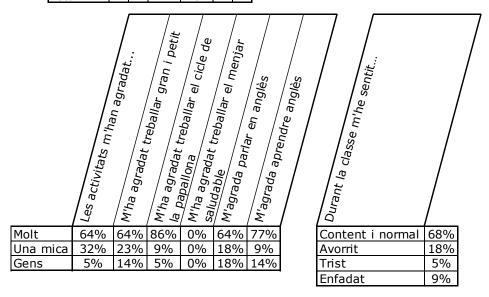
Nu	umb	mber of pupils									
Molt	22	15	22	22	19	20					
Una mica	1	8	2	1	4	3					
Gens	1	1	0	1	1	1					
Total	24	24	24	24	24	24					



Group B				4./	7		7 / /	
2-12			M'ha agradat treballar gran i no.	M'ha agradat trot	1.2	J D L	/ / /	
		M'ha a] / it	i (e	1 6	,	Durant la classe m'he sentit	; /
		_/	⁷ dd,	70	7	/	lès lès ent	/
			gb 75	75	31.	/ /	g / g	
		18	:/e//	//e//	,//e		e e ''	
		7,4	/ g/ g		ה ה	٦ /	dr e l	
	1	5 /	# #	` '	<i>'</i> /	J.F	ass	
		<u>į</u> į	pe gpe	one Spe	a. /	ď/	G / a	
	17	₹/ ⊱	5/5	9 9	2/2	5/2	± / ₫	
	/ \	, j	ا هر	الم الم الم الم	j / ģ	5/ ¿	<u> </u>	
	[e/	Σ	M E	M'H Sal	M'agrad	Ž	Durant la classe m'he sentit.	/
1	_			-	1	2	contenta	
2	2	2	2	-	2	2	contenta	
3	1	2	1	-	2	1	normal	
4	2	2	2	-	0	0	avorrit	perquè estava esperant fins que em tocava
5	2	1	2	-	2	2	avorrida	perquè no ens hem mogut gaire de la cadira
6	2	2	2	_	2	2	enfadat	perquè algú ha cridat
7	2	2	2 2 2 2 2	-	2	2	content contenta	
	2	0	2	-	0	0	content	
10	2	2	2	_	2	2	avorrit	perquè hi havia nens que em molestaven
11	2	2	2	-	1	2	contenta	perque in navia hens que em morestaven
12	2	1	2	-	0	1	content	
13	2	1	2	-	2	2	content	
14	2	2	2	-	2	2	contenta	
15	1	2	2	-	2	2	contenta	
16	1	0	1	-	2	2	trista	
17	-	-	-	-	-	-	-	
18	1	1	2	-	2	2	content	
20	2	2	2	-	2	2	normal content	
21	0	0	0		0	0	enfadat	perquè no he pogut sortir
22	2	1	2	-	2	2	content	political no no pogue soren
23	1	2	2	-	1	2	avorrit	només ho he fet una vegada
24	-	-	-	-	-	-	-	

Molt	2
Una mica	1
Gens	0

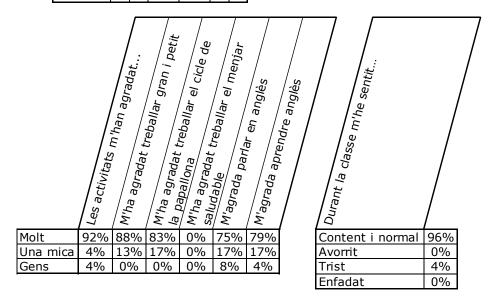
Number of pupils										
Molt	14	14	19	0	14	17				
Una mica	7	5	2	0	4	2				
Gens	1	3	1	0	4	3				
Total	22	22	22	0	22	22				



Group A	Ą					- /						
$\left \frac{1}{2} \right ^{2} = \left \frac{1}{2} \right ^{2} \left \frac{1}{2} \right ^{2} = \left 1$												
$\int : \int_{\partial Q} \frac{\partial}{\partial q} = $												
	Group A 3-12 Wha agradat treballar el menjar Wha agrada aprendre anglès Wagrada aprendre anglès Urant la classe m'he sentit 1											
		_ /	sts/	र्घ ध	a / fa	' /	Jan/	70 / Pu	/			
		- /	₩/	ĕ/ĕ.	<u>5</u> /£.	<u>u</u> /	/م	م م				
		1 7	7/6	9,00	g / a	g / g	<u>ק</u> א	# \d				
		/ "	ھ_ / اُ	Pa	5/0/3	į / ģ	; / È	<u>v</u> \ <u>r</u> o	/			
		Ιšί	ĮΞ	\ <u>\</u> \ <u>\\</u> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Sa'ı	/ ž	Ž	n_Q	/			
1 1	-50	2	2	1	_	2	2	contenta				
- 100 COS COS	dische.	2	2	2	-	2	2	content				
3	C MIN.	2	2	1	-	0	0	normal				
4		2	2	2	-	2	2	content				
5		2	2	1	-	1	1	content				
6	-	2	2	2	-	2	2	contenta				
7		1	1	1	-	1	1	normal				
8	per Solo	2	2	2	-	2	2	content				
9	ELFRI.	2	2	2	-	2	2	content				
10		2	2	2	-	2	2	contenta				
11	2	-	-	-	ı	-	ı	-				
12	_	2	2	2	ı	2	2	content				
13	<u> </u>	2	2	2	-	2	2	normal				
14		2	2	2	-	2	2	content				
15		2	2	2	-	2	2	contenta				
		2	2	2	-	2	2	content				
17	and the	-	-	-	-	-	-	-				
18		2	1	2	-	2	2	normal				
19		2	2	2	-	1	1	content				
		2	2	2	-	2	2	normal				
21		2	2	2	-	2	2	contenta				
22		2	2	2	-	2	2	content				
	H. N.	0	1	2	-	0	1	content				
24	-	2	2	2	-	1	2	content	,			
25		2	2	2	-	2	2	trista	perquè em torna a fer mal la panxa			
26		2	2	2	-	2	2	content				

Molt	2
Una mica	1
Gens	0

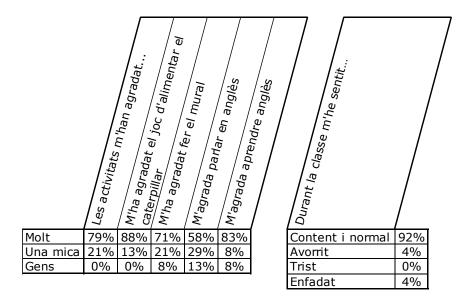
Number of pupils									
Molt	22	21	20	0	18	19			
Una mica	1	3	4	0	4	4			
Gens	1	0	0	0	2	1			
Total	24	24	24	0	24	24			



Gro	Group B														
9-1	Group B 9-12 Les activitats m'han agradat contentar el joc d'alimentar el joc d'alimentar el mural M'agrada parlar en anglès Durant la classe m'he sentit														
			/	:/ភូ	Ţ	/	/ / / .	, /							
			at l	: / S	- /	<i>'</i>	′ / /∄	· /							
			9.	ĮĔ.	/	<u>ə</u> /	§ / §§ / å								
			jg/	שׁ	1	≥ /,	6/6/s								
			[]	9	1	- / -	9/9/4								
			/يّا الْحِيّا/ بَا	ğ	/ 50	/ 8	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\								
			[E a	,	\ \P	4	l gen								
		/	ats lat	/	∫at	β./	19 / ja								
		- /:	∄/ੴ	₽/	٦/ آ	ď/.	م م								
		1 $\frac{7}{6}$	(L)	<u> </u>	<u> </u>	3 / 3	Ď / / ∠								
		/ \d	/ e a	[/ œ	/ ģ	;/ ¿	ē/ Ē								
		[e]	Sat Sa	Σ	M'agradat fer el B.	M'agrad Parlar en a	Durant la classe m'he sentit.	/							
1	Bullion S.	2	2	2	2	2	contenta								
2	Better a	2	2	2	2	2	contenta								
3	Total Control	1	2	2	2	2	normal								
4	Acres II.	2	2	2	2	2									
5	G+ 8	2	1	0	2	2		perquè no ens hem aixecat gaire de la cadira							
6	10	2	2	2	2	2	content	perque no ens hem dixecut gane de la cadia							
7	N	2	2	1	1	2	content								
8	Sade M.	2	2	2	2	2	contenta								
9	Convert	1	2	2	0	0	content								
10	M	2	2	2	1	2	normal								
11	Re-	2	2	1	1	2	contenta								
12	50	2	2	1	0	1	normal								
13	MILE SERVICE S	2	2	1	1	2	normal								
14	Section	2	2	2	2	2	contenta								
15		2	2	2	0	0	enfadada	perquè tu has enganxat una cosa al mural							
16	An July	1	1	1	1	1	normal								
17	April 1	1	1	2	2	2	normal								
18	(ASS.)	1	2	2	1	2	normal								
19	784	2	2	2	2	2	contenta								
20		2	2	2	2	2	content								
21	All male	2	2	0	2	2	normal								
22	344	2	2	2	2	2	content								
23		2	2	2	1	2	normal								
24	The same of the sa	2	2	2	2	2	contenta								

Molt	2
Una mica	1
Gens	0

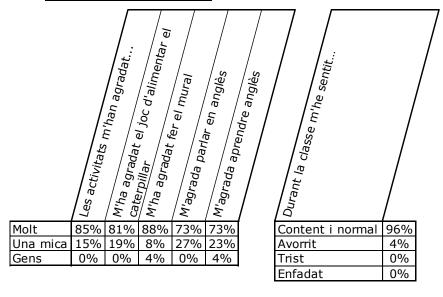
Number of pupils										
Molt	19	21	17	14	20					
Una mica	5	3	5	7	2					
Gens	0	0	2	3	2					
Total	24	24	24	24	24					



Group A 10-12 Les activitats m'han agradat el joc d'alimentar el M'ha agradat fer el mural M'agrada aprendre anglès Durant la classe m'he sentit Total d'alimentar el momal Total d'alimentar el momal										
1		1	2	2		normal				
2	2	2	2	2	2	content				
3	2	2	2	2	0	normal				
4	2	2	2	2	2	content				
5	2	1	2	2	1	normal				
6	<u>2</u> 1	2	2	2	2	contenta				
7	1	1	1	1	1	normal				
8	2	2	2	2	2	content				
9	2	2	2	2	2	avorrit	perquè havíem d'esperar			
10	2	2	2	2	2	content				
11	2 2	2	2	2	2	content				
12	2	2	2	2	2	content				
13		2	2	2	2	contenta				
14	1	2	2	1	2	content				
15	2	2	2	2	2	contenta				
16	2	2	2	2	2	content				
17	1	2	1	1	2	normal				
18	1		2	2	2	normal				
19	2	2	2	1	1	content				
20	2	2	2	2	2	normal				
21	2	2	2	2	2	contenta				
22	2	1	2	1	1	normal				
23	2	1	0	1	2	normal				
24	2	2	2	1	1	content				
25	2	2	2	2	2	normal				
26	2	2	2	2	2	content				

Molt	2
Una mica	1
Gens	0

Number of pupils									
Molt	21	23	19	19					
Una mica	4	5	2	7	6				
Gens	0	0	1	0	1				
Total	26	26	26	26	26				



10.4 Interview

The interview with the English teacher is the following.

1. Has vist diferències entre la motivació dels alumnes en una classe on s'utilitzava la PDI i en una classe on no s'utilitzava?

Sí, perquè les noves generacions d'alumnes han crescut amb les tecnologies i estan molt motivats. És una eina d'aprenentatge que permet la interacció.

2. Creus que els alumnes estaven motivats mentre realitzaven les activitats amb la PDI?

Els alumnes estaven molt motivats amb els jocs interactius.

3. En una classe on s'utilitzava la PDI, hi ha hagut moments en què els has vist més motivats que en una classe sense l'ús d'aquesta eina?

Sí, estan més motivats perquè és una eina de treball diferent, on els alumnes participen activament.

4. Quins aspectes consideres que són més positius i quins negatius pel que fa a l'ús de la PDI a l'aula?

Aspectes positius:

- L'alumne pot participar de forma activa en jocs interactius, presentant treballs davant de la classe, etc.
- Permet accedir de forma immediata a qualsevol tipus d'informació.
- Permet utilitzar material informàtic i didàctic que prepara el professorat.

Aspectes negatius:

- La manca de temps del professorat per preparar material informàtic adequat al seu alumnat.
- La dificultat per poder treballar amb un grup reduït d'alumnes a l'hora de realitzar els jocs interactius.
- La connexió a Internet és molt lenta i sovint falla.
- 5. Hi ha alguna altra referència que vulguis fer pel que fa a la motivació dels alumnes?

Res més.