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Cooperative learning and multiple  
intelligences applied to English teaching  
in Infant Education

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## ABSTRACT

According to EF EPI, the position of Spain in the ranking of English command has decreased, showing the lacks that English teaching suffers. In this situation and with the aim of improve English learning, it has been designed an innovative educational proposal for Infant Education based on Multiple Intelligences Theory and Cooperative Learning.

The proposal employs visual-spatial and bodily-kinaesthetic intelligences to distance from the linguistic intelligence used traditionally. Moreover, cooperative learning is used to attend to diversity and take advantage of the potential that teachers have in class. These methods and other techniques are used as mean to English language approach. The evaluation of the proposal will show its efficacy.

**Keywords:** Cooperative learning, Visual-spatial intelligence, Bodily-kinaesthetic intelligence, English teaching, Educational proposal.

## RESUMEN

Según EF EPI, la posición de España en el ranking sobre el dominio de inglés ha descendido, mostrando las carencias que sufre la enseñanza de este idioma. En esta situación y con el objetivo de mejorar el aprendizaje del inglés, se ha diseñado una propuesta educativa innovadora para Educación Infantil basada en la Teoría de las Inteligencias Múltiples y el Aprendizaje Cooperativo.

La propuesta emplea las inteligencias visual-espacial y corporal cinestésica o kinestésica para distanciarse de la inteligencia lingüística utilizada tradicionalmente. Además, el aprendizaje cooperativo se utiliza para atender a la diversidad y beneficiarse del potencial que tienen los maestros en el aula. Estos métodos y otras técnicas se usarán como medio para un acercamiento a la lengua inglesa. La evaluación de la propuesta mostrará su eficacia.

**Palabras clave:** aprendizaje cooperativo, inteligencia visual-espacial, inteligencia corporal cinestésica, enseñanza del inglés, propuesta educativa.

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## **1. Introduction**

It is known that is important the acquisition of a foreign language to manage in this globalized world. Nowadays, this language could be English, although it isn't the most spoken, it is the language of science, entertainment, technology and Internet. As a matter of fact, in Spanish schools English is a growing subject and there is an intense demand of English teachers due to the implantation of Bilingual Educational Project that provides bilingual education from early age.

Students have to be prepared for their future and this language is necessary for them. According to EF EPI (ranking of English Proficiency), in 2017 Spain was in the 28<sup>th</sup> position of 80 countries of the entire world, decreasing 3 points respecting previous years. Regarding the deficiencies in English teaching in our country, in this study we want to offset this lacks and investigate deeply about different innovative methods for teaching English in Infant Education.

To teach in this period is essential to develop four skills: reading, writing, speaking and listening. It should be noted that grammatical and theoretical activities, such as reading or writing have to be adapted, just because children haven't developed those skills in their mother tongue. Traditional English teaching has been directly connected with linguistic competence usually forgetting about others.

In this study, it is dealt English teaching in an effective, different and communicative way. To get it, several activities are purposed to develop social skills and other competences. As far as I am concerned, cooperative learning is the suitable way to achieve it, from the educational principle that for a child, the best teacher is another child (Slavin & Calderón, 2000).

Furthermore, not all the students learn in the same way and not all of them have the same abilities. Because of that, it is important that teachers take into account the characteristics of each child, requiring the approach of teaching English in Infant Education from the perspective of multiple intelligences.

Multiple intelligences Theory (hereinafter MIT) defends that there are distinct types of intelligences. This theory keeps in mind the differences between students and tries to attend to diversity. In this project we are going to consider all the intelligences but focusing mostly on the ones that are more favourable for English teaching: visual-spatial and bodily-kinaesthetic intelligences.

For all these reasons and because there aren't enough researchers, information and data about cooperative learning and multiple intelligences applied to English teaching in Infant Education, we want to give the importance that it deserves and contribute to the dissemination of knowledge and an improvement in English teaching.

This work is divided in different sections. The first part has the objectives that are pretended to achieve. After that, it is deeply explained the theoretical framework and the methodology.

The theoretical framework contains the research part. It is started with different ways of comprehending the reality following MIT of Howard Gardner, which defends there are eight types of intelligences. I relate this theory with education and with teaching English, finding out what intelligences are more appropriate to learn a second language. Secondly, it is explained the importance of cooperative learning from early ages, the necessary conditions to support that way of working and how it can be implemented in a class.

At the same level of importance is the methodology. This part comprehends methodology of Action-Research and teaching methodology. The initial, in turn, is divided in theoretical and practical. In the first one are exposed the sources used for the theoretical framework while in the second are the techniques and procedures used in the educational proposal. Lastly, teaching methodology contains different information about resources and materials used to teach English and an educational proposal.

The educational proposal has numerous activities to teach English in the second course of the second cycle of Infant Education. It is based on multiple intelligences and cooperative learning with the goal of innovate and teach English effectively. The activities are going to be performed in a school so that

they could be analysed and confirm its efficacy or not with several evaluation techniques and instruments.

Ultimately are the results that will show if the objectives proposed have been reached. To conclude, the author will exposed the conclusions of the whole project, attending to knowledge and experiences acquired during the process and strengths and weaknesses.

## **2. Objectives**

The main objective of this study is to design an innovative and motivating educational proposal with different activities, resources and techniques to teach English in Infant Education, specifically for children about 4 and 5 years old, highlighting MIT and cooperative learning.

To reach this aim, secondary objectives are needed:

- Study and consider MIT, paying particular attention to visual-spatial and bodily-kinaesthetic.
- Promote cooperative work and meaningful learning.
- Use Action-Research to explore how the use of multiple intelligences and cooperative learning in Infant Education improves English learning.

## **3. Theoretical framework**

The theoretical framework contains information about MIT, its relation with education and English, cooperative learning, the conditions to support it and the group formation.

### **3.1 Multiple Intelligences Theory**

Intelligence is a difficult word to define since there is not only one acceptation for it. Commonly, it has been known as “the ability to modify and adjust one’s behaviours in order to accomplish new tasks successfully.” (Ormrod, 2006, p.140); moreover, a lot of controversy is around the term intelligent. Mostly, intelligent has been related to an academic point of view. For instance, someone who has good academic marks is usually called intelligent; however, this vision is not right. In another way, a person can have awful academic marks and could be very clever and excellent in their life (Escamilla,

2014). This is because there are several types of intelligences as Gardner proposed.

### **3.1.1 Gardner's Multiple Intelligences Theory**

Howard Gardner's Multiple Intelligences Theory has challenged the historical view of intelligence as a fixed quantity since he first published *Frames of mind* in 1983 (Philips, 2010). He defines intelligence as "a biopsychological potential to process information that can be activated in a cultural context to solve problems or create valuable and appreciated products in a culture." (Willingham, 2004, p. 19).

According to Gardner (1994-2012), Prieto & Ferrándiz (2001), Ferrándiz (2005), Pérez & Beltrán (2006), Ander-Egg (2006) and Amstrong (2012), MIT has several distinguishing characteristics:

- It is a model for understanding the operation and structure of the mind.
- It rejects one-dimensional conception of intelligence.
- It supposes a new explanation of human cognition.
- The intelligences are, in a neurologist way, independent, but grouped they seem to be connected. They work as a system.
- Existence of several intelligences. Neuroscience studies establish eight rules related to biology, experimental psychology, evolutionary psychology and logic analysis.
- The intelligences are potentials that have to be developed, or not, depending on the genetics, the contexts, the person, the evolution and the experiences lived. They can improve, block or go back. In this sense, Gardner expresses:

Mental representations are not given in the birth and nor 'freeze' in the moment of their adoption. According to this point of view, they can be reformed, recreated, reconstructed, transformed, combined and altered. In a few words, they are in our mind and also in our hands. (Gardner, 2004, p.65).

MIT defends the existence of eight different types of intelligences and each one has their own mechanisms and procedures. Sancho & Grau (2012) explained the intelligences Gardner proposed in this way:

1. Linguistic intelligence: think in words.
2. Logical-mathematical intelligence: think by reasoning.
3. Musical intelligence: think through rhythms and melodies.
4. Visual-spatial intelligence: think in images.
5. Bodily-kinaesthetic intelligence: think in movement.
6. Interpersonal Intelligence: think understanding the others.
7. Intrapersonal intelligence: think about yourself.
8. Naturalistic intelligence: think through the world around.

On the whole, to success in a scope we need a specific intelligence given that each one is used in a precise field. Nonetheless, it is likely that more than one intelligence is used in an activity (Armstrong, 2000). Solving an authentic problem normally requires the interaction of several types of intelligence, so this doesn't mean that one intelligence is better than others, they are simply different. Because of that, this theory is very used in education. Teachers might choose MIT as it is an optimistic view of human potential, for pupils self-esteem is guaranteed as well as attention to diversity, as the curriculum established.

### ***3.1.2 Multiple Intelligences Theory in Education***

Gardner holds that every person has all the intelligences in a basic level independently the education received and that one person can stand out more in ones than in others. Gardner (2011) resumes the educative implications of MIT saying that teachers who use this methodology should pluralise, that is, decide what concepts are important and consequently present them in different ways so that all pupils can learn successfully.

Given that the scholar context affects the intelligence of a person, in school it is important to deal with all the intelligences from early childhood (Gardner, 1995). In fact, the model based on MIT is closely linked to the principles and purposes of the Curriculum of Infant Education, mainly because both have as their final aim the integrated development of the child.



According to Decree 67/2007 that establishes and orders the curriculum of the second cycle of Infant Education in Castile-La Mancha, there are nine competences to achieve in this scholar period and all of them are directly connected with the eight intelligences Garner suggested. Furthermore, MIT has characteristics that belong with the spirit of the Curriculum. Therefore, I am going to use this theory to teach English in Infant Education besides the advantages it has for learning a second language.

### ***3.1.3 Multiple Intelligences Theory in English teaching***

Multiple intelligences activities are useful for English teaching in variety of situations. The most important aspect of using MIT in class is that you will be giving support to learners who may find more conventional activities difficult (Beare, 2018). Traditionally, English teaching has been related to linguistic intelligence. It is irrefutable that both are connected for the fact that English is a language, but it isn't the unique intelligence we can use. The development of linguistic intelligence in students of a second language can be favoured using variety of tasks that requires several intelligences (Arnold & Fonseca, 2004).

Thus, most English activities integrate diverse intelligences simultaneously. In fact, in an activity where children have to colour a picture and its name, kids are using their linguistic and visual-spatial intelligences at the same time. In this study, I am going to follow the organization of activities of Álvarez (2011) that classifies them according to the intelligence that contributes the most in each activity. Generally, students' evaluation takes into account linguistic competence forgetting about other abilities and intelligences that frequently are presented in English teaching but not assessed. In contrast, in this project I focus on bodily-kinaesthetic and visual-spatial intelligences and its evaluation, but without forgetting the other ones that will be presented to a greater or lesser extent.

Bodily and kinaesthetic intelligence is the ability to use the body to express ideas or accomplish tasks. This type of learning combines physical actions with linguistic responses and is very useful for joining language with actions (Beare, 2018). This intelligence is connected with Total Physical Response (TPR) where students are called to respond physically to verbal

commands. It is based on the idea that if you have to do something physical in response to language, learning will be faster and more meaningful.

It is an approach for teaching a second language based on listening and linked to physical actions. Dr. James J. Asher (1969) developed for first time TPR approach. He wondered why so many people had problems learning a second language. The solution he proposed was a creation of a stress-free approach in L2 environment which was similar to L1 learning; in L1, very young learners respond physically to parents' commands (Frost, 2004). TPR works because it is an excellent way of providing students comprehensible input.

In the classroom many teachers integrate TPR with other approaches and techniques rather than using it alone. It may be particularly appropriate for low level learners. For example, if learners are studying action verbs, when the teacher says 'jump!' they jump, instead of repetition and other boring activities. The teacher says the command and the students do the action (Frost, 2004).

Likewise, visual and spatial intelligence is very used in English teaching. It contemplates explanation and comprehension through the use of pictures, flashcards, graphs, maps... This type of learning gives the students visual clues to help them to remember language (Beare, 2018). Teachers interested in developing this intelligence try to use colours, pictures, flashcards, diagrams and real objects.

Gardner's research indicates that teachers should aim to appeal to all the different learner types at some point during the course. It is particularly important to appeal to visual students as a very high proportion of learners have this kind of intelligence. Furthermore, visual-spatial intelligence is connected with bodily-kinaesthetic, in the sense that visual activities can be combined with TPR ones. For instance, students can respond physically to activities with flashcards.

### **3.2 Cooperative learning**

It is a fact that we lived in a globalized world and nowadays it is impossible to imagine an important international company without thinking in the interdependence of many parts, each one working in benefit of the others and

in this way for the own benefit. This shows the magnanimity and importance of cooperation against self-interest and competition. Society of the 19<sup>th</sup> and 20<sup>th</sup> century was developed since specialization, however in the 21<sup>st</sup> century we have to speak about interdependence (Torrego & Negro, 2012).

Perhaps, this theory explains the profound scourges and consequences of our educational system and the rise of scholar failure and exclusion. Our system suffers significant lacks, maybe promoted by -you will forgive the repetition- the lack of cooperation, and the loss of belonging to the scholar institution that many students experiment. To improve that, schools should implement cooperation from early childhood education, so that this feeling of cooperation was strong and difficult to eradicate in other levels.

This way of learning offers a support to comply with the educational laws that defend the right of an inclusive education and attention to diversity, such as Organic Law on Education (2006). Accordingly, cooperative learning can integrate all kind of students, with different learning rhythms, from other countries and languages or with specific needs, and all of them can learn from the others. As teachers, we should take advantage of our students and promote cooperation and inclusion. Each child has unique characteristics and abilities and in a context of diversity, all can learn.

### ***3.2.1 Cooperative vs. collaborative***

The advantages of working together are fairly obvious and this concept, for the purpose of learning, has been used for as long as we can remember, considered Socratic Circles (Clare, 2015). But there are some words used to talk about working together: collaborative and cooperative. It is thought that both have the same meaning but this is not true, there are some differences between them.

Firstly, cooperative learning is an instructional strategy that simultaneously addresses academic and social skill learning by students. In this kind of learning, the teacher has the main role and is the person that structures the work and defines the purpose. This way of learning relies heavily on interdependence of the students among each other. There is social interaction

but the success of this learning is based on individual strengths that form the team work. The activities are structured with each student assigned a specific role and group success depends upon the efforts of everyone involved. Moreover, the group work is submitted to evaluation at the end of the lesson.

On the other hand, collaborative learning is commonly illustrated when students progress personally while collectively working towards a common goal, they work together to search for solutions or to create a product of their learning (Clare, 2015). Each student makes progress individually in-line with the progress made by others. Students have the main role and they organised their efforts between themselves. The activity is not monitored by the teacher, although he can intervene when assistance is requested by the group. The group searches for solving problems and there is social interaction where the entire group works together. Success depends on the success of the individuals in the group.

In this report I am going to focus on cooperative learning since pupils of Infant Education are so little to structure their knowledge and they need a model to guide their teaching and learning process: the teacher. It should be noted that Oxford (1997) states that cooperative learning is more structured and directive to students about how to work in teams than collaborative learning. It involves students working together to reach a common goal under different conditions as we are going to expose below.

### ***3.2.2 Conditions that support cooperative learning***

It should be pointed out that cooperation is an important social value. It should be transversal in an education centre and be presented in the Educative Project so that conditions were successful for this way of learning: furniture, installations adapted to work in groups, different duration of classes... (Torrego & Negro, 2012). Nevertheless, traditional individual activities should be combined with cooperative ones, but in a different environment, where the teacher that uses cooperative learning weren't the weird one.

Fortunately, in Infant Education all is different from other levels. Time dedicated to each area is not as strict and the classroom is organized in distinct

groups. However, the students work on individual activities but sitting in groups, so cooperative work is not presented. Teachers ought to take advantage of this organization of the class and put into practice cooperative learning. It is in these ages where pupils learn and acquire patterns that will help to develop social abilities to cooperate.

Torrego & Negro (2012) proposed five basic conditions that cooperative learning needs to be successful:

- Positive interdependence between participants: create a perception that pupils are bind together and connected, in order that in the development of learning activities no one can succeed unless they all succeed. To achieve it, pupils have to share common objectives or assume group symbols.
- Personal responsibility and individual efficiency: each member has a role and has to do a part of the task. The result should be a collective product where each student has participated. In the distribution of the roles teachers have to take into account the abilities and possibilities of each student and their likes.
- Promote interaction *face to face*: this learning is supported by direct interaction where each student has the need of interact and promote the others' efforts. The purpose of this work is to show heterogeneity in terms of learning rhythms, specific needs...
- Social skills: needed to reach cooperative success, to resolve conflicts, to help each other or to communicate appropriately. The only way to achieve them is by practice, so in the classroom time should be spent in learn to cooperate. It is significant to dedicate time to this learning, that is not only instrumental but also forms part of *learn to learn* competence, presented in the official curriculum. In addition, organizational abilities should be taught to know how to manage in a team, how to speak or how to organize materials.
- Periodic evaluation: it is indispensable a formative evaluation that involves pupils and teachers, to know the strengths, weaknesses, progresses and setbacks of the process. For that, we can use team notebooks, group evaluations or observation and notes of the teacher.

### 3.2.3 Group formation

To secure the necessary heterogeneity of groups it is habitually that the person in charge of distributing the students in different teams is the teacher. It must be said that there are different types of groups: base groups, sporadic groups and groups of experts. In this project I am going to use a base group.

Teaching working in groups supposes a big alteration for pupils so this change has to be progressively. It is also essential that students take time to reflect about the benefits of working in group. According to Pujòlas (2017) a base group has its own characteristics:

- Heterogeneous: each base group has to be a representation of the class group. One way of forming the groups is taking into account the characteristics of the students. We can divide them in three groups (see figure 1): the students more capable in all senses (not only the ones that have good marks or abilities and high performance and efficiency, but also the most motivating able to help and inspire hope in the classmates); in the other side, the ones that need more help; and lastly, the rest of students who have a learning rhythm appropriate to their age.

More capable students	Rest of the students in class	More help needed
○ ○ ○ ○ ○ ○ ○	□ □ □ □ □ □ □ □ □ □ □ □	◇ ◇ ◇ ◇ ◇ ◇ ◇

Figure 1. Distribution of the students taking into account their efficiency.

- Groups of 4 students: ○ □ □ ◇
- Permanence: it is recommended to maintain the groups during a trimester. Even so, we have to be flexible under the circumstances around the group and the possible incompatibilities.

## 4. Methodology

This section includes methodology of Action-Research and teaching methodology. In this case and in line with the tradition of Action-Research (Kemmis & Mactagar, 1992) both concepts of methodology go together. The initial is divided in theoretical, where are exposed the sources used for the theoretical framework; and practical, with distinct techniques and procedures

used in the educational proposal. Finally, teaching methodology contains different information about resources and materials used to teach English, and an educational proposal.

#### **4.1 Action-Research methodology**

This part comprehends the methodology used for the research. It is divided in: theoretical, composed by different sources and authors used in the search for information for the theoretical framework; and practical, techniques and instruments utilised in the design of the educational proposal.

##### **4.1.1 Theoretical**

To face the theoretical framework of this study, several bibliographical sources have been studied and analyzed. Needless to say, most of these sources have in common the relation with MIT and Cooperative Learning.

First of all, it is thought that is essential a definition about the traditional conception of intelligence until the concept that Gardner proposed (1983,1995). In this case it is used as principal source Ormrod (2006). To define MIT I have taken into account Gardner's contributions and to analyze the eight intelligences he suggested we have used Sancho and Grau (2012) classification. Moreover, I have focus on Escamilla (2014) to find useful techniques and didactic resources to establish this theory in a class and promote the development of multiple intelligences.

To deal with multiple intelligences and its relation with English and education I have utilised different sources. Focused on the first one, I have used Dr. James J. Asher (1969) who developed a combination of methods to collaborate with language learning: Total Physical Response. This method is directly related to MIT, mainly with bodily-kinaesthetic intelligence. To considered the relation between this theory and English I have consulted Arnold & Fonseca (2004) and Beare (2018), and the organization of activities that Álvarez (2011) recommended. These authors include specific proposals to apply MIT in teaching and learning English. Centred on education, I have used Project Zero (2014) and Decree 67/2007 that establishes and orders the curriculum of the second cycle of Infant Education in Castile-La Mancha.

Secondly, to describe cooperative learning I have utilised Torego & Negro (2012) fundamentals, and to distinguish between cooperation and collaboration Clare (2015). We have based on Pujolàs (2008) for techniques and group formation to implement this learning in a class.

Finally, I have consulted diverse studies for selecting the appropriate materials and resources to teach English in Infant Education. For that selection, we have taken into account different criteria (Aznar, 2014; Fonseca & Martín, 2015).

#### **4.1.2 Practical**

One of the aims of this report is to explore how the use of multiple intelligences and cooperative learning improves English learning. To achieve this goal, and taking into account the information extracted from the bibliographical sources, I have designed an educational proposal that will be implanted in a class of the second course of the second cycle of Infant Education (4-5 years old). The students will learn vocabulary related to *Vegetables*, simple grammar structures and important values through cooperative learning and multiple intelligences: visual-spatial and bodily-kinaesthetic as discussed below.

This project is based on Action-Research method (Lewin,1946) Correlation between “investigation” and “action” shows the central feature of this approach: submission the practice to an analysis with the aim of learning more about teaching and learning process. It is a systematic learning process orientated to praxis and it induces to theorize about the practice. Moreover, it is participative since people work with the objective of improving own experiences and it is also collaborative because involves different participants that without them this couldn't be accomplished.

Lewin described it as a process of introspective spiral with different steps, each one composed of planning, action, observation and evaluation of the action results. Understanding the different steps it is necessary to describe the ones I have follow in this study:



- 1) Observation and diagnosis: analysis of the context and discovery of the thematic concern.
- 2) Planning: action plan design.
- 3) Action: execution of the action plan, observation, and information and data collection.
- 4) Reflection and evaluation: interpretation of the results.

The aim of a research study is to acquire knowledge and improvement, and the choice of the suitable method to analyse the reality is essential. Depending on what we want to measure and the perspective of the research, there are quantitative or qualitative methods.

On the one hand, quantitative tradition is based on probabilistic induction of logical positivism where quantitative data are collected and analysed about variables. It is an objective technique orientated to the results. On the other hand, qualitative tradition is centered in phenomenology and understanding. They avoid quantifying and do make narrative registration of the phenomena studied. It is a subjective technique orientated to the process.

In this report I have used both traditions in order to grant reliability and accuracy to the results, although qualitative methods predominate because it is an action-research study and we want to focus on the process (the action) and not really on the results. Therefore, one of the most successful ways of combining both procedures is triangulation.

Triangulation is a control process implemented to ensure reliability among the results of any investigation. The results that have been object of triangulation may show more strength in their interpretation and construction than those who have been subjected to a single method (Donolo, 2009). In this triangulation we have combined: methodological techniques (observation, interview and questionnaire), different subjects (external teacher, participant-observer and students) and moments (before, during and after the action plan) (see annex 1).

Before anything else, it is necessary to stand out the different techniques and instruments used for data collection:

- A. Teacher's diary: basis of teacher's practice reflection.
- B. Interview: an important tool for collecting information, it supposes a direct way of obtaining data: unstructured interview to the teacher of 4 years old.
- C. External observation during 2 months to know the methodology used in English classes or children's profiles and efficiency.
- D. Participant observation during the process. See annex 2 to know the reference points to plan an observation.
  - Team notebook and self-assessment of the students (see annex 3).
  - Invention table: double entry table, used by the Greeks where they introduced in the horizontal and vertical axes the four basic categories that Joseph Schwab (1969) proposes as common places of education: teachers, students, subject of study and environment (see annex 4).
- E. Questionnaires to the students about motivation and satisfaction of their ordinary English classes and the ones of the proposal. In annex 5 are the questionnaires with the punctuation value of each answer.

In education, teachers usually act as researchers of an Action-Research project (Kemmis & Mactagar, 1992). Therefore, in this study the teacher has acted as a participant observer since she was involved in the process. Because of the important labour teachers perform, a good researcher should possess the following characteristics: self-critical, skills in and for evaluation, interest in empirical verification of theory and systematicity.

Focusing on self-criticism, it is relevant to deal with self-assessment. The analysis of the own teaching practice promotes the analysis of the teaching assignment in class, allowing an improvement on the educational work. For that task I have used a teacher's diary. Having an introspective analysis of teaching practice is fundamental at all levels (Motalvo, 2014) because through this kind of feedback teachers can experiment professional growth that necessarily impact on teacher's quality.

## **4.2 Teaching methodology**

This methodology is related to teaching and learning process. This section includes information about how to deal with English teaching in Infant

Education, and an educational proposal with innovative and motivating activities for early learners.

#### ***4.2.1 Teaching English in Infant Education***

Before planning activities to teach English in early stages, it is necessary to know the necessities of the students and the best resources for teaching in these ages.

##### **A. Criteria for material selection**

The numerous existing resources that are on the market and on the Internet for English teaching in early childhood education, urge the need to know how to select them properly as regards the priority objectives of this educational level: the holistic training of students in their cognitive, psychomotor and social skills. The purpose of this section is to expose what is important to take into account for teaching English in Infant Education.

Firstly, according to Bassedas (2006), during the first years of children's education, there are essential learning directed to acquiring autonomy. In this process of acquiring autonomy verbal language obtains special importance (Barrio, 2001), but other types of languages also intervene, such as corporal, artistic, audiovisual and mathematical. In short, all kind of languages are basic to enrich the possibilities of expression and contribute to the development of communicative competence in a foreign language (Canale & Swain, 1980).

In addition, the Integrated Hispanic-British Curriculum for the Infant Stage defends that for teaching English is necessary to develop literacy skills that includes speaking, listening, writing and reading; mathematical concepts and skills; knowledge and understanding of the world, and cultural aspects. Thus, it is considered that MIT is presented in English teaching.

Secondly, the development of individual skills, interaction with the equals and the environment contribute to thought evolution, teach to think and learn, and establish the bases for subsequent learning (Lacasa, 1988). Accordingly, it

is essential for children from early stages to work with their classmates and implement cooperative learning in the English class could be the method.

Thirdly, we have to evaluate the phonetic-phonological characteristics of English in order to teach this language appropriately. These characteristics are: motivation towards printed resources, awareness of printed materials, phonological awareness, knowledge of the letters, vocabulary and narrative abilities.

As teachers, we have to be conscious of these features of English language, considering that, from the perspective of pronunciation, it is an opaque language whereas Spanish is transparent (Aznar, 2014). The difficulties of English learning reside in its opacity, in relation to the correspondences between its pronunciation and writing. In contrast to Spanish alphabet, the English one has 26 letters, 44 phonemes, and 70 graphemes.

## **B. Materials and resources for English teaching**

Given the enormous amount of materials and resources available, the objectives to achieve in Infant Education, and the basic skills to develop when studying a foreign language, I have opted to classify them into four types of materials (Fonseca & Martín, 2015): materials for teaching vocabulary, grammar, pronunciation and cultural aspects of the language.

- a) Vocabulary: to learn a foreign language and develop basic communicative skills it is important to learn vocabulary. This vocabulary should be presented in a context and avoiding repetitive and tedious activities. We can use visual materials such as flashcards, blackboard, posters, real objects or ICT.
- b) Grammar teaching: it can be inductive or deductive, being more suitable for little kids the first one, because the initial models of language are more comprehensible from a grammatical point of view and don't need theoretical explanations. Teachers have to teach to "speak the language not to speak about the language". Role-playing, songs or rhymes could be used.
- c) Pronunciation: the command of English language involves the acquisition of comprehension and production skills. It is significant to teach how to

pronounce correctly in English and imitation and repetition are the keys. For example: phonetic bingo or messages transmission.

- d) Socio-cultural aspects: they are quite important because contribute to social or culture information that the language has itself. Those aspects have to be close to kids' habits and routines and have to engage them and create curiosity of learning more.

#### ***4.2.2 Educational proposal***

The educational proposal is designed for children of 4 years old from Ocejón School. With the activities is pretended to motivate the students and know how MIT and cooperative learning affects students learning at this ages.

##### **A. Context**

Ocejón School is a public school located in Guadalajara. It is considered a unique place to access to bilingual education given that develops integrated curriculum according to the Agreement MEC-BC in Guadalajara. The families come from different parts of the city and parents are from 35 and 45 years old. Their cultural level is medium-high with medium economic level.

I have chosen the class of 4 years old B because of the teacher's predisposition towards this Action-Research project and because I knew the students from the practice period. This class is formed by 25 students, 13 girls and 12 boys. The kids are organised in four mixed groups of six pupils, having one of seven. All the students have Spanish nationality, even so, some of them come from immigrant families. There aren't any children with special needs although two kids go to a resource room once a week to improve their speaking. It is accurate to say that learning rhythms are little assorted. The teacher uses a democratic style, stimulates pupils' learning with motivating explanations and adapted language, and the way of teaching English is by projects. The teacher plans individual activities focusing on linguistic and visual-spatial intelligences. Once a trimester kids are able to work together to create a mural of the project.

This proposal has been carried out with a group of four students, having a little representation of the class group. It is formed by two girls and two boys. The formation of this group has followed the procedure of a base group

(Pujòlas, 2017), so there are children with distinct abilities. One student came from an immigrant family but he is totally integrated. It must be said that the students haven't worked together before.

## **B. Justification**

Firstly, I want to introduce cooperative learning and visual-spatial and bodily-kinaesthetic intelligences in English teaching because I want to innovate in English methodology in order to improve English learning. Moreover, I want to distance from traditional teaching focused mostly on linguistic intelligence.

Secondly, I have chosen *Vegetables* as a topic because usually it has been a forgotten issue for pupils when they are studying the food, as the class of 4 years is doing in this third term. I want to approach vegetables to kids and encourage healthy habits from early stages.

## **C. Objectives**

The didactic objectives of this proposal are formulated in coherence to the objectives of the TFG. The main goal is to explore how the use of visual-spatial and bodily-kinaesthetic intelligences and cooperative learning improve English learning in Infant Education and motivates students. To achieve it, we want the students to reach several didactic objectives:

- Promote cooperative learning.
- Stimulate creativity, imagination and motivate the students.
- Develop analysis, synthesis and reasoning abilities.
- Acquire autonomy in own tasks.
- Reflect about learning by self-assessment.
- Promote meaningful learning and create own knowledge.
- Show interest in learning new concepts.
- Improve writing, speaking, listening and reading skills.
- Learn vocabulary related to vegetables and food.
- Review the colours, shapes and sizes.
- Encourage healthy habits.
- Know cultural aspects related to English food.
- Learn English grammar: distinguish between likes and dislikes.

## **D. Contents**

### *a) Conceptual*

- Vocabulary:
  - Vegetables: carrot, cabbage, broccoli, onion, garlic, potato, tomato, spinach.
  - Tree, garden, leaves, greengrocer, gardener, supermarket.
- Grammar: likes and dislikes (Do you like...? Yes, I do / No I don't)
- Cross curricular dimension: healthy habits and education in values.
- Other contents: colours, sizes, shapes.

### *b) Procedurals*

Communicative and social skills, artistic development, attention, use of visual-spatial and bodily-kinaesthetic intelligences as an instrument to learn, and cooperative learning.

### *c) Attitudinal*

Respect the classmates and team rules, interest in learning, participation in class, healthy food habits and education in values: help the equals and cooperate to achieve common objectives.

## **E. Competences**

In this unit will be all the competences that appeared in the Decree 67/2007 that establishes the curriculum of the second cycle of Infant Education in Castile-La Mancha (see annex 6).

## **F. Didactic methodology**

With this unit is pretended that children create their own knowledge through information from themselves and their classmates. The bases of this design are going to be cooperative learning and MIT. The teacher will be a guide and facilitates the necessary tools to achieve the objectives proposed. This unit seeks to promote a first approach to reading and writing, develop listening and speaking skills, as well as early initiation experiences in logic and

mathematical skills, in visual and musical expression, bodily-kinaesthetic skills, and education in values. The methodology to follow is detailed in annex 7.

## G. Activities

The aim of the activities is to innovate in teaching English with new techniques and resources. On the other hand I would like to know how they affect children’s learning and motivation towards English language.

The main objective of Infant Education stage is the integrated development of the child. Therefore, the use of multiple intelligences and cooperative learning implicates the achievement of this objective besides the advantages that visual-spatial and bodily-kinaesthetic intelligences have to English learning.

The activities are divided in warm up, to present the contents and know previous knowledge; learning activities and summary activities, used the second ones to evaluate the students.

### ❖ WARM UP

ACTIVITY 1: MY TEAM	
<b>Objective/s</b>	Create a feeling of belonging to a group and cohesion.
<b>Description</b>	<ol style="list-style-type: none"> <li>1. <u>VIDEO</u>. Children will see a short video of cooperative working and the teacher will ask some questions about it to know the ideas of the students. With this activity we are teaching values (cross curricular dimension)</li> <li>2. <b>SPIDER WEB</b>: is a presentation technique where the participants stand up in a circle, one of them is given a ball of thread and has to say his/her name, where is he/she from, likes and dislikes or special abilities (performance some of the if it is possible). Then, this kid takes the tip of the thread and throws the ball to another classmate, who should be presented in the same way. The action is repeated until all the participants are linked in a sort of spider web as we can see in annex 8.</li> <li>3. <u>TEAM NOTEBOOK</u>. Children will choose a name and logo for the group, they have to define some rules to work together and will propose shared objectives and personal proposals. The decisions will be made following “1-2-4” technique and brainstorming (see annex 9). “1-2-4” consists in thinking about something firstly individually, then in pairs and finally discuss in a group of four. In annex 10 is the team notebook done by the students.</li> </ol>



<b>Intelligences</b>	Interpersonal, intrapersonal, musical, linguistic, bodily-kinaesthetic, visual-spatial. ➤ Bodily-kinaesthetic: in spider web children have to respond physically to some orders (throw the ball or what do you like doing?). ➤ Visual-spatial: watch the video and use of images in the team notebook.
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>• Video: "Team work pays off" (<a href="https://www.youtube.com/watch?v=wuo13FrNX6g">https://www.youtube.com/watch?v=wuo13FrNX6g</a>)</li> <li>• A ball of thread</li> <li>• Team notebook</li> <li>• <u>Cooperative structures</u>: "Spider web" and "1-2-4".</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>- 1<sup>o</sup> session : 1 hour</li> <li>- 2<sup>o</sup> session: 30 minutes</li> </ul>

### ACTIVITY 2: WHAT DO YOU KNOW?

<b>Objective/s</b>	<ul style="list-style-type: none"> <li>• Promote creativity and motivate the students.</li> <li>• Become aware of team.</li> <li>• Know the previous knowledge.</li> <li>• Improve interaction between the components of a group and active participation.</li> </ul>
<b>Description</b>	The teacher asks the students what do they know about food and vegetables following " <b>Gyratory paper</b> " technique: in group, each child has to write or draw with a different colour what he/she knows about the topic and then pass the paper to another team classmate until no one knows what to write. The students can help their mates (see annex 11)
<b>Intelligences</b>	Interpersonal, intrapersonal, visual-spatial, linguistic. ➤ Visual-spatial: drawing, use of different colours.
<b>Technique and materials</b>	<ul style="list-style-type: none"> <li>• A paper.</li> <li>• <u>Cooperative structure</u>: Gyratory paper.</li> </ul>
<b>Timing</b>	- 30 minutes

### ACTIVITY 3: VEGETABLES

<b>Objective/s</b>	Present the contents attending to diversity.
<b>Description</b>	<p>Present the topic of "Vegetables" in different ways in order to approach the contents to all the students.</p> <ol style="list-style-type: none"> <li>1. <u>Flashcards</u>. The teacher shows pictures with the words of vegetables (see annex 12) and kids have to repeat. It is a good activity for linguistic and visual-spatial intelligences.</li> <li>2. <u>TPR</u>: children have to choose firstly one vegetable and then two, and when the teacher shows and says the corresponding vegetables they have to stand up.</li> <li>3. <u>A song</u>: "Vegetables song for kids". Children have to listen to the song, try to sing, follow the rhythm by clapping and imitate the movements. It is a good activity for musical intelligence.</li> </ol>

<b>Intelligences</b>	Linguistic, bodily-kinaesthetic, musical, naturalistic, visual-spatial. ➤ Visual-spatial: use of flashcards. ➤ Bodily-kinaesthetic: imitate the movements of the song and TPR activity.
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>Flashcards of vegetables.</li> <li>Song: "Vegetables song for kids"  <a href="https://www.youtube.com/watch?v=RE5tvaveVak">https://www.youtube.com/watch?v=RE5tvaveVak</a></li> </ul>
<b>Timing</b>	- 30-45 minutes

## ❖ **LEARNING ACTIVITIES**

<b>ACTIVITY 4: ASSOCIATIVE ANALYSIS</b>	
<b>Objective/s</b>	<ul style="list-style-type: none"> <li>Promote meaningful learning and create own knowledge.</li> <li>Develop analysis and synthesis abilities.</li> <li>Improve attention, logic thinking and memory.</li> <li>Work in a cooperative way.</li> </ul>
<b>Description</b>	<p>Students have to work in group and think about information related to vegetables. Children have to answer questions like: what? , when?, why?, where? or with whom? in order to work distinct notions: origin; time; utility and job; space; cause; and ethics, morals and social This technique of studying a topic from different points of view is called "<b>Associative analysis</b>" (see annex 13).</p> <p>Children will follow "<b>The number</b>" technique. They have to think the answers in group exchanging opinions. Then, the teacher gives a number to each student and from a bag chooses a paper that contents those numbers so that each child has to do a part of the task in a cardboard with pictures, drawings and letters.</p>
<b>Intelligences</b>	Linguistic, logical-mathematical, visual-spatial, interpersonal, naturalistic. ➤ Visual-spatial: analysis and <i>mind-map</i> , images, drawings, colours.
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>Cardboard, drawings, markers and pictures.</li> <li><u>MI technique</u>: associative analysis.</li> <li><u>Cooperative structure</u>: the number.</li> </ul>
<b>Timing</b>	- 1 hour

<b>ACTIVITY 5: FOOD BOOK</b>	
<b>Objective/s</b>	<ul style="list-style-type: none"> <li>Promote meaningful learning.</li> <li>Learn food vocabulary.</li> <li>Study and review the colours, shapes, sizes.</li> <li>Acquire autonomy in own tasks.</li> <li>Be able to work in group and respect the others likes and turn to speak.</li> <li>Know cultural aspects of English: traditional food of UK.</li> </ul>

<b>Description</b>	<p>This activity consists in making a “Food book” with individual tasks of the members of the group. Each child has to decide what is his/her favourite food and complete a little paper with information of it They have to look for their food in a magazine and cut and paste the picture (see annex 14)</p> <p>They follow “<b>Group-Investigation</b>” technique. It consists in dividing a topic in different parts and give distinct tasks to each student following the interests and abilities of them. Then each child has to present his/her job to the classmates.</p> <p>Furthermore, to study some cultural aspects of English, the teacher will show a picture of the typical meal of United Kingdom: fish and chips. Kids have to describe this image by raising their hand. Then, they have to look for fish and chips in the magazines and create their own plate as a group.</p>
<b>Intelligences</b>	<p>Interpersonal, intrapersonal, linguistic, visual-spatial, logical-mathematical, naturalistic, bodily-kinaesthetic.</p> <ul style="list-style-type: none"> <li>➤ Visual-spatial: use of drawings, shapes, sizes, colours, magazines.</li> <li>➤ Bodily-kinaesthetic: respond to a question (what is your favourite food?) by an action (cut and paste the food).</li> </ul>
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>• Papers, markers, scissors, glue and other craft materials.</li> <li>• Magazines.</li> <li>• <u>Cooperative structure</u>: Group-Investigation</li> </ul>
<b>Timing</b>	- 1 hour

<b>ACTIVITY 6: LIKES AND DISLIKES</b>	
<b>Objective/s</b>	<ul style="list-style-type: none"> <li>• Learn English grammar: likes and dislikes by questioning and answering.</li> <li>• Be able to work individually, in pairs and in group.</li> </ul>
<b>Description</b>	<ol style="list-style-type: none"> <li>1. Kids will watch the video “Do you like broccoli ice cream?” in order to know some grammatical structures to express likes and dislikes. The best way of learning grammar in these ages is by repetition. In addition, the pupils have to repeat the movements of like and dislike that appear in the video.</li> <li>2. After that, the teacher asks some questions about the video, such as, what food appear in it? Following “<b>The substance</b>” technique: the kids have to write or draw individually the answers, and then they discuss in group and choose the best answer with all the ideas.</li> <li>3. Role-playing: in pairs children have to ask and answer the question <i>do you like...?</i> during some minutes. They can use some flashcards as help say the food and they can answer physically (nod or shake their head) or with some cards (Yes, I do/ No, I don't) (see annex 15).</li> <li>4. Role-playing with the teacher. The teacher holds two cards where says “Yes, I do” and “No, I don't”. The teacher asks Do you like...? and the students in pairs have to go where the teacher is and take the card that best fits with their answer.</li> </ol>

<b>Intelligences</b>	Musical, bodily-kinaesthetic, interpersonal, intrapersonal, linguistic. ➤ Visual-spatial: watch the video and use of flashcards. ➤ Bodily-kinaesthetic: imitate the movements of the video, respond with physical actions, role-playing.
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>• Role-play</li> <li>• Video: “Do you like broccoli ice cream?” (<a href="https://www.youtube.com/watch?v=frN3nvhlHUK">https://www.youtube.com/watch?v=frN3nvhlHUK</a>)</li> <li>• <u>Cooperative technique</u>: The substance.</li> </ul>
<b>Timing</b>	- 30 minutes

## ❖ SUMMARY ACTIVITIES

<b>ACTIVITY 7: CARDS GAME</b>	
<b>Objective/s</b>	Know students’ learning and evaluate them as a group.
<b>Description</b>	The teacher will ask some questions to the students with some cards of different colours and distinct kind of questions related to the activity of the associative analysis. They have to answer as a group and reach all the points they can (see annex 16).
<b>Intelligences</b>	Interpersonal, linguistic, logical-mathematical, naturalistic, visual-spatial, bodily-kinaesthetic, musical. ➤ Visual-spatial: use of cards and visual memory to remember the mind-map of the associative analysis. ➤ Bodily-kinaesthetic: in some questions students can answer with actions (example: - do you like broccoli?, +”Nod”).
<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>• Cards.</li> </ul>
<b>Timing</b>	- 30 minutes

<b>ACTIVITY 8: DICE and DRAWING</b>	
<b>Objective/s</b>	Know students’ learning and evaluate them individually.
<b>Description</b>	In this activity the students have to be grouped in pairs and throw a big dice to answer questions about the food. If they guess the answer they get a point. They have to reach all the points they can but they are not competing with anyone, just to self-satisfaction. The dice is divided in 6 faces with different sort of activities about several intelligences (see annex 17): mimic (bodily-kinaesthetic intelligence), model with plasticine, (bodily-kinaesthetic), likes and dislikes (intrapersonal), pictionary (visual-spatial), riddles (linguistic), count (logical-mathematical).  To end with the activities, the students have to draw in a paper what they have learnt in this unit (see annex 18)
<b>Intelligences</b>	Logical-mathematical, linguistic, intrapersonal, interpersonal, visual-spatial, bodily-kinaesthetic. ➤ Visual-spatial: use of flashcards, Pictionary, drawing. ➤ Bodily-kinaesthetic: activities of mimic or plasticine.

<b>Techniques and materials</b>	<ul style="list-style-type: none"> <li>• A dice.</li> <li>• Flashcards</li> <li>• Plasticine, riddles, whiteboard and markers.</li> </ul>
<b>Timing</b>	- 30 minutes

❖ **TIMING:** the activities were performed during a week from 9:00 to 11:00 a.m. However, during 2 months I have been observing the reality of the class.

## **H. Evaluation**

Among others, according to the context of the study I have considered to use the evaluation from a dual viewpoint: teaching (student's evaluation) and research (process' evaluation).

### **Teaching evaluation**

The evaluation will be global, continuous (before, during and after learning) and educational. Before starting the unit the teacher will ask questions to know the previous knowledge of the pupils. The evaluation will be based on direct observation. The teacher will observe the progress and learning that each student acquires during the development of the sessions. Individual works and own productions will be evaluated too. The interest that each child presents in the activities is viewed favourably as well as the questions that they ask during the sessions. Regarding group work, we will evaluate cohesion and efficiency of the team, compliance of roles and respect of team rules. Ultimately, a final evaluation will be carried out by the summary activities

The instruments of evaluation are: a teacher's diary, self-assessment and group assessment of the student through a notebook team, conversations with the children and creations of the pupils: individual and in group. In Annex 19 are exposed the items to evaluate the pupils. The items are related to the objectives purposed in the unit.

### **Research evaluation**

The instruments and techniques used in the class of 4 years old for data collection have been diverse but mainly based on observation. The evaluation is divided in three parts: before, during and after the educational proposal.

First of all, before the educational proposal, I have been observing the reality of English classes during two months, the methodology and resources used and the student's profiles. To confirm what I observed and to know more about that I had an unstructured interview with the teacher of the classroom. On the other hand, to know the student's opinion of their ordinary English classes I used a questionnaire.

During the sessions, the teacher's diary was useful to noted information about the development of the activities, children's attitude and the achievement of the objectives. At the same time, the invention table helped a lot to know the connexions between children's answers, teacher's practice, the methodology used and the environment (Kemmis & Mactagar, 1992). Students, for their part, commented about the activities and their participation in a team notebook with some emoticons.

And finally, after the proposal, I have utilised the same questionnaire used before to know the satisfaction and motivation of the students of the activities of the design. To conclude, I asked several questions about their favourite activities and materials.

To interpret the information collected and formulate the results I have used triangulation. A procedure that combines different techniques to ensure reliability (Donolo, 2009).

## **5. Results and discussion**

Throughout this section, I will analyse if the objectives suggested in the proposal have been achieved, if the activities have caused interest in the students and motivated them, and if cooperative learning and visual-spatial and bodily-kinaesthetic intelligences improve English learning.

Generally, the proposal is positively valued since it is considered that students have achieved most of the objectives proposed through the activities: learn vocabulary of vegetables and food; learn English grammar: likes and dislikes; be able to work in group or acquire healthy habits. The attainment of these goals is reflected in the fact that most of the students have accomplished the evaluation criteria.

Furthermore, the proposal plays an important role in motivation towards English language. To know the motivation of the students in their ordinary English classes and the classes of the proposal some questionnaires have been used. The results, included in annex 20, show that students are more motivated in the classes of the proposal than in the ordinary ones. Ordinary classes have 89 points whereas the proposal has 99 points out of 108. In annex 21 are graphs that represent the results of each question of both questionnaires. It must be said that in both questionnaires students have valued in a similar and positively way English classes and their activities (see graph 7, annex 21).

In the same manner, students have considered in a positive way the materials and resources used. The most valued activities have been: *spider web*, *activity 3: vegetables-TPR*, *activity 4: likes and dislikes-role playing with the teacher*, and diverse videos and songs where children have to act and imitate. Given that most of the favourite activities are related to TPR, there is every reason to believe that bodily-kinaesthetic intelligence motivates English learning. Another reason why I hold this view is that during the activities of the proposal, students showed enthusiasm towards the activities that implicated movement. Consequently, the results suggested that bodily-kinaesthetic intelligence improves English learning in Infant Education.

With regards to less valued activities: *food book* and *associative analysis*, are closely linked to visual-spatial intelligence. This kind of intelligence and activities attracts a lot children's attention at the beginning, but does not maintain it for long time. It cannot be denied that visual resources are necessary for teaching in early childhood, but these activities should have less duration to maintain children attentive. Also they can be combined with other stimulus able to maintain their attention and cause interest in learning. These activities assessment will be taken into account in future implementations of this proposal in order to maintain, modify or eliminate concrete aspects.

With reference to cooperative learning, in class was viewed favourably by students. They achieved the objectives proposed and accomplished with their roles successfully. But, in terms of learning and efficiency, no big differences have been noticed between individual work in ordinary classes and cooperative

learning. Moreover, basing on class observation before the proposal and during it, it seems that cooperative work sometimes negatively affects students' learning in these ages.

There are three causes why I support this view. The first one is that the student with high abilities was the leader of the group, she proposes answers and the rest of the kids followed her so they don't have the opportunity to think. Sometimes she wants to do all the tasks due to delay or ignorance of the rest. Secondly, the student that more help needs, get carried away by the rest, he doesn't think from himself and repeat what his schoolmates said. The classmates were willing to help him, but this does not improve his performance. And third, the rest of students haven't experimented noteworthy changes between one way or learning and other. These results suggested that working in a cooperative way in early ages does not improve students' efficiency.

Despite cooperative learning in this case doesn't have the advantages expected in terms of learning, it is important that kids learn to work with other people, develop social skills and accomplish with social rules. Therefore, cooperative learning can be performed in class once a trimester or a month but not as the common way of learning. Or instead of heterogeneous groups homogeneous ones so that all pupils have the same abilities and opportunities.

## **6. Conclusions**

The purpose of this final degree project was offering an innovative educational proposal for Infant Education taking into account multiple intelligences theory and cooperative learning with the aim of improving English learning.

It is considered that the theoretical framework have been essential for the design of the educational proposal in order to study and consider MIT, cooperative learning and different resources and material for English teaching. The objective was to distance from the traditional English teaching characterised by the use of linguistic competence and individual work. In contrast, the proposal uses visual-spatial and bodily-kinaesthetic intelligences and cooperative learning.



On the whole, the results of the implementation of the activities were positively since students were motivated, contents seems to be significant and they achieved the objectives proposed; nevertheless not all the resources and techniques have had the expected results. Methodology based on multiple intelligences did perform as was suspected.

On the one hand, bodily-kinaesthetic intelligence attracts children's attention and stimulated pupils to learn, they enjoyed a lot the activities that involved movement, and were interested in learning. On the other hand, visual-spatial intelligence also attracts children's attention but for less time, these materials should be combined with others.

On the contrary, cooperative learning was expected to improve students' efficiency, but the effects have been dissimilar. Pupils get distracted easily and the student with high abilities did almost all the tasks without giving the opportunity to think to the others. Most experts in the field agree that cooperation has benefits for children's learning, but I would dare to say that in early ages all changes and it is difficult to deal with it.

It must be emphasized here that in future studies some changes will be necessary in order to ensure reliability and better results. The proposal would be carried out with a larger number of students and furthermore they will be divided into control and experimental groups, for the purpose of giving accuracy to the results.

In short, multiple intelligences theory is an essential component of English teaching. At the same time, it is a requirement to reach the demands of the official curriculum. More studies and researches about multiple intelligences and cooperative learning applied to English teaching in Infant Education are needed in order to improve English learning from early ages.

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## 8. Annexes

### ANNEX 1: TRIANGULATION

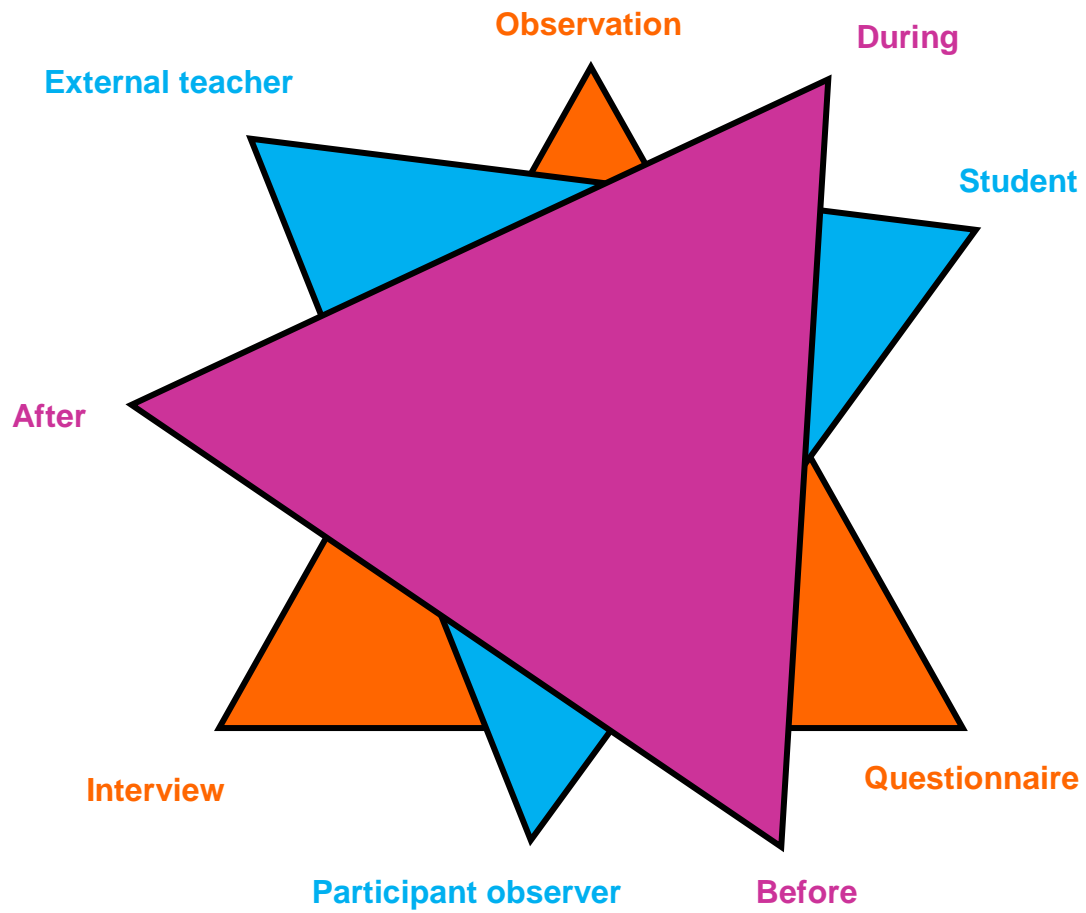


Figure 2. Triangulation used to data interpretation.

**ANNEX 2:**  
**PARTICIPANT OBSERVATION**

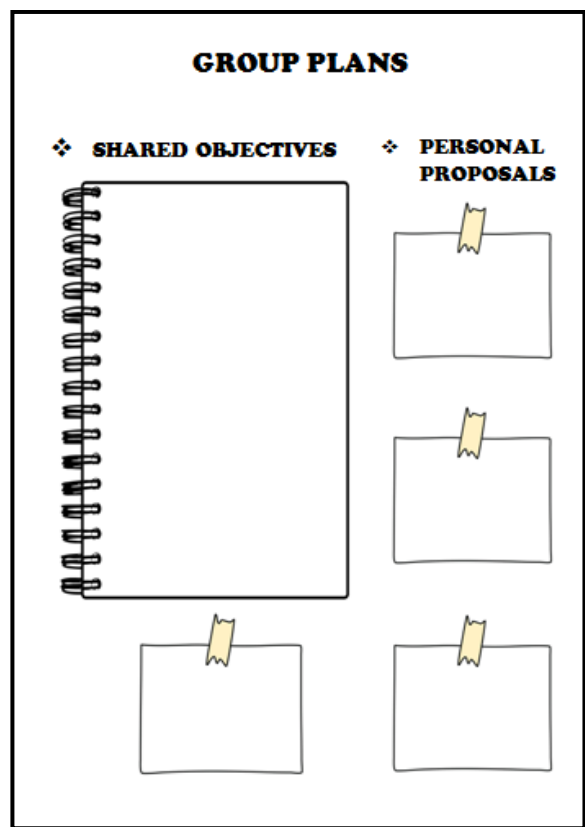
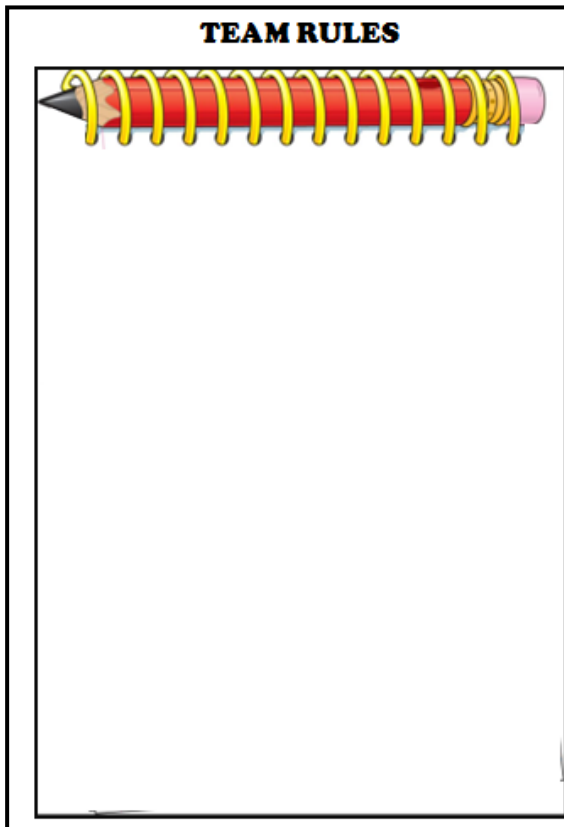
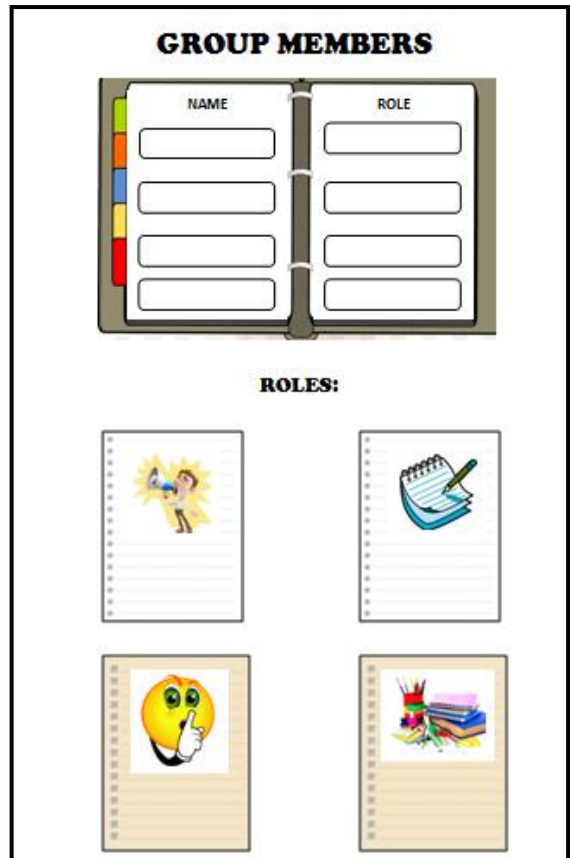
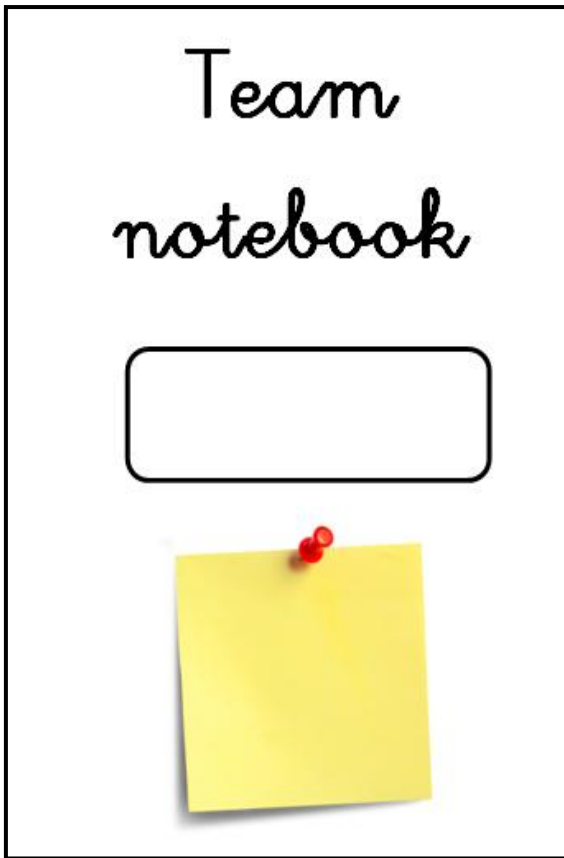
1. What is the aim of the observation?	
2. Which objective I want to achieve?	
3. What am I going to observe? <ul style="list-style-type: none"> <li>- Methodology</li> <li>- Resources</li> <li>- Students' learning</li> <li>- Timing</li> <li>- Difficulty of activities</li> <li>- Meaningful activities (interest, motivation)</li> </ul>	
4. Which is the focus of the observation?	
5. During how much time?	
6. Which observation techniques will I use?	
7. What of this data will I use?	

*Table 1. Reference points to plan an observation.*

*Note.* From "El maestro investigador" by A. Latorre and R. González, 1987, p.35



ANNEX 3:  
TEAM NOTEBOOK



### DIARY

*✍*

Name		Observations	Name		Observations

*✍*

Name		Observations	Name		Observations

### REVIEW GROUP PLANS

1. Do we achieve the shared objectives?

Objectives proposed	Yes	No	We need to improve because...

2. Do we accomplish the personal purposes?

Name	Personal purpose	Yes	No	I need to improve because...

3. Have we exercised correctly our role?

Name	Role	I need to improve because...	I do it well because...

Figure 3. Different parts of a team notebook.

**ANNEX 4:**  
**INVENTION TABLE**




	A.Teacher	B.Students	C.Subject of study	D.Environment
1.Teacher				
2.Students				
3.Subject of study				
5. Environment				

*Table 2.* Invention table used to data collection.

*Note.* From “Cómo planificar la investigación-acción” by S. Kemmis and R. McTaggart, 1992, p.123

## ANNEX 5:

### QUESTIONNAIRES USED TO EVALUATE MOTIVATION AND SATISFACTION OF ORDINARY ENGLISH CLASSES AND ENGLISH CLASSES OF THE PROPOSAL

<b>QUESTIONNAIRE ABOUT THEIR ORDINARY ENGLISH CLASSES</b>			
			
<b>English classes interest me.</b>	1 point	2 points	3 points
<b>During English classes I speak with my classmates, don't pay attention,...</b>	3 points	2 points	1 point
<b>I fall asleep.</b>	3 points	2 points	1 point
<b>I like English classes.</b>	1 point	2 points	3 points
<b>I like participating.</b>	1 point	2 points	3 points
<b>I like the activities, they are amazing.</b>	1 point	2 points	3 points
<b>I will change some activities.</b>	3 points	2 points	1 point
<b>I learn English in my classes.</b>	1 point	2 points	3 points
<b>I am good in my English classes.</b>	1 point	2 point	3 points

*Table 3.* Questionnaire to evaluate motivation and satisfaction of the students in their ordinary English classes.




<b>QUESTIONNAIRE ABOUT ENGLISH CLASSES OF THE PROPOSAL</b>			
			
<b>English classes of the proposal interest me.</b>	1 point	2 points	3 points
<b>During English classes of the proposal I speak with my classmates, don't pay attention,...</b>	3 points	2 points	1 point
<b>I fall asleep.</b>	3 points	2 points	1 point
<b>I like English classes of the proposal.</b>	1 point	2 points	3 points
<b>I like participating.</b>	1 point	2 points	3 points
<b>I like the activities, they are amazing.</b>	1 point	2 points	3 points
<b>I will change some activities.</b>	3 points	2 points	1 point
<b>I learn English in my classes.</b>	1 point	2 points	3 points
<b>I am good in my English classes.</b>	1 point	2 point	3 points

Table 4. Questionnaire to evaluate motivation and satisfaction of the students in English classes of the proposal.

<b>POINT VALUE</b>	
1	Low motivation and satisfaction
2	Medium motivation and satisfaction.
3	High motivation and satisfaction.

<b>QUESTIONNAIRE ASSESSMENT INTERVALS</b>	
9-14 points	Low motivation and satisfaction.
15-21 points	Medium motivation and satisfaction.
22-27 points	High motivation and satisfaction.

## **ANNEX 6:**

### **COMPETENCES OF THE EDUCATIONAL PROPOSAL**

- The competence of linguistic communication will be presented by activities of listening, speaking, pre-reading and writing.
- The mathematical competence, by activities with basic operations and reasoning.
- Interaction and knowledge of the world through interaction with the classmates and the space.
- Social competence, by activities with the classmates the social skills will be developed, such as cooperative working.
- Artistic and cultural competence, with activities where the children have to develop their artistic skills and create their own materials.
- Learn to learn. Children will learn by practising and their own experience, and they will learn to cooperate.
- Autonomy and personal initiative, through individual tasks children will acquire security and autonomy in their work.
- ICT: technology is essential in some activities.
- Emotional intelligence: there are activities that require auto-reflexion.

## ANNEX 7:

### DIDACTIC METHODOLOGY OF THE EDUCATIONAL PROPOSAL

- **Initial assessment:** analysis of the previous knowledge of the pupils in order to help the teacher to know the starting point.
- **Individual work:** continuous personal assessment will be carried out.
- **Cooperative work:** most of the activities are orientated to work in group. Some techniques and structures of cooperative learning are used: gyratory paper, spider web, the number, group-investigation, 1-2-4, the substance, and a team notebook, divided in different parts:
  - Name and logo: to create a feeling of belonging to a group.
  - Group members and roles: each student has personal responsibility and individual efficiency. The students are assigned by the teacher depending on the abilities of each child and their likes. The students wear a pendant with their role in a card. The roles are:
    - In charge of material: has to bring and tidy the materials.
    - Moderator: in charge of silence and respect everyone's turn to speak and pay attention.
    - Spokesperson: person authorized to speak in representation of the group.
    - Secretary: in charge of writing the tasks of the group.
  - Team rules: to work with others, some rules are needed.
  - Group plans: the pupils have to propose some shared objectives to achieve as a group and each one have to think about a personal proposal in order to create positive interdependence between participants.
  - Diary: in each session the students have to evaluate their contribution to the group. And the teacher can note some observations too.
  - Review group plans: a group assessment where the students have to reflect if they have achieved the objectives purposed and accomplished the team rules and how they have worked together.
- **Multiple intelligences:** different techniques are used in order to attend to the intelligences Gardner proposed, mainly to visual-spatial and bodily-

kinaesthetic: associative analysis, role-playing, dice, cards, songs, videos and flashcards.

- **Use of technology:** use of the tablet to expose some contents and songs.
- **Motivation:** stimulate and reward the children when they do a good job and work with enthusiasm. The activities have to stimulate and awake the children's curiosity and interest in order to facilitate meaningful learning instead of memorizing and learning by heart.
- Learning has to be **meaningful** to ensure utility for children. The contents that kids learn at the school have to be useful in their daily life.
- **Self-assessment** of the students: kids have to reflect about their learning by drawings and emoticons. They have to draw what they have learnt or what they like the most about the class and qualify their behaviour and performance with an emoticon.
- **Group-assessment:** with the team notebook the group has to evaluate their performance at the end of each activity and at the end of the unit.
- These methods will be based on the experiences, activities and the game, and will be applied in an affective and confidence environment in order to promote self-esteem and social integration.
- Taking into account the **spatial organisation**, all the activities are carried out in the corridor, which is adapted with tables and chairs, but there can be any changes if necessary.
- **Grouping:** base group of four students with different abilities. In the group each student has a role: a person in charge of materials, a secretary, a moderator and a spokesperson.



**ANNEX 8:**  
**ACTIVITY 1: SPIDER WEB ACTIVITY**



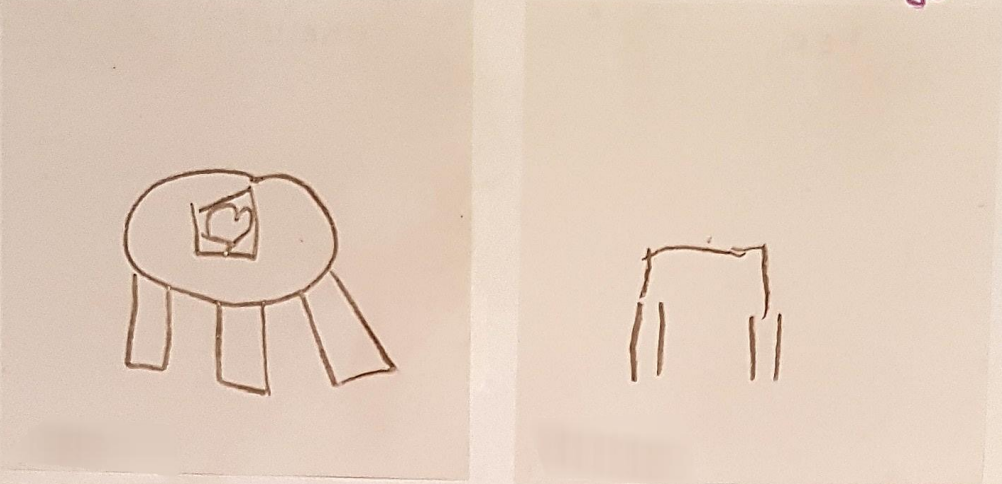
*Figure 4.* Example of spider web made by the students.

ANNEX 9:


ACTIVITY 1: "1-2-4 TECHNIQUE"

"1-2-4" TEAM NOTEBOOK: Name & Logo

①  
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ACTIVITY 1: MY TEAM (1-2-4)

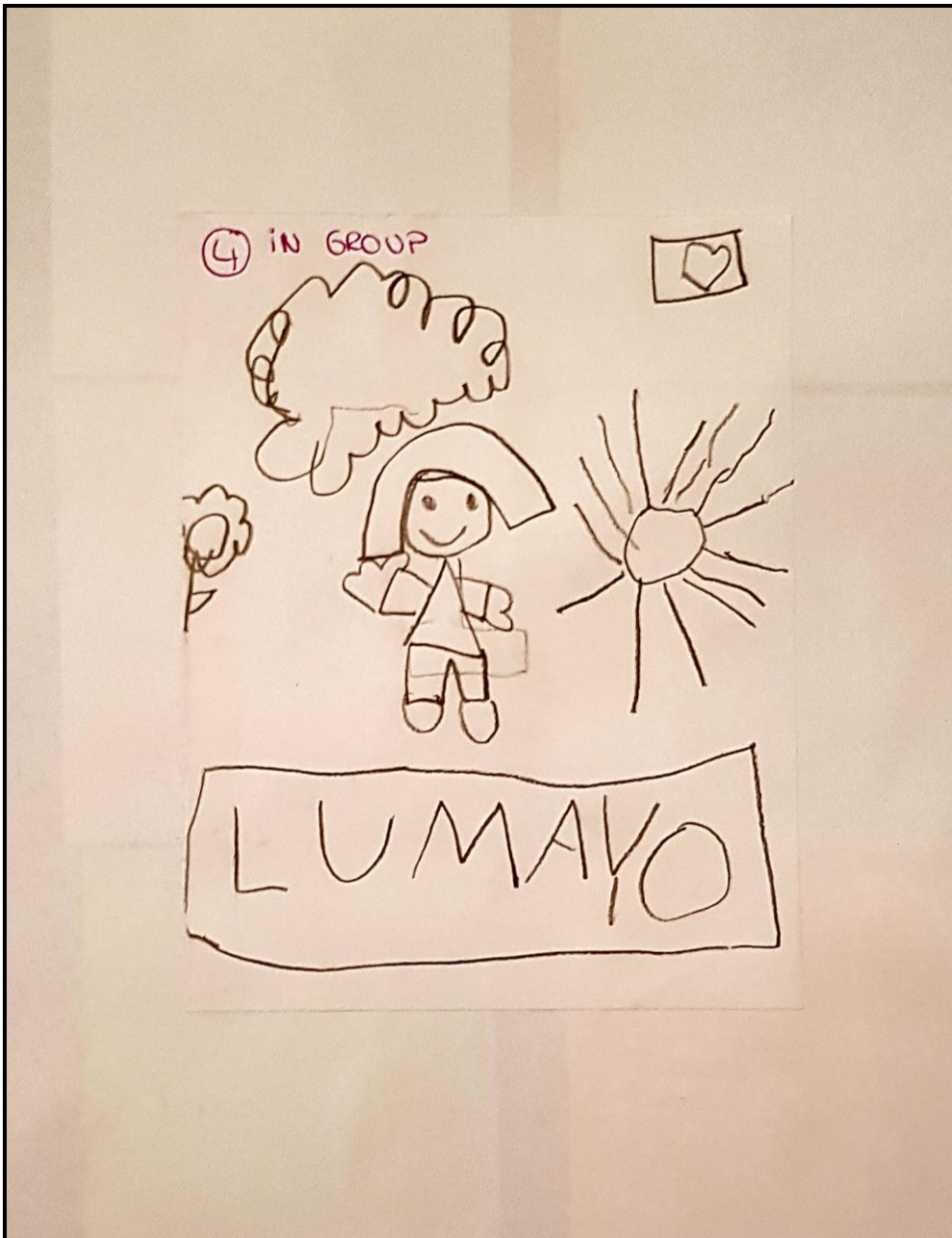


Figure 5. Example of "1-2-4" technique.

**ANNEX 10:  
STUDENTS' TEAM NOTEBOOK**

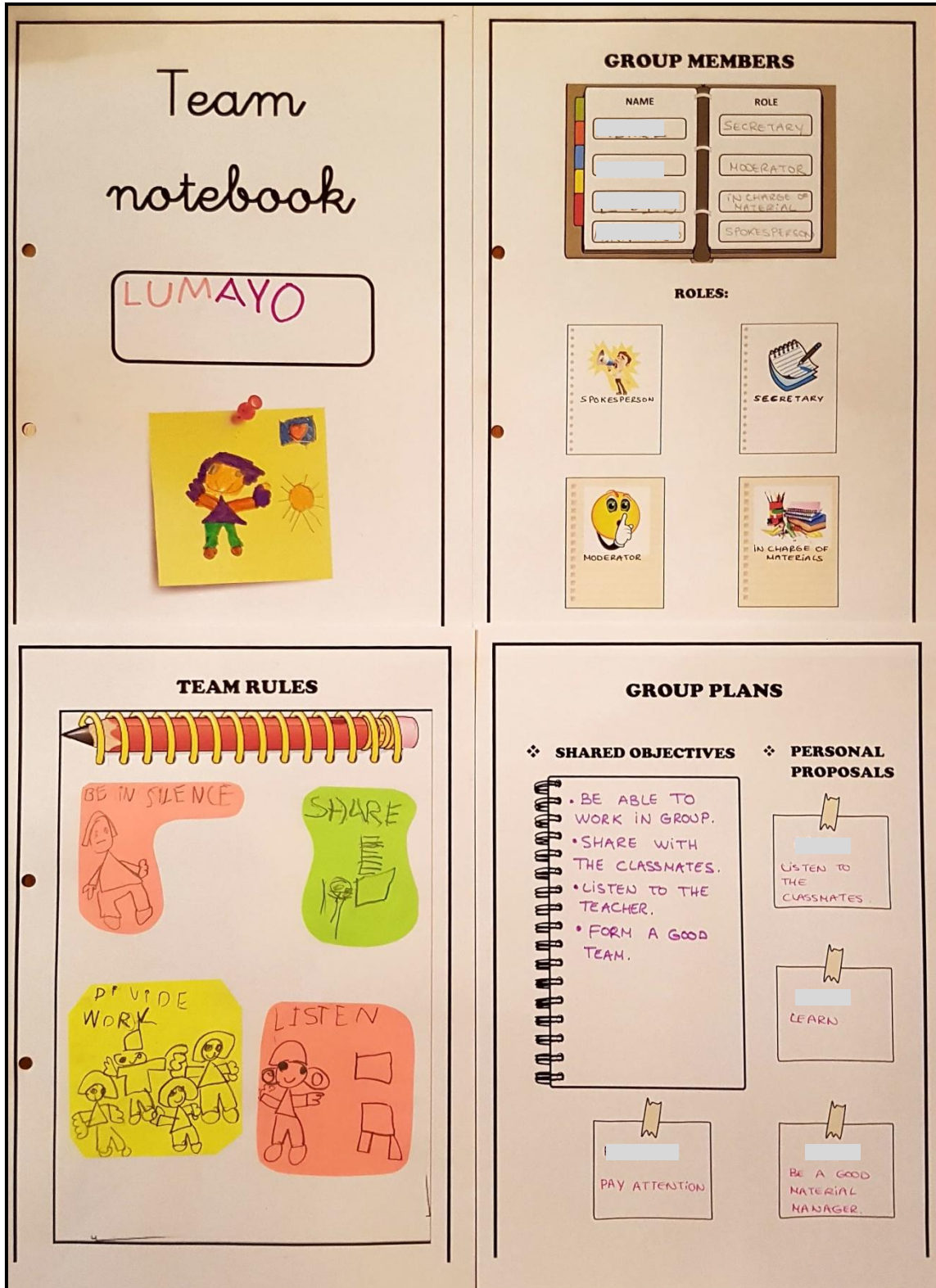


Figure 6. Team notebook done by the students of 4 years old.

ANNEX 11:

ACTIVITY 2: GYRATORY PAPER

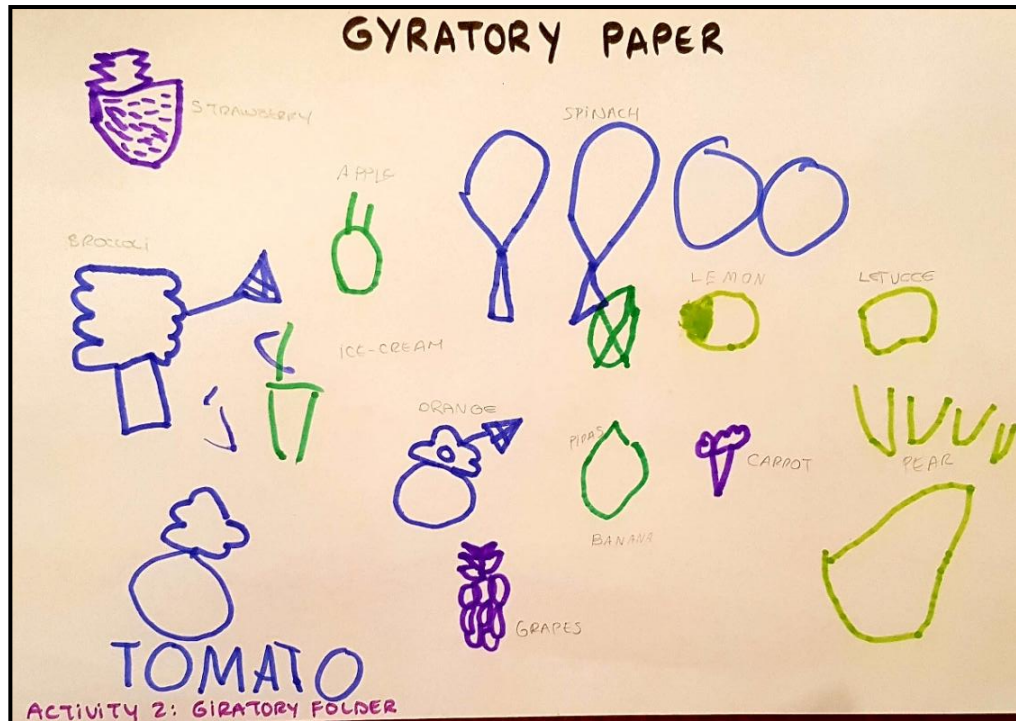


Figure 7. Drawing done by the students of 4 years old using "Gyratory paper" technique.

ANNEX 12:

ACTIVITY 3: FLASHCARS

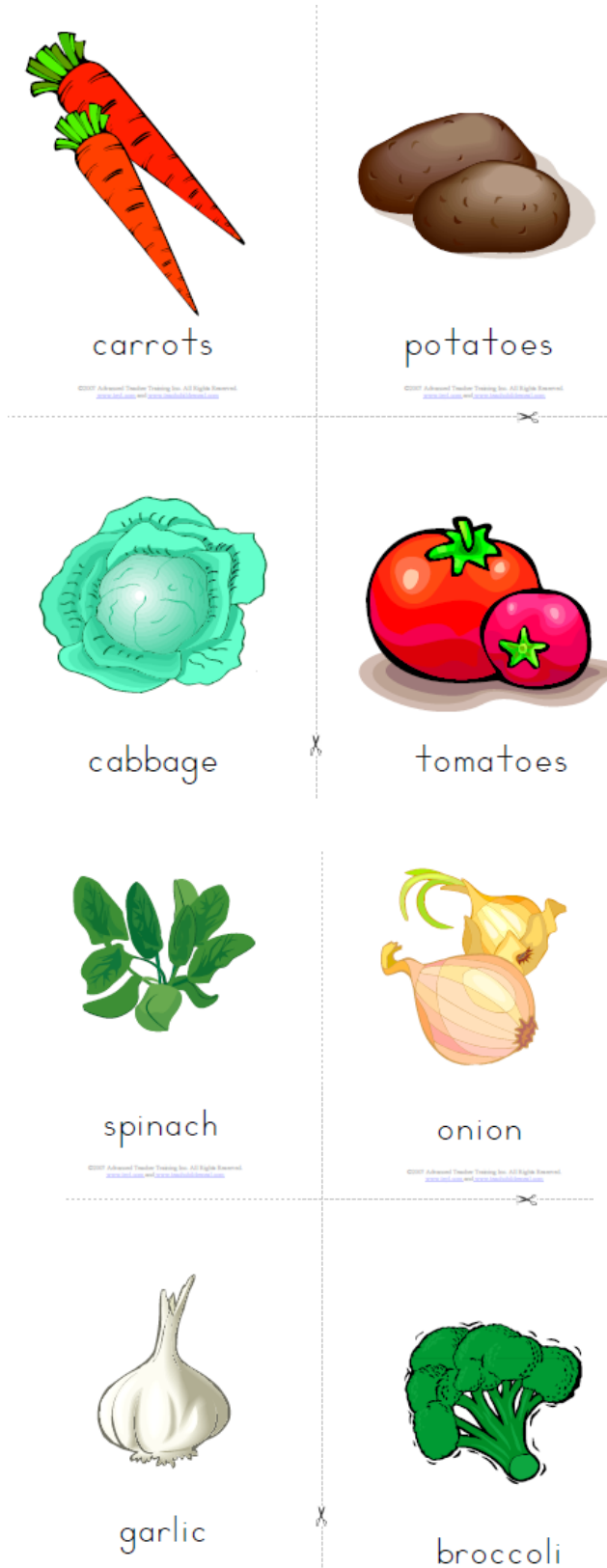


Figure 8. Flashcards used to expose vocabulary and other activities.

ANNEX 13:

ACTIVITY 4: ASSOCIATIVE ANALYSIS

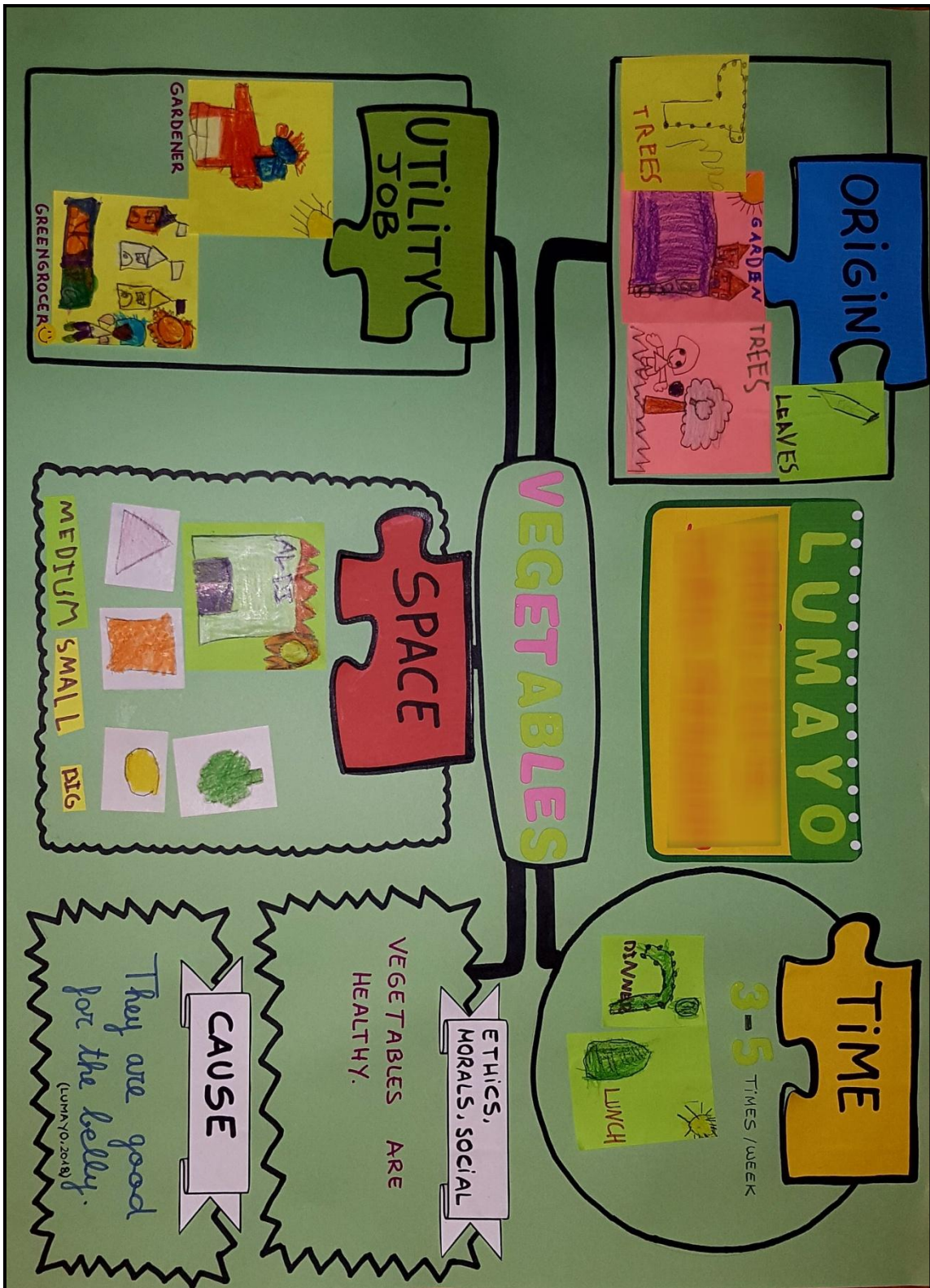


Figure 9. Associative analysis done by the students of 4 years old.

**ANNEX 14:**  
**FOOD BOOK**

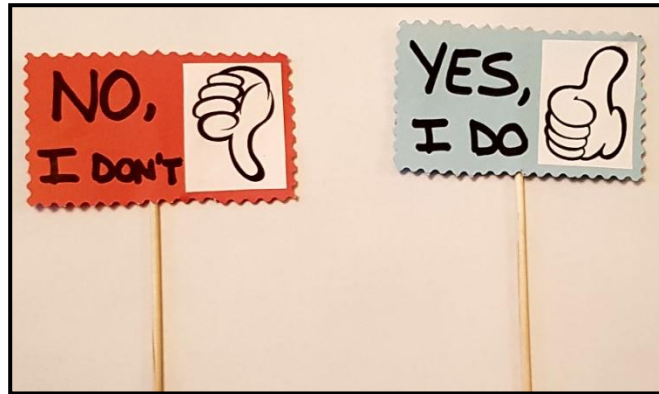


Figure 10. Food book made by the students of four 4 years old using “Group- Investigation” technique.



**ANNEX 15:**

**ACTIVITY 6: LIKES AND DISLIKES**



*Figure 11.* Cards used to help the students to answer to “do you like...?” questions.

**ANNEX 16:**

**ACTIVITY 7: CARDS GAME**

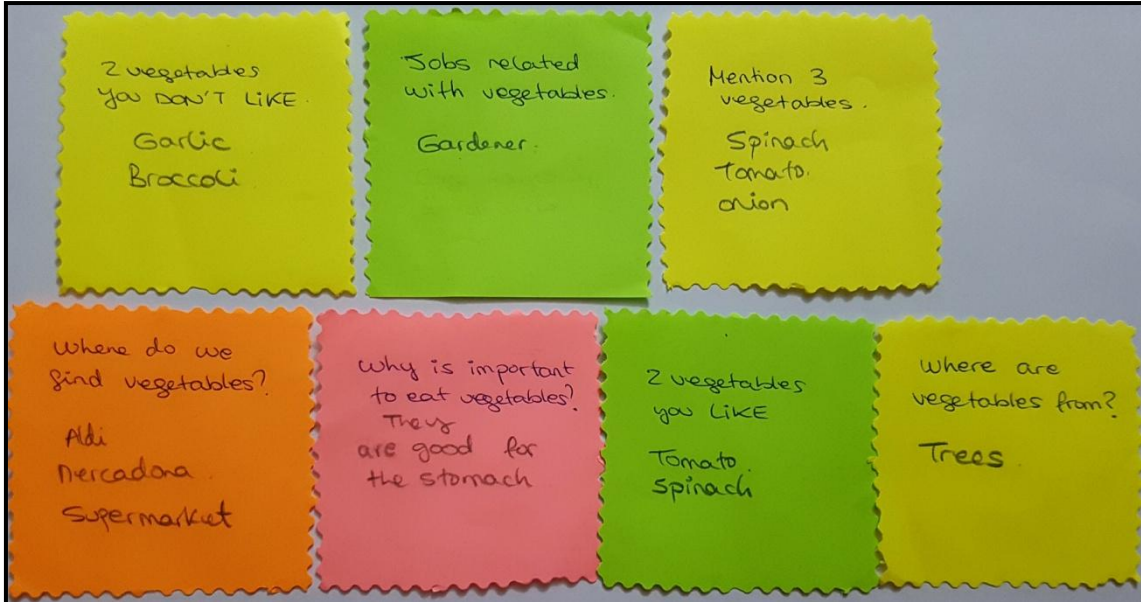


Figure 12. Questions and students' answers of "Cards game" used to evaluate the students.

**ANNEX 17:**  
**ACTIVITY 8: DICE GAME**

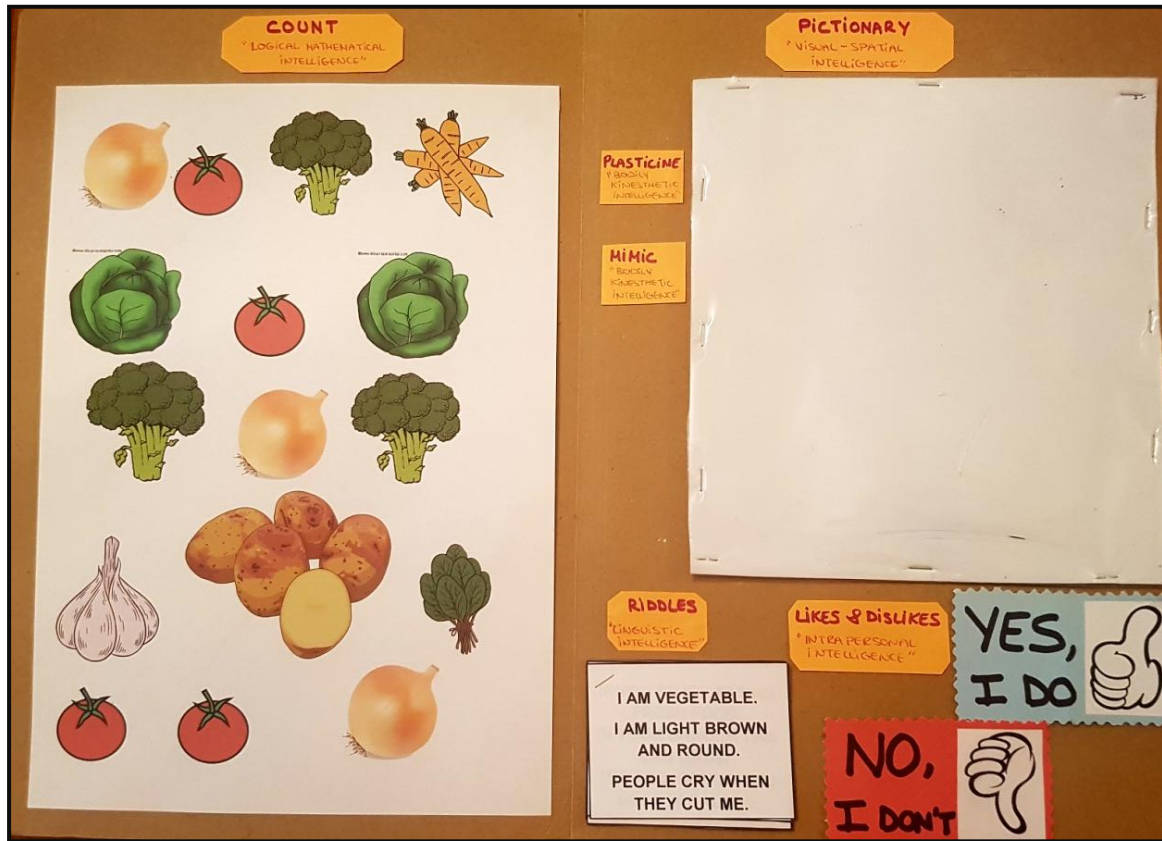


Figure 13. Different resources used in "Dice game".

**ANNEX 18:**  
**ACTIVITY 8: DRAWING**



*Figure 14.* Drawings done by the students of 4 years old about what they have learnt during the educational proposal.

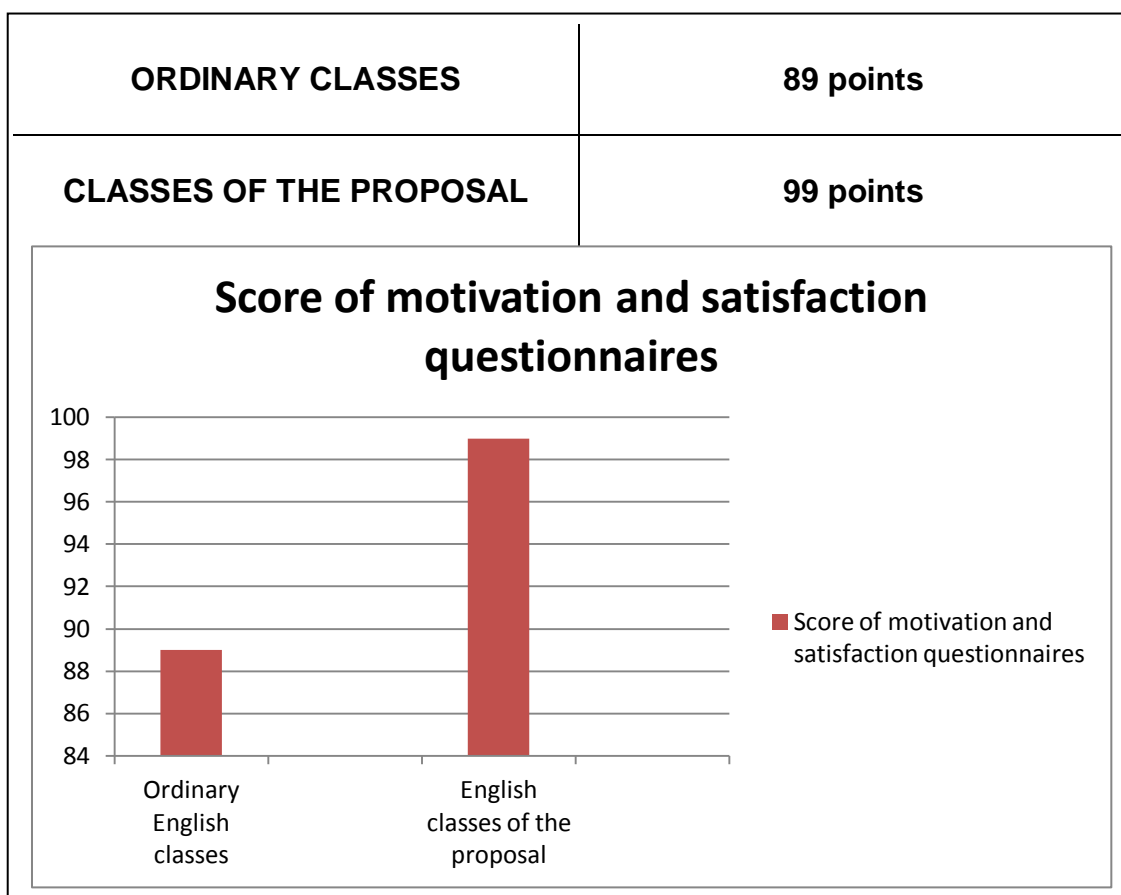
## ANNEX 19:

### ITEMS OF STUDENTS' EVALUATION

ITEMS TO EVALUATE...	Yes	No	In process
1. Know some vegetables in English.			
2. Know some characteristics of vegetables.			
3. Be able to distinguish between like and dislike.			
4. Be able to count without problems.			
5. Participate in class.			
6. Show interest during the classes.			
7. Distinguish the shapes.			
8. Differentiate concepts of big and small.			
9. Respect the rules of the group.			
10. Respect everyone's turn to speak.			
11. Good spatial and orientation development.			
12. Pay attention to the teacher's explanations.			
13. Help the equals and cooperate in group.			
14. Create own materials with satisfaction and cleanliness.			
15. Be aware of healthy habits.			

*Table 5.* Items used to evaluate the students according to the didactic objectives.

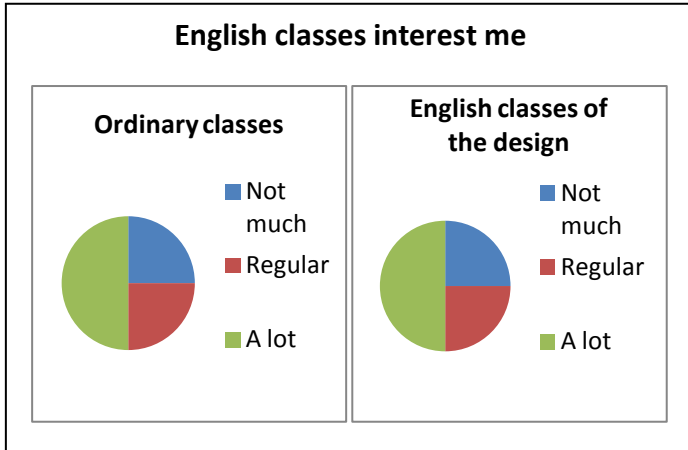
**ANNEX 20:  
QUESTIONNAIRES'S RESULTS**



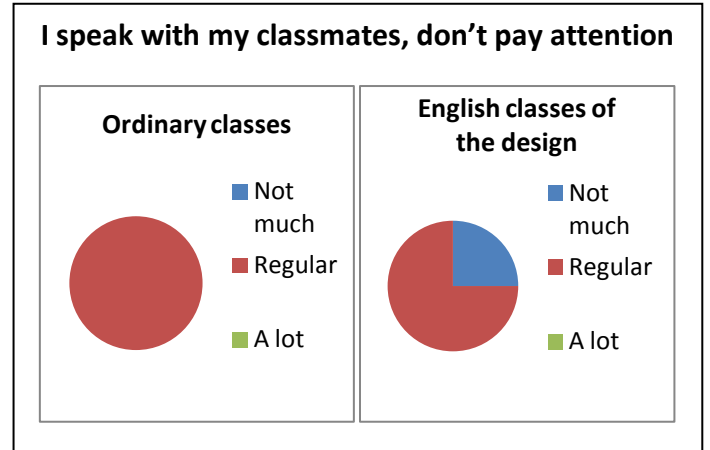
*Graph 1.* Final scores obtained in the results of the questionnaires of motivation and satisfaction in ordinary English classes and classes of the proposal.

ANNEX 21:

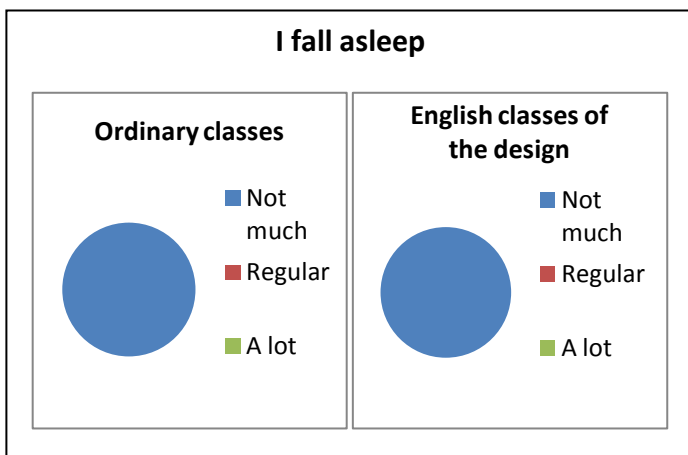
GRAPHS OF THE RESULTS OF THE QUESTIONS OF MOTIVATION AND SATISFACTION IN THE ORDINARY CLASSES AND OF THE PROPOSAL



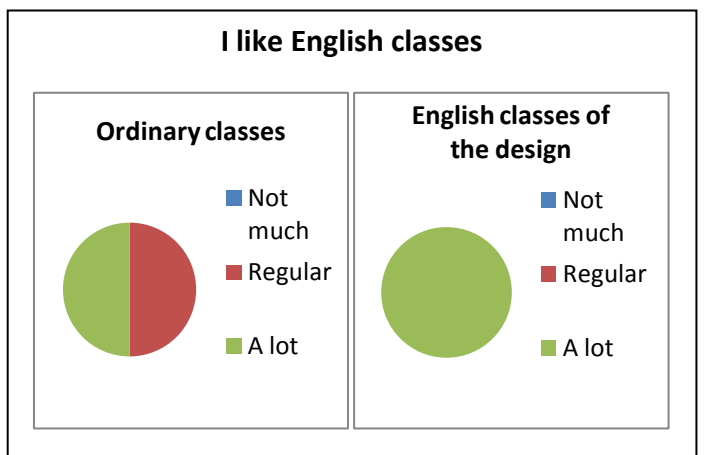
Graph 2. Students' interest in ordinary English classes and of the design.



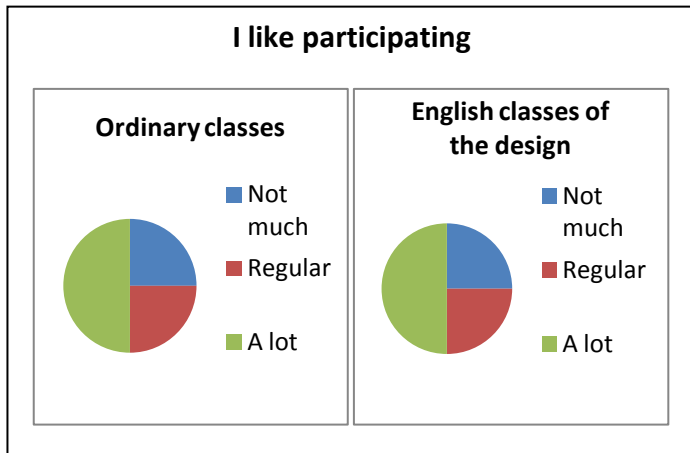
Graph 3. Students' distractions in ordinary English classes and of the design.



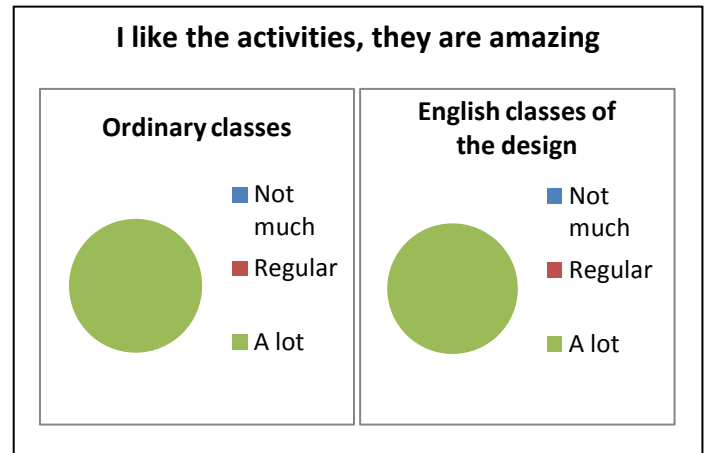
Graph 4. Students' boredom in ordinary English classes and of the design.



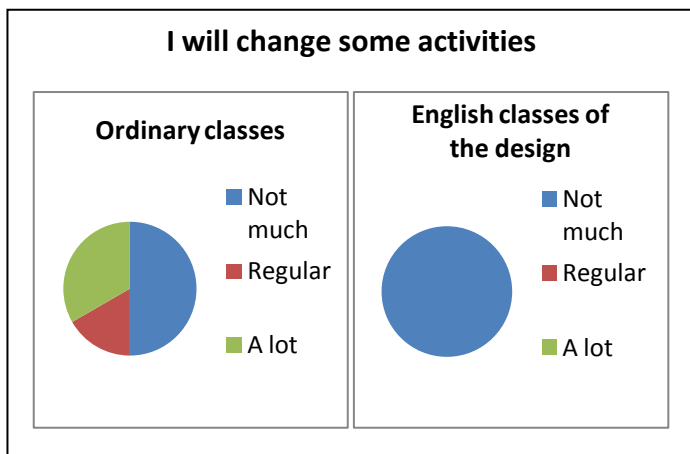
Graph 5. Students' viewpoint about ordinary English classes and of the design.



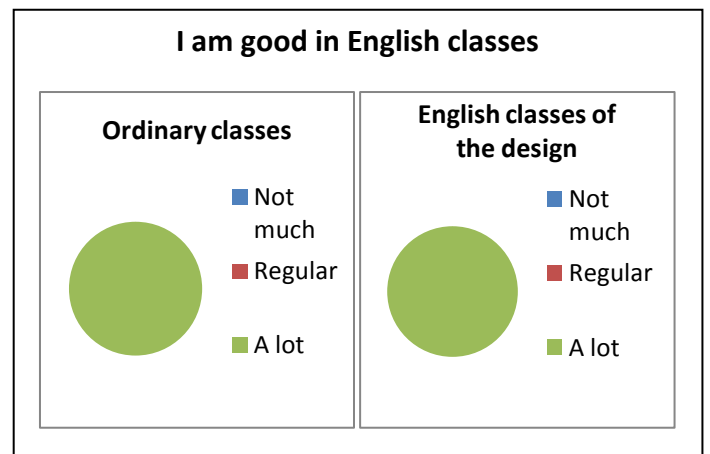
Graph 6. Students' viewpoint about participating in ordinary English classes and of the design.



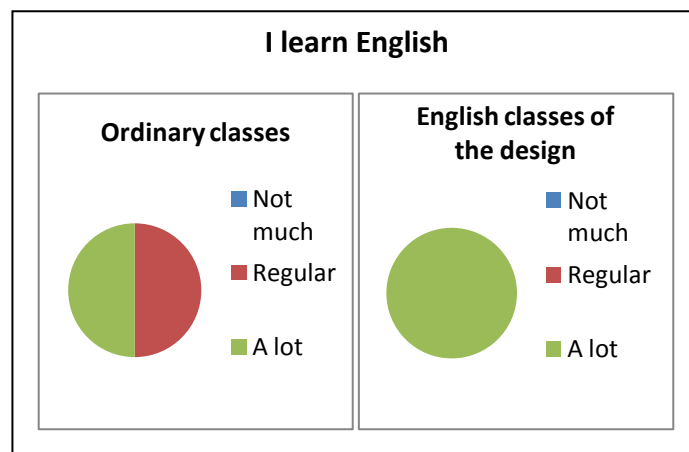
Graph 7. Students' viewpoint about ordinary English activities and of the design.



Graph 8. Students' possible changes of ordinary English activities and of the design.



Graph 9. Students' efficiency in ordinary English classes and of the design.



Graph 10. Students' learning in ordinary English classes and of the design.