

The use of lateral thinking puzzles to improve opinion paragraph writing

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This research report is the result of my own work and includes nothing that was done in collaboration with others.

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(Signature)

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## ABSTRACT

Focusing on the need of fulfilling the requirements of today's globalized world as well as on the need of improving writing skills, this study examines the assumptions, practices, impacts and benefits of critical thinking skills when enhancing writing skills in opinion paragraph writing. The research was carried out within a group of 23 students of sixth grade in a female catholic school of Bogota. The writing performance of the students who participated in the project was deeply analyzed according to the effects that brain teasers had upon the learners' writing skills. A wide range of thinking activities provided students with enough tools to guide students in making and defending argumentatively a stand and to generate analysis and language awareness that could foster and empower writing skills. It focuses on the process students followed in order to increase their performance and how co variables besides the use of brain puzzles influenced improvement. This work compares the targets, strategies and effects with the findings obtained after piloting the study. Analysis led to conclude that the use of brain teasers succeed in improving writing skills as well as in motivating students towards writing. However, it is recommended to research in depth the benefits of motivation on developing writing skills.

Key words: *thinking skills, writing process, opinion paragraph, motivation.*

## Resumen

Haciendo énfasis en la necesidad de satisfacer las exigencias de la globalización en la sociedad actual y en la necesidad de mejorar las habilidades de escritura, este estudio examina las hipótesis, prácticas, efectos y beneficios del desarrollo de las habilidades de pensamiento crítico en el mejoramiento de las habilidades de escritura, específicamente en la composición de párrafos de opinión. La investigación fue realizada con un grupo de 23 estudiantes de un colegio femenino y católico de Bogotá. La producción escrita de las estudiantes que participaron en el proyecto fue analizada cuidadosamente teniendo en cuenta los beneficios y los efectos que tuvo una serie de actividades de desarrollo de pensamiento crítico conocidas como desafíos mentales (brain teasers) en el mejoramiento de las habilidades comunicativas en forma escrita. Dichos desafíos sirvieron como herramientas para que las estudiantes analizaran críticamente ciertas temáticas, asumieran una posición específica frente a éstas, expresaran sus opiniones, las defendieran con argumentos; y al mismo tiempo para que las estudiantes mejoraran su desempeño en la lengua extranjera (inglés) y por ende su producción escrita en dicha lengua. El estudio se enfocó en el proceso que siguieron las estudiantes con el fin de mejorar su rendimiento y también en cómo algunas variables a parte de los desafíos mentales influyeron positivamente en dicho mejoramiento. En la investigación se compararon los objetivos, las estrategias y los efectos de los desafíos mentales con los resultados obtenidos después de la misma, llevando así a un análisis exhaustivo que permitió concluir que los desafíos mencionados anteriormente influyeron en forma positiva y exitosa en el mejoramiento de las habilidades de escritura y también en la motivación de las estudiantes por la escritura. No obstante, teniendo en cuenta este último aspecto, se sugiere investigar más a fondo los beneficios de la motivación en las habilidades de escritura en futuras investigaciones.

## CONTENTS

|  |           |
|--|-----------|
| <b>CHAPTER 1: Introduction.....</b>  | <b>8</b>  |
| Statement of the problem.....  | 8         |
| Research question.....   | 9         |
| Research objectives.....   | 9         |
| Rational (Justification).....  | 10        |
| <b>CHAPTER 2: Theoretical framework .....</b>  | <b>12</b> |
| <b>CHAPTER 3: Research design.....</b>   | <b>24</b> |
| Type of study.....   | 24        |
| The researcher’s role.....   | 26        |
| Context.....   | 27        |
| Participants.....  | 28        |
| Data collection instruments.....   | 29        |
| Data collections procedures.....   | 31        |
| <b>CHAPTER 4: Pedagogical intervention (action plan) and<br/>Implementation.....</b> | <b>33</b> |
| <b>CHAPTER 5: Data analysis and findings.....</b>                                    | <b>46</b> |
| <b>CHAPTER 6: Conclusions, Pedagogical Implications and Further Research .....</b>   | <b>84</b> |

Conclusions.....84

Pedagogical Implications.....88

Further Research.....89

**BIBLIOGRAPHY.....91**

**APPENDICES.....96**

**APPENDIX A.....96**

**APPENDIX B.....97**

**APPENDIX C.....99**

**APPENDIX D.....104**

**APPENDIX E.....107**

## Introduction

### *Statement of the problem*

One of the most important skills regarding language learning is the one related to dealing with arguments orally and in written form. Indeed, this ability has become even more important since the communicative teaching approach has arisen in the latest years. However the misunderstanding or misuse of this method, among other reasons, has given speaking more relevance than writing on account of the wrong believe that communication only takes place orally.

Numerous studies have attempted to explain this fact. Actually, some theoreticians have outlined that humans are more likely to communicate orally and such communication allows language acquisition as the result of being exposed to the target language in a natural way (Richards 1997). However, and in contrast to speaking, writing is understood as a process that requires awareness and a lot of practice. In other words, speaking is considered more spontaneous, while writing has an academic or professional purpose. Nevertheless and despite its academic context, the complex process of writing is taken for granted and is wrongly understood as the simple action of symbolizing meaningless codes in a piece of paper.

In arriving at a solution to this, and turning to the reasons given to justify the teaching of writing skills, it is highly suggested that writing must be considered as an important part in language learning. Thus, writing skills should be developed as a communicative competence since it implies communication and interaction between the writer and the reader.

The aforementioned issues related to writing teaching are evident in the context of Iragua School. Then, it was decided necessary to carry out a six weeks study to examine which were the



principal factors that affected students when writing opinion paragraphs, and how to overcome those obstacles aiming at helping students to improve their writing skills.

*Research question*

Taken together the conclusions of the abovementioned reflection and with the purpose of improving writing skills further work needs to be done. Such work is concerned with the current action research project which deals with the following question:

*What are the effects of lateral thinking puzzles on improving opinion essays writing?*

*Research objectives*

Turning to the need of looking for a solution to the problem enunciated before, (improvement of writing skills), this research project seeks to reach the following general target:

*To improve opinion paragraph writing in a group of sixth-grade students by means of using brain teasers as part of critical thinking skills.*

However, the accomplishment of the former major objective implies the achievement of the following *specific objectives*:

1. *To guide students in their writing process so that they improve coherence and cohesion in opinion essays.*
2. *To provide students with opportunities that allow them develop peer correction skills.*
3. *To provide students with meaningful activities that help them feel engaged and develop an affinity for their writing process.*

Based on these objectives, the *expected results* for this action research project are:

1. *Students will be able to write logical and coherent opinion paragraphs.*
2. *Students will be able to understand the importance of writing for a specific audience rather than their teacher.*
3. *Students will be able to correct their partners' essays and to give feedback in a proper way.*
4. *Students will be engaged with their writing process and will develop an affinity for their writing process.*

It should so far be clear that based on the arisen awareness of the importance of teaching writing when teaching a foreign language, and with regard to the specific needs of the students of sixth grade at Gimnasio Iragua, this action research project focuses on ways of addressing the issues related to the improvement of writing abilities by means of strengthening critical thinking skills.

#### *Rationale*

Several reasons made the design of an action research framework for improving writing by enhancing critical thinking skills both feasible and attractive as the core of this work came from real concerns that are the result of careful observation and analysis of the students' needs. At the roots of the project there were two main driving forces: on the one hand to analyze how students can improve opinion paragraph writing by using brain teasers. On the other hand, to guide students on becoming critical in order to analyze and synthesize arguments that gives support to their ideas.

It is of firm conviction that, both students and teachers will benefit from the advancements in writing. According to the curriculum structure, by the end of the school year the target population will be asked to support and defend in written form their ideas and opinions

with regard to a specific topic and will be required to produce a number of written compositions in different subjects. Therefore, the study to be carried out will be helpful for them in order to improve their writing skills by providing some practice so that they accomplish the proposed goals for the school year. In the same way, the teaching practice will be less overwhelmed since students will drive their own learning and the teachers' role will be the one of facilitator.

A through summary of the most remarkable issues of the project stated above are highlighted in this work and it explores the research study as follows. Chapter one gives the reader a nutshell compendium of the whole research, its rationale and its objectives. It also addresses the main problem that generated the project. Chapter two presents the general theoretical background on which the project was based. It also addresses the principles that relate critical thinking to writing and argues that good writing is both a process and a product of critical thought. To illustrate so, some prior research studies are shown. Chapter three describes the research design and offers specific information about the context, the participants, the data collection instruments and procedures as well as the researcher's role. Chapter four focuses on the development of the project as it introduces the reader to the pedagogical intervention and implementation. Chapter five examines the data analysis and findings. The last part of the work, chapter six, summarizes and concludes the main issues of the findings, explores the causes of the pedagogical implications and suggests ways to carry out further research.

Therefore, with the purpose of following the sketch just mentioned, the next chapter describes in depth the theory behind this connection as it explores the different constructs upon which the project will be based.

## Theoretical framework

As stated in the previous chapter, the piloting idea of carrying out this study stemmed from the need of improving written production; and from the need of giving writing a new and active role in communication by means of the development of thinking skills.

This section is devoted to the core features that will serve as theoretical foundations of the present research project. At the same way, this chapter illustrates clear examples of prior research on similar fields that will serve as basis to support and validate the study. There are also detailed definitions and descriptions of the issues concerned with the *writing process*, the methodology and the key elements for providing successful activities; the principal features of *thinking skills* importance of developing them, the use of *lateral thinking puzzles (brain teasers)* as a tool that fosters such abilities; and the main characteristics of *opinion essays*. These constructs will illustrate the connection between language and thought upon which the hypothesis of the present study was based.

### *The writing process*

Although writing is used in several daily situations, it is considered, only, as an academic matter despite its different purposes. Writing can aim at describing; narrating, arguing or it can be found as the main form of literature. For some professionals, writing is considered as the most complex means of communication due to the fact that interaction between the writer and the audience is asynchronous and for this reason, it implies following a careful process (Richards, 1997). Therefore, written texts must be as clear as possible so that the readers can draw specific conclusions and can adopt a specific position towards the author's point of view.

Another aspect that makes writing a complex process is the fact that it demands more elaborated, formal and professional linguistic utterances, more specific vocabulary and a great variety of idioms, register and jargon depending on the context and the accurate use of communicative skills. Successful communication depends on knowing the socio-cultural codes that rule language (Harmer, 2007), and therefore, it is important that students become aware not only of the linguistic rules but also of its socio-cultural rules. That is to say, the communicative competence includes not only a linguistic competence and language awareness to write accurate sentences but also a discourse competence which implies the capacity to connect those sentences in a meaningful whole that gives structure and coherence to a text (Brown, 2007). Actually, this point can be brought out by Harmer for whom the success of discourse relies on coherence and cohesion. On the whole, it can be stated that teaching writing should aim at developing students' language and discourse skills so that they write coherent and cohesive texts.

However, teaching writing is a slow and developmental process that involves engaging, enhancing and clarifying ideas and which can be enhanced by the development thinking skills. Indeed, if writing is seen as a product that shows a series of complex mental processes and its complexity relies on the ability to use of grammar rules and to state ideas and points of view in a balanced and coherent way; teaching writing should “create ‘cognitive dissonance’ or should use ‘decentering’ exercises which challenge students to look at other perspectives and create opportunities for active problem-solving that involve dialogue and writing” (Bean, 2001). Writers need to be skillful in organizing thoughts and using language accurately and it can be stated that writing can be used to foster thinking skills and those thinking skills can be used to empower language awareness. This statement suggests that language is the main tool to create and express ideas either in oral or written way. While deep thinking helps students to analyze language

patterns and to improve their language level, thinking at the same time takes form by means of oral or written language.

In taking this from the view that good writing and careful thinking go hand in hand, literacy has cited the acquisition of writing as a fundamental factor in the development of modern thought. Prior research on education has shown that writing and thinking skills have become an important trend. Among other previous research on writing, Damron and High (2008), have stated that writing is considered the most demanding of the four language skills, on account on the fact that it implies more complex mental process than the ones required in reading, listening or speaking. Such cognitive processes are concerned with debate and decision making, choice and revision, and evaluation. Indeed, the connection between writing and thinking is emphasized by considering writing as the combination of the process of thinking critically and presenting the outcomes of such cognitive development. (Bean, 2007 cited in Damron & High, 2008). In other words, writing is the transformation of internal perceptions and meanings so that they can be revealed to an audience after a series of cognitive processes. Furthermore, the thinking process in writing allows students to discover what they know or think about a subject and help them to get to know their own thoughts. Then, it serves as a critical role in focusing on expanding the students' minds through analysis and composition, clarifying their own thinking and broadening students' creative horizons.

Some other studies make it obvious that “the role of writing in thinking can be conceptualized as resulting from (1) the process of a rhetorical problem in which students relate a predetermined message to an audience that must be persuaded to accept their points of view and from (2) the process that leads to better understanding of the topic under consideration and (3) it helps to attempt academic goals” (Langer & Applebee, 1987). In this way, writing should be an

interdisciplinary activity by which students use their language skills as a complement to empower their knowledge about different topics that go beyond linguistic issues and that help them put into practice what they study in the English class. Indeed, this view that writing is a facilitating tool in learning was the starting point which generated the American writing-across-the-curriculum movement.

Continuing the examination of previous research on writing, some other works provided interesting material to the present study. Based on Hatcher's (1995) research, writing is a self and peer correction activity that implies thinking skills in order to attend feedback from others and in order to evaluate, revise and edit drafts before writing the final version of a text. In other words, writing enables students to reflect upon their work, to analyze, interpret and question what they see in their environment in order to express it in written way. In the same way, writing provides students with opportunities to develop thinking skills to examine ideas and support them with enough arguments as it can be defined as a process that eases a coherent and logical display of inner ideas. However, when expressing personal ideas in a text, students must be able to think carefully in order to choose the correct way to express them so that can persuade others and so that the use of language do not interfere with meaning; and for this reason, it is considered important to shed light on how specifically thinking skills influence writing. This point leads towards another construct of the present project: thinking skills.

### *Thinking skills*

If thinking is understood as a process that is needed in the development of any activity regardless its level of difficulty, the development of thinking skills should be fostered and empowered by education. According to Schafersman (1991) thinking skills deal with abilities

that are acquired by means of practice and for this reason, they should be enhanced since children are born.

Along with the lines of Scriven and Richard (1997), most of educators have become aware of the importance of the teaching of thinking skills given that they seem to fit the nowadays society needs as they deal with reasoning, problem solving and drawing conclusions. On the other hand, according to Ennis (1997, cited in Mason, 2008) thinking skills are broadly seen the kind of logical and reflective abilities that allows students to analyze and understand different situations and different sources of information with the purpose of drawing conclusions about what to believe and do.

In approaching thinking skills as an essential tool of education, there have been some studies which have indicated that cognition, writing and pedagogy should work together in order to develop both, writing and thinking skills since writing is a process that implies a thinking process and presenting the product of such thinking development (Bean, 2001) as stressed above. That is to say, by means of exercising writing, students have the opportunity to empower their thinking skills as they must analyze and “solve” the problem of how to give coherent meaning to their ideas when communicating them. This position endorses strongly that students who develop thinking skills are those who communicate effectively their ideas and their perceptions of the world. In the same way, they have more control over their environment, question it, look for and demand specific answers. In fact, thinking is considered as a way to build a justified understanding of the world and it is then suggested that teaching must foster different ways of thinking that are embedded in various domains as it has been remarked and,



consequently, the development of thinking skills is likely to improve the quality of the students' speaking and writing.

In order to better illustrate the importance of enhancing thinking skills in the classroom, it is worth to cite prior research on the development of thinking skills. Some of those studies stress that in a move from a model of rote-learning towards a model of learning that leads to questioning, analyzing and reasoning, teachers must enhance thinking skills and deductive rhetorical writing styles to students. In other words, the teaching of thinking skills within English lessons must precede and accompany writing, speaking, reading, and listening. Students must learn to analytically assess what they write, say, read and hear. In doing so, the communicative abilities stimulate and clarify further thought. For instance, the process of peer correcting their writing stimulates clearer and more creative thinking. Students who stimulate their thinking skills tend to get better grades and to use reasoning in daily decisions. Students' performance can be improved by focusing on instructional efforts to develop thinking skills (Stapleton, 2002). Some other examples of previous research describe the development of thinking skills as an intentional, self-regulated process that provides a mechanism for solving problems and making decisions based on reasoning and logic, which is particularly useful when dealing with issues of national and global significance. Such process implies analysis, inference and evaluation.

Students who have developed their thinking skills seek for the truth, are open-minded, analytical, systematic, and have a comparative advantage (especially regarding writing) over other students who have not developed these skills. (Quitadamo & Kurtz, 2006). Findings in such research shed light on noticing that thinking skills and writing are connected and influence positively one another.

As it has been continuously stressed, it appears to be a cyclical relation between language and thought. Writing shapes thinking and thinking shapes writing. At this point, when thinking shapes writing, it is worth mentioning that the way in which a student perceives the world will influence the way he/she writes and what he/she writes, especially in opinion essays.

According to Hyland (2002) writing is understood as the result of the thinking process in which students adopt specific position and evaluate how to express it and how to support it by organizing ideas in a logical and coherent way to approximate personalized meaning. This personalization of meaning deals with presenting and arguing inner and subjective opinions in a text such as in opinion essays.

### *Opinion essays*

As previously mentioned, writing takes place in different ways depending on its purpose. Texts may be descriptive, narrative, expository, related to literature or argumentative. However, the texts that are matter of analysis in this study deal with expressing and supporting opinions and points of view. Therefore, the writing process of the students will be framed in the argumentative texts. Opinion essays can be considered to be within the argumentative category as the writer must evaluate subjectively a judgment related to a specific topic. Indeed, opinion essays allow writers to express what an individual thinks about a specific subject. The main purpose is to convince the reader that the argument stated is valid or correct. When working with opinion essays, it is worth to understand that persuasive strategies need to be taught. Such strategies help learners in:

1. knowing which is the most effective way to state and to support their opinions towards an audience;

2. analyzing the ways for defending one's point of view and to be critical towards something learners do not agree with.

As referred in an article published by the *University of British Columbia*, *The Principles Of Persuasive Writing*, when writing opinion essays, points of view and ideas can be addressed by approaching the audience from three different perspectives as follows:

1. Appealing reasons.
2. Appealing emotions.
3. Appealing good character.

The main point of view should be explained with a topic sentence and the supportive sentences should give body to the paragraphs by providing details and proof. In the same way, a conclusion should sum up the argument. However, this is not an easy process, it is on the contrary a very complex one as students must think critically in order to support their answers.

Now, taking a closer look at the development of thinking skills in the classroom so that students can gain abilities to argue their points of view in an opinion essay, one of the teaching strategies that best suits fostering them is the thinking-based questioning strategy (dialogical strategy) which encourages interaction between teacher and student, and among the students (Sternberg, 1996). The main objective of this strategy is to stimulate thinking and discussion. However, there are not right or unique answers to those questions, and the answers proposed by students cannot be labeled right or wrong. This strategy may be applied by means of lateral thinking puzzles (known also as brain teasers). In this way, students are challenged to think outside the box and to find alternative or lateral answers to solve the problems proposed by the

brain teasers. This puts a step forwards the final construct: lateral thinking puzzles (know also as brain teasers).

### *Lateral thinking puzzles*

Lateral thinking puzzles can be considered as a kind of games that use the dialogical strategy previously highlighted, since they encourage students to think and to reason creatively with the purpose of looking for a non conventional answer to a specific problem in an engaging and appealing way. This particular line of argument is then taken to suggest that the importance of introducing lateral thinking puzzles to students as a kind of game relies on the fact that games may be some of the few activities that engage completely students with the lesson or task. When students play in the class they are not aware about any kind of evaluation criteria. In other words, using games in the classroom eases learning as it creates a stress-free environment on account of the fact that games not only alleviates existing deficits, but also increases self-confidence, which in turn is a cornerstone of successful learning (Bartl, 2004).

Furthermore, using games is an excellent strategy to help learners move from theory to practice as they enhance solving-problem skills and bridges the gap between classroom concepts and the real world. Games incorporate many of the elements that researchers suggest stimulate the brain, causing neurons, which are responsible for sending and receiving nerve impulses or signals, to fire and more effectively embed key learning concepts in the memory of participants (Lucas, 2007). In this way, using games should be considered as tools for setting learning objectives and attaining them because they empower knowledge.

Therefore, taking the importance of games into account, and need for empowering thinking skills, lateral thinking puzzles will be used as the main teaching tool for both motivating

students and enhancing thought in the current study. The most outstanding benefits of using lateral thinking puzzles rely on the fact that they enhance memory skills and help to develop social abilities and teamwork. Besides, lateral thinking puzzles encourage concentration, reasoning, patience and even more important problem solving skills as problems must be solve in an unconventional way (Richards, Stillson & Recamán et al., 2002). Hence, students are pushed to think outside the box and to look for alternatives that help them to find a not easy or regular answer for “problem” stated. This thinking process takes students to explore the some of the different levels of intellectual behavior proposed in Bloom’s taxonomy (Heacox, 2002) as students must first identify arrange the information given by the lateral thinking puzzles, relate it to their immediate context or to their prior knowledge and memorize it in order to go over it until she gets the answer. Students must also comprehend the teaser, which means, they must identify the clues of the brain teaser, and express their ideas related to the possible answer. They must give reasons to the answer chosen and illustrate how they get such answer. They must also be critical enough to question their partners’ answers. Finally, they must assemble their ideas and their partners’ ideas in order to organize it in such a way that they finally get the answer proposed by the lateral thinking puzzles. It can be concluded then, that brain teasers help students move toward a structured way of thinking. In addition to the aforementioned benefits, lateral thinking puzzles aid students in the internalization of new vocabulary as figuring out the answer does not only push them to use logic but also to use language. (Schmidt & Ma, 2006)

For the development of this project, the theory presented above is not enough if it is taken in an isolated way. For this reason, it is worth mentioning that a clear example of the effectiveness of brain teasers in the development of thinking skills can be illustrated in a research study carried out by Crist & Scaffa (2004). Although the study was carried out in a different field

to education, it focused on testing how the use of lateral thinking puzzles stimulated critical thinking. To do so, students attempted to infer the neural mechanism responsible for what have just experienced after analyzing lateral thinking puzzles.

Yet, as there is a wide range of research on writing and critical thinking skills, studies make it obvious that the role of writing in thinking can be conceptualized as resulting from the process of a rhetorical problem in which the student relates a predetermined message to an audience that must be persuaded to accept his/her point of view and the process that leads to better understanding of the topic under consideration in the writing exercise it helps to attempt academic goals (Langer and Applebee, 1987). In this way, writing should be an interdisciplinary activity by which students use their language skills as a complement to empower their knowledge about different topics that go beyond linguistic issues and that help them put into practice what they study in the English class. Indeed, in taking this view that writing should be used as a helpful tool in learning was what generated the writing-across-the-curriculum movement in the American education.

Based on the former findings and considerations, it can be concluded that writing and thinking are closely related as they complement each other. Therefore, exercises for language outcome should fall at the communicative end of communication and not just practice of syntax of grammar rules (Harmer, 2007). In this order of ideas, the development of writing skills does not only imply the study of language items but also the development of thinking skills which lead students to find manners of stating arguments.

The former constructs will serve as the theoretical foundations to the present research. It must be stated that each issue of the literature review and prior studies (state of the art) mentioned

in this chapter complement each other and will interact in order to guide and support the development of the study. To better illustrate how the previous constructs will shape the study, the next section explains in more detail the methods that will be adopted in the current study and how that theory will be put into practice.

## Research design

This section aims to establish the practical link between the theoretical background that will support the project with the facts that will articulate such theory in action. Therefore, the methodology and teaching strategies that will be used in the present project so that the objectives can be accomplished are discussed in great detail throughout this chapter. To do so, it is worth describing the type of study that will be piloted and its main characteristics.

### *Type of study*

Given that the context where this project stemmed was an educational environment, the action research approach was chosen in order to solve the problem already stated. Regarding education within the nowadays society, action research is a well known term and is may be the most common type of classroom research. It can be defined as a systematic process that implies reflection, inquiry and discussion. It is meant to be a collaborative activity in which educators (and sometimes administratives) work together with the purpose of (1) looking for a solution to everyday and real problems that take place in schools; or aiming at (2) improving instruction and consequently students' achievement. Action research allows all the people involved in the study to approach those concerns that are closest to them, and over which they can exhibit some influence and make change (Ferrance, 2000).

To better illustrate how action research can be understood, some other definitions can be cited. Action research is any systematic research that stems from a hypothesis to be tested and is piloted mainly by teacher researchers or by any other member of the school community aiming at gathering information about the teaching practices and the students' performance and with the



purpose of gaining insight, developing reflective practice and effecting positive changes in the school environment (Mills, 2007).

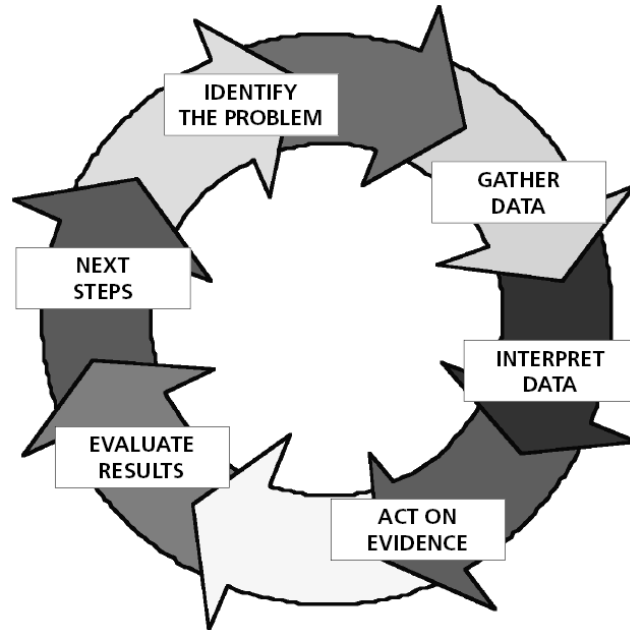
Besides the characteristics mentioned above, action research is carried out in the natural environment (educational settings) and is usually based on qualitative and descriptive analysis due to the fact that it attempts to observe, record and evaluate human behavior. The action research procedures are very flexible and can be adjusted according to the different unpredictable issues that may emerge during its development. It can be triangulated as well given that data can be gathered using different sources. In the same way, it offers a number of personal and professional benefits for students and teachers since it engages them in building critical reflection on teaching/learning practice (Burns, 1999).

Sagor (2005) proposes a similar definition to the former ones but adds that action research is a process which could be classified in two categories depending on its purpose. It can be said that action research is descriptive research if practitioners seek to understand what is currently occurring the setting where it is being conducted. On the other hand, action research is considered quasi-experimental research if practitioners are primarily concerned with testing a hypothesis.

Each of the former concepts of action research tends to be useful in somewhat similar ways, and indeed most of them address that it is a cyclical process which implies four sequential stages. Such stages imply problem identification, data gathering, data analysis, results evaluation and reflection in order to design action plans for better practices or for further studies. Figure 3.1 illustrates these steps of action research.

*Fig. 1 Steps for doing research*

Ferrance, E. (2006). *Action research*. Northeast and Islands Regional Educational Laboratory, Brown University: Rhode Island



As stressed by Ferrance (2006) and illustrated in the former figure, it was crucial to determine a real existent problem as the starting point of this study. Such awareness led to a careful analysis prior to commencing the study, in which concerns about the pupils' writing skills arose. Once conclusions were made, it was found that there was a need in improving writing skills, and consequently, and in order to tackle this issue, the idea of carrying out an action research project was born.

### *Researcher's role*

When following the former steps, the researcher of the current study assumed specific roles that are to be described in this section. While the main objective of action research is to look for insights in order to improve all issues affecting the educational process within a specific context, the objective of education is to facilitate learning. When teachers carry out action

research they usually assume a dual role: the researcher role as the investigator in the study and the teacher role as a facilitator in learning. Therefore, the role of the investigator in the current study is the one of teacher-researcher. The researcher role will require designing tools and instruments for collecting data, piloting and adjusting the project as it is developed and according to the students' needs, observing carefully and reflecting on such observations. On the other hand, the teacher role will imply applying the instruments and developing the lessons designed in the action plan. This role will involve innovating, fostering and understanding learning as a public service.

### *Context*

Gimnasio Iragua is a well recognized catholic female school located in the north of Bogotá that supports its pedagogy on the Opus Dei Organization philosophy and the ASPAEN educational principles. ASPAEN is a national organization of education which principal aim is to offer high quality education framed within a curriculum based on values. During the past few years, ASPAEN schools have acquired higher levels than B1 because it is always searching for excellence in its students. It is expected that with its new language arts project, graduates will show a minimum level of C1 (ALAC, 2008). Gimnasio Iragua has provided academic services from grade k (nursery) to 11 for 41 years and it is currently in the process of becoming a bilingual school as well as it is part of the International Baccalaureate Organization (IBO). Gimnasio Iragua strives for the development of the entire person in terms of knowledge, competences, skills, and learning ability. In order to function in the social context, a student must have mastered a range of general competences and specific communicative language competences. Therefore, the school curriculum looks to develop the whole child so that she can draw upon the

competences in a given social context. Gimnasio Iragua, believing in high performance, considers bilingualism as the ability to communicate competently in a foreign language and understands the word *competence* not only as a high domain of the language, but the capacity to practice higher level thinking skills that would be developed through the processes of acquisition and the learning of a second language.

Bearing in mind the school educational principles, a need of improvement with regard to the English language learning has emerged. As part of the requirements of the International Baccalaureate Organization program for getting the international degree; and the school requirements for graduation, the upper high school students must be able to take decisions, assume positions and express opinions in written form (throughout essays) and at the same time to provide arguments and support to their opinions; the need of contributing to the future accomplishment of such demand, the leading inspiration of this work arose from the students profile.

### *Participants*

The targeted population consisted of twenty three sixth grade female students who are aged between 10 and 12 and are considered to be at an elementary level of English. They take seven hours a week of English classes. While it is clear that they follow instructions, listen to recording materials and comprehend them, follow up conversations, and comprehend as well written texts; it is evident that they need to broaden their vocabulary repertoire and to reinforce the use of grammar structures. In the same way, writing difficulties were documented through data obtained from standardized tests taken in the previous school year and the need of improving their writing skills so that they write coherent compositions arose.

While not denying the relevance, and even the necessity, of considering individual differences and learning styles, it must be claimed that most of the pupils are audio-visual, social and kinesthetic learners. So, they participate actively in class and enjoy working in groups, role-playing stories, listening to songs, making posters, giving speeches and playing games. Thus, when conducting the project, lessons attempted to address each student's learning style in order to motivate them, and in the same way they went through the process of developing autonomy by means of doing activities that lead them to become aware of their interests, skills and weak aspects regarding learning.

#### *Data collection instruments*

Moving forward to the data collection instruments, based on the students' needs previously described, and considering the fact that reliability is a must in action research, it is worth stating the choice of data collection techniques was based on aiming at giving balance and objectivity to the study as well as at making a change in the aforementioned setting.

After reflecting on my students' profiles and needs; it was decided to use the techniques for gathering information as follows:

##### *1. Surveys: (see appendix C)*

Since the present project aims at strengthening opinion paragraph writing, students' opinions and points of view are crucial. Therefore, a starting point should be the perspective they have about their writing process. Consequently, surveys are the first instrument for gathering data. Based on the fact that surveys aim at finding people's position or perspective towards a specific topic, this technique will give insights about how my students see their writing process in general. By means of a survey students will be encouraged to reflect on their needs and analyze

their strengths and weaknesses regarding writing opinion paragraphs. Thus, two surveys will be applied: one at the beginning of the project before collecting the samples and a second one during by the end of the project with the purpose of comparing and contrasting results.

### 2. *Documents (see appendix D)*

On the other hand, more objective information will be needed. To collect that data, documents will be used. Documents will include students' writing samples, field notes, lesson plans (and tools used in the lessons such as writing rubrics, lists of conventions for peer correction, quizzes, etc.). Six writing samples of the students' production will be gathered in order to have a trace of their development throughout the study. Careful analysis of the students' production will help to test the initial research hypothesis. Furthermore, field notes taken by teacher-researcher will record information and insights on specific aspects of the research and will provide details of the students' responses and of the external aspects that may affect the study or the students' performance. Taking into account that documents illuminate numerous aspects of practice and this allows researchers to measure if a specific technique fits in the classroom, it was considered that the sum of all of the former documents will provide good evidence of the process students will go through in this action research project.

### 3. *Photographs*

Photographs record specific behavior of a certain moment that can enrich further description and analysis after developing an activity during the study. For this reason, photographs were considered important in the current project. They will allow capturing crucial moments that may serve as support for future interpretations.

#### 4. Interviews (see appendix)

Finally, interviews will be used to collect information regarding other teachers' perspectives of the development of writing skills in different subjects (Science and Cultural Studies) and their feedback will help to balance the research.

#### *Data collection procedures*

Once the instruments to glean trends were designed, the data collection process started. To do so, the action research steps proposed by theoreticians and described in this chapter, were followed in order to pilot the study.

In the *pre-stage* the students took a pre-quiz and answered a pre-survey in which they expressed their opinions, feelings and ideas about their writing skills and the teaching of writing. Students were told about the project and simultaneously, a consent letter (see appendix A) was sent to parents. A 100% of the students were willing to participate in the project and all parents authorized their daughters to participate in the study. Initially, a six-week plan was designed (see appendix B) and it targeted to get two writing samples per week.

However, during the *while-stage*, the project took one more week than expected (seven weeks) on account of the students' responses (work pace was not as expected) and on account of time constraints, since it was carried out during a not favorable time of the school year. For this reason, only one writing sample was collected per week. Most of the lessons took place in the computers lab and students used word processors to write their essays. Lessons were carefully planned and were based on the student-centered approach and on cooperative learning strategies. Hence, pupils were arranged in groups according to their learning styles and were assigned different roles with the objective of involving them in the lessons.

Finally, in the *post-stage* of the project, students took a post-quiz and answered a post-survey. In addition, the Science and Cultural Studies teachers were interviewed as a way of contrasting the students' performance in other subjects. In addition, the research findings were shared with the participants in wrapping up session in which some of the students were awarded because of their performance and their essays were published in a book designed by the teacher-researcher and they were given a "recognition diploma". An article summarizing the main issues of the study was also written and findings were share with a community of other researchers.

The former description gives insights on the steps that were followed to collect data. Nevertheless, these procedures will be described in depth in the next chapter.



### Pedagogical intervention (action plan) and implementation

The former section gave a general idea of the data collection instruments and how they served in the implementation of the project in order to glean data. However, as previously stressed, this chapter describes the steps and process followed to solve the problem and highlights the main points of methodology used when piloting the project. The following chart displays the time line that sketches such process.

Fig. 2 Action plan

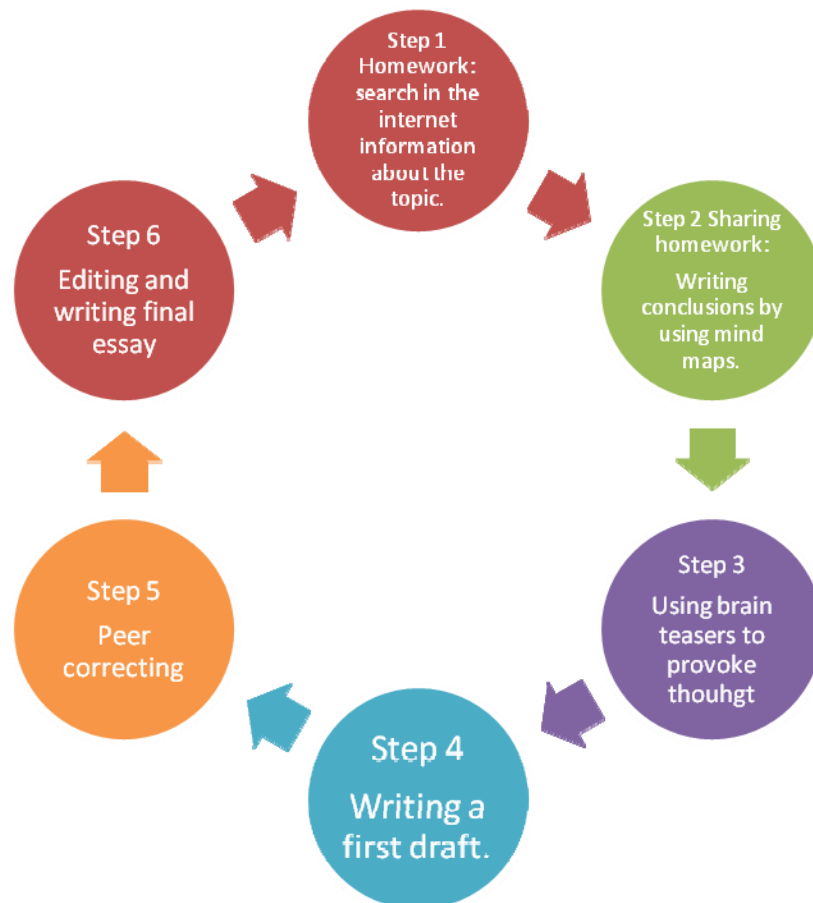
León, H. (2009). *Thinking puzzles to unpuzzle writing*

| Activity  | Week 1<br>April<br>14-17 | Week 2<br>April<br>20-24 | Week 3<br>April 27-<br>May 01 | Week 4<br>May<br>4-8 | Week 5<br>May<br>11-15 | Week 6<br>May<br>18-22 | Week 7<br>May<br>26-29 |
|---|--------------------------|--------------------------|-------------------------------|----------------------|------------------------|------------------------|------------------------|
| <i>Pre- stage:</i> Apply pre-quiz, pre-survey, send consent letter to inform parents and administratives.   | 2 hours                  |                          |                               |                      |                        |                        |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about the use of the internet. | 2 hours                  |                          |                               |                      |                        |                        |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about a film review.           |                          | 2 hours                  |                               |                      |                        |                        |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about extreme snow sports.     |                          |                          | 2 hours                       |                      |                        |                        |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about global warming.          |                          |                          |                               | 2 hours              |                        |                        |                        |
| Extracurricular events (no normal classes, no samples collected)  |                          |                          |                               |                      | 0 hours                |                        |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about natural disasters.       |                          |                          |                               |                      |                        | 2 hours                |                        |
| <i>While stage:</i> Thinking puzzle, create a mind map with previous knowledge and information gathered at home, write a draft, peer correction, write the final paragraph about best destination.        |                          |                          |                               |                      |                        |                        | 2 hours                |
| <i>Post stage:</i> Apply post quiz and post survey  |                          |                          |                               |                      |                        |                        | 2 hours                |
| Totals: 16 hours  |                          |                          |                               |                      |                        |                        |                        |

Since implementation of the program for improving opinion essays involved careful planning, a six-lesson program was made (see appendix B). However, as shown in the former chart, the period devoted for piloting the research was extended one week as explained in the previous chapter. For each of lesson in the while-stage sessions presented in the former chart a cyclical process for writing was used. As shown in the following figure, lessons and activities were designed with the purpose of enhancing writing and communicative skills.

*Fig. 3 Lesson stages*

*León, H. (2009). Thinking puzzles to unpuzzle writing*



As revealed in the figure, in *step 1*, students investigated (at home) about the topic of the essay by using the Internet. However, they were also allowed to use some other information sources such as electronic encyclopedias, magazines, books, etc. The main objective of this step was to let students get acquainted with relevant facts related to the essay topic.

In *step 2*, students were arranged in groups and shared the information they found. Sharing allowed them to get conclusions and based on such conclusions they created mind maps summarizing the most relevant aspects.

In *step 3*, students were provided with brain teaser exercises. These served as warming-up and as critical thinking promoting activities. In the first lessons, it was kind of hard for students to “think out of the box” and they tended to give up instead of trying getting the answer. However, in the latest classes, they were highly motivated to work with the brain teasers, work faster and even created their own brain teasers.

In *step 4*, students wrote a first draft of their essays. They were given a composition model written by the teacher-researcher and related to the topic of each essay. In addition, a chart with useful expressions and vocabulary was administered so that pupils could have extra tools for their task.

In *step 5*, students peer corrected their writing and to do so they used a rubric created by the teacher-researcher as a reference point. However, in dealing with this rubric for assessing the paragraphs, it was found that students had difficulties understanding the way in which it was written and consequently, there was a need of adjusting the original rubric (see appendix). In spite of this inconvenience, the teacher-researcher made some changes and students had no problem working with the “new” rubric.

Furthermore, it was considered convenient that students needed to have one extra-practice session before doing the first peer correction. Thus, they were given an example of a mistaken essay.

Mistakes were highlighted and students attempted to determine:

- why those expressions were considered wrong,
- how to categorize the mistakes, and
- how to correct them.

By means of this activity, the list of conventions for peer correction was explained.

Nevertheless, the initial list of conventions for peer correction was adapted since it was hard for students to use the symbols managing a word processor. Anyway, the main ideas of the original code were taken into account in order to design the list of conventions the students finally used.

In *Step 6* students edited their drafts and wrote their final essays and once they were finished with the corrections, they e-mailed their final work to their tutor.

As shown in the previous description, lessons were carefully planned and were based on the student-centered approach and cooperative learning strategies. To do so, students were arranged in groups according to their learning styles and were assigned different roles with the objective of involving them in the lessons. It is worth outlining that although this project did not focus on self-directed learning, interaction and autonomous work were some of the most successful aspects in the development of the project program. Students went through the process of becoming independent learners and they showed improvement regarding self-confidence when they were asked to work on their own and when they were assigned duties and responsibilities

similar to teacher's roles such as being monitors, secretaries, etc. However, aiming at better illustrating the process presented above and at providing a more detailed view of the lessons, describing the sessions and the use of the lateral thinking puzzles is a must. It is essential mentioning that the topic of the essays was determined by the content of the school English program.

*Session 0, before conducting the study*

In this session, students answered a pre-survey and presented a pre-quiz. Given that the aim of this activity was focused on finding areas of improvement, students were given no writing instructions or models, neither any lateral thinking puzzle.

*Session 1, essay 1: the use of the internet*

In this session, students were asked to write an opinion essay about *the internet*. They were provided with the following thinking puzzles:

1. Original puzzle: Two students are sitting on opposite sides of the same desk. There is nothing in between them but the desk. Why can't they see each other?

This puzzle was retrieved April 10, 2009, from: <http://www.folj.com/lateral/>

However, it was adapted by the teacher researcher according to the needs of the class and so that it could be related with the topic of the essay.

Adapted version: Sally and Sue are in the same classroom. Sally gives a letter to Sue. Nevertheless, they don't have any kind of contact when Sally gives Sue the letter. How can it be so? Answer: Sally sends the letter by e-mail.

2. What is a computer virus? A terminal illness that lives in the internet

This puzzle was retrieved April 10, 2009, from:

<http://school.discoveryeducation.com/brainboosters/lateral/crossingtheriver.html>

*Session 2, essay 2: my favorite movie*

In this session, students were asked to write an opinion essay about *their favorite movie*.

Before displaying the thinking puzzles used in this session, it is important mentioning that it was very hard to find a thinking puzzle that matched the topic of the essay. For this reason, most of the puzzles found were adapted by the teacher-researcher by adding an extra question that could lead students to think of a movie. The puzzles used in this session were as follows:

1. What happens once in a minute, twice in a moment and never in a thousand years?

The letter M. This puzzle followed the question: which movie has a name that starts with letter M? Possible answers: Marley and me, Madagascar.

This puzzle was retrieved April 15, 2009, from:

[http://www.intrepidtravel.com/inspirations/kidz/brain\\_teasers.php](http://www.intrepidtravel.com/inspirations/kidz/brain_teasers.php)

2. A girl doesn't want to go home because there is a guy who is wearing a mask waiting for her there. What's happening? They are playing baseball. The man in the mask is the Referee, and the girl is on third plate. This puzzle followed the question: Which movie starts with a baseball game between a father and his daughter: A Cinderella story.

This puzzle was retrieved April 15, 2009, from:

<http://www.mansioningles.com/recurso05.htm>

3. In the year 1201, a woman was 35 years old. In the year 1206, the same woman was 30. How is this possible? The dates are B.C. rather than A.D.

This puzzle followed the next questions: in which movie the main character got younger instead of older? The Curious Case of Benjamin Button.

In which movie the main character doesn't get older? The Bicentennial man.

This puzzle was retrieved April 15, 2009, from:

<http://school.discoveryeducation.com/brainboosters/lateral/GettingYounger.html>

*Session 3, essay 3: snow sports*

In this session, students were asked to write an opinion essay about snow sports.

Although the thinking puzzles do not refer to snow sports, they refer to the climatic conditions of the places where these sports are practiced. It was very hard to find puzzles related to the topic of the essay. The puzzles used were as follows:

1. Jake was standing on one side of the river, and his dog Scruffy was standing on the other side. "Come on Scruffy, come, boy!" shouted Jake. Scruffy crossed the river, ran to Jake, and got a treat for being a good dog. The amazing thing was that Scruffy didn't even get wet! How did Scruffy do that? The river was frozen

This puzzle was retrieved April 20, 2009, from:

<http://school.discoveryeducation.com/brainboosters/lateral/crossingtheriver.html>

2. What is so fragile that when you say its name you break it? Silence.

Adapted version: What is so big and seems strong but is fragile when scream a word? A snow mountain.

This puzzle was retrieved April 20, 2009, from:

[http://www.intrepidtravel.com/inspirations/kidz/brain\\_teasers.php](http://www.intrepidtravel.com/inspirations/kidz/brain_teasers.php)

3. I have three letters, and I read the same forward and backwards. I rhyme with a word that is important to everyone. What word am I? eye.

Adapted version: I have three letters, and you can say my name with your eyes. What am I? Ice.

This puzzle was retrieved April 20, 2009, from:

<http://school.discoveryeducation.com/brainboosters/lateral/crossingtheriver.html>

*Session 4, essay 4: the global warming effect*

In this session, students were asked to write an opinion essay about the global warming effect. Although some of the puzzles do not refer to the global warming itself, they refer to some of its causes or consequences. It was very hard to find puzzles related to the topic of the essay and most of them were adapted by the teacher researcher. The puzzles used were as follows:

1. Gertrude and Zelda are lying on the floor, dead. There is glass and water all around them. What happened? Gertrude and Zelda are fish. The fish tank fell and broke on the floor, thus killing the two fish.



Adapted version: Gertrude and Zelda are lying by the beach, dead. They needed water to survive but could not find it in the ocean. What happened? Gertrude and Zelda are whales and died after an oil ship split all its content.

2. The higher I am the smaller I am. The lower I am the bigger I am. What am I? The sun.

Adapted version: The higher I am the smaller I am. The lower I am the bigger I am, but no matter where I am my power would destroy you if you don't protect from me. What am I? The sun.

The former puzzles were retrieved April 20, 2009, from:

[http://www.intrepidtravel.com/inspirations/kidz/brain\\_teasers.php](http://www.intrepidtravel.com/inspirations/kidz/brain_teasers.php)

3. What is what goes up and goes down but never moves? Temperature

Adapted version: What is what goes extremely up and goes extremely down and can destroy the earth without moving at all? Temperature

This puzzles was retrieved April 20, 2009, from:

<http://techshout.blogspot.com/2007/01/11-puzzles-to-test-your-lateral.html>:

4. A pipe, a carrot, and a couple sticks are lying together in a field. Why? They're what's left of a melted showman.

Adapted version: a pipe, a carrot, and a couple sticks are lying together in a field. Why? They're what's left of a melted showman in the North Pole.

This puzzle was retrieved April 20, 2009, from:

<http://www.increasebrainpower.com/brainteasersriddles.html>

*Session 5, essay 5: the natural disasters*

In this session, students were asked to write an opinion essay about *natural disasters*.

Although some of the puzzles do not refer specifically to the natural disasters, they refer to similar circumstances when they occur. It was very hard to find puzzles related to the topic of the essay and most of them were adapted by the teacher researcher. The puzzles used were as follows:

1. A man is riding the elevator down. The lights go out and the elevator stops. He realizes his wife is dead. How does he know this? 7 He is in a hospital, and his wife is a patient. 7 He is in a hospital, and his wife is a patient. She lives only by a life-support system. The power went out, thus the life-support system went off.

Adapted version: a man is riding the elevator down. There is a small earthquake and lights go for two minutes. After the earthquake all the people in the building are fine but the man realizes his wife is dead although she did not suffer any injury. Why did she die? The woman was in a hospital and was living only by a life-support system. She died when the power went out.

This puzzle was retrieved May 11, 2009, from:

<http://www.mansioningles.com/recurso05.htm>

2. How could a baby fall out of a twenty-story building onto the ground and live? The baby fell out of a ground floor window.

Adapted version: after a tornado a baby fell out onto the ground of a window of the only twenty-story building that remained still, and lived. What happened? The baby fell out of a ground floor window.

This puzzle was retrieved May 11, 2009, from: <http://www.folj.com/lateral/>

*Session 6, essay 6: the world's best destination*

In this session, students were asked to write an opinion essay about the place they considered *the world's best destination*. Although some of the puzzles do not refer specifically to *the world's best destination*, they refer to traveling and tourism issues. Opposed to the former topics, traveling and therefore, the world's best destination was the topic that could be related in the easiest way to the thinking puzzles that were found. The puzzles used were as follows:

1. On a train journey in Thailand, two kids play three games of travel chess. They both won three times. How is this possible? They were not playing each other.

This puzzle was retrieved May 15, 2009, from:

[http://www.intrepidtravel.com/inspirations/kidz/brain\\_teasers.php](http://www.intrepidtravel.com/inspirations/kidz/brain_teasers.php)

2. A train leaves London for Edinburgh. An hour later another train leaves Edinburgh for London. The two trains travel at exactly the same speed. Which of the two will be closest to London when they meet? Obviously, when they meet, they will both be the same distance from London.

This puzzle was retrieved May 15, 2009, from:

<http://www.mansioningles.com/recurso03.htm>

3. If you were alone in a deserted house at night, and there was an oil lamp, a candle and firewood and you only have one match, which would you light first? The match!
4. If you drove a coach leaving Canterbury with 35 passengers, dropped off 6 and picked up 2 at Faversham, picked up 9 more at Sittingbourne, dropped off 3 at Chatham, and then drove on to arrive in London 40 minutes later, what would the name of the driver be?

YOU are the driver!

5. If a plane crashes on the Italian/Swiss border, where do you bury the survivors?

You don't bury survivors!

6. How many hands does the clock of Big Ben have?

Eight: there are four faces on Big Ben (see the picture to the right)

The former puzzles were retrieved May 15, 2009, from:

<http://www.kent.ac.uk/careers/sk/lateral.htm>

*Session 7: post quiz and post survey.*

In this session students were asked to answer a post survey and to take a post-quiz.

Bearing in mind the target propose in *session 0*, students were given nor thinking puzzles neither examples or detailed instructions for developing the writing activity so that changes in quality could be measured in a more objective way. However, students were given two topics for writing their essays and they were free to choose the one that seemed more appealing for them. These two topics were: *risky jobs and endangered animals*. Most of the students decided to write about the endangered animals.

*Session 8: wrapping up and sharing session*

In this session, students had the opportunity to share their essays with girls of other classrooms. The teacher-researcher chose the best essays and put them together in a booklet. This booklet was show to students in this session and they felt proud of them when they saw their essays in the booklet. In addition, students received a honor diploma for the effort and hard work during the project.

It is clear from the above that, sample recruitment involved following a cyclical action research process as well as a cyclical writing process. Although some issues suffered some changes on account of some unexpected factors and how they affected the flow of the project, all the instruments and materials seemed to work well after the adjustments. Hence, it shall be concluded that the methodology used in the lessons was adequate for the students since they seemed interested in the class. Together with the use of the thinking puzzles, such motivation enhanced students to improve their writing skills as it will be shown in the next section as chapter 5 provides a summary of the main findings of the research.

### **Data analysis and findings**

Up to now some of the stages prior to the interpretation and evaluation of data have been presented in the previous chapters. However, as this report continues, it is time to give a step forward in order to analyze data. Data analysis allows researchers to make clear the issues held in studied phenomenon by means of reflection and examination. One of the main purposes when analyzing data in the current study was to shed light on the improvement of writing skills influenced by three different variables that echoed the objectives of the project.

#### *Data analysis approach*

Given that this study was carried out within a pedagogical setting the qualitative analysis was considered useful in this study as it deals with the responses, feelings and perceptions of the participants as well as with their active role in the research. Indeed, qualitative analysis allowed in-depth examination of how the students' behavior was influenced by the use of the lateral thinking puzzles and how its use impacted writing quality.

Among the qualitative approaches, the method chosen to analyze the gathered data was the grounded theory approach proposed by Straus and Corbin (1990). In their approach, Straus and Corbin (1990) highlight that data can be analyzed if it is sorted in categories that steer through a theory which helps researchers to get to an understanding of the issues under investigation. To do so, Straus and Corbin (1990) propose that once all the data is gathered, some crucial points must be labeled with specific codes, which at the same time are determined and grouped by similarities. All the common issues of a group create a category which is in fact considered the foundation of a theory that leads to answer the initial question of the research. Bearing this in mind, the accumulated trends were sorted and coded in three different categories that led to evaluate the effects of the lateral thinking puzzles according to the targets of the study.

*Data analysis procedures*

According to Hopkins (2008), it is important that researchers organize data in a practical way so that it can be easily administered and examined given that the data analysis is a tough, time-consuming and complex procedure that must be carefully developed so that it doesn't turn messy especially when there are voluminous amounts of data. In short, it is crucial to assemble and organize data in order to sharpen the overall process.

In the current work, data was grouped in categories aiming at narrowing the amount of information and taking into account common issues as suggested by Straus and Corbin (1990). The first steps of the grounded theory approach implied classifying the data in groups according to the most outstanding characteristics bearing in mind that all the information needed to be broken down, conceptualized, and rearranged in new ways so that theories could be stem properly and according to the purpose of the study. Once categories were organized, they allowed establishing comparisons and relationships that attempted to look for an answer the original question of the current project: what are the effects of lateral thinking puzzles on improving opinion essay writing?

In the same way, the arisen categories needed specific names and the coding process was complex as it implied playing with the categories, creating and restating them, moving them back and forth until they appeared to fit the objective of the study and to align the answers for the research question. Therefore, categories led to determine whether or not the use of lateral thinking puzzles could improve writing skills regarding coherence and cohesion, responses to peer correction and motivation; and a noteworthy issue of this process was how data was reduced so that the final categories could stem from the initial maze of information.

### *Data reduction*

Since the amount of data was large, the need of reducing it became essential and the process itself suffered several changes before the final product came out. Initially, data was divided according to the approach upon which it would be analyzed and two initial categories were born: **quantitative data** (*scores of the students' writings*) and **qualitative data** (*students' artifacts, opinions stressed in the pre and post-survey, researcher's opinions documented in the field notes, other teachers' opinions expressed in interviews, and photographs*).

Regarding the quantitative data, scores were subcategorized taking the period of time when they were collected into account. In this way, the grades earned in the first three sessions were classified in: *stage 1*; and the scores gained in the last three sessions were arranged in: *stage 2*. This sorted method aimed at allowing comparisons of the students' outcome at different moments of the research.

For both categories: *stage 1* and *stage 2*, the same subcategories were created: *most interesting topic, less interesting topic, lowest graded essay, most interesting topic, best graded essay, outstanding students' improvement, standard students' improvement, low students' improvement; and how thinking puzzles affected opinion essays writing*.

On the other hand, qualitative data was organized as follows. The first subcategory was labeled *students' opinions about writing* and dealt with the different perceptions of the students at three stages of the study: *before the project, during the project* and *after the project*. In the same way, another subcategory in the qualitative group was created and was concerned with the students' opinions about the use of thinking puzzles, regarding their *likes/dislikes, how effective the thinking puzzles were in the writing process, how engaging the thinking puzzles were* and *how difficult/easy to solve the thinking puzzles were*.



However, deeper analysis of the former categories, allowed noticing that the quantitative subcategories *most/less interesting topic and best/lowest graded essays* were very similar and somehow complemented each other. Consequently, they were joint together as follows: *most/less interesting topic* with its subcategories *highest/lowest graded essay*. Aside to this, the *qualitative* group showed more modifications. Given that the while-survey was not applied as it was initially thought, the subcategory regarding *the students' opinions about writing during the project* was deleted. In addition, the subcategories concerned with the *students' opinions about the use of lateral thinking puzzles* and their subcategories *likes/dislikes* and *how engaging they were* showed commonalities and were joint in only one subcategory called *motivation in writing*. While the subcategory *how effective thinking puzzles were*, was renamed and was called *usefulness of thinking puzzles in writing*, the subcategory *how difficult/easy to solve thinking puzzles were* was deleted.

However, while examining the essays, it was found that most of the problems students had when writing their compositions were related to two big aspects: linguistic and discourse skills; autonomy and willingness to develop the tasks. Finally, after thorough reflection, a last version of the data groups was made and it came up with the following categories that echoed the research objectives and the criteria used in the writing rubrics to evaluated the students essays.

1. *Coherence and cohesion.*
2. *Peer correction skills.*
3. *Motivation.*

However, arranging data in three categories was not enough to reduce all the amount of trends and the main categories were reevaluated by using the axial coding process suggested by

Straus and Corbin (1990). Axial coding pays attention to the specific and little details that make a category in order to shed light on the creation of subcategories. For his reason, the axial coding process was useful in creating subcategories to the main groups mentioned already.

For each category, some subcategories were also created. *Category 1: coherence and cohesion* and its subcategories: *greater/fewer amount of thinking puzzles used to write the essays*. These subcategories were created because the number of thinking puzzles used in all the sessions was not even due to different reasons and some samples were written after using a fewer amount of thinking puzzles.

*Category 2: audience awareness and peer correction*. This category stemmed from the need of analyzing the students' attitude towards the importance of writing for an audience and the response students had towards giving and receiving feedback.

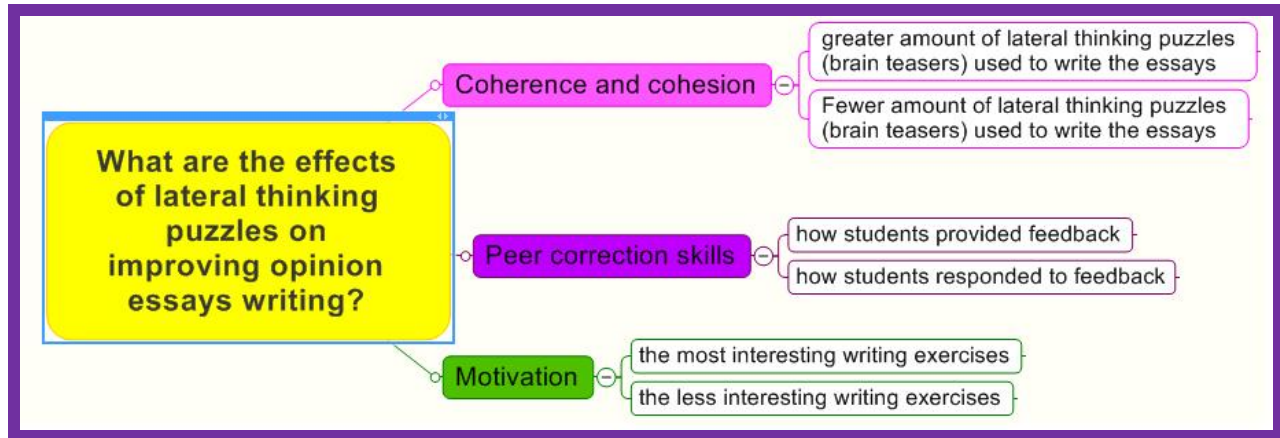
Finally, *category 3: motivation* aimed to examine the effects of the thinking puzzles on the students' interests related to the writing activities. This category had its subcategories: *the most interesting/the less interesting essays*. Taking into account the students' responses and amusement showed in the lessons, and also the way in which they presented the essays, students appeared to be more engaged with some essays than others.

The aforementioned categories complemented each other by providing crucial information that allowed getting an answer for the initial question. Likewise, the sources that provided data complemented and triangulated each other as they were carefully chosen in order to validate the study.

As previously mentioned, it is important to establish a clear understanding about the categories in which the data was classified. Therefore, the following map shows the different groups that were created to analyze the information.

Fig. 4. Data categories

León, H. (2009). *Thinking puzzles to unpuzzle writing*.



### Triangulation

Based on the principle of giving validity to research, triangulation can be understood as a method that offer validity to a study by using several kinds of information and by relying on the different perspectives and findings they reveal certain data that complement, support and echo one another. Burns (1999) states that while gathering data from a single source or by using only one instrument provides a limited and subjective sight of the study, collecting data from varied sources reveals a more rounded picture of the issue under investigation as multiple methods enrich the study and make it more objective and valid. In the present work, triangulation was addressed aiming at reducing bias, balancing the level of trustworthiness and at analyzing data within a wide range of angles. For this reason, a varied set of techniques for collecting data was used. As highlighted in chapter three, the instruments employed were: surveys, interviews, photographs and documents. However, the larger amount of information came from the documents which enclosed quizzes, students texts (writing samples), field notes, lesson plans (and tools used in the classes such as writing rubrics, lists of conventions for peer correction,

examples for peer correction, etc.). A clearer appreciation of this can be seen in the data that is displayed in the next section.

### *Data display*

In what follows, the disclosed data gives insights on the effects of the lateral thinking puzzles.

#### *Category 1: coherence and cohesion*

Bearing in mind the first specific objective the current project (to guide students in their writing process so that they improve coherence and cohesion in opinion paragraphs), it was considered important to analyze and classify data according to this issue. For this reason, the first category presented in this chapter concerns with the development of the students' writing skills related to coherence and cohesion. Therefore, the theory that stemmed from the collected data intended to prove if the lateral thinking puzzles could be used as a tool to improve coherence and cohesion writing. However, aiming at analyzing the findings in a proper way, coherence and cohesion must be clearly defined prior to the display of data.

Based on the fact that writing attempts to communicate and express ideas, it must be stressed that a written text should be coherent and cohesive so that communication can be effective. According to Connor (1996) cohesion refers to the accurate use of the linguistic rules and principles when building sentences within a written text so that all the language devices can be related can interact in order to provide a clear lexical and grammatical meaning. In other words, cohesion refers to the grammatical and lexical connections that relate accurately one part of a text to another at a language level.

On the other hand, Connor (1996) states that coherence deals with the meaning of the text as a whole and the way in which ideas are organized in order to make clear and specific sense of them. Therefore, an accurate written text should not look as a list of isolated ideas or utterances, as rather more a connected and meaningful discourse aiming at facilitating the flow of reading to the audience. Therefore, it can be concluded that the communicative competence in written texts does not only imply grammatical but discourse skills as well.

In the same way, discourse abilities are concerned with knowledge of the culture and cognitive abilities. In this order of ideas, it can be stated that the communicative competence deals also with cognition. Piaget (1972 cited in Brown, 2007) claimed that cognitive development is one of the most natural and outstanding process of every single person and, language at the same time, is closely related and affected by such cognitive development. Indeed, language occurs as a result of such cognitive process. Thus, bearing this in mind, writing can be seen as a complex process that involves both communicative and cognitive skills due to the fact that thinking shapes language. In fact, as previously mentioned, the current study stems from the hypothesis of how related writing and thinking skills are.

The following excerpts show the effects of the development of thinking skills through the use of the thinking puzzles upon cohesion and coherence in writing. Before displaying the excerpts, it is worth mentioning that *Excerpt # 1* was used as a “starting point” in order to compare the quality of the students’ writing at the beginning of the study with the quality of the students’ writing after carrying out the study.

Excerpt # 1, Session 1 April 17, 2009, essay: use of the internet, S11

*The internet is the most popular **net red** in the computers. This net red is so good for students because it **help to make** investigations without books. Also this **program** change the world because other people enter the program that they **made** and that **convert** the internet bigger and bigger. People use the internet to talk with their friends, listen to music, make investigations, **publication** of photos and videos, etc... The internet also got some bad things that **can be bad persons** in the e-mail or publication of some things and other people put that bad things in other programs etc... The internet also can be very good without bad things.*

As pointed out before, if cohesion is concerned with organization at linguistic level, it is noticeable in *excerpt # 1* that student 11 (*S11*) did not manage cohesion in a proper way as she showed neither grammatical nor lexical accuracy. The words printed in bold help noticing that *S11* had problems related to word choice, verb tense, verb parallelism, missing subjects, and punctuation. Such mistakes were not corrected after the feedback given by a peer and suggest a low level of language skills. Taking coherence into account, it can be said that the sentences and ideas are not organized in such a way to contribute to a specific meaning and to hold true for the whole text. *S11* did not present a specific and clear topic sentence from which she could maintain a clear focus, and instead, she drifted randomly from one idea to another without providing enough support or depth to any of them. Besides, ideas were not concluded and the essay was ended abruptly with no effective closing. These issues gave the text a sense of incompleteness. Although *S11* wrote within the topic of the essay (use of the internet), she did not fully address the writing task since she attempted to write a descriptive essay instead of an opinion essay and limited herself to quote some of the advantages and disadvantages of the internet.

Considering this, it can be suggested that *S11*'s grammatical and discourse competences appeared to be low, and consequently, she could not synthesize the information she had about

the internet in order to present her point of view in a coherent and cohesive way. This suggests a two way relation between language and thought on account on the fact that the lack of cognitive abilities needed in the discourse competence to analyze and to assume a position about the topic did not allow *S11* to use language devices accurately to presnet her points of view. In other words, a low level of thinking interfered with grammar structures and gave the text a sense of writing a list of separeted items which consequently, did not facilitate the flow of the writing.

Aside to this unclear text, the following exerpt shows a more coherent and cohesive structure and gives insights to test the hypothesis that one of the effects of lateral thinking puzzles upon writing is to foster improvement regarding coherence and cohesion.

*Excerpt # 2, Session 6 May 29, 2009, essay:best destination of the world, S11*

***I think** that Switzerland is very beautiful and the best country **because** it has beautiful costumes and has beautiful geography, it has spectacular mountains and has a beautiful animals, houses, mountains etc. **I think** that if I go to Switzerland i want to go to the snow and I make many sport in the beautiful snow because I like it but the problem is that I don't speak there language so I need to learn English. **I believe** that Switzerland is the best country and **I want** to go to Switzerland **because** I want to visit many cities and museums and ancient houses and I want to go to the best hotel and meet many people of many parts in the world. **I think** that Switzerland is best country **because** the people is very educated and intelligent. If I have a opportunity to go Switzerland I take many photos to convince my friends that is the best country of the world.*

It is clear that in *excerpt # 2*, *S11* showed improvement in most of the weak aspects evident in *excerpt #1* and such progress suggested advancement regarding coherence and cohesion. Despite some minor mistakes, there is evidence of superior control of language and grammar structures are used accurately through the text and, consequently, such varied sentence structures produced cohesion. In addition, *S11* launched into the topic providing an opening statement and maintained a specifi position through the text without drifting the main focus. Ideas were well developed and orgnize by offering an effective sequence and logical transitions

and by presenting an appropriate closing that restated some points of the introduction. Most of the major points were supported with specific detail and adequacy of depth was clearly evident in each of them. Voice was mature, consistent and suitable for the topic, purpose, and audience. In short, *S11* addressed the writing task in a more appropriate way than in *excerpt # 1* and the structure of the text showed a more academic style regarding the organization of ideas which facilitated a more fluent and coherent writing. *S11* demonstrated more specifically her point of view about the world's best destination and seemed to gain thinking skills that allowed her to evaluate and make judgements about a certain topic as well as produce a text in which she stated the outcomes of such evaluation. Indeed, she did not only use descriptive sentences as shown in *excerpt #1* but she also expressed desires and wishes that worked as support for her statements. In the same way, it can be said that *excerpt # 2* showed improvement regarding the student's level of language as she broadened her vocabulary repertoire, improved her conceptual knowledge concerned with linguistic devices.

In addition to the abovementioned issues, observation recorded in the researcher's blog were useful in offering a more rounded view to triangulate the study and the field notes echoed the findings already stressed.

### Field notes

*This week students showed progress in essay 6 and they also seemed more careful when writing and analyzing their texts. It was apparent that the use of lateral thinking puzzles has served as an effective strategy not only to develop thinking skills but also to motivate and engage students with their writing process. Students wrote more coherent and cohesive essays and objective 1 is being achieved. Students seemed to understand that in order to write clear essays they need to organize their ideas in a coherent way and grammar must be accurate. In addition, the students' performance seemed to improve when a bigger amount of puzzles were provided, as such exercises appeared to foster thinking and to gear students to focus on task. This week we used more puzzles than the former weeks and students appeared to strengthen their thinking skills the more they exercise them with the teasers.*



The information highlighted in the field notes suggested that the quality of the students' writing performance was higher in *essay 6* as it was analyzed in the previous excerpts. The researcher perceived some progress and students seemed to write clearer essays at language and meaning levels. In other words, the students' essays appeared to follow the principles of coherence and cohesion.

The former evidence comprised so far in *category #1: coherence and cohesion* and showed a clear increase in the quality of the students' writing performance regarding coherence and cohesion. However, if such improvement could be measured quantitatively, grades would be a good resource to examine that development. But before analyzing grades, it shall be stressed that, as it was shown in one of the data collection instruments presented in chapter three, coherence and cohesion were some of the major points considered in the rubrics to evaluate the students' writing performance.

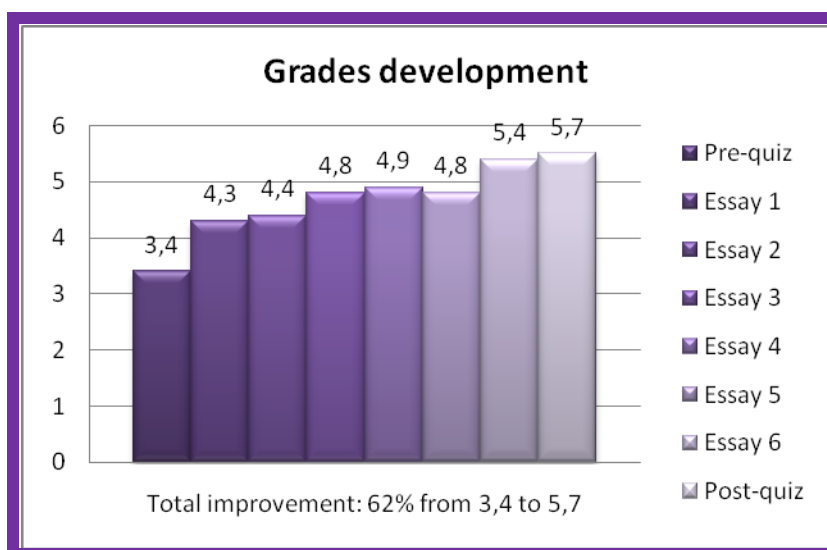
In the foregoing graph it is apparent how students improved coherence and cohesion in writing. As it is displayed in the *figure 2*, the mean grade of the group evidenced improvement and progress regarding these two issues. In order to get a better understanding of the figure, it is essential to point out that the grading scale under which pupils' essays were graded went from 1.0 up to 7.0 and the boarding pass grade was 4.0.

As it is shown in the following chart, it is clear that the mean grade rose gradually 68% if the average scores of the pre-quiz and the post-quiz grades are compared. In this way, the figure shot up from 3,4 to 5,7. At the beginning of the study –in the first two sessions when *essay 1* and *essay 2* were gathered-, the students' mean score held almost steady. Then, the grades climbed 9% in *essay 3* and increased 2% more in *essay 4*. However, there was a gradual drop of the same

percentage in the grades as they went down from 4,9 to 4,8 in *essay 5*. From this point on there was steady upward trend of 13% in *essay 6* and in the post-quiz the grades continued increasing and they slightly rose 6% from 5,4 to 5,7. It can be concluded that every two essays (but in *essay 5*), there was a remarkable upward trend and then the mean score leveled off. However, there was a small drop of 2% in *essay 6*.

*Fig. 5 Grades development*

*León, H. (2009). Thinking puzzles to unpuzzle writing.*



The following graph is useful in presenting a more detailed picture of how students (according to their language level) responded to the study. To do so, students were divided in three groups according to their general performance in the English class: low students, standard students and outstanding students.

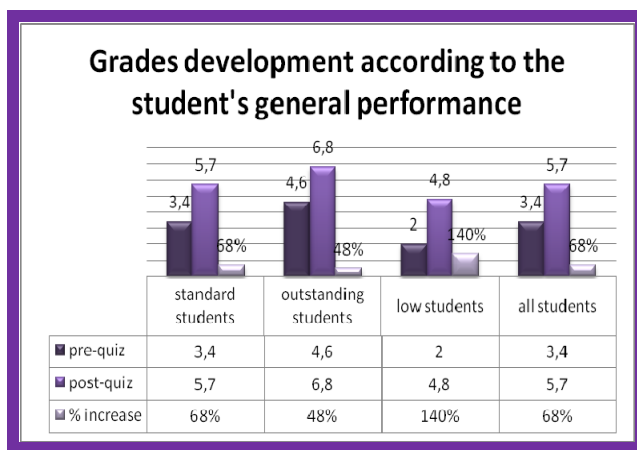
The next graph gives evidence of the grades improvement based on the differences between pre-quiz and post-quiz results in the three sets of students. Growth is evident in the

three groups but it is definitely remarkable in the low students' group, who improved their grades 140%.

However, although low students improved a lot, the increase ranked by the mean of the class is not that high, due to the fact that 57% of the students (13 students out of 23), were classified in the standard students group and this amount of students made the overall improvement behaved in a similar and homogenous way as group of the standard students' behavior. Nevertheless this fact suggests that the methodology used when conducting the project fitted the pupils' needs as it seemed to be effective to strengthen the weakest learners. Indeed, taking into account the grades, it could be highlighted that low students performed better than the standard and the outstanding students as they showed more improvement in their scores. This point is supported as well by the results of the post-survey.

Fig.6 Mean grades development divided in groups of performance

León, H. (2009). *Thinking puzzles to unpuzzle writing*.



As previously mentioned, triangulation allowed having a wider perspective of the data gathered. So far, findings have been balanced based on the students' texts, quizzes and grades. However, it is important to parallel the interpretations presented above with the perceptions and

feedback from other teachers given in an interview. The Science and Cultural Studies teachers observed that students looked happy and confident with their writing skills as they noticed improvement during and after the project. In the same way, the tutors perceived a significant increase in the students' participation. Overall, teachers felt strongly that the influences of the project were positive.

*Interview excerpt*

*Cultural Studies teacher: o.k. in my class students are asked to write all the time, and I have seen that they have improved their writing skills. I remember that during the first bimester it was of frustrating for them to write their opinions and to defend them with arguments... and I, I have seen that they have improved, and they really need it, I mean, they don't participate in the MUN project, but they have get used to the idea that they will when they pass to 9<sup>th</sup> grade, and now they have a clearer view of different issues studied in class and can adopt a position and defend it.*

*Science teacher: yeah.....uhm, what she said is true. Well, the grils don't write that much about their opinions in my classes, but they need to summarize texts using their own words, especially in a project that we have and that they have to write reports in their blogs. I don't know if it is because they do it at home, and they use the computer, and they create their blogs, but they have improved. They write in a more organized and coherent way. They used to start their texts talking about something and then ended it up in a different issue. Now, they focus on a specific thing and develop it till the end.*

It is clear from the interview excerpt that the other teachers' perspectives echoed all the information displayed in this category and paralleled the researcher's observations. In the same

*This week students showed progress in essay 6 and they also seemed more careful when writing and analyzing their texts. It was apparent that the use of lateral thinking puzzles has served as an effective strategy not only to develop thinking skills but also to motivate and engage students with their writing process. Students wrote more coherent and cohesive essays and objective 1 is being achieved. Students seemed to understand that in order to write clear essays they need to organize their ideas in a coherent way and grammar must be accurate. In addition, the students' performance seemed to improve when a bigger amount of puzzles were provided, as such exercises appeared to foster thinking and to gear students to focus on task. This week we used more puzzles than the former weeks and students appeared to strengthen their thinking skills the more they exercise them with the teasers. Consequently, the samples gathered this week showed a higher quality than the ones collected before. Students are more careful when writing and think deeper their ideas before writing and communicating them when doing the tasks.*

way, it suggests improvement in students' writing skills regarding coherence and cohesion is evident. Nevertheless, coherence and cohesion were not the only issues of improvement. For this reason, it shall be stated that the next category will provide information that support progress regarding audience awareness and peer correction skills.

*Category 2: peer correction skills*

As it was mentioned in the former category, writing implies a complex thinking process in order to ensure coherence and cohesion. Whereas *category 1* showed the development that students reached regarding of coherence and cohesion in writing, *category 2* will continue suggesting a two way relation between language and thinking but will focus deeper on the linguistic issues of writing as it will present findings connected to the students' peer correction skills as proposed in the second objective of the current study.

In response to the need of promoting a significant and effective shift in teaching and therefore, to the need of appreciating the development of team-work skills by means of cooperative learning strategy, peer correction have been incorporated to some of the nowadays language lessons, especially in writing activities. According to Hyland (2002), when the writing process is seen as a cooperative activity, students have the opportunity to interact with their peers at an academic level and this interaction is considered to be responsible of enhancing knowledge since as students interact and exchange ideas they create a friendly environment in which they get hooked and engaged. At the same time, students learn to see their partners as a real audience beyond the teacher and understand the communicative purpose of communication. In this order of ideas the cooperative learning approach promote improvement in writing as students become dynamic participants of their own learning process and become more sensitive to the need to write legibly. Indeed, taking advantage of interaction and applying the main principles of the

cooperative learning strategy, students can peer correct their writing and empower their language level as they are the ones who drive their learning process by identifying their partners' mistakes and by correcting their mistakes pointed out by a peer. In other words, peer correction can be understood as a student-centered strategy that allows students to review others' work and to provide feedback to others. By peer correcting, students state and organize thoughts based on the feedback they get, understand writing as a process that implies editing, develop a wider sense of audience, strengthen communicative skills as they are required to give feedback to their peers, build self-confidence, engage students with high-quality compositions and, most important, foster thinking skills.

The widely adopted strategy of peer correction involves students in a stress-free environment in which they receive and give feedback in an informal way without the pressure that they may feel when they are corrected by an authority figure as the teacher's. Indeed, theoreticians such as Hertz (1992) cite not only cognitive benefits of the peer correction strategy but also behavior benefits. Peer correction empowers students' social and interpersonal skills since students adopt reader/writer roles, help each other in developing writing skills, gain confidence in their ability to learn from one another but, most important, students see writing as a social construction of meaning as they must learn to negotiate the way in which they express ideas through a text to that I can make sense, they must learn to analyze their peers' texts adopting a different perspective in order to understand their peers' point of view and at the same time they must learn how accept different positions that let them enrich their texts. All these processes are essential to develop social maturity.

The aforementioned benefits suggest that peer correction may be a crucial and useful tool in the writing process as it fosters not only language but also social skills. On the whole, it can

be stated that peer correction work in a two relationship between language and thought and complement the thinking process and skills.

Although at the beginning of the study the students were given an example (see appendix) and a list with conventions (see appendix) before peer correcting their essays, most of them were not confident when correcting mistakes and expressed a feeling of inadequacy about how to do it. This fact can be linked to Ferris' (2002,) view of the feelings students experiment when they are first exposed to a peer correction activity, and who states that due to the cognitive proximity and to the fact that both students are in the process of learning a new language, they do not trust their peers to correct their compositions. In fact they do not consider partners as people from whom they can learn something new of who can advise them on how to improve. In the same way, students do not believe they are capable to give feedback to their mates. This fact is apparent in the following excerpt.

To illustrate the benefits of the peer correction process in improving writing, it is convenient to analyze the following samples. However, disclosing the list of conventions used by students to peer correct their friends is necessary before presenting the excerpts.

List of conventions

|   |                            |            |            |
|---|----------------------------|------------|------------|
| Spelling  | word order                 | vocabulary | verb tense |
| Punctuation   | letter                     | capital    |            |
| ----- missing Word                                      | unclear or incomplete idea |            |            |
| separate these two words                                | Unnecessary word           |            |            |
| put together these words                                |                            |            |            |
| (*) start a new paragraph or write on a separated line. |                            |            |            |

*Excerpt # 3, session 3, first draft reviewed by S1 , April 29, 2009, essay: snowsports*

*written by S18*

*The snowboarding is the best known winter activity in the world; it was developed in Utah [United States of America] **like** 20 years ago, the first snowboard was invented by Sherman **l**oppen in 1965 it is a **cousin to** the hybrid sport of **skiing**, it is a x-treme sport that only can be practice in places totally covered by snow. I think it is very dangerous to practice it, you can **broke** a bone or suffer a blood slope, but also I think that the snowboarders enjoy it and me too. **But... in really** I will never, never practice that if I am not a student or while I am alive. I think that this sport is very fun and I like to **make** that sport, the people maybe can **past** a very fun time **whit** **his** family **whit** this sport.*

The fact pointed out by Ferris (2002) is apparent in *excerpt # 3* since *S1* did not manage peer correction skills accurately and she just identified few surface-level mistakes related to vocabulary, spelling and capitalization but not the ones concerned with verb tense, punctuation, and language interference which may be considered as a meaning-level mistake. Based on Ferris' view it is believed that *S1* did not feel confident with herself when peer correcting the essay and for this reason she highlighted few mistakes. Besides, it might have been possible that language interference would have been the main reason why *S1* did not identify the mistakes printed in bold and highlighted by the researcher.

Aside from assuming the role of feedback providers, students also assumed the role of feedback receivers. The following excerpt illustrates the response *S18* had to the corrections made by *S1* shown in *excerpt # 3*.



Excerpt # 4, Session 3, April 29, 2009, final version: Snow sports, S18

*The snowboarding is the best known winter activity in the world; it was developed in Utah [United States of America] like 20 years ago, the first snowboard was invented by Sherman Poppen in 1965, it is a x-treme sport that only can be practice in places totally covered by snow. I think it is very dangerous to practice it, you can break a bone or suffer a blood slope, but also I think that the snowboarders enjoy it and me too. But ... in really I will never, never practice that if I am not a student or while I am alive. I think that this sport is very fun and I like to make that sport, the people maybe can past a very fun time with his family with this sport.*

Analysis upon *excerpt # 4* suggests that *S18* attended most of the corrections highlighted by *S1* but she was not aware enough to express accurately her idea “it is a **cousin to** the hybrid sport of **skiing**”, and she decided to avoid the sentence. She did not check either her writing beyond the suggestions marked by *S1* and did not correct other mistakes that were apparent in the text. Despite some drawbacks in the early peer correction activities, students became accustomed to the objectives and the dynamics of the exercise and improved their revision skills by the end of the project. The foregoing samples suggest that students strengthened their cognitive process required in the peer revision activities and allowed them to provide partners with a higher-quality feedback.

Excerpt # 5, Session 4, May 8, 2009, first draft reviewed by S1, essay: the global warming effect, written by S18

*I think the global warming effect is our responsibility because **many times** we don't **use in the correct form** the water, the light and many other things that we also have **to take care of them**. I think that many people **doesn't** care about the global warming, **but also they have** because if we don't care, **we would have many consequences**: like the poles **melt**, the water **contaminate**, the earth over **heat**, and the world in the future will be very dirty and the humans **can't** live in here because they **can't** die because of the contamination. I think we also have to save our planet for the **childs** that will exist in the future. **Because** it is not fair **for** them, they have to **suffering because about** our fault. I think that the global warming problem is not only a problem for the **science teacher** or the people that work to protect the planet like the green groups **or people like that**, no, is our **responsability** because all the persons live in the earth and all the people **has** to help to solve the problem. I believe that we **can walk to not use the cars and not make more smoke**, for this reason the **pico y placa** is good. We can recycle in the school and in the house and we can save paper and water. I want you to help me to save the planet, is for you too, it is important to take care of the planet because is **were** we live.*

*Excerpt # 5* illumined how *SI*'s peer correction skills were awoken compared with *excerpt # 3*, and consequently, how she improved the way to give feedback. Peer correcting clearly enabled *SI* not only to become aware of her partner's grammar mistakes but also enabled her to become more critical of her peer texts and highlighted more features beyond linguistic devices. Although she still marked some surface-level mistakes she provided her partner with a better feedback than the one she provided in *excerpt #3*, since she also highlighted areas of confusion that interfered with the flow of the text. In other words, *SI* recognized meaning-level mistakes. It is also noticeable that *SI* gained more confidence in order to provide feedback due to the fact that she analyzed the text as a whole and not as a list of items related to grammar and linguistic utterances. Indeed, the excerpt shows a thorough evaluation of the essay and an appropriate feedback.

*Excerpt # 6, Session 4, May 8, 2009, final version, essay: the global warming effect, S18*

*Hello world, I am \* and I want you to know that the global warming is affecting our planet and we have to do something to save it. I think the global warming effect is our responsibility because sometimes we don't use in the correct form the water, the light and many other things. I think that many people don't care about the global warming effect, but they have to care about it because if we don't care, we will suffer the negative effects in the future: like the poles will melt, the water will contaminate, the earth will over heat, and the world in the future will be very dirty and the humans will not be able to live in here because they could die because of the contamination. I think we also have to save our planet for the children that will exist in the future because it will not fair for them, they will have to suffer because of our fault. I think that the global warming problem is not only the problem of the Science teacher or of the people that work to protect the planet like the green groups, no, is our responsibility because all the persons live in the earth and all the people have to help to solve the problem. I believe that we can help the earth if we walk and we don't use the cars and we not make more smoke, for this reason the "pico y placa" in Bogotá is good. We can recycle in the school and in the house, and we can save paper and water. I want you to help me to save the planet, is for you too, it is important to take care of the planet because is where we live.*

*\*Student name was avoided to protect the student's identity*

It is clear from *excerpt # 6* that *S18* felt more comfortable with the feedback provided by *SI*, responded to feedback in a positive way, accepted the "critique" from her partner given that she made the necessary corrections. This fact parallel the appreciation highlighted in *excerpt # 5*,

as *S18* considered the feedback provided by *S1* good and appropriate. *S18* benefitted from peer correction since she gained confidence in the ability of learning from *S1*, and indeed picked up some structures and writing styles from *S1*'s essay that she found good for the final version of her essay such as: "*hello world...*". In addition, *S18* showed cognitive and language awareness scaffolding by correcting some mistakes that were not highlighted by *S1*. Consequently, *S18* organized thoughts more carefully in order to give a clearer meaning to her essay. Although *S18* was still not able to manage and correct all kinds of mistakes, she definitely improved her draft in more appropriate way and the quality of this essay was better than the quality of prior essays she wrote as the one presented in *excerpt #4*. This suggests that *S18* became aware of the importance of the process of editing and improving writing in order to communicate accurately.

Bearing in mind one of the benefits of peer correction which was marked in the former interpretation, citing the researcher's field notes is a must in order to clarify and provide a more rounded view of the advantage of learning from one another. As noted by Hertz (1992), by correcting their peers, students develop the ability to learn from one another and adopt expressions and writing styles from their mates. In *excerpt 6*, *S18* picked some expressions of *S1* used them in her essay. In fact, she found those expressions useful, shared them with the rest of the class and as a result of that, she was not the only student using those expressions.

### Field notes

*During the peer correction step students felt confident with their partners feedback because they had not the pressure of the teacher and because they shared some kind of cognitive proximity. As a result of that, they started sharing with other groups different from their correction pairs and said aloud what they found good and helpful for their essays. A student shared with the whole class an expression that became a pattern in another girl's compositions: "hello world, my name is \* and I'm here to tell you some interesting things that you will probably want to know. The topic is about..." Some students found this expression useful and adopted it in their own compositions.*

\* the name of the student was avoided to protect the student's identity

Excerpt # 7, Session 4, May 8, 2009, S1's popular expression

*Hello world, my name is \* and I'm here to tell you some interesting things that probably you will want to know. This topic is about...*

*\* the name of the student was avoided in order to protect her identity.*

Some students (included S18 as shown in the *excerpt # 6*) adopted this structure and used it in their essays as it will be shown in the next excerpt.

Excerpt # 8, ways in which some students used S1's popular expression

*Hello, I want you to know that...*

*Hello, I am here to tell you my opinion about...*

*Hello my name is \* and I am going to tell you my opinion about...*

*Hello, I am here to tell you what I think about...*

*Hello world! My name is \* and want to write my opinion about...*

*\* the name of the students were avoided in order to protect their identities*

The above-presented samples are useful in providing evidence of how peer correction can influence positively students work. As a whole, it can be stated that the peer correction exercises enabled students to strengthen their cognitive skills needed to give and receive feedback and at the same time, interaction fostered social abilities and served as an ice-breaker that created a stress-free environment which promoted cooperation and collaboration.

The behavioral benefit of peer correction activities stresses the importance of all the extrinsic and intrinsic issues that play a role in learning. Among these issues, motivation is one of the most outstanding in education. For this reason, category three will display data that shows the behavior of students' motivation during the study.

### Category 3: motivation

As mentioned before, up to now, data has been examined with regard to the improvement of coherence and cohesion and peer correction skills. However, aiming at continuing examining all the categories that stemmed from the current study, it is necessary going deeper in category three which examines the development of motivation.

Considering that learning takes place when it is driven by the intrinsic feeling a learner might have, if learners and teachers were asked to point out the most powerful and effective issues that lead to successful learning, motivation would probably be the most remarkable one, given that motivation allows students (or anybody else) to be willing to learn and consequently to make it happen (Williams, 1997). Category three was created aiming at analyzing the behavior of the students' motivation and it affected their writing skills.

In believing that students are likely to be attracted to what interests them, it can be stated that if students are motivated, they naturally show willingness to participate actively in any learning situation. If this assumption is considered when teaching writing, all writing activities should stem from students' likes, so that learning can take place as a result of the natural and intrinsic need-to-know that rises from the students' desire and not as the consequence of extrinsic factors.

In order to have a clearer overview of intrinsic and extrinsic issues in motivation it is crucial to define what intrinsic and extrinsic motivation is. Taking into account that students can be driven by the desire of learning in two different ways, intrinsic motivation deals with the internal desire a student has to learn. In other words, students who are intrinsically motivated enjoy doing any learning activity and such encouragement generates some interest that goes

beyond obtaining a grade, a prize or beyond passing a course. On the other hand, extrinsic motivation concerns with external factors that influence learning outside from the learning situation. That is to say, students who are extrinsically motivated act in order to gain something outside the learning activity itself, such as passing a test or getting a “prize”. However, it is important to emphasize that motivation is more than a simply arousing interest that easily fades away. Motivation is also a constant interest that pushes students to invest time and energy into the necessary effort to achieve certain goals.

In trying to make sense of the literature presented above, it is crucial to contextualize it within the present research by analyzing the students’ opinions provided in the post-survey results; and by analyzing some pictures taken during the intervention of the study, and by examining the layout of the writing samples.

Based on the results revealed in the post survey, 83% of the students (19 students out of 23) found the writing activities interesting and fun. In the same way, question 14 provided evidence for the most interesting essay as 74% of the students (17 students out of 23) considered “the snow sports” and “the worlds’ best destination” the most interesting essays. On the other hand, 65% of the students (15 students out of 23) considered “the use of the internet” and “the natural disasters” the less interesting essays. Therefore, it can be stated that whereas students felt motivated and engaged when writing the essays “snow sports” “the world’s best destination”, they did not feel amused when writing the essays “the use of the internet” and “the natural disasters”. Indeed, increase and decrease in such motivation can be analyzed taking into account the amount of thinking puzzles used in the warming up activities for writing the different essays. For instance, in *session 6* and in *session 3* when students wrote essays about *the world’s best destination* and *snow sports*, they were provided with six and three thinking puzzles exercises (6

exercises is *session 1* and 3 exercises in *session 3*). This amount of activities contrast with the amount of activities provided in *session 1* (two thinking puzzle exercises) and in *session 5* (two thinking puzzle exercises). The amount of thinking puzzles exercises varied due to time constraints, relation of the exercises with the topics of the essays and the fact by the end of the project students created their own exercises and consequently “played” not only with the puzzles provided by the tutor, but also with the ones they created.

This motivational fact can be also supported by the following series of shots that were taken in two different days during *session 1* and the *session 5*. These sets of photographs depict some of the students’ attitudes that allow confirming that they might have not been motivated enough to write the corresponding essays. These photographs focus on some of the responses students had towards the writing task.

Fig. 7 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



As it can be seen in *photograph 7*, the body language and expressions of the students suggest that they were not engaged with the topic of the essay. The student who was wearing a different uniform seemed to be worried or stressed and these are feelings that do not match with the state

of being motivated. Besides that, the missing place of a student who stood up to talk to another gives hints on the student's lack of interest in the task.

Few minutes later, the following photograph was taken.

Fig. 8 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



*Photograph 8* is useful in supporting the statement presented above which indicates that students did not find the writing task interesting possibly because they did not like the topic of the essay. The absent spot indicates that the student who was absent in *photograph 7* was still missing in *photograph 8* because she interrupted the activity again and went away one more time. If she would have felt engaged with the topic, she would have not been away that often. Besides this fact, the gesture of the student who was laying her head on the computer is clear in suggesting that she was not enjoying the activity either.



Fig. 9 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



In *photograph 9* the student who was absent in the former photographs returned to her computer and tried to continue working. However, her body language shows no interest at all in the activity. In addition, the posture of the student who was sat at the back of the row gives evidence of lack of interest. In the same way, the student who was sat in the middle of the row in *photograph 7* is missing in *photograph 9* probably because she did not find the topic interesting and stood up to talk to another friend.

Whereas the former set of pictures allowed perceiving lack of motivation in *session 1*, the next shots clearly indicate no interest in *session 5*, in which students wrote an essay about the natural disasters.

As it will be noted in *photograph 9*, the four students recorded in the photograph seem not to be engaged with the writing activity in *session 5* as two of them were probably playing an online game. The body language of the students at the back of the row suggests that they were not willing or motivated to write the essays as their expressions illustrate attitudes that contrast with motivation.

Fig. 9 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



Fig. 10 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



*Photograph 10* was taken two minutes after *photograph 9* was shot and it suggests that probably one of the students in *photograph 4* shared the game with the rest of the class and therefore, this is likely to be the reason why most of the students have the same screen shot and seem not to be working on their task. Instead, students appear to be playing an online game and this fact suggests that students might have not been interested in the exercise and might have

looked for something else more amusing to do. For this reason, it can be concluded that students were not motivated enough to write *essay 1* and *essay 5*.

Besides the support provided by the pictures, the students' artifacts were useful in backing up the aforementioned issues. The foregoing set of images shows how motivation affected the way in which students worked and how students showed lack of interest in the layout and presentation of their compositions. The images are screen shots of some of the students' essays after editing them. The first set of image depicts the *essay 1* which dealt with the use of the internet *essay 5* which was related to the natural disasters, and which according to the data presented already, were classified as the less interesting essays.

Fig. 11 Students' samples

León, H. (2009) Thinking puzzles to unpuzzle writing.



To validate the interpretation of the former images, comparison with the following set of shots become essential.

Fig. 12 Students' samples

León, H. (2009) Thinking puzzles to unpuzzle writing.


**The best place to visit**

I think that Orlando is the best city for entertainment because in Orlando you can do a lot of things. Orlando has many parks like Universal Studios, Magic Kingdom, Disney, etc. You can go in the afternoon in Universal because some parks have attractions that have closed. I think that Orlando has the best hotels that are: Nickelodeon hotel, Disney well resorts, etc. They are the best hotels because have they many attractions that you like. For example, roller coasters, water slides. I think that the city is very beautiful because has many sculptures that represent monuments of the cities of the world. I think to go there and I suggest to you to go.




**The best place to visit...**

Paris is the capital of France and the country's largest city. Paris is a very big city and it has a very beautiful history. So it has a lot of monuments to visit. For example: the Eiffel tower is something beautiful and I don't know the history of the tower but I would be enchanted with the structure and all. Another thing is the culture I think it would be interesting to know new cultures, the food, and the language is very pretty and I would like to learn it because I would know about what they are talking and the weather is not bad sometimes it rains but it is cool. I think it is the best place to visit because it is very big and beautiful.



London is the capital of United Kingdom and is the largest city in European Union. I would like to visit London because I consider it very beautiful and big so there is so much to visit to know the history for example the Big Ben is a tower with a clock in the middle but I would like to know why the people build that monument, how did they built it and all of that. I also would like to know about its culture, etc. I believe that London is the best place to visit because there is a lot of history so they may have a lot of culture. I believe that travel there would be an excellent opportunity to practice the English.



By Laura Estela 6A

**The best place to visit**

**Morocco**

I think Morocco is the best place to visit because of the culture and the people, the food is delicious and there are some beautiful things like the Moroccan desert and cities. Also there are some other more beautiful than others. One of the best cities is Marrakech a relaxing city that is located down the coast. There are very good buildings and buildings in this city that is the capital. Casablanca is a city of incredible beauty, and it's the city capital of Morocco. There are exhibitions in the streets and modern landmarks. I think that this is the city that I like the most. Morocco is the city where you can relax with comfortable accommodations. There is very beautiful and wonderful sea beaches.

I believe that Morocco is the best place to visit because it is a great city to visit, where the people are kind and the food is so good. Morocco doesn't have any other reasons why you should go to visit there, the people are very nice and it's a very nice country. Morocco is a very nice country. I have decided to visit Morocco and it doesn't matter the distance to me, I hope that I go soon.



By Alejandra Yabreana 6A

**SNOWBOARDING.**

I think that the snowboarding is an interesting sport, it is very important for the story of the extreme snow sports. This sport is probably the best winter activity, snowboarding has joined the ranks of Olympic sport, but it's also has advantages and disadvantages. The advantages are that when you are doing the sport you can relax, this is a sport that you can practice in the snow, this sport is considered an Olympic sport. The disadvantages are that when you are driving you go very fast and you can have very you should have many care with this sport, for dangerous accidents, this sport you can practice in a mountain in this place happen some landslides, you can remained in the landslide, and if prevent the accidents...

By Maria José Ramirez 2A



**Snowboarding**


I think that snowboarding is an interesting sport because you can see that snow boarders put all their efforts to make history in snowboarding although some people think that it is the worst sport ever invented. I believe snowboarders do not care about what people think about this sport due to the fact that they have fun, they can earn to another "sport" where some people would love to be in, they can imagine a lot of things like that they win a prize or a that they win a race, etc... some of them feel that it is a great sport because they can show their skills to all the world. I believe that it is exciting to do all those dangerous things because it is something that you can not do all the time with all the things. I would love to be a boarder or to feel how fantastic it is to snowboard. I admire the snow boarders because they are risk due to the fact that they throw themselves from tall mountains where they can be in situations like death. I personally think that snowboarding is an extreme sport because it is dangerous.

By Facia Beltrán 6A



**extreme snow sports**

Hello, my name is Mayra Pérez and I'm going to tell you my opinion of the extreme snow sports. I want you to know that I don't like this type of sports because I think that they are very dangerous, and also because they are practiced in a very cold weather and I don't like these types of weather. If you are going to practice one of these sports you must be very strong because you have to walk a lot and the wind makes the way more difficult. I think that the snow sports are not for children, they are only for adults that have a lot of energy. But if you think like an adult, the snow sports are very funny because you can participate in competitions and have many trophies. But I personally think that the snow sports are very dangerous for everybody, that be an adult or children because with these sports you can have an accident, a big accident and in those you can lose out a part of your body, go if you are going to practice these sports first think very well and then start training.



By Natalia Pérez 2A

Noticeable and marked differences are evident in the two sets of shots. Whereas the first one offers an almost plain layout that is barely decorated with few images, the second group shows a more colorful and elaborated decoration in which more images are used to expose the clear position of the writer regarding the topic of the essay. In other words, the visual support of

the second set of shots empowers the students' voice and at the same time shows willingness and dedication while developing the exercise. In a whole, it can be suggested that students seemed to be more motivated when writing about *snow sports* and about *the world's best destination* as shown in the last set of images.

Furthermore, results of the post survey reveal facts that support the former interpretation of the images. 80% of the students found the essay about *snow sports* and the essay about *the world's best destination* more interesting than the rest of the essays. This fact allows concluding that students were more intrinsically motivated to develop the writing task in *session 3* and *session 6* since they liked the topic of the essays by showing interest and willingness when writing their papers. In the same way, the following set of photographs depicts a positive attitude of the students, suggests that they enjoyed the activities and triangulate the interpretations about the layout of the essays.

Fig. 13 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



As it can be seen in *photograph 13*, students seem to be happy working on the pre-writing stage and trying to get the answers for the thinking puzzles exercises. Their facial expressions strongly suggest that they liked and enjoyed the activity and that they felt engaged with it. Cooperation and collaboration is also evident. The student standing up appears to be looking for some help and based on her body language she seems to find the supported she needed in the couple of students who look smiling at the back. There is also another girl that appears to be working in another group which is next to the smiling couple and next to the student who is standing. She appears to be motivated and amused with the activity. After a while, the following photograph was taken.

Fig. 14 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



*Photograph 14* backs up the interpretation of *photograph 13* and reveals that the student who was at the back, was in fact, enjoying the activity. This photograph serves as evidence to illustrate a positive attitude and a possible high motivational level during homework sharing stage. At this phase of the session, the students knew which the topic of the essay was going to be, and the gestures of both students in the photograph suggest that they liked the theme and consequently got hooked in the activity.

Fig. 15 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



In *photograph 15* another couple was recorded in a shot that was taken five minutes later. The photograph is helpful in depicting collaboration and cooperation during the peer correction stage. While the student on the left seems to be pointing out something that might need correction, the student on the right appears to be listening carefully and attending to the feedback given by the other one. Both of them show a positive attitude which can be understood as a good aspect of motivation.

The following set of photographs were taken in the computers lab during the final stage of the writing process and while students were editing their essays.

Fig. 16 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



Students seem to be motivated working on their essays as they decorate their templates and as the colorful screen shots in most of the computers recorded in the photo echo the students' artifacts presented above. The first student that appears in the row looks as if she were looking for images for essay as the Google search is evident on the screen of her desktop. All of the students are sat and give the impression to be motivated and hooked in the activity. The following photograph was shot two minutes later.

Fig. 17 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing.



*Photograph 17* reveals what it seems to be a couple of students who are trying to convey meaning at the editing stage as one of them has a piece of paper which is likely to be the first draft of her essay. She looks as if she were explaining something to her partner given that the other one appears to be listening. The attitude of both of them looks positive and it is possible that they feel encouraged doing the activity.

*Photograph 18* displayed as follows, was taken two minutes later and supports the screen shots presented above.



Fig. 18 Motivational attitudes

León, H. (2009) Thinking puzzles to unpuzzle writing



The colorful screen shots and the images perceived in the computers at the back indicate that students were willing to decorate their essays. Besides, *photograph 18* depicts the facial expression of the student who was sat in front and indicates that she looks as if she were amusedly doing the activity.

The former evidence showed how students' motivation increased over time and how the thinking puzzles were the initial "push" that hooked the students with the writing activities. The photographs were also useful in disclosing that the students' interest awoken in the pre-writing stage was maintained in most of the sessions and during the whole writing process as the students kept willing and engaged since the moment when they were given the thinking puzzles till the moment when they published or shared their essays with their friends.

Furthermore, students' motivation increased when they knew they would have a different audience apart from their tutor. Students were told that the best essays would be chosen and published by the teacher-researcher in a little booklet, and giving the students a communicative

purpose of writing helped them to find it meaningful as most of them wanted to do their best in order to get their essays published. In the same way, by the end of the project students had a closing ceremony in which they shared their compositions with peers of other classes. This ceremony engaged learners because they felt they were part of a community of writers and the effects of having a real audience motivated pupils to be more careful when writing, and consequently encouraged them to improve the quality of their essays. The students who shared their essays in the closing ceremony received some recognition for their good work and were given an honor diploma as shown in the following image.

Fig. 18 Honor diploma

Retrieved and adapted May 20, 2009, from: [www.graphicgarden.com](http://www.graphicgarden.com)



Another issue that could have a positive influence on the students' attitude towards writing was the fact of using a word processor when developing the writing activities. The post-survey results enriched this appreciation by providing information regarding the students' perspectives of using technology when writing essays. Outcomes showed that students positions' towards using a word processor program were rated positive as they believed that it facilitated the hand writing process. 92% of the students (20 students out of 23) considered that the use of technology motivated them to write as it avoided the hand writing process. Indeed, before

piloting this study, students complained about getting tired when they were asked to develop writing tasks taking into account they were required to copy and take notes “all day long” and their hands used to get tired after such an “exhausting” activity. Taking this issue into account as well as the benefits technology, it was decided to use a word processor program so that students could write their essays without getting tired.

Considering the data displayed in *category # 3*, it can be concluded that the theory concerned with this category and which claimed that motivation has significant effects on improving writing was proved true as students got engaged with most of the sessions of the project and such motivation let them feel free to express their ideas in their writings. As a result of this, students also changed their attitude towards writing in a positive way.

On the whole, the displayed data was useful in getting conclusions that revealed unknown features that turned into possible answers to the main question of the studied phenomenon and which will expose in the next chapter.

## **Conclusions, pedagogical implications and further research**

### *Conclusions*

As highlighted in the former chapter, analysis of the research findings were helpful in noticing that most of the effects of the lateral thinking puzzles did lead students through a path of improvement regarding their writing skills, though initially such enhancement appeared to be subject of little changes. Likewise, they put forward a step in claiming that the main objective of the study was successfully accomplished. Moreover, they allowed gaining a more rounded view and a clearer understanding of the bond that literature makes between language and thinking and in this way, the findings shed light on the initial hypothesis and suggested that the quality of writing may depend in a certain way, on the level of cognition a student has when developing the writing task. In fact, the use of lateral thinking puzzles in the pre-writing activities assisted students in empowering the thinking skills needed in the writing tasks in order to state opinions and to give arguments to support them coherently in their opinion essays.

Actually, writing is considered a process that does not merely imply linguistic skills but also thinking skills and as it involves a development of a great variety of mental processes in building structure and in acquiring audience awareness, such as connecting and organizing ideas, supporting arguments, reading, analyzing, drawing conclusions, etc. This fact was evident in the study as students followed a series of complex steps before achieving improvement.

Results of the current study dovetail with the findings of other recent research, including Stapleton (2002) and Quitadamo and Kurtz (2006) and showed how feasible is to improve writing by fostering critical thinking skills. As in the present study, Stapleton found that “in a move from rote-learning towards creating critical writing and towards freedom to question and

criticize education, teachers no longer need to hesitate to introduce critical thinking and deductive rhetorical writing styles to learners”. In the same way, Quitadamo and Kurtz (2006) concluded that “writing and critical thinking are connected and influence positively one another. Students with prior critical thinking skills had a comparative advantage over other students who had not developed these skills”.

With regard to the specific objectives proposed for the project, interpretation of the findings and comparison with the targets led to the conclusions as follows:

*Objective 1: To guide students in their writing process so that they improve coherence and cohesion in opinion essays.*

Result: by the end of the project, the students’ writing performances showed a more organized and coherent structure as in their essays they presented logically their ideas in such a way that they were easily followed throughout the text. In the same way, students used connectors and opinion expressions that facilitated the flow of their essays.

Furthermore, based on the findings of *category 1: coherence and cohesion*, it was concluded that the mental procedures enhanced in the pre-writing stage served as a strategy to strengthen and foster the thinking skills required in the writing process by stepping forward a higher level of cognitive skills which eased the development of coherence and cohesion in the students’ essays and which at the same time facilitated expressing and supporting an opinion about a specific topic.

Likewise, analysis of the data provided in the field notes yielded the following conclusions and it can be stated that writing quality was better when thinking skills were stimulated with a larger amount of lateral thinking puzzles. That is to say, the bigger the amount

of puzzles, the better the students' performance was. Unfortunately the amount of brain teasers used in the different sessions of the project was not even and it varied on account of factors such as time constraints and the complexity of the topic of the paragraph among others.

*Objective 2:* To provide students with opportunities that allow them develop peer correction skills.

Result: by the end of the project students became more aware of language, more aware of their mistakes and developed correction skills. In the latest sessions, students identified and corrected more mistakes in a faster and more efficient way than in the earlier sessions.

Another noteworthy addition as a result of analyzing the findings in *category 2* was that the peer correction activities led students to empower their language awareness, learn how to give and receive feedback in a polite and proper way, develop audience awareness skills, learn from others' writing, understood that feedback can work as a tool that helps them to improve and that goes beyond grading, and understood writing as a collaborative process that implies revising and editing. This suggests that peer feedback is surely a tool which should be part of any learning activity as it allows students to scaffold not only cognitive but also social processes.

*Objective 3:* To provide students with meaningful activities that help them feel engaged and develop an affinity for their writing process.

Result: it was thought that by having a positive attitude, a direct correlation to improve writing skills should occur, and effectively, the findings paralleled these promising results. Findings in *category 3* showed that students got engaged with most of the sessions since the beginning of the class given that the lateral thinking puzzles seemed to be catching for them. In

addition, the displayed data illuminated how the thinking puzzles not only enhanced thinking skills as stressed in the previous category but also created a friendly environment in which the students felt comfortable and motivated to learn and express their ideas. Such motivation allowed students to change their attitude towards writing in a positive way and to enjoy writing activities not only in the English class but also in some other subjects that demanded written production as underlined in the interview. Besides, students were very excited about publishing their essays in the school bulletin boards and they even shared voluntarily their papers with some of the students of other classrooms.

Besides the former benefits, it can be stated that observation done during the project, post-survery results, data findings and other teachers' perceptions examined in interviews allowed to conclude that the lateral thinking puzzles allowed students improving within other areas besides writing some unexpected benefits were gained.

. For instance, apart from the advancement in writing skills, by the end of the project students seemed to empowered their thinking skills as they followed a process for exercising thought in order to first get the possible answers for the puzzles and then to create their own thinking puzzles. In the same way, thinking skills allowed students became more aware of the importance of giving thorough support to arguments when writing opinion paragraphs.

Likewise, students appeared to have gained autonomy and self-confidence when developing writing tasks. The interaction and the stress-free environment fostered by the lateral thinking puzzles let students to use the English language more often and more spontaneously when participating in class, and in a more independent way as they learned to trust their peers and to change the “powerful and almighty” image of the teacher when giving and receiving feedback.

In addition, following a student-centered approach and a cooperative learning strategy taking advantage of the easy environment create by the lateral thinking puzzles let students to feel part of their own learning process. Interaction and collaborative work were enhanced as students linked their ideas together in order to do their tasks. They supported each other working as a team and gained identity within each group.

Apart from the former benefits listed above, the research findings bore testimony not only to the advantages mentioned above but also to the benefits disclosed as follows:

- Students learned how to create mind maps and to use them as an outline for writing opinion paragraphs.
- Speaking skills were enhanced through interaction when playing with the thinking puzzles, sharing homework, creating mind maps, giving and receiving feedback.
- Students understood the importance of being aware of the audience.
- When writing cooperatively, students learn to understand and respect others' point of view although they contrast with their own views.
- Students applied their knowledge gained in other subjects such as Science and Cultural Studies.

While the current research findings shed light on writing advancement by using lateral thinking puzzles, they still cast doubt on some other unexpected areas that emerged and were not covered.

#### *Pedagogical implications*

Given that the curriculum of the school attempts to develop language skills in a bilingual context, the benefits of the study fit the objectives proposed by the English program of the



institution. By using the lateral thinking puzzles, students improved their language skills and it is expected that they can use them in any situation different to the English class when needed.

In the same way, the school curriculum aims to foster argumentative skills that allow the students assume and defend a position. Indeed, the school is well known by its outstanding participation in the MUN (Model of the United Nations) project. Students who represent the school in this project must be able to take active part of a discussion, express points of view and support them thoroughly with specific and clear arguments. The advantages gained in the current project will help students to have an adequate performance such forum. In fact, the Cultural Studies teacher underlined that the benefits of the research were evident and positive.

#### *Further research*

Reflection upon the teaching practice after piloting this project was meant to raise awareness of all the issues implied in the study. This involves clear areas and uncovered areas which set new questions/suggestions that can be used as ideas for conducting further investigation. However, in view of the positive results of the study, the researcher encourages other teachers to use lateral thinking puzzles in their classrooms because the benefits are considerable for students of any foreign language. In the same way, it would be interesting to use lateral thinking puzzles in other areas different to language (Math, Science, Cultural Studies, Philosophy, etc.).

Although the study conducted in this thesis has led to positive results on improving writing skills by using lateral thinking puzzles, some other unexpected areas that emerged were not covered. For instance, new teaching approaches emphasize on the importance of developing thinking skills in students, but little research is known about the effects of thinking puzzles on

language learning. Therefore, it is highly suggested that additional investigation is necessary in order to gain a better insight into how thinking games or puzzles can foster language acquisition.

In addition, if further research can establish more effectiveness of motivation in learning, it is recommended to pilot future studies in order to find a way of driving extrinsic motivation to intrinsic motivation in students.

Based on the benefits that the students gained and applied in other classes, it is highly recommended to those interested in research concerned with writing carry out a cross-curriculum study in order to evaluate the advantages of cognitive connections among different learning areas.

As it can be seen, a number of opportunities for further studies are evident as high reliance on the benefits of research suggests that piloting a project provides the teacher researcher with insights and tools that help them improve their teaching strategies and therefore to overcome difficulties that may rise as natural part in any learning process.

## BIBLIOGRAPHY

- ASPEN, (2008). ASPAEN language arts core document ALAC
- Bartl, A. ( 2004). 101 Quick thinking games and riddles for children. Publishers group west.
- Bean, J. (2001). *Engaging ideas: the professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco: Jossey Bass.
- Brink-Budgen, R. (2000). *Critical thinking for students: learn the skills of critical assessment and effective argument*. Begbroad, Oxford: How to books.
- Brown, H. (2007). *Principles of language learning and teaching*. New York: Pearson education.
- Browne, N. & Keeley, S. (2007). *Asking the right questions: a guide to critical thinking*. New Jersey: Pearson, Prentice Hall
- Burns, A. (1999). *Collaborative action research fro English language teachers*. Cambridge: Cambridge University Press.
- Carr, N (2008). Is Google making us stupid? Retrieved July 27, 2008, from:  
<http://www.theatlantic.com/doc/200807/google>
- Connor, U. (1996). *Contrastive rhetoric cross-cultural aspects of second language writing*. Cambridge University Press.

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*.

(2nd ed.). Thousand Oaks, CA: Sage.

Crist, P. & Scaffa, M. (2004). *Best practices in occupational therapy education*. Haworth Press.

Damron and High (2008). Enhancing writing and critical thinking through paired courses.

Retrieved September 20, 2009, from:

<http://www.ciser.ttu.edu/conference/Poster%20Papers/DamronHighPoster.pdf>

Ferrance, E. (2006). *Action research*. Northeast and Islands Regional Educational Laboratory, Brown University: Rhode Island.

Ferris, D. R (2002). *Treatment of error in second language writing*. USA: The University of Michigan Press.

Jaffar, S. Teaching critical thinking through literature. *Journal of research*, 2004, vol. 5.

Hakes, B. (2008). *When critical thinking met English literature: A resource book for teachers and their students*. Begbroad, Oxford: How to books.

Harmer, J. (2007). *The practice of the English language teaching*. England: Pearson, Longman.

Hatcher, (1995).

Heacox, D. (2002). *Differentiating instruction in the regular classroom: how to reach and teach all learners, grades 3-12*. Minneapolis: Free Spirit Publishing Inc.

Hertz (1992) in Zaphiris & Zacharia. (2006). *User-centered computer aided language learning*.  
British Cataloguing in Publication Data.

Hopkins, D. (2008). *A teacher's guide to classroom research*. Open University Press.

Hyland, K. (2002). *Teaching and researching writing*. Great Britain: Pearson education

Langer & Applebee (1987). *How writing shapes thinking: A study of teaching and learning*.

Retrieved October 8, 2009, from [http://wac.colostate.edu/books/langer\\_applebee/](http://wac.colostate.edu/books/langer_applebee/)

Lucas, R. (2007). *Creative learning: activities and games that really engage people*. San  
Francisco: Pfeiffer.

Mason, M. (2008). *Critical thinking and learning*. Malden, MA: Blackwell Publishing Ltd.

Mills, E. (2007). *Action research: a guide for the teacher researcher*. New Jersey: Pearson  
Prentice Hall.

Norton, L.S. (2009). *Action research in teaching and learning: A practical guide to conducting  
pedagogical research in universities*. Routledge Education.

(Quitadamo, I. & Kurtz, M. (2006). *Learning to improve: Using Writing to Increase  
Critical Thinking Performance in General Education Biology*. Life Sciences Education Journal.  
Vol. 6, 140–154, Summer 2007

Richards, J. (1997). *The language teaching matrix*. Cambridge: Cambridge University  
Press.

- Richards, K., Stillson, A., Recamán, B. et al. (2002). *Classic brain teasers*. New York: Sterling Publishing.
- Sagor, R (2005). *The action research guidebook: A four-step process for educators and school teams*. United States of America: Corwin Press
- Schmidt, R. & Ma, W. (2006). *50 Literacy strategies for culturally responsive teaching K-8*. Thousand Oaks, CA: Sage Publications.
- Scriven and Richard, (1997). A working definition for critical thinking. Retrieved September 17, 1997 from: <http://lonestar.texas.net/~mseifert/crit2.html>
- Schafersman, S. (1991). *An introduction to critical thinking*. Retrieved January 15, 2009, from <http://www.freeinquiry.com/critical-thinking.html>
- Stapleton, P. (2002). *Critical thinking in Japanese L2 writing: rethinking tired constructs*. *ELT Journal* 56(3), 250-257.
- Sternberg, R. J., & Spear-Swerling, L. (1996). *Teaching for thinking*. Washington, DC: American Psychological Association.
- Strauss, A. C. and Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and Techniques*. Sage Publications, Inc, 2nd edition. Sage Publications, Inc.
- Stringer, E. T. (2007). *Action research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Wallace, (2007). *Action research for language teachers*. Cambridge: Cambridge University Press.

Williams, M & Burden, R. (1997). *Psychology for Language Teachers*. Cambridge: Cambridge University Press.

## APPENDIX A

**Consent letter**

ASPAEN GIMNASIO IRAGUA



Bogotá, abril 27 de 2009

Señores  
PADRES DE FAMILIA

Cordial saludo.

Mediante la presente les informo que su hija ha sido seleccionada para participar en un proyecto de investigación que estoy realizando con la Universidad de la Sabana, Departamento de Lenguas, en la maestría de “Didáctica del Inglés y Ambientes de Aprendizaje Autónomo”.

El proyecto tiene como objetivo mejorar la habilidad de escritura a través del uso de la tecnología y de ejercicios de habilidad mental. Para tal fin se realizarán seis sesiones desde el 14 de abril al 15 de mayo del año en curso. Dichas actividades se llevarán a cabo durante la hora de clase con la guía de la docente. Es importante aclarar que dichos talleres no afectarán el desarrollo del programa de inglés del grado sexto, ya que han sido diseñadas de acuerdo con el currículo y los contenidos del libro.

Si están de acuerdo con lo anterior les agradezco firmar y llenar el formato anexo autorizando a su hija para participar en este proyecto.

Cordialmente,

Valeska León  
Docente de Inglés

---

**FAVOR DILIGENCIAR EL DESPRENDIBLE Y ENTREGARLO A LA PROFESORA DE INGLÉS**

Nosotros: \_\_\_\_\_ y \_\_\_\_\_

Autorizamos a nuestra hija: \_\_\_\_\_ Grado \_\_\_\_\_

para participar en el proyecto de investigación con el Departamento de lenguas de la Universidad de la Sabana.

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 FIRMA DE MAMÀ

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 FIRMA DE PAPÀ



## APPENDIX B

### *Sample of lesson plan*

*Preliminary activities:* students are arranged in groups according to their learning styles and based on the cooperative learning strategy. There is a monitor and an English secretary in each group. (These two students were given an adapted copy of the lesson plan (see appendix 1) and were given instructions on the development of the class). The monitor is in charge of guiding all members of the group in the development of the exercises. The English secretary is in charge of encouraging and reminding all members of the group to speak in English all the time. Once they are in groups, teacher gives all the instructions needed for developing the activities to be carried out in class. As support for these instructions, the monitors of each group shares with the other member of the team the adapted copy of the lesson plan (see appendix 1) so that they follow the steps in order to do the activities.

*Warming up activities:* As stated in the assumed knowledge section, students are used to do brain puzzle activities as part of their writing process. To do so, each group is divided in subgroups (two subgroups of three). In each team, “*subgroup A*” is given a brain puzzle activity and “*subgroup B*” is given another one (appendix 2). Both subgroups exchange their puzzles and have 4 minutes to write as many answers as they can. The monitor of each group is in charge of controlling time.

*Brain storming activities:* guided by the monitor of each group, students share the information they have about “natural disasters as a result of the global warming effect” (this was gathered in the former lesson, see “assumed knowledge” section). They exchange and complement the information.

*Pre-writing activities:* based on the input collected last class (Internet search, see materials section appendix 1 and 2), in each group students write main ideas that could be useful for their opinion paragraphs. Students are free to use the technique that fits better their own learning styles – mind maps, cluster maps, charts, note-taking form, etc. They do this activity guided by the leader of each group but teacher monitors when necessary.

*While writing activities:* The monitor of each group give her mates an example (appendix 3) of an opinion paragraph related to the global warming effect and students write their first drafts. In the same way, they take into account the “rubric for writing” (see appendix 4). In all groups, students are guided by the leader and they also support each other to write their paragraphs. The teacher goes around the classroom to monitor the activity. Students who finish ahead of time peer correct their writing.

*After writing activities:* In the next lesson, students exchange their paragraphs and correct their partners’ work. In the next class students will work in the computers lab and will write the final paragraph based on the peer correction and on the suggestions made by their classmates.

APPENIX C

Surveys

Pre-survey

What do I think? 

This survey has been designed in order to collect important information that may be useful in planning new activities for helping you to improve your writing skills in the English language.

Read the following questions and answer according to your personal opinions. Remember that there are not right or wrong answers.

1. How do I feel using the English language?



a. Very confident

b. Kind of confused

c. Absolutely lost

d. My opinion \_\_\_\_\_

2. Which skill I consider I am good at?



a. Listening

b. reading

c. speaking

c. writing

3. I consider my writing skills are



a. Excellent  
Why?

b. Good

c. Poor

\_\_\_\_\_

4. When I have write a composition, I



Enjoy it

b. Feel stressed

c. do it without complaining

d. My opinion \_\_\_\_\_

5. I think writing compositions is



- a. Boring      b. Difficult      c. Interesting  
 d. My opinion \_\_\_\_\_
- 

6. If one of my compositions is chosen as the best one in my class, I would like to



- a. Publish it.      b. Share it with a friend.      c. Keep it to myself.  
 d. My opinion \_\_\_\_\_
- 

7. I think that “brain games” are



- a. Boring      b. Difficult      c. Fun  
 d. My opinion \_\_\_\_\_
- 

8. How would I like to use technology (computers, internet) in the English class?



- a. During the explanation given by the teacher.      b. For doing class work      c. For doing homework at home  
 d. My opinion \_\_\_\_\_
- 

9. How do I feel when I do writing activities using the computer?



- a. Very confident      b. Kind of confused      c. Absolutely lost  
 d. My opinion \_\_\_\_\_
- 


10. I think that using computers



- a. Facilitate writing.      b. Makes writing difficult.      c. Is the same as using paper and pencil.

**Post-survey**

**POST-SURVEY**

**What do I think?** 

This survey has been designed in order to collect important information that may be useful in analysis of your progress in your writing skills in the English language. Read the following questions and answer according to your **personal opinions**. Remember that there are not right or wrong answers.

**1. How do I feel using the English language?**



- a. *Very confident*    b. *Kind of confused*    c. *Absolutely lost*  
Why? \_\_\_\_\_

**2. I consider that my writing skills have**



- b. *improved a lot.*    b. *somehow improved*    c. *not improved at all.*  
Why? \_\_\_\_\_

**3. I found the writing activities**



- a. *interesting and fun.*    b. *as usual (did no change at all)*    c. *worse than the normal exercises.*  
Why? \_\_\_\_\_

**4. Working in groups helped me to improve my writing skills**



- a. *Very much*    b. *a little bit*    c. *not at all*  
Why? \_\_\_\_\_

**5. When I was told about the booklet, I**



- a. *thought my compositions would never be published.*    b. *thought I had a chance to publish my composition*    c. *though my writings will be chosen to be published*  
Why? \_\_\_\_\_

6. When I was told about the chosen paragraphs for the booklet, I



- a. felt happy and proud      b. did not expect it      c. I did not like it  
 Why? \_\_\_\_\_

7. I found the “brain games”



- a. helpful in my writing process.      b. pointless in my writing process.      c. fun but useless

Why? \_\_\_\_\_

8. The use of technology (computers, internet, videos) in my writing process was



- a. very helpful.      b. somehow helpful      c. no helpful at all.

Why? \_\_\_\_\_

9. How did I feel when I did writing activities using the computer?



- b. very confident      b. kind of confused      c. absolutely lost  
 confident      confused      lost

Why? \_\_\_\_\_

10. The use of the computer during my writing process



- a. facilitated my writing.      b. made my writing difficult.      c. was the same as using paper and pencil.

Why? \_\_\_\_\_

11. Which was the most interesting paragraph?

- a. The use of the internet      b. the film review      c. Snow sports.

12. Which was the less interesting paragraph?

- a. The use of the internet      b. the film review      c. Snow sports.

13. Which was the most interesting paragraph?

- a. The global warming effect      b. Natural disasters      c. The world's best destination

14. Which was the less interesting paragraph?

- a. The global warming effect      b. Natural disasters      c. The world's best destination

**APPENDIX D****Documents****Pre-quiz**

What do you think about having animals to perform in a circus? Write a paragraph in which you state your opinion. Save the document as shown in the example and e-mail it to your teacher.

*Animals in a circus-your name*

**Post-quiz**

Choose one of the following options:

- a. What do you think about risky jobs? Would you like to have a risky job? Why? Write a paragraph in which you state your opinion. Save the document as shown in the example and e-mail it to your teacher.

*Risky jobs-your name*

- b. What do you think about endangered animals? Whose responsibility is it? Why? Write a paragraph in which you state your opinion. Save the document as shown in the example and e-mail it to your teacher.

*Endangered animals-your name*



**Rubrics**

**Original rubric**

| Category                                   | Excellent 6.0 – 7.0   | Good 5.0 – 5.9   | Pass 4.0 – 4.9   | Poor 2.0 – 3.9  |
|--|---|--|--|---|
| Task fulfillment                           | You follow instructions accurately and fulfill the task requirements outstandingly to state your personal and critical opinion related to natural disasters.                | You follow instructions and fill the task requirements sufficiently to state your personal and critical opinion related to natural disasters. However, some points could be developed in better way. | You cover the required points for the task to state your personal and critical opinion related to natural disasters, but there may be unnecessary details or some ideas could have been expanded more. | You did not follow the instructions and did not accomplish the task requirements. There is a lot of unnecessary information or lack of development in your critical opinion regarding to natural disasters. |
| Coherence (Organization of your paragraph) | Your ideas are logically organized and can be followed easily throughout the paragraph. You use a wide range of connectors facilitating the flow of your opinion paragraph. | Your ideas are organized in a way they can be followed throughout the paragraph, and you properly use a range of connectors.   | Your ideas are organized in a way they can be followed easily throughout the paragraph. You use some connectors properly but you need to be more flexible when using them.                             | Your ideas are not organized logically and can not be followed easily. You misuse or overuse connectors.  |
| Cohesion (vocabulary and grammar)          | You use accurately a great variety of vocabulary and great range of simple and complex structures.  | You use accurately a variety of vocabulary and simple and complex structures. There are some mistakes in spelling, word formation and grammar.   | You use adequate vocabulary and simple and complex structures adequately. There are some mistakes which do not interfere with meaning.   | You use basic vocabulary and grammar structures. There are many mistakes which interfere with the meaning.  |

**Modified rubric**

| Category   | Excellent 6.0 – 7.0 | Good 5.0 – 5.9 | Pass 4.0 – 4.9 | Poor 2.0 – 3.9 |
|--|---------------------|----------------|----------------|----------------|
| Font size and number of lines                        |                     |                |                |                |
| Organization of ideas (coherence, opinion statement) |                     |                |                |                |
| Vocabulary   |                     |                |                |                |
| Spelling   |                     |                |                |                |
| Punctuation  |                     |                |                |                |
| Verb Tense   |                     |                |                |                |
| Total  |                     |                |                |                |

**List of conventions for peer correction**

**Original List of conventions**

|       |  |
|-------|--|
| ↻ WO  | Word order<br>A whale blue.                        |
| ^     | Missing word<br>-- A cup ^ tea                     |
| T     | Tense<br>She buy a jacket yesterday.               |
| ?     | Unclear or incomplete                              |
| Gr    | Grammar mistake.<br>They takes a shower every day. |
| WW    | Wrong word (vocabulary).                           |
| Prep. | Preposition  |
| P     | Punctuation  |
| -     | Capital letter<br>sally is a pretty girl.          |
| /     | Separate word<br>She buysa jacket yesterday.       |

**Adapted list of conventions**

Spelling

Word order

----- Missing Word

Tense

Unclear or incomplete unclear or incomplete

Vocabulary

Preposition

Punctuation

Capital letter

Separate these two words separate word

Unnecessary word unnecessary word

(\*) start a new paragraph or write on a separated line.

Put together these words Put together these words

## APPENDIX E

### Interview

*R: Researcher  
teacher*

*CS: Cultural Studies teacher*

*S: Science*

*R: Well, thank you for taking this time to answer this interview and to share with me your opinions about the students' performance regarding writing.*

*CS: you're very welcome.*

*S: don't worry.*

*R: as you know, I conducted my action research project on writing. I aimed to analyze the effects lateral thinking puzzles on the improvement of writing skills. I know that the students are required to develop some writing exercises and would to know if you noticed any change in the quality of their writing.*

*CS: eh, I... (interrupted).*

*S: well... sorry, you go ahead.*

*CS: o.k. in my class students are asked to write all the time, and I have seen that they have improved their writing skills. I remember that during the first bimester it was of frustrating for them to write their opinions and to defend them with arguments... and I, I have seen that they have improved, and they really need it, I mean, they don't participate in the MUN project, but they have get used to the idea that they will when they pass to 9<sup>th</sup> grade, and now they have a clearer view of different issues studied in class and can adopt a position and defend it.*

*S: yeah.....uhm, what she said is true. Well, the grils don't write that much about their opinions in my classes, but they need to summarize texts using their own words, especially in a project that we have and that they have to write reports in their blogs. I don't know if it is because they do it at home, and they use the computer, and they create their blogs, but they have improved. They write in a more organized and coherent way. They used to start their texts talking about something and then ended it up in a different issue. Now, they focus on a specific thing and develop it till the end.*

*R: thank you. Eh, how do you perceive the attitude towards writing?*

*CS: they don't complain as they used to.*

*S: I've noticed that as well... oops...the bell is ringing, is that a problem or should we meet later?*

*R: no, it's o.k. I can work with the information you just gave me. Thanks again for your time.*

*S: you're welcome.*