Universidad de La Sabana

DOCUMENTO DIGITAL PARA REPOSITORIO

El presente formulario debe ser diligenciado en su totalidad como constancia de entrega del documento para ingreso al Respositorio Digital (Dspace).

TITULO	Promoting the Information Transfer technique to prompt writing skills in ESL students
SUBTITULO	
AUTOR(ES) Apellidos, Nombres (Completos) del autor(es) del trabajo	**Quintero Jiménez, Martha Josefina**

PALABRAS CLAVE (Mínimo 3 y máximo 6)

Habilidades de escritura académica	
La técnica de transferencia de información	
Pantallas visuales	

RESUMEN DEL CONTENIDO (Mínimo 80 máximo 120 palabras)

El objetivo de este proyecto de investigación consiste en investigar los posibles resultados dada la promoción de la técnica de transferencia de información con fines académicos, en un grupo de siete estudiantes que están obligados a tomar el examen IELTS para la matrícula profesional. Este examen incluye una tarea de escritura que se basa en la información presentada en determinados gráficos, tablas o diagramas. Los estudiantes involucrados en esta investigación han estado luchando con las maneras de abordar esta tarea de escritura (IELTS Writing task 1). La transferencia de información surgió como una herramienta relevante para los estudiantes de interpretar la información contenida en gráficos visuales en forma escrita. La técnica mencionada se aplicó con éxito en este proyecto. Después de la implementación los participantes mejoraron la fluidez, el vocabulario y la gramática en su producción escrita. Los resultados también indican que proveer a los estudiantes con esta técnica ha tenido efectos positivos sobre la motivación hacia la escritura académica.

Promoting the technique of Information Transfer to prompt writing skills in ESL students

La Sabana University

Master in English Language Teaching-Autonomous Learning Environments

Second Semester, Research in Language Teaching: Seminar

Chía, 2012

Promoting the Information Transfer technique to prompt writing skills in ESL students

By: Martha Josefina Quintero Jimenez

Submitted in fulfillment of the requirements for the degree of

Master in English Language Teaching –Autonomous Learning Environments

Directed by: Claudia Acero

Master in English Language Teaching –Autonomous Learning Environments

Department of Foreign Languages and Cultures

Universidad de La Sabana

Chía, 2012

Acknowledgements

Firstly, I would like to convey my gratitude to the Lord and only God Almighty, Jesus

Christ, and surrender my efforts and strengths for all His blessings and assistance received

during the course of this study.

Finally, I would like to thank my husband for being so patient and collaborative for the

satisfactory accomplishment of this project.

PROMOTING THE TECHNIQUE OF INFORMATION TRANSFER

Abstract

The aim of this research project is to investigate the possible outcomes which result when promoting the technique of Information Transfer for academic purposes in a group of seven students who are required to take the IELTS exam for professional enrollment. This exam includes a writing task which is based on the information presented in given graphs, tables or diagrams. Students involved in this research have been struggling with the ways to approach the IELTS Writing task. The Information Transfer technique arose as a relevant tool for students to interpret the information within these visual displays in written form. The aforementioned technique was successfully applied in this project. After implementation the participants improved organization, fluency, vocabulary and grammar in their writing production. The results also indicate that providing students with this technique had positive effects on their motivation towards academic writing.

Key words: academic writing skills, information transfer technique, visual displays.

PROMOTING THE TECHNIQUE OF INFORMATION TRANSFER

Resumen

El objetivo de este proyecto de investigación consiste en investigar los posibles resultados dada la promoción de la técnica de transferencia de información con fines académicos, en un grupo de siete estudiantes que están obligados a tomar el examen IELTS para la matrícula profesional. Este examen incluye una tarea de escritura que se basa en la información presentada en determinados gráficos, tablas o diagramas. Los estudiantes involucrados en esta investigación han estado luchando con las maneras de abordar esta tarea de escritura (IELTS Writing task 1). La transferencia de información surgió como una herramienta relevante para los estudiantes de interpretar la información contenida en gráficos visuales en forma escrita. La técnica mencionada se aplicó con éxito en este proyecto. Después de la implementación los participantes mejoraron la fluidez, el vocabulario y la gramática en su producción escrita. Los resultados también indican que proveer a los estudiantes con esta técnica ha tenido efectos positivos sobre la motivación hacia la escritura académica.

Palabras clave: habilidades de escritura académica, la técnica de transferencia de información, pantallas visuales.

Table of Contents

PROMOTING THE TECHNIQUE OF INFORMATION TRANSFER

List of figures and tables

PROMOTING THE TECHNIQUE OF INFORMATION TRANSFER

Appendices

Introduction

Our immediate world surrounds us with images; it can be said that people today live in a visual culture where the environment is rich with pictures, drawings, graphs and other types of visual stimulus provided by the television, printed media, and multimedia. However, it seems that understanding what the images convey still remains an issue for many students and professional people. That is the case for a group of learners who took part in the present project. This research paper reports the findings of a study investigating the effects of implementing the Information Transfer technique on writing development of second language learners.

In past years, researchers (O'Louglin & Wigglesworth, 2003; Mickan & Slater, 2003; Lewthwaite, 2007) have investigated candidates' interpretation of prompts, and teacher and student attitudes to IELTS writing tasks. Also, some authors have had interest in "gathering accounts from learners/test takers on their test-taking behavior and thoughts" (Mickan & Slater, 2003, p. 60). Moreover, some other scholars have studied task difficulty and how this is affected by the information provided to the candidate in the writing prompt (O'Louglin, K. & Wigglesworth, G., 2003). These studies have been developed with both native and non-native English speakers and demonstrate the difficulties with the writing component of the IELTS test. In addition, as a general conclusion about those studies, the findings suggest implications for students and for teachers preparing candidates for IELTS examinations. Furthermore, the academic IELTS exam has been adopted in Colombia as a requirement to enter undergraduate and postgraduate programs at university level. It is also used to determine English language proficiency for teachers in higher education

institutions. Participants of the present research project were not strangers to this examination. Each had failed to reach the minimum score required for employment in American health care institutions, and each reported the writing task was one of their weaknesses. The challenges reported in the literature and experienced by test subjects of the IELTS writing task called the researcher's attention to investigate the underlying issues and to propose an intervention to improve writing process outcomes.

The students reported anxiety and reluctance about taking the Academic IELTS Writing Task 1 (AIWT1); therefore, the aim of this research is to decrease the anxiety of IELTS test subjects through the implementation of the technique of Information Transfer.

Statement of the problem

Nowadays students find that their environment is filled with visual, electronic, and digital text which integrates different modes of text to create meaning and to convey messages (i.e. audio design, visual design, photos, electronic books, mobile web, video, etc.) (Ajayi, 2009). The information they receive is a combination of visual images, hypertexts and written texts presented in books, other printed materials, and on the Internet. Therefore, texts today are no longer read in a linear way as in traditional forms from left to right. Moreover, students are required to use a variety of cognitive strategies to understand and interpret different forms of visual representations found in their printed-material and other modes of texts (Serafini, 2011).

The aforementioned paragraph can be understood as a picture of what happens nowadays in the educational field in the world. The society is living new ways of receiving

information due to the advances in technology. Students in higher education not only use textbooks but can have access to information through sources which are a click away from them. Most of the learning materials (printed or digital) students use are full of visual and hypertextual elements that require from them certain cognitive skills (attention, symbolic thinking, reasoning, perception, etc.) to comprehend the visual language among other aspects implicit in printed and multimodal texts. Following those ideas, this research project is based on an investigation done with a group of adults who struggle with the understanding and interpretation of visual displays as those used in the Academic IELTS Writing Task 1 (AIWT1) such as graphs, charts and tables. Therefore, students taking the AIWT1[1] should have certain knowledge and strategies on how to approach a visual display as well as the appropriate skills they must also have to execute a written interpretation of information conveyed by graphs to achieve good marks on the examination. Nevertheless, it is not this research project intention to delve into the requirements of this international exam. This writing task was taken as an example of the concerns which arose from the participants of this project while writing descriptions of diagrammatic representations.

Since this was the first time the researcher worked with this group of students, a pre-questionnaire (Appendix A) was applied. The aim of this tool was to find information about students' opinions about writing. The results of this pre-questionnaire showed that five of seven students were fearful of writing because they did not know how to write. Also, 6.3 % of the students expressed that they were not taught at school to write using the

---

[1] AIWT1. It stands for Academic IELTS Writing Task 1. IELTS is an international English language testing system that enables candidates to start their journey into international education and employment. This proficiency test is comprised of components of listening, reading, writing, and speaking skills. The Writing Task 1 deals with the description of diagrammatic representations. Candidates are required to write a 150 word-paragraph.

academic style, but were asked more about simple narrations of short stories (e.g. describing their vacations). Students reported that they could not write effectively, which hindered them from making professional progress. Besides, students manifested their concern related to the writing component of an international exam they were required to pass in order to assure a future job. They indicated they had lost points in the writing component of the IELTS exam due to their inability to describe graphs. Students recognized their limited vocabulary and grammar to express what graphs meant in an appropriate and accurate way.

Our world has always used different visual displays to convey information found in textbooks, the media, and printed material; so one could think that people are used to reading images displayed within their environment. However, sometimes students have difficulties comprehending information depicted in graphs. Most importantly, however, is that teachers might not be prepared to teach students how to think critically about diagrams and graphs placed in their routinely lives.

In consequence, the purpose of this research project is to help students face their encountered problems with understanding diagrammatic displays. Therefore, three instruments to collect data from the participants of this project were used: learning logs which helped the researcher get information of what these learners would achieve through the implementation stage; field-notes that were an important tool for the researcher to take notes of what happened in the classroom; and the students' artifacts (written tasks and pre/post tests) which evidenced students' progress of their writing skills and understanding of the Information Transfer technique. Moreover, the researcher adopted the content analysis and grounded theory methodologies to analyze the collected data. The

interpretation of the data which is the analyst's impressions of the data (Cohen, Manion & Morrison, 2007) underwent a process of generating, developing, and verifying concepts to finally produce the categories and the core category of this present research project.

Students were introduced to the technique of *Information Transfer* (Weissberg, 1987; Nation, 1988; Novick, 2004) as a way to solve their comprehension and effective development in interpreting information given by some diagrammatic representations such as graphs, charts, and tables. Therefore, helping students deal with this issue would assist them at least with a minimum of vocabulary and structures to improve their academic writing to succeed in their goal.

Furthermore, this group of participants not only needed appropriate tools to interpret visual displays but a possible way to develop academic writing skills. The researcher proposed the *process approach* as a methodology to provide students with strategies to start their process of writing to facilitate improved results during, while and at the end of the implementation stage of this project.

Lastly, this project not only encouraged students to develop their writing skills, but also served to motivate them to pass the IELTS exam; students also seemed motivated to get engaged into the understanding of visual literacy which might have been seen as a door towards a better performance in their professional or personal interests.

Research Question

The following are the central question and its supporting sub-question which were answered in this research project:
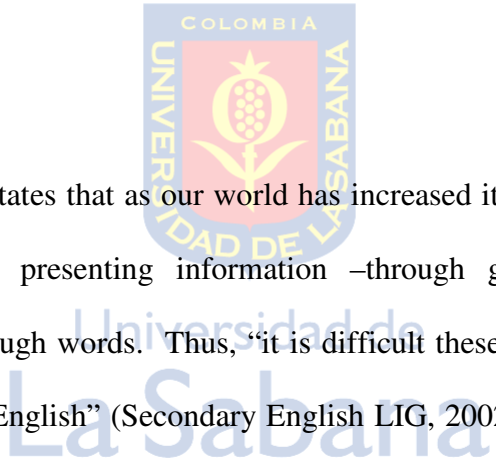
- How does the technique of Information Transfer contribute to ESL students' academic writing development when interpreting visual displays?

- What does the technique of Information Transfer tell us about students' writing process?

Research objective

- To analyze and explain how the use of the Information Transfer technique affects students' writing.

Rationale

Goodman (1996) states that as our world has increased its rate of using technology there are new ways of presenting information –through graphics, pictures, layout techniques as well as through words. Thus, "it is difficult these days to find a single text which uses solely verbal English" (Secondary English LIG, 2002, p.2). This suggests that schools and institutions will need teachers and professionals who can provide students with visual strategies to understand the signs and symbols that are used to construct meaning. Otherwise, learners will not develop the skills necessary to comprehend images.

Participants in this project expressed their incompetence to compose a text in which visual displays were used. Moreover, these learners mentioned that they had a low performance in academic writing as they had never composed these types of texts at the university. Although these students, language pathologist professionals, were used to write reports about their patients they never realized these types of documents required an

academic style. They expressed their knowledge about specific terminology in the health field, but they had not been aware that a text should have a structure organization and that it follow other features being academic texts. Most of the time their reports were reduced to fill a chart with short descriptions of the health evolution of their patients.

This research project would be a benefit to a wide range of students who feel frustrated when facing a written task similar to AIWT1. Teaching writing in the classroom should be carefully and sequentially developed to tackle important problems learners face when asked to write a text which can go from a paragraph to an essay or lab report. Consequently, the aim of this study was to provide students with strategies and tools to achieve an effective writing process. On the one hand, the *Information Transfer* technique was introduced and worked with the participants of this project; this technique sought to give students insight and skills to write well-constructed paragraphs in which visual displays were the object to be described. On the other hand, the *process approach* used as the method to develop writing skills, pointed to the need to facilitate scaffolding in the process of students' writing.

Knowledge about diagrammatic representations seems to be a topic to be taught at schools in order to prepare them for university level writing (Weissberg, 1987). Shah (1997) claims that "graphs are unique compared to other diagrams and visual displays" (p. 94). That is, the information given by a graph is systematically related to that graphic representation. Graphs represent quantitative properties of either concrete objects or abstract concepts. Therefore, considering the degree of difficulty reading a math or statistical graph implies the researcher hoped the educational community to understand the

complexity of diagrammatic representations far beyond the visual literacy students are taught at school (photos, drawings, pictures in magazines).

Equally important to take into account in the learning process of students at school is the instruction towards academic writing they can receive. This research project proposes the process approach as a methodology which may guide students to learn to write academic texts effectively. This writing approach provides students with a sequential set of actions such as planning, pre-writing, drafting, revising, and editing (Hedge, 2003) which can be helpful in the generation and organization of ideas to write texts at an academic level.

In order to give a smooth sequence to this study, the organization of chapters is as follows: Chapter one presents the context of the problem and the introduction of the research questions and objective of this project. It also gives a general view of how the researcher defined her research question based on the results of a pre-questionnaire applied to a group of professionals who had difficulties understanding the AIWT1.

In Chapter two, some salient features of the writing process and skills development will be discussed as the constructs of this study. They are the process approach, academic writing, the technique of Information Transfer, and visual literacy. This chapter also includes studies done in writing skills with native and non-native students in order to achieve a better development in their academic tasks.

In Chapter three, "action research" will be addressed as the type of study this project followed in order to reflect on the problem students had with their writing. Moreover, action research guarantees students' confidentiality as a way of protecting their identities

and at the same time making collected data useful and valid in this investigation. Other aspects developed in this chapter are:

- Characteristics of the research population and its settings which are also developed as a context of the circumstances this project was undertaken.

- The three different instruments used to collect data are explained. They provide this study with evidence of what was done during the implementation stage and collect the perceptions of its participants as relevant data for the interpretation of its findings.

Then Chapter four refers to the pedagogical intervention or the implementation of materials and methodologies which helped the students overcome their difficulties. It describes the process the researcher went through to facilitate strategies for students to get over their fear and incapacity to interpret graphs, bars and diagrams.

In Chapter five, the reader will be introduced into the procedures this study followed to analyze data collected during the pedagogical intervention. The analysis was done using *content analysis and grounded theory* which provided the researcher with tools to manage data properly for the effects of answering the research questions.

Finally, the last Chapter recapitulates the conclusions, pedagogical implications, the limitations, and further research concluded throughout this project.

Literature review

In this chapter theoretical constructs will be discussed as they frame this research project based on the review of literature and the state of the art. Firstly, the principal characteristics of *the process approach and academic writing* are established. Secondly, a review of what and how *visual literacy* is seen by some authors in order to foster writing is presented. Thirdly, an explanation of a technique which is related to the interpretation of graphic information, and which is frequently used in academic writing exams the *Information Transfer* is described. As a last part of this chapter, the state of the art is provided as a support of the effectiveness of the process approach and the technique of Information Transfer in teaching writing.
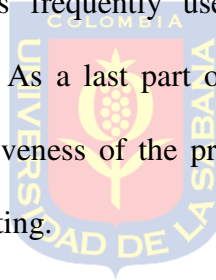
Constructs

The process approach

The teaching of writing in L2 contexts started to be of growing interest all over the world when students coming from different non-English-speaking backgrounds decided to take part of the higher education system in countries which were not their homeland (Kroll, 2003). For many years many schools around the world have recognized the teaching of a second language such as English in their curricula and have also struggled with the issues of teaching writing skills in L2. With that in mind, one could think that teachers of second language should be trained or at least should be prepared "with more than a set of lesson

plans, an interest in their students, and strong skills of their own target language" (Kroll, 2003, p.4). Therefore, schools may guarantee the best possible way to teach writing in order to provide students with strategies and activities of a particular approach. Moreover, writing as a process has been studied for the past two decades (Silva, 1993) and it has been very useful for teachers, first to analyze and second to understand the process before teaching students how to write. As a consequence, writing is a complex field of study in which teachers nowadays have been giving more attention to it as a dynamic process rather than just concentrating only on the product (Scott, 1996).

Students at elementary level or at college often report that they are overwhelmed when they are asked to compose a text. Both groups of learners feel pressure when they have to hand in a final product without receiving help through the process of writing. Some scholars (Hedge, 1998, Holmes, 2009, Richards, 1990) think that to prevent students from seeing writing as a daunting task, learners should be taught to go through various stages before handing in a final product. Those stages which are well described by the *process approach* would provide the learner with strategies to get into the task of writing as something to enjoy see it less complicated to develop (Holmes, 2009). Hedge (1998) states that due to reasons such as short time or pressure of covering the syllabus, teachers have relegated writing to homework without appropriate conditions of learning. Consequently, many de-motivated learners who think writing is difficult and uninteresting are found in the educational settings. Learning to write well seems to involve certain anxiety and frustration for many learners as writing is a difficult and lengthy process (Richards, 1990). It is also seen sometimes as a task of mere grammatical accuracy which prevents its enjoyment. To illustrate this situation, Tsui (1996) wrote about Julie, a young Chinese ESL

teacher who expressed her unhappiness with writing in a journal. When this ESL teacher was a young student, she was taught writing in a product-oriented approach that emphasized grammatical accuracy and rhetorical organization. She associated writing with the words *stressful* and *nightmarish*. Later, as a teacher she associated writing with the word *exhaustion* because she realized her students also failed to enjoy the activity. She understood that just as writing was a problem for her, it was a problem for her students.

Furthermore, writing in a second language is not a simple task for students as they may lack language competence, may not be used to "thinking" in the second language, and may have forgotten vocabulary or grammar structures they are supposed to know (Ariza, 2005). These difficulties often prevent students from advancing in their writing process; as a result students in most educational programs struggle with writing essays and papers in general. However, writing is a skill which is required at universities and in many occupations and professions.

Far beyond the linguistic organization, writing is a difficult skill because thoughts, concepts, and ideas are transferred through a series of complicated mental operations into a text (Richards, 1990). The process of writing involves a number of complicated cognitive operations: "setting goals, generating ideas, organizing information, selecting appropriate language, making a draft, reading and reviewing it, then revising and editing." (Hedge, 2003, p.302). To give students sense and meaning as they begin the writing process, the teacher must help the students develop these cognitive operations. In addition, the written discourse has many dimensions at the macro level of text structure and at the micro level of syntax and vocabulary (Richards, 1990). Those dimensions can be addressed by different approaches such as *the product-focused approach* or *the process approach*.

Hedge (2003) states that "the primary aim of the *process approach* is to help students to gain greater control over the cognitive strategies involved in composing such as thinking, planning, drafting, rereading, evaluating and revising so, the learner can reach the final product through a process. In order to do so, four main points should have to be taken into account before starting to write. They are:

1. Determining a purpose to write.

2. Selecting the main ideas to include.

3. Directing the writing to a specific audience.

4. Deciding on a genre of writing.

Considering the points above, Harmer (2004) suggests that the writer should have a purpose in mind in order to direct his/her writing to a specific audience. The author also adds that the purpose of writing will affect the type of language the writer chooses and how s/he uses it. For instance, the way of designing an advertisement or a letter has a particular vocabulary and construction form that the readers should identify and recognize without difficulty as it is familiar to them. Such readers should be part of a "discourse community" in order to know what a letter or advertisement should look like. That is, any text has an established construction pattern which may be easy to recognize due to proper/particular vocabulary (specialized topic vocabulary, e.g. yours faithfully, formal ending of a letter) (Harmer, 2004). There are different writing constructions ("advertisement", "letters", etc) which are understood as **genres** in which vocabulary choice and register are characteristics which make them different or easily recognizable from one type to another. For example, "literacy fiction" is a genre of English which is different from, say, "science-fiction."

Further, it is with the "knowledges" or "competences" about any writing that genres would have the chance to succeed (Harmer, 2004).

Furthermore, many authors (Hedge, 2003; Harris, 1993, White and Arndt, 1991) suggest following this cyclical process of the *process approach* while in the process of writing.   In the first stage (*planning and pre-writing)* activities are related to ideas the writer wants to write about. The purpose is to help students to generate ideas about any topic in the beginning of the writing process by using any technique such as *brainstorming, list, and graphic organizers* (Hedge, 2003). Moreover, *planning* should be a flexible process which "can be adjusted as the writing progresses and generates alternative ideas and structures" (Hedge, 2003, p.308); meaning, that according to the reader or audience the text can be gradually reformed and changed. In the second stage (composing, according to Hedge, 1998; drafting, White and Arndt, 1991; creating and developing in Harris terms, 1993) construction of the text happens in which the writer's aim is to convey a message to the reader based on information he is familiar with.   It is about the first ideas students come up with to later write down on paper, which means, that they are not ready or finished pieces of writing because the importance of this stage is that students start writing without worrying about spelling and/or grammatical mistakes. After that, a third stage called *revising* makes part of the last steps in the process of composing. The writer makes sure his message grabs his audience's attention. That means the basics of communication should be met for the writer and the reader achieve the desired purpose of communicating. *Revising* has to be encouraged, for students to do it by themselves. That is to say that the teacher's role will be more than being the marker, as it happens in the traditional way of teaching writing. The teacher will support students to improve their papers by careful questioning

that leads students to see progress in their writing. One way of supporting the *revising* stage is helping learners to put ideas together, organize them and find appropriate language for their writings. The last and final stage of the *process approach* is *editing*. It deals with accuracy on grammar structures, spelling, vocabulary, cohesion devices, etcetera. which complete the steps in improving the written document. All these stages should not be considered independently as they are part of a non-linear cycle which makes possible the process of writing and the writer's progress towards a well-developed written text. Writers often plan, draft, edit, but then they go backwards and forwards into the writing process as they may find themselves changing their minds and re-planning, drafting, or editing. It may seem that writers often re-start their process of writing before they feel satisfied with a final draft. Harmer (2004) states that the weight writers put on each stage during their writing process will depend on "what kind of writing we are doing, what medium we are using, what the content and length of our piece is, and who we are doing it for." The author (2004) also explains that sometimes writers do not go strictly over each action as they have developed the ability to put them into their heads as the same time they write. However, without importance on the type of writing people try, they still plan what to write, check and revise what they have written before sending it.

Additionally, the *process writing approach* claims that collaborative work done through discussions and feedback from peers and the teacher may enhance the writing process in the classroom. It is about learning to write through writing and being involved in cooperative work where the experience of checking sentence structure, cohesion devices and the organization of ideas within a paragraph would bring meaningful learning to the participants. The writing process will be significant when the learners are required to go

over and over their work to refine it themselves and not when the teacher is improving it in the marking process. This process is more about learning through experience than the production of a text. Similarly, Hedge (2003) states that "other students and the teacher can be readers: they can question, prompt, support, and provide ideas and language which help the writer to be clear, organized, and accessible to readers" (p.302). This may nurture the writer´s engagement and confidence. The author also states that this writing process approach engages students in the composing experience itself. For the purpose of this project, the *process approach* was considered as a strategy to develop writing with adult students. However, it is not the researcher's intention to use the *process approach* as a unique model which explains learning to write in a second language or how it should be taught.

Nevertheless, it would be enriching to know a little more about the different approaches that exist to teaching ESL writing. Scott (1996) states that L1writing and L2 writing are different because of the control of the language a student should have at the moment of composing. In second language writing the writer should pay attention to many features of the language such as mechanics, word choice, grammar, and syntax. Those features are added to other features such as content, organization, the writing process, and the audience (Scott, 1996). Therefore, a variety of approaches to teaching ESL writing which include both form and content will be here mentioned. A short description of six different approaches to teaching ESL writing is as follows (Scott, 1996):

(1) The controlled-to-free approach, "this approach stresses the importance of grammar, syntax, and mechanics. Generally taught sequentially, teaching writing first involves sentence exercises and then paragraph manipulations" (p.145). As its name

suggests, this approach goes from controlled exercises of writing sentences to a permitted stage in which students are allowed to engage in autonomous writing, thus, when he or she has reached an advance level of proficiency.

(2) The free writing approach, "in this approach, teachers value quantity over quality in writing and do minimal error correction" (p.145). That means students are encouraged to concentrate efforts on content and audience and not that much on grammatical accuracy.

(3) The pattern-paragraph approach, "this approach involves the analysis and imitation of model texts and stresses organization above all" (p.146). This approach has to do with the organization of sentences into a paragraph in which students need to identify the topic sentences and place them correctly.

(4) The grammar-syntax-organization approach, in this approach the student is expected to pay attention to different features of writing at once such as those of grammar and syntax (e.g. to give order, first, then, finally)

(5) The communicative approach, this approach is more about the reality of students with their communicative skills when writing a letter in formal or informal ways.

(6) The process approach arises in the same way L1 writing instruction does, meaning, shifting from product to process. That is, teachers are expected to pay attention in helping students discover ideas, plan, draft, revise, and edit more than the mere final product. In addition, this model was adopted in higher education specially to solve students' academic writing difficulties (Scott, 1996).

Nevertheless, "process approaches do not repudiate all interest in the product, (i.e. the final draft). The aim is to achieve the best product possible" (Steele, 2004, p.1). What is more, Dyer(1996), referring to Hillocks and Horowitz studies, puts process and product together in the concept of the communicative "task" known as task-based writing instruction to teach L2 writing. Dyer (1996) states that "what is lacking in process instruction is the concept of writing tasks specific to the needs of students" (p.313), that is, the relationship between the writer and the audience (the purpose of writing) is far beyond the mere linguistic construction done in the process of composing a text. That is said due to the linguistic structures are acquired into meaningful units rather than in isolation and which communicate something to the reader. These authors refer to "task" as an activity with a specific purpose in the real world and which can guide the learner to produce, solve or undertake an activity which is part of his needs (Dyer, 1996).

Twenty-five years ago, writing instruction used to focus on linguistic and rhetorical form (product-approach) rather than focusing on the writer and the writer's process (Holmes, 2009). Zamel (1985) also states that responding to students who used the product approach prevented them from understanding the notions of writing, thus, students saw writing as a very limited way of producing texts that evolved over time. Zamel (1985) intended in his studies to show teachers that their role in writing classes should be that of facilitating "revision by responding to writing as a work in progress rather than judging it as a finished product" (p.1).

The implemented activities in the present research project also included product writing as its focus is sometimes "on the text rather than on the developer of the text. Consequently, such perspectives focus on "contrastive analysis" and "genre analysis" of the

text and embark upon modeling and analyzing the ideal texts and prescribing the writers to produce the features of such model texts in their writing" (Khabiri & Rouhani-Tonekaboni, 2009, p.54). In the product writing approach there is more focus on controlled writing than on free composing which makes the student's writing process overwhelming (Hedge, 2003). Moreover, some activities carried out during this project implementation used the product approach as to imitate a model text and give importance to the organization of ideas more than ideas themselves in order to provide a way of understanding the Information Transfer technique. That means, that this project used a range of writing approaches from controlled to communicative. This approach was designed to benefit the learners, so they would understand and engage with meaningful activities related to language and communication. In addition, the integration of these approaches may give variety to the writing process in which the student is the center of the process rather than being "item checkers" as Holmes (2009) states.
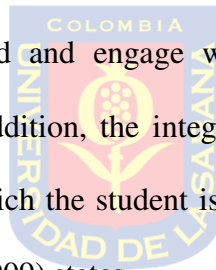
Academic Writing

Academic writing is one of the most common genres that a second language writer might produce in the classrooms at higher education levels. Some types of this genre are *papers and general subject reports, essays, academically focused journals, technical reports (e.g., lab reports), and theses* among others (Brown & Abeywickrama, 2010, p.260). Academic writings are referred to as those written texts belonging to any particular discipline with the purpose of being read especially by discipline specialists or an audience with certain academic knowledge (Elton, 2010). Thais and Zawacki (2006) define academic writing "as any writing that fulfills the purpose of education in a college or

university […]For most teachers, the term implies student writing in response to an academic assignment, or professional writing that trained ""academics""—teachers and researchers—do for publications read and conferences attended by other academics." (Thaiss & Zawacki, p. 4). Other authors (Henning, Gravett, & Van Rensberg, 2002) define it as a process of thinking that uses written language. Based on these two definitions one should think that academic writing is not merely a technical skill but one which incorporates critical thinking.

Thaiss and Zawacki (2006) believe that students at school or university, in many cases, receive a distorted or low instruction about academic writing due to teacher's limited personal experience with academic prose. For instance, the assumption that academic texts should avoid the first person is still taught in the classrooms as if one of the features that underpins the essence of academic writing; "even though many teachers across disciplines routinely accept first-person writing, and journals in every field accept articles with more or less use of the first person" (Thaiss & Zawacki, 2006, p. 5). However, these authors suggest the following characteristics of academic writing regardless of differences among disciplines:

1. Clear evidence in writing that the writer(s) have been persistent, open minded, and disciplined in study. That means the writer should have prepared himself in deep readings and thinking critically about the subject to write about before launching any thought or idea. The authors state that "persistent, disciplined study can be shown as well in a personal narrative as in a lab report, so this first characteristic of academic writing is not restricted in style or voice […] (p. 5).

2. The dominance of reason over emotion or sensual perception. The authors suggest that emotions or sensual stimuli are not exactly absent in academic writing. But, those senses and emotions must be under the control of *reason* which respects the context of the relevant experience of others. That means writers should avoid the mere expression of "feelings" or opinions. Instead the writer should show himself somehow as a reflective and analytical person through his narratives.

3. An imagined reader who is coolly rational, reading for information, and intending to formulate a reasoned response. This characteristic refers to the writer's intention to approach the reader by finding an agreement or his respect towards those ideas expressed in the text and which he may object or reject by using the resource of argumentation. Considering the three characteristics above described, we could say that academic writing is not an easy task to teach to students. For that reason, guidance in the acquisition of academic writing seems necessary for students to produce written texts supported with its essentials.

Another perspective about academic writing is that defined by the University RMIT as it should be "clear, concise, unambiguous and accurate" (RMIT, n.d.., p.1). The author also mentions that the writer needs to compose with an air of authority in order to persuade the audience. He advises writers to plan their topic before starting to write to avoid the audience becoming uninterested or the text appearing directionless. In addition, academic writing is much more than the ability to "construct sentences or compose neatly organized paragraphs with topic sentences" (Irvin, 2010). It requires from the reader and the writer to develop high order thinking skills to respond intelligently to new information found behind complex texts such as research papers. Consequently, some approaches to develop

academic writing have been proposed to address student writing difficulties (Chowke, 2011). They are:

1. The Study Skills Model. This model tends to favor the surface features of language such as grammar, spelling, and punctuation. It ignores the content and context of the writing that can influence individual student writing. However, an author such as Chokwe (2011) strongly suggests the universities to avoid using this model in order to teach academic writing because its mainly emphasis is on the surface level.

2. The Academic Socialization Model. This model deals with the familiarization of students with the different discipline discourses and genres.

3. The Writing process Approach. This model refers to the different actions or activities a writer should go when producing a written text. They include idea generation, composition, rewriting, and editing in order to organize ideas within the text.

Although there are different ways to approach academic writing, it is still in the teachers hand to decide which one or the combination of them might work with their students regarding their needs or the subject-content class (discipline) which requires products such as essays, reports, and other type of academic composition. In the present research project, the writing process approach in combination with others was used as the guidance students could count on for the development of their writing skills.

Visual Literacy

Generally speaking, literacy has been a term which mainly refers to reading and writing. However, a new concept of literacy has emerged since the moment written

language is being accompanied with visual stimuli. That is, pictures or visual symbols within textbooks and printed material are also used with the intention to complete or interpret a message given by the written text. Therefore, the introduction of visual literacy, a new way of communication which implies that "the literate citizen must develop knowledge of visual codes, at least in order to interpret written information" (Secondary English LIG, 2002, p.2). Visual literacy is also described as the "reading" of images.

Because of the influence of technology today, children and teenagers should develop to a certain extent skills to understand and interpret information given by different types of diagrammatic representations. Additionally, students should have a particular knowledge of some disciplines, more broad vocabulary, and critical thought as well as accurate observation to construct meaning from visual displays (Bamford, n.d.). Therefore, the reader needs to have the ability to visualize when he is reading a text, thus, comprehension and reflection can be enhanced.

Seglem and Witte (2009)state that "visual literacy is the ability to understand and use images, including the ability to think, learn and express oneself in terms of images" (p.217). Visual literacy goes beyond the mere conception of images as illustrations and entertainment of narrative stories; meaning, images used to be more an element of ornament in texts rather than the intention of communicating and meaning-making" (Felten, 2008, p.60). Consequently, Felten (2008) adds that despite the fact that our new generation was born and is surrounded by visual stimuli, they need and can be taught visual literacy skills in order to understand what these images communicate. Those skills can be learnt in a similar way as we learn textual literacy. However, visual literacy is not just directed to read photographs, pictures, or images which are found everywhere in the environment.

Students of this new generation are bombarded by many other sorts of visual displays which are more referred to math, science, and social studies. Then, a new literacy called *diagrammatic* arises in the educational settings.

Diagrammatic Literacy

Graphs displays are used in math, science and social studies textbooks; also, in scientific journals, educational software, and media. They can help people understand mathematical functions and social science data. They are also a way of depicting (quantitative) data and scientific concepts in a brief and different mode (non-narrative form) (Shah, 1997).

The National Council of Teachers of Mathematics (NCTM) (Novick, 2004) states that "children should learn how to create and use representations to model phenomena in the world and to organize and communicate [the mathematical] ideas underlying those phenomena" (Novick, 2004, p.70). That is, competence in understanding the real world they are immersed in should be of great interest at schools nowadays to provide students with the right tools to represent information in a depicted form; another concern should be for students to address the appropriate selection of conventional visual representation in order to solve problems and learn to recognize connections between the different types of representations. Therefore, one could think that our students might not have a systematic way to approach graphic representations with some degree of confidence, "particularly in terms of their ability to think critically about the visual 'rhetoric' of a given diagram" (Jackel, 2011, p.1).

Furthermore, the NCTM (Novick, 2004) explains the potential of learning to use graphs as a problem-solving tool. This institution demonstrates that the usefulness of graphic displays seems to derive from sources such as (1) simplifying complex situation through these abstract representations, and (2) making abstract concepts more concrete. These sources require a teacher to be prepared to give instruction concerning the use of various types of diagrams for modeling everyday situations. The last statement makes us think of the importance to having teachers diagrammatically literate. Another important aspect to recognize when teaching to read graphs is that these visual displays have a particular way of achieving them which is referred as graph comprehension.

In the first place the student should know that scientific diagrams are classified into three categories: iconic, schematic, and charts and graphs. "Charts and graphs are diagrams that depict a set of related, typically quantitative, data" (Barker-Plummer, Cox, & Swoboda, 2006). For instance, a line graph can show us how something changes in value as time goes by; a bar graph can show the relation between age and groups of man and women getting married in a certain period of time. Therefore, the learner needs to understand the conventions a graph uses to describe what is happening. For example, to interpret bar graphs the student must understand the relationship between horizontal and vertical axis units. However, conventions have to be seen as something that conveys meaning beyond their composition of graphic elements (Novick, 2004). Then, in order to comprehend graphs three major component processes should be identified (Shah & Hoeffner, 2002): Firstly, "viewers must encode the visual array and identify the important visual features (such as a curved line)" (p.50). Firstly, it might be easier for students to encode absolute values for bar graphs than for pie charts. Secondly, "viewers must relate

the visual features to the conceptual relations that are represented by those features" (p. 50).

That is, students are more likely to relate three data points grouped in the same line as if they are not grouped. Thirdly, "viewers must determine the referent of the concepts being quantified and associate those referents to the encoded function" (p. 51). This third component process deals with the abstract quantitative information displayed by a particular graph. In other words, the viewer's interpretation of data is influenced by characteristics of the type of graph, its content, and knowledge about that graph as explained in the three components above.

Moreover, Jackel (2011) recommends that children should start learning about diagrammatic literacy in elementary school to prevent frustration when they start high school. She adds also that instruction into diagrammatic reasoning should be included into the schools' curriculum. The author also declares the importance of fostering this ability in students as our society is significantly increasing reliance on forms of graphical communication through the use of media, the Internet, smart phone, and other ICT tools. Jackel (2011) believes that the ability to read diagrams needs to go beyond the simplicity of a mere visual display such as photos and illustrations. However, difficulties still lie in the fact that there are numerous of diagrammatic forms used in different disciplines which seem impossible to cover all in one class.

For the purpose of this study, charts and graphs were the diagrammatic representations worked with students along this project. Students were introduced to pie charts, bar graphs, line graphs, and tables as they are the most common images used in the writing component of the IELTS exam. Also important, they were given details of the characteristics proper of each graphic display.

27

Information Transfer technique

The technique of Information Transfer deals with taking information and changing it into different formats. Diem & Thi (n.d.) refers to Palmer's definition of Information Transfer as "an activity involving the reproduction of information either from a diagrammatic or semi-diagrammatic form into a fully linguistic form or vice versa." (p.98). Weissberg (1987) explains the meaning of Information Transfer as the "shifting of information from one modality to another." This technique does not require the student to invent or discover ideas; however, it requires the writer to place the information in an academic language.

Initially the Information Transfer technique was used in the classroom as if describing a picture or a process to someone who did not have the visual stimulus and needed to know what the other knew about the relationships shown in the graph. Its purpose was not only to describe the picture itself but the concepts and connections around (Weissberg, 1987).

Moreover, Nation (1988) suggests that in order to use the Information Transfer technique is better to go from the receptive skills to the productive skills. Similarly, Thi and Loan (n.d.) state that in the use of information transfer, the learner has to go from one skill to another when interpreting graphs, tables and diagrams. That is to say, when using the technique there is a process in which non-verbal/verbal information changes into written or spoken language to convey that information.

In addition, Nation (1988) states that in repeating the information transfer tasks of similar topics will allow learners to get acquainted with the structure of the text and to gain insights about the use of this technique for future activities. Academic paragraphs have the particularity of sharing the same features such as the way sentences are organized within a paragraph. In other words, the text organization which has the same physical structure pattern at the level of the paragraph can be easily applied to other texts. That is the case of the use of the information transfer in description of graphs; the pattern feature found in the description of visual displays may help students in their writing process while using this type of generalizable learning model (Nation, 1988).

Furthermore, Diem and Thi (n.d.) outline some of the advantages the Information Transfer technique provides learners with to understand information around their everyday lives. Among the advantages of the Information Transfer technique are the following:

1. Information transfer occurs in our everyday environment (authenticity); for instance, we transfer visual information into linguistic forms when we explain a map of routes to help someone cross the city.

2. It is a communicative task used to offer help to others through interpreting information presented in visual or symbolic form.

3. Information transfer is a repetitive task as the conventions of diagrammatic or semi-diagrammatic structure are similar. Therefore, the same linguistic equivalent may be used when reading those similar visual displays.

4. It is a productive task which means that students can use it in the classroom as a tool to complete information by means of exchanging with others.

5. It can be seen as a very applicable element in the four skills (listening, reading, writing, and speaking).

6. Finally, transferring information into another mode is seen as a self-access strategy which can help students organize and communicate their ideas. It is seen also as "an excellent learning strategy because it requires learners to process deeply the information that they are dealing with and to deal with two types of encoding of that material" (Nation, 1988, p.20).

Nation (1988) also mentions that using Information Transfer techniques may focus learner's attention on the details of the information used in exercises. That is to say, learners would acquire some knowledge of the world based on the topic the activity deals with. Another source of learning students can gain from a spoken or written text is the vocabulary and grammatical items they use with a high frequency during the information transfer activities. That vocabulary may be one specialized which students may need constantly to refer to similar graphs, tables, or diagrams. Similarly, the information transfer activities may provide students with the use of certain language items (due to repetition) which can be useful in their professional fields, as a result of a meaningful learning.

This research project intended first to help students become familiar with the interpretation of graphs, tables and diagrams through the "pedagogical intervention" stage. Hence students would be able to take information from a table or a chart (visual mode) and present it in the form of a short written description (text mode). Finally, the researcher hoped this technique of Information Transfer would assist students in their writing process so they could be able to describe in detail the information provided by graphs and charts.
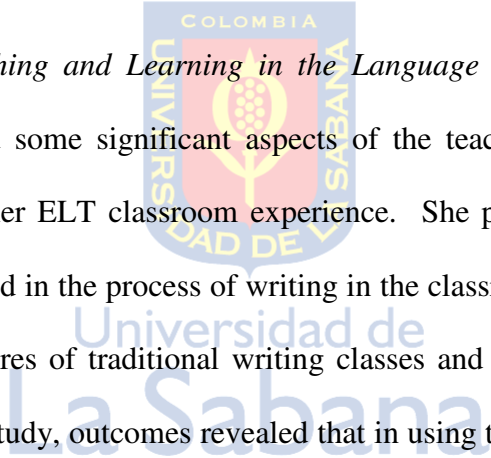
State of the art

Much has been written and discussed about the way the writing process should be carried out (Silva, 1993; Ariza, 2005; Chokwe, 2011), what tips to consider when writing down a paragraph (Nation, 1984; RMIT University, 2007; Purslow, 2008; Harmer, 2004), and skills and strategies students might develop to write an accurate and readable composition (Dyer, 1996; Hedge, 2003; Harmer, 2004). Hedge (2003) states that the best way to teach and learn writing is by doing so. Moreover, writing is not learnt by watching writing or by memorizing techniques; people construct knowledge by doing, thus a student will acquire writing skills by writing (Turan, n.d.). Further, as constructivists state (Turan, n.d.), teachers should get students involved in the process or give them the chance to put their hands into the mud to experience it by themselves; it was this idea which triggered the approach to follow with the group of professionals here mentioned. The researcher of this project refers specifically to *the process approach* which gave learners the scaffolding to use the technique of Information Transfer. This technique was used in this project to facilitate students through the description of graphs, charts, and tables in order to develop academic writing (Weissberg, 1987).

Nevertheless, it seems that writing for young people is boring and unfashionable as teenagers' socialization and education are based upon multi-media experiences and events (Elliot, n.d.). The Language Department of Lisboa University (*Facultade de Letras Universidade de Lisboa)* with John Elliott (n.d.) as a researcher, developed a project to find out and describe the causes of students' lack of motivation to engage in writing activities. Elliot (n.d.) states that after having applied a questionnaire based on students' preferences of the four basic skills (listening, reading, writing, speaking), the responses suggest that

students generally considered speaking more important than writing. Some of these students gave a primacy to *speaking* when they were nearing the end of their courses. Others favored the idea of *writing* as they felt incapable of speaking. However, when Elliot's students realized what writing implies, they reported that their lack of motivation and inspiration was because of the topics that they were given. Their other reasons were that they needed help with organization and planning, with creativity to write arguments, and with register to write to a specific audience among others. Organization and planning make considerably more sense if looking for ways to help students to improve their writing skills (Elliott, n.d.).

In her book *Teaching and Learning in the Language Classroom,* Hedge (2003) helps teachers understand some significant aspects of the teacher´s approach to writing through anecdotes from her ELT classroom experience. She presents one of her studies done with students engaged in the process of writing in the classroom setting. Her students were using both the features of traditional writing classes and the composing experience itself. At the end of that study, outcomes revealed that in using the process approach, weak writers can get support from teachers and better writers can gain opportunities for improvement through discussion, collaboration and feedback. Hedge's (2003) methodology was also considered in this project. Students were guided through both the process and product approach. The aim was to provide students with scaffolding along the writing process done in the classroom. They got engaged in the writing process by doing it by themselves as Hedge (2003) proposes it should be the best way ever done.

Over the past several decades, academic writing in second language has seen a rapid increase in providing non-native writers with learning aids to write with academic style

(Hinkel, 2004). Also, it has been found that non-native speaking students experience a great deal of difficulty in writing at the college and university level. Some reasons for that difficulty in academic writing are due to students' inability to recognize and appropriately use the conventions and features of academic written prose (Hinkel, 2004). Hinkel (2004) explains in his study that faculty perceived second language writers' academic papers to be "vague and confusing, rhetorically unstructured, and overly personal" (p.4). Also, this study found that students' writing lacks sentence-level features considered to be basic in the organization of a paragraph. Therefore, Hinkel (2004) insisted that explicit instruction in advanced academic writing and text is needed to help second language writers become aware of discourse and sentence level linguistic features within academic writing. Hinkel's (2004) study about approaching L2 writing to academically basis were based on four assumptions about learning to write in an L2: "(1) learning to write in an L2 is fundamentally different from learning to write in an L1; (2) applying the same methodology used to teach native speakers to teaching L2 writing is not readily applicable to L2 writing instruction; (3) writing narratives/opinions is not similar to producing academic writing which requires obtaining and transforming knowledge; (4) extensive, thorough, and focused instruction in L2 academic vocabulary, grammar, and discourse is essential for developing the L2 written proficiency expected in general education studies in the disciplines" (Hinkel, 2004, p.6).

As the present research project deals with second language learners it is relevant to mention that authors such as Hinkel (2004) and Silva (1993) have found that although there are some similarities between L2 writing and L1 writing there are also some differences which may lead one to think that L2 writers struggle a little more in their compositions.

Also, there is a coincidence in the cyclical process that L1 and L2 writing share when writers develop the process of writing (planning, writing, and revising) (Silva, 1993). However, Silva (1993) states that there are salient differences between L1 and L2 writing as results of a comparative empirical research he underwent evidenced them. Therefore, the authors suggest that ESL writing practitioners should be advised about the unique nature of L2 writing, "of how and to what extent it differs from L1 writing" (p. 657).

In order to show the differences between the L1 and L2 composition Silva (1993) paid close attention to some salient differences in the sub processes of planning, transcribing, and reviewing. The study reported that L2 writers did less planning. They devoted more attention to generating material, specially figuring out the topic, and less time to succeed in their way to put those ideas into the written text. When producing the written text the study reported that L2 writers spent more time in looking up words in the dictionary which made them consume more time in writing. Therefore, it was found that L2 writers "wrote at a slower rate and produced fewer words of written text" (Silva, 1993, p. 662). In addition, there was evidence that students did not take much time rereading and reflecting on what they wrote. Silva (1993) found that this revising stage did not report differences to L1 revising. There were similar patterns and strategies as those used in L1 writing.

Silva (1993) concludes that L2 writing is simpler and less effective than L1 writing. He adds that composing in a second language is more constrained and more difficult as it could be seen when L2 students tried to generate and organize material. Students' writing was more laborious, but also less fluent and less productive.

In Colombia, not much has been written and researched about writing in academic settings (Sanchez, 2001). However, Sanchez (2001) claims that Colombian students, unlike students in other countries around the world, are not taught to write academic papers or essays. Conversely, most writing tasks focus on developing skills for narration. That is, students do much writing about poems and short stories rather than essays, hence, the poor quality of argumentative or analytical texts at higher education.

Moving to the visual forms students at school and higher education currently are taught, McTigue and Flowers (2011) investigated students' perceptions of science diagrams and their skills related to diagram interpretation with a group of 30 students from middle school. They observed that students did not spend enough time to observe and understand graphics in their science textbooks which were considered complex as little support was offered within the texts (no captions or labels). Some other results of this study drew conclusions about the inconsistency of graphs depicted in textbooks and those found in science trade books. They encountered that the majority of graphics were pictorial in nature (drawings, photographs, and paintings) which did not require from students higher skills to describe. Also, these researchers discovered that not many teachers made commitment to guide their students through complex graphics. Moreover, other results indicate that some students did not understand the functions of diagrams in science texts; however, students valued diagrams with high levels of organization and significant amounts of information. In addition, McTigue and Flowers (2011) think that great amounts of exposure to graphics do not ensure mastery.

Visual literacy teaching had great influence in the educational backgrounds of Colombian primary schools in 1991 when the area of Spanish language as a content-subject

got the attention of the Education Ministry (Villa, 2008). Students are expected to understand the image as an important element of meaning which allows them have interaction with the written text (i.e. understand possible meanings and messages conveyed; analyze and produce other texts). Hence, when students reach high school they are expected to show a more solid knowledge on visual displays.

Another study done with the Information Transfer technique is that of Storla (1993) who used it as a critical thinking activity to provide students with effective writing in the classroom in a four-level intensive English program. Students used the Information Transfer activity to move from graphic stimuli to written texts. These students practice critical thinking by discussing data, reformulating it, and adding their own analysis. Storla (1993) says that students learn better when they start by discussing the information found with others and then they pass it to written form. Doing so will help students learn to paraphrase material and gain confidence as they are learning by articulating on their own rather than just repeating or copying the words of others. The author also states other benefits of the Information Transfer for second language learners: "students get to practice selecting specific information from a larger body of data"(Storla, 1993, p.5). In other words, students in this study worked on deciding what information was more relevant to convey the main facts which were described by the given graph changes. It was found also that these students started a process of using academic skills in order to explain and establish relationships between all the possible comparisons and contrasts given by the visual displays. Once learners could recognize the information, they started to compose a draft where the possible interactions between the subject matter and different patterns of prose development (comparison/contrast, cause/effect, and chronology) were put in a

written form. The activities planned for the class were worked following first a discussion in small groups and then followed-up with whole class discussion. Hence Storla (1993) proved that helping students go from receptive to productive skills will benefit the learner to use paraphrasing and not copying answers from others.

Weissberg (1987) is another scholar who investigated the effects of the Information Transfer in academic writing. This author claims that typical writing assignments given to advanced students of English as a second language do not prepare them for university level writing. However, the use of the Information Transfer technique seemed to be a useful tool to prompt writing in university students. He adds that Information Transfer "may be used to teach the various types of academic discourse commonly encountered by college students: process descriptions, comparison and contrast, categorizing and listing, cause and effect, and generalizing from numerical data" (Weissberg, 1987, p.1). However, teachers should present the visual stimulus to the class in a series of instructional moves to give students confidence of what academic discourse type use. That is, students should have had a lot of practice with similar visual stimuli in order to engage in a task they were already acquainted with. Therefore, pattern features of graphs practiced before will be adopted by students as part of their own writing repertoires.

Throughout Weissberg's project (1987) the technique of Information Transfer proved to be effective to foster students' writing development and to provide them with practice to select information and be able to transfer it from graphic display to written text. Visual forms used in his study were a restricted body of information which seldom required students to invent or discover. Nevertheless, the small selected information from the

graphs students put in written form helped them to "rehearse the cognitive, linguistic and rhetorical conventions common to written academic English" (Weissberg, 1987, p.13).

Equally important, research has been done on the Academic IELTS Writing Task 1 (AIWT1) in areas of cognition and attitude from the perspective of the test taker. Yu and other colleagues (2007) presented an investigation which explores "the extent to which candidates' cognitive processes are affected by the use of different graphs, their graphic skills and English writing abilities, and by the training [exam preparation]." In the mentioned study the authors used the "think-aloud protocols" to determine what cognitive processes were similar among their participants. The researcher found that although students were given a variety of graphs to write about, there was no significant difference in the way students processed the textual instructions. However, the cognitive processes students used differed among candidates depending on the graphs given. Line graphs seemed to be easier for students to describe as they seemed to be the most familiar to them. Other graphs such as the statistical tables were more challenging for students to understand. Nonetheless, this was not the case for all tables; some presented information in a form that did not demand "a complex mapping of syntactic symbols to semantic information" (Yu et al., 2007, p. 394). That is, tables were not related to complex comparisons of trends which require the students to "look at several entries in the table and make mental calculations and comparisons among these values" (p. 394). In other words, the way students processed the information was directly affected by the type of graph they were shown; and which was evidenced in the use of vocabulary and how they would make comparisons between graphs.

Continuing with the IELTS writing tasks investigations, a study on teachers and students' attitudes towards the usefulness of this exam as well as the preparation for it was

done by Lewthwaite (2007). The author researched a group of college students who had to take this international exam as a requirement to enter undergraduate level studies in the United Arab Emirates University. The aim of this study was to anticipate the wide impact (or wash back) of this international exam especially on the attitudes of teachers and learners. Results were, in general, positive as writing tasks were worked in class and shown to be relevant at faculty level; just a few students from *Law* and *Business* faculties reported lack of usefulness. The latter is due to the irrelevance students see of this examination for their future study needs. Positive or negative attitudes towards IELTS exam are mainly attributed to the teacher's influence, and it is based on the ways students are presented tasks of this international exam.

Basically, the process-product approaches and the technique of Information transfer, according to the above mentioned studies , have been seen by many scholars (Hedge, 2003; Abisamra, 2010; Ariza, 2005; Chokwe, 2011: Nation, 1988; Weissberg,1987) as effective methodologies which would support the language learning and writing process of a non-negligible number of students in the world.

Research Design

This chapter is about "action research" in the classroom where the teacher reflects upon their teaching in order to improve or change what is not effective. It also presents the settings and participants who took part of this research project. Moreover, some principles of ethical issues are taken into account to avoid exploiting the participants. The chapter also gives a short explanation of the instruments used to collect data and their validation, reliability and triangulation. At the end, a chart of an action plan is proposed as a guide of the time and stages the project followed during the implementation period.

Type of the study

In order to introduce action research, it seems relevant first to talk about qualitative research. Qualitative research can be understood as an investigative methodology which emphasizes "the importance of looking at variables in the natural settings in which they are found" (Key, 1997, p.1). That is to say, the researcher seeks to make sense of the human behavior by studying in the context in which it occurs and drawing conclusions for that particular context.

Another characteristic of qualitative research is that the tools used to collect data are subjective because the researcher relies on descriptions, interpretations, and observations. The methodology of qualitative research differs from the scientific method (Burns, 1999) which collects data by objective methods. An important element when doing qualitative

research is the participants; the students and the researcher are directly involved with their behaviors and interpretations of situations with particular perceptions and descriptions from their own points of view (Woods, 2006).

There are a variety of types of qualitative research, one of which is known as "Action Research". This project has been designed upon the considerations of Action Research methodology which provides the teacher with a way to gain insight into his own teaching practice and gain more understanding of his students' needs, and his classroom (Burns, 2010). The teacher needs to become a reflective person as well as a researcher to approach his practice in a critical and systematic way. Hence, the teacher should question what he is doing in the classroom in order to change or improve practices that are ineffective. Doing action research provides the teacher with strategies to try new ideas as an "investigator" or "explorer" of his personal teaching context, while at the same time being one of the participants in it." (Burns, 2010, p.2).

In order to tackle difficulties that may happen in the classroom, the teacher needs to collect data which are analyzed to see whether changes or improvements took place. These data are solid information which can be collected systematically by the researcher during an implementation period.

Authors such as Ferrance (2000), and, Chamot, Barnhardt, and Dirstine (1998) describe Action Research as the type of study which "involves people working to improve their skills, techniques, and strategies. Action Research is not about learning why we do certain things, but rather how we can do things better. It is about how we can change our instruction to impact students" (Ferrance, 2000, pp.9). That is, more than dealing with theoretical studies, Action Research serves as a tool for teachers to help them notice and

find solutions of what happens in the classroom through observation and decision-taking. The type of Action Research done here deals with one teacher and her group of students focused on a single issue.

Furthermore, this research project followed ways in which the steps of Action Research have been codified by authors such as Sagor (2005); Cohen, Manion and Morrison (2007); Kemmis and McTaggart (1988) as it follows: *Identification of the problem area* in which concise and meaningful questions are stated by the researcher; *collection and organization of data* in which multiple sources of data are collected by observing systematically what is happening around the research questions. In order to collect data, some instruments should be adopted to collect solid information given by the context, actions and opinions of the participants. After that *interpretation of data* phase comes. This stage has to do with the qualitative analyses of the major concerns useful for the project. Lastly, the *reflection phase* takes place in which reflection and evaluation of the whole process happens, and in response, improvements and adjustments can be made.

The stages above are a basic framework which worked well for the type of action research implemented in this project. It suited the everyday practice of the researcher and the group of participants involved in its implementation.

Context

This research project was developed in a private English language school in Bogotá, Colombia. This language school's main aim is to promote the development of communicative skills in the four basic areas of language: listening, speaking, reading, and

writing. In order to help students develop the four skills, the school provides them with a general English course book. This textbook is an intermediate level for English language adults and young learners. This book constitutes the syllabus of the class with a scope and sequence appropriate for B1 (CEFR)[2] English language level students. Parallel to the student's book, learners are provided with copies related to the IELTS exam. They are about reading and writing task 2, components of the international exam. These two IELTS components are worked on once a month in a course of six hours per week.

On the other hand, this research project has two kinds of participants. One is the researcher who may take the role of participant observer and the other is the group of learners who will play a very important role throughout this project.

According to a study researched by the Familiy Health International ((2011) all participants involved in Action Research should be knowing and contributing participants. The teacher's role is that of participant-observer; this is someone who can obtain a better understanding of a particular problem "by both observing and participating, to varying degrees, in the study community's daily activities" (FHI, 2011, p.13). That means that the researcher tries to learn and gain an understanding of the community context and behavior. In addition, in this project the researcher had the opportunity to live or experience directly, as a participant observer, situations happening in the students' natural settings (the classroom) whilst developing their writing process. As Cohen, Manion and Morrison

---

[2] CEFR. It stands for Common European Framework of Reference for languages. "The CEFR is a document which describes in a comprehensive manner i) the competences necessary for communication, ii) the related knowledge and skills and iii) the situations and domains of communication. The CEFR defines levels of attainment in different aspects of its descriptive scheme with illustrative descriptors scale." Taken from: http://www.coe.int/t/dg4/linguistic/cadre_en.asp

(2007) stated being the participant observer of the project provides the researcher with immediate awareness which would yield more valid or authentic data.

Researcher's role

The researcher of this project had worked with adults, but not with the academic writing component of any international exam. Therefore, the researcher had to investigate and study about the Academic IELTS exam in order to develop appropriate material and lessons for the students in question. Moreover, another role of the researcher during this project was to change students' negative thoughts about writing. The researcher took advantage of her good rapport with students to encourage them in the classroom.

Participants

In addition to the researcher, the other participants are a group of professionals taking courses at a language school located in Bogotá, Colombia, in preparation for using English in academic or professional contexts. Groups at this type of language schools open according to the market demand of the moment. That is, they are comprised of a non-definite number of students, although, there is a minimum of five and a maximum of 15 students per group. In the case of this project, the participants were composed of seven students who met two times per week in three-hour sessions. All the students were Speech Language Pathologists whose ages range between 23 and 30 years. The group was at B1-intermediate according to the CEFR. Their main needs were to improve their English skills

and pass the IELTS exam to obtain a proficiency certification for employment in New York City.

In terms of motivation, these students were very interested in learning English because of an extrinsic factor which was their expectations of travelling abroad to work with an American company at the end of the year. Although this group of students enjoyed their English class, the time spent in class was not enough to practice. Students usually came straight from work feeling tired which was a cause that reduced their attention and sometimes disposition to take advantage of their English lessons. They were very quick at switching code and speaking in Spanish.

In addition, 90% of the students in this study favored a visual learning style in classes. Hence, they preferred to follow the teacher and the tasks by taking notes. Likewise, activities which involved construction paper, scissors, and markers to design posters were of their preference. Some of them liked printing pictures to make their own dictionary by listing words in special notebooks. Others responded more easily to audio stimuli and got engaged to oral participation without being pushed. Those who seemed to be shy and quiet in class were pleased with writing down information; they gave a sense of concentrated on listening to the teacher while taking notes. In general, these students liked listening activities despite the degree of difficulty. However, they did not tire of listening to the same recording many times in order to complete the exercise.

Furthermore, as Language Pathology therapists, this group of professionals frequently faced demands from their boss such as written reports about their patients. More specifically these learners had encountered some difficulties when taking the AIWT1 due to their non-confidence and lack of skills in the writing process. Some of them had taken the

IELTS examination before and agreed that the most difficult skill to develop is writing. In this examination, tables, graphs and diagrams are shown to be interpreted.

Ethical Considerations

When doing Action Research many issues can arise around the relations between the participants involved in any research project. According to Burns (1999) three ethical principles should be considered when conducting action research: responsibility, confidentiality and negotiation. These principles take care of the identity of the students, guarantee the confidentiality of the information provided by the students, and respect the decision taken by participants to be or not part of the project. Consequently, the researcher asked for permission from both the institution where she wanted to conduct the research and from the students who accepted to take an active part in the project, by sending consent letters.

As the Social Research Association (2003) claims, ethical considerations are due to partly data protection and to "enhance responsible behavior … when sharing information that is open to public scrutiny" (Social Research Association, p.35). Therefore, the content of the letters (Appendix B) dealt with questions that gave the participants a view of what the project was about and its implications.

Instruments for data collection procedures

There are many ways to gather information from students in an Action Research project (Nunan & Bailey, 2009). For the purpose of this project, data were collected by

using learning logs (student's view), field-notes (researcher's view), and pre and post-tests plus students' artifacts.

Learning logs

Learning logs are documents of high value for someone's learning. It is considered a personal document which records thoughts, feelings and reflections about one's learning. A learning log may consist of some entries the teacher suggests to the students to encourage them to think about their learning (Stephens & Winterbottom, 2010). This instrument, in this research project, was written by students in two ways: either in their home language or the target language as a suggestion from students.

One good reason to ask students to write a learning log is that they can learn from writing (Sanders, 1985). Students write about their perceptions, their feelings of what was done in the class and what they learnt from it. This instrument does not yield *wrong or good answers* as it contains personal reflections and information that can provide relevant insights of what students were thinking about their learning. Baker (n.d.) states that " the learning log can provide a valuable resource for the faculty member and student to jointly assess the student's learning" (p.11).

This study employed learning logs (Appendix C) over a five-week period, with a class of seven students learning about their writing process at an English language school in Bogotá, Colombia. The learning logs themselves formed one source of data, useful to find out evidence of the participants' own learning process, their strengths and current limitations in writing. Moreover, the learning log's questions were thought by the teacher-

researcher as a way to obtain relevant data in which learners' writing process development and improvement responded to the research questions.

Field-notes

Another instrument used to collect data for this project is called *field notes* (Appendix D). This instrument is seen as strategies for recording data from observation and its organization depends on the researcher's preferences to take notes. That is why field notes are similar to reflective diaries as well. The researcher may include both his thoughts when experiencing in the field, and "reflections on his own life experiences that might influence the way in which he filters what he observes," (Mulhall, 2002). Some researchers consider field notes as something that is built up from two views: professional and personal worldview.

Field notes can be taken in different moments. Sometimes the researcher prefers to record observations at the moment events were observed and some other researchers who delay the writing of a field note at the end of each day, after observations have taken place. Although none of them is considered incorrect, the former may ensure that details are not lost to memory. On the other hand, the latter "may provide a different gloss on the events" (Mulhall,2002, p.312) due to long-term reflection on observations. Furthermore, in this research project, field notes were useful to keep record of facts and personal notes as well in two different phases. Firstly, observational or descriptive notes were taken while in the field; secondly, reflective or expanded notes were taken after the observer had left the classroom.

Students' artifacts

For this research project, the workshop guides, written tasks (Appendix E), and pre/post-tests were considered as artifacts which were useful to validate data at the end of this study. These artifacts have great value related to the information recorded in them: their content, their text.   New York University libraries (2011) states that artifacts "in addition to telling you something about its creator, they provide insight into a culture: its customs, preferences, styles, special occasions, work, and play"(p.1).   Throughout the pedagogical intervention students had to compose a lot of written texts which evidenced students' own style and way of building ideas based on their previous knowledge about the world.   Writing tasks were assigned throughout the implementation stage.   In addition, those artifacts were key to answer the research questions as they were relevant and valid instruments to evidence whether change happened or not. That is to say, the researcher had the chance to analyze a process which was taking place silently inside the students' head.

Validation process

Doing Action Research implies that the validity of data must come from the various interventions researchers develop along the project by using different instruments of data, as in this case, students' artifacts, learning logs, and field-notes. Outcomes may be alike to be used by other teachers in other contexts or subjects in research (Burns, 1996). Moreover, the assertions made about the project data might be triangulated to check their

validity. To do so, different perspectives might be gathered to show similar results from all the instruments involved (Burns, 1999).

Cohen et al. (2007) states that in qualitative research "validity might be addressed through the honesty, depth, richness and scope of the data achieved, the participants approach, the extent of triangulation and the disinterestedness or objectivity of the researcher." (p. 133). That is said due to the subjectivity of respondents, as data is collected from their own opinions, perceptions, and attitudes which may bring a degree of bias. In addition, qualitative methods can address internal and external validity which is connected with the reliability and accuracy of data. That is to say that in the internal validity, data is sufficient to explain the problem or situation that it is researched. That data which might be collected by using different instruments, will give the research confidence to be trusted (reliability). Besides, external validity has to do with the generalization of the outcomes into another similar situation (Cohen et al., 2007). In the present project all data collected was taken from the results the three instruments used yielded. The aforementioned statement has to do with the non-experience of the researcher with doing investigation in the classroom. That is, it was the researcher's first time both working with a component of an international exam and being involved in investigation. The researcher did not have a reference with similar situations (academic examinations) which would infer the data analysis of the present research project.

Furthermore, validity is checked through a triangulation method (Burns, 1999). Burns (1999) defines triangulation as:

Comparing different kinds of data (e.g. quantitative and qualitative) and different methods (e.g. observation and interviews) to see whether they corroborate one

another…This form of comparison, called triangulation, derives from navigation, where comparison bearings give the correct position of an object. (p. 163)

It is important in action research to triangulate the data collected during the project. These data have to be studied from more than one point of view: that is why this project based its data collection in learning logs, field-notes, and artifacts. From these three instruments the complexity of human behavior and situations in which they were involved, provided the researcher with a larger view to analyze -avoiding bias. Results from the instruments were compared to find strong similarities between them, thus, triangulation could take place and data were likely to be valid.

Data collection procedures

Throughout the pedagogical implementation, data was carefully gathered from various sources such as learning logs, field-notes, and written tasks and tests (students' artifacts). For this project the researcher decided to provide students with a *learning log* as the instrument to fill in at the end of some of the lessons taught during the implementation stage. The aim was for students to write their perceptions and insights gained before, while, and at the end of their writing tasks. The learning log consisted of a note with directions and five questions (Appendix C). Each question was designed to collect data that could enrich, answer, and triangulate the research questions. A second instrument used was the field-notes which included the researcher's opinions and observations made in the classroom. Those observations were documented by using the technique of note-taking. The researcher wrote notes at the end of the class, about what she interpreted as students'

strategic behaviors to accomplish their writing tasks. That is, students' comments while developing activities and artifacts (written tasks and pre/post tests).

Design and validation of the instruments and procedures

Learning logs were filled once a week-average and they were done by students at the end of the class. There were seven sets of logs which were collected counting from the first week to the last day of the implementation stage. Students were taught how to fill it in and were given the rationale behind writing their perceptions and ideas about what they had covered and learned in each class.

Students' instruments followed a structure comprised of five entries whose answers provided the research project with data related to the effectiveness of using the Information Transfer technique as a strategy to promote students' academic writing development. The learning logs were piloted the first lesson they were introduced with the generalities and purpose of the research project. In that lesson, students learned about the information transfer technique and how it would be developed through the implementation stage. At the end of the class, learners, for the first time, filled out their learning logs. After revising the instrument with the research seminar professor, the researcher found that they had limited answers and only wrote adjectives such as "good", "interesting", and yes/no short answers. For this reason the learning log instrument was re-structured by reformulating questions and separating positive and negative possible outcomes and adding the expressions "explain" and "give examples". Then, the questions were revised to have a more elaborated form in order to obtain more information which would help the researcher answering the research questions.

To illustrate, the following piece below was the first sample of the instrument design.

Question 2 in learning logs (planning stage): What progress do you see in your writing process using the technique of information transfer? How is it easy or difficult? Give examples.

Student F answer: "*Be more aware of the expressions I´m using. More fluency when writing*.

As you can see the question did not work very well because the answer provided by the student did not say much or did not give evidence of what was difficult or easy for him to accomplish. The researcher was looking for responses in which the student could give examples of what he found easy or difficult to understand or do.

Consequently, the statement was split into three parts in order to elicit more complete responses from students. For example, comparing the statement in Question 2 – already mentioned- this was the new version of the question:

Question 2: What progress do you see in your writing process using the technique of information transfer?

Question 3: How is it easy? Give examples.

Question 4: How is it difficult? Give examples.

After having separated the statements, which composed the big question (n.2), the researcher found that more detailed information was collected which produced more significant data.

The researcher gathered data using the field-notes as a means of collecting information on what was observed during the implementation stage. The field-notes were also useful to write down some facts such as the number of students attending class during the pedagogical intervention as this was not the same every single day. The researcher also used this instrument to keep a record of the researcher's perceptions coming from students' artifacts (written tasks, pre/post-tests). That is, the field-notes were useful instruments for this study to obtain in a limited amount of time relevant data needed to improve the students' ways of developing writing tasks.

The researcher's field-notes were piloted with the group of students of this project before starting the implementation stage. In order to do so, students had to take a pre-test and after it, they had to express their opinions on how they felt based on the type of reading and writing exercises given. They had to answer appropriately to the organization of sentences in a paragraph and some gap fill exercises. After that, the field-notes instrument was useful in obtaining information that evidenced students' writing development and the usefulness and effectiveness of the Information Transfer technique throughout the writing stages. Data collected in the field-notes included a certain structure in which the sequence of activities, the students' performance, and what participants expressed or felt were recorded in order to answer the research questions of this project.

Lastly, students written tasks which were developed during each class were used as artifacts for the purposes of this research project. At the beginning of the pedagogical intervention written tasks given were as simple as isolated sentences that described a graph or a table. Later on, the tasks became more elaborate. Moreover, artifacts were collected in three stages: in the second week, fifth, and tenth week of the intervention. In addition to

written oriented-tasks done by students, one pre-test and one post-test were part of the artifacts kept and analyzed. These two tests were applied with a main purpose of identifying what the difficulties and types were at the beginning of the process and which improvement were evidenced at the end of the research project.

For this research project, data collection techniques included *field notes*, learning logs, and student writing tasks which were kept artifacts. The three instruments were appropriate to collect data as they permitted the researcher to understand the problematic of the participants' writing skills. Data written in the instruments supplied the researcher with information to interpret what happened during the intervention. All these instruments provided valuable data to find why students were struggling with their writing, how they overcame those difficulties and improved their writing skills.

Pedagogical Intervention

The main aim of this stage of the project was to provide students with strategies and a technique which was designed to help them overcome the difficulties they had with understanding and interpreting information conveyed by visual displays, especially those required by international exams such as the Academic IELTS Writing Task 1. It was hoped that through the technique of Information Transfer and the process approach students would be able to grasp the significance of comprehending some diagrammatic representations in order to describe the information communicated by them.

In order to identify learners' challenges, the researcher applied a pre-questionnaire (Appendix A) to identify students' perceptions and opinions about writing. Based on the students' answers the following information was noted: students thought their limited grammar and vocabulary were one of the reasons they felt uncomfortable composing a text, and even more, their lack of ideas to develop a written task was placed also as a limitation to get engaged with writing. This information made the researcher assume that their expressed apathy and reluctance towards writing compositions in the classroom was a result of the aforementioned statements.

Results can be better seen in Table 1 where "limited vocabulary and grammar" answer had the highest score among students:

Table 1. Results from a pre-questionnaire

Questions	Raw score	%
Limited vocabulary and grammar	7	100
Inappropriate structures to compose (a paragraph)	7	100
Lack of ideas to express thoughts	5	71.43
Apathy and reluctance towards writing	4	57.14
Feel interested in learning how to write	2	28.6
Feel incapable to do writing	1	14.29

The above results were a starting point to think of a research question for this project. It was clear for the researcher that learners needed to deeply, comprehensively and consciously work on the development of their writing skills. The questionnaire pointed out the agreement on the lack of vocabulary and grammar and inappropriate structures as the most problematic aspects when writing. Just over 71 % of learners expressed that they had problems with writing due to lack of ideas to say what they had in mind. However, nearly 30% of the students were interested in learning how to write.

Once the researcher identified the research problem, a lot of ideas emerged to start the pedagogical intervention. The researcher had a better picture of possible things students needed in order to improve their writing skills, so the design of effective and appropriate lessons were prepared.

This chapter illustrates the work done in the classroom with the target students, during the pedagogical implementation process over an eleven-week period (Appendix E). The intervention was done during a 22 hour period of time to "critically inform" (Burns, 2010) what was going on with the situation here concerned. Moreover, lessons designed

for the implementation stage were thought appropriate for students to gain the necessary skills to develop writing through the process approach by using the Information Transfer technique and to achieve the objectives for the research questions.

The researcher also considered it relevant to include a general action plan (Appendix F) in order to inform the educational community and the reader about the time line proposed to accomplish the different stages developed in this research project in a systematic way. The time covered had to do with both the availability of the researcher and the students' period of time involved in the pedagogical implementation.

Instructional Design

The researcher used a lesson plan model from the ICELT[3] format (Appendix G) to write the activities and relevant material worked on during the implementation stage. The lesson plan format included the main aims, subsidiary, and personal objectives which were in accordance with the content or activities to be taught. This format included also the description of materials used and the daily lessons to be carried out throughout the pedagogical intervention.

Before this pedagogical intervention started, the researcher looked for material related to the IELTS exam contents and the requirements to apply this type of examination. The researcher was not acquainted with this international exam so it was completely unknown how to approach this exam in order to help the group of participants. In that order of ideas, the researcher resorted to the search of material related to the Academic

---

[3] ICELT. It stands for In-service Certificate in English Language Teaching. It is a teaching program which main aim is to prepare teachers on their development of language skills in areas such as language awareness and language use in the classroom; planning, teaching and evaluation, and assessment and evaluation.

IELTS Writing Task 1 (AIWT1). Since this international exam seems to be well-known in higher education as a requirement to start graduate studies at a university level, it was not a problem to find printed or digital version of the material (i.e. textbooks sold at bookshops or for free on the Internet). The researcher borrowed IELTS textbooks from friends and free published materials in the web sites (i.e. British Council, IELTS, BBC web sites) with updated information that was helpful to the organization of the lesson plans. The researcher found a lot of free downloadable versions of IELTS sample tests and worksheets that fit the necessities of these students. Useful sources taken from these samples had to do with the instructions and variety of graphs which were of help to familiarize learners about the type of questions asked in the AIWT1 (Burgess & Head, 2005). However, despite the good sources found, materials needed to be adapted regarding the audience needs, class size and time factors to effectively help students overcome their writing difficulties.

Another useful consideration the researcher took into account to implement the lessons during the intervention was the design of five strategies to teach the Information Transfer technique. These strategies were used in the activities worked through workshops (Appendix H). The following are the five strategies briefly explained:

Strategy A. This strategy used model answers at a sentence and paragraph level.

Step 1. The instructor presented model answers and asked students to underline repeated patterns.

Step 2. The instructor helped students identify the target vocabulary, set-phrases, and sentence structure included in the model answer.

Step 3. Students wrote down their own description and used the model answer to make corrections by themselves.

Strategy B. This strategy aim was to teach vocabulary related to the description of trends in graphs, tables and diagrams.

Step 1. The instructor introduced sets of vocabulary (upward/downward changes). She made students aware of the syntactic functions of words by showing examples in a Power Point Presentation.

Step 2. Students followed workshops instructions to individualize movements and later group them under categories.

Step 3. Students wrote isolated sentences that described trends in graphs, tables and diagrams.

Strategy C. This strategy represented activities usually done in reading and writing lessons which is frequently used at schools.

Step 1. The instructor prepared a workshop for students to complete activities using fill-in-the-gap exercises, matching, and find and correct the mistake (lexis-syntax, grammar structures).

Step 2. Students first worked individually and then checked answers with classmates.

Strategy D. This strategy worked on the sentence structure: from a simple sentence to a complex one.
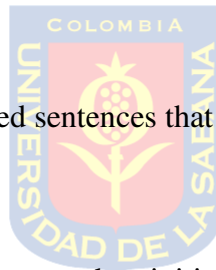
Step 1. The instructor gave students a paragraph in which long sentences were underlined. Students were given examples to shorten sentences.

Step 2. Students had to rewrite sentences. Sentences were taken from a model descriptive paragraph (graph or chart). Long sentences had to be changed into short form.

Strategy E. This strategy was about giving directions to others to draw a graph.

Step 1. Students had to read a paragraph for the others to complete the trends in a graph and then swapped roles.

Step 2. They had to describe orally their graph to the class. The rest of the class was allowed to help.

These strategies helped the organization of the lessons and resulted in guides for students to first get acquainted and later on to make practical the use of the Information Transfer technique.

The following pages describe the design and implementation of some lessons used in the classroom. In the first lesson students were introduced to the main aspects of the AIWT1 exam, and some exam tips were given. Some generalities and hints were studied to be sure that all the students had a minimum idea of what they were required to answer in terms of task achievement, organization of paragraphs, and grammar accuracy, to pass the examination. Tips were provided to clarify the "do's and don'ts" this examination takes into account to mark. A second lesson was given in which students were introduced to the *Information Transfer technique* as a tool to read visual displays. In the third lesson students were proposed to initiate their writing process by following the *process approach* as a new perspective to teach writing which shifts the focus from the product to the process.

After that, more lessons were prepared in which the five strategies to teach the Information Transfer technique through the process approach were worked through workshops. Each workshop was developed following the stages suggested by the process model (i.e., planning, drafting, revising, editing). However, the process was not constrained as a sequence of stages activated in a linear way. Therefore, students could decide a functional way for them to proceed from the set of actions suggested by the process approach.

The following is a short explanation of a lesson taught at the beginning of the implementation stage of this project which included examples taken from the students' environment. First, the teacher showed students a "*Transmilenio map*"[4] (system of transportation in Bogotá, Colombia)(Appendix I) and local domestic flight timetables to identify how much they could talk or say about the information behind these visual kinds of information –Information transfer devices as well. The aim was to break the ice before continuing with other visual representations used in science, math and statistics which proved to be more challenging. This was seen as an appropriate tool because learners were able to easily relate to the difficulties of transportation in their city. The majority of the students could easily interpret the flight timetables. The students and the teacher discussed the graphs and they were told that they had already started their contact with the Information Transfer technique. They were asked about their answers, how they reached those descriptions about the given map and table. Many of the students referred to their regular activities done during the day (e.g. travelling by *Transmilenio*) and other personal experiences (e.g. traveling by plane; television contact). Students expressed their

---

[4] Transmilenio public transportation system. TransMilenio is a system (articulated, two-hinged and feeders) that mobilizes 69% of the population in Bogotá, Colombia. This system has exclusive lanes to ensure rapid movement to the population.

understanding of maps given by the symbols, colors, and types of lines drawn in the picture. The teacher then picked their answer as an opportunity to teach the Information Transfer technique. It was the opportunity to present bar graphs, pie charts, and tables to students. The teacher showed the students a line graph that depicted the number of people using London Underground stations during a certain period of time as shown in Figure 1 below:

Figure 1 London Underground station passengers
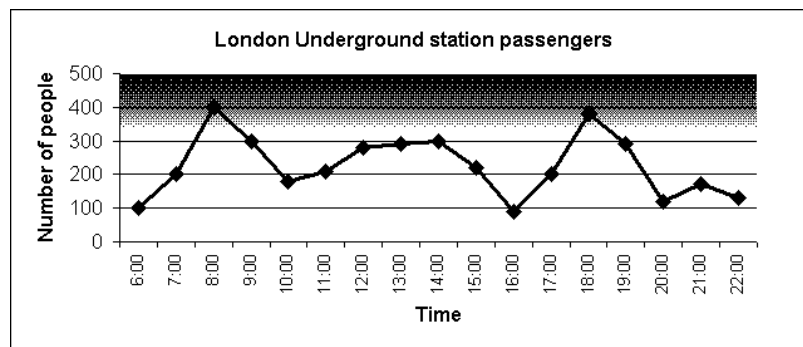
Figure 1 London underground station taken from http://writefix.com/?page_id=202

The learners were asked to suggest what relationships they could identify between the number of passengers and the time. They realized that changes occurred at 8 in the morning and 6 in the afternoon seemed directly related to the rush hours' time. Students had identified and made relationships between the two axes "x" and "y" presented in the line graph. That was the object for the teacher to make them aware that they had done an information transfer exercise because the information was presented into a diagrammatic form and then the same information was put in a linguistic form. Similarly, more workshops (two-hour-long each) with pie charts, bar graphs, and tables prepared the students to understand the Information Transfer technique.

As *process writing* intends to provide students with confidence and practice little by little (Alcón, 2002); learners were guided to work exercises with diagrammatic displays by following its different phases in a cyclical manner. In the *planning and pre-writing* stage, the researcher started by eliciting information, ideas and vocabulary students should know about describing graphs and tables. The *brainstorming* strategy was used to allow students recall as many ideas as they could. Moreover, the aim of this first activity was to provide students with the essentials to start understanding how to read some diagrammatic representations. Scaffolding was provided by the researcher to go from the simple visual displays to the complex ones. In this manner, students could work at their pace and ease in the next stages of the writing process (i.e., drafting, revising, and editing).

Following that idea, the first two lessons were planned to help students with their confidence with graphs, thus, they could face them each workshop without hesitating. Therefore, providing students with clear instructions and the necessary information to complete the information transfer activity would assure them a better writing process. These first two lessons were dedicated to expose learners to work on language. Information transfer devices "focus on the function of language in a given text and draw students' attention to the logical organization of the text […] These activities require students to concentrate on what words, sentences, and other language units do in a given text" (Latorre & Garfinkel, 1982). This suggests that to write information conveyed by a graph is necessary to know the specific language to complete its description. Considering the former arguments, students were provided with phrases and lexis which deal with math and statistics terminology (Appendix J) and which were of specific use depending on the graph shown. For instance, to describe the movement a line graph may have, there is some

specific language which is always the best way to convey information to the audience in order to show upward or downward changes: the number of passengers **decreases significantly** from 6 to 8 pm; at 8 in the morning, passenger numbers **peak** at about 400.

In the exercises the inclusion of new or appropriate vocabulary that describes graphs was differentiated as nouns, verbs, adverbs and adjectives which evidence the type of movement depicted in the diagrammatic representations. Students were assigned an exercise which was based on a text where they had to identify words that represented upward and downward changes. Once words were identified they had to organize them under their possible syntactic function by following a table which contained the labels: verbs, nouns, adjectives, and adverbs (Appendix J). In turn all those words were classified into two groups, one for upward changes and another for downward changes. As a manner to reinforce students' skills, they were asked to write sentences that described suggested line graphs. These line graphs were given as individual pictures for students to write single sentences with the right word according to the movement (Appendix K). This exercise in particular challenged students to understand the slight differences implicit in words such as *fluctuations* and *erratic movements* compared to the pictures they had to match with.

Deepening a little more with other type of exercises, students found that sentences could be written differently, but keeping similar meaning, just by changing the quality of words. For example, verb phrases could be changed into noun phrases: The production of milk <u>increased</u> 20% more than last year. There was <u>an increase</u> of 20% in milk production (Appendix N). The aim of this exercise was for students to understand that words content may produce different grammatical structures. For example, a *verb* should be changed into a *noun* in order to write a different sentence structure: *Numbers **rise** sharply from 6 to 8*

am, changed into *There is a sharp **rise** in numbers from 6 to 8 am*. Although both words (rise) used in these sentences had similar spelling, the exercise permitted the student to see the syntactic differences and learn a new structure as in the example given by *There is* which introduces a noun phrase.

In other lessons students were given prompts which helped them in the composition of new sentences using different expressions that convey the same meaning. For instance, one possible sentence was: *"50% of the Internet users were young adults…"*; students had to find another way to express the same idea with different words or structures, thus, a new phrase could be: *"half of the Internet users were young adults…"*. According to Harmer (2004) giving students patterns that express quantities in the form of numbers or expressions, can offer the writer support to vary their statements in the same paragraph. This exercise may also diminish student's fear if he is provided with a scheme, rather than the sensation a blank piece of paper may produce.

In addition, the information graphs convey may vary regarding the type of diagrammatic representation used. Line graphs have an implicit pattern or scheme to follow which make them different from other graphs. Line graphs can be used to show how something changes over time (NCES Kid's Zone, 2012):

> They have an x-axis (horizontal) and a y-axis (vertical). Usually, the x-axis has numbers for the time period, and the y-axis has numbers for what is being measured. Line graphs can be used when you're plotting data that has peaks (ups) and valleys (downs), or that was collected in a short time period. (p.1)

In contrast, pie charts are good to show relative sizes; its shape is completely different as this is represented by a circular chart divided into sectors and its values are

often represented in percentages.   Being consistent with the characteristics proper of the different diagrammatic representations the researcher varied the activities during the intervention stage so the students could rehearse and learn the vocabulary of graphs.

Later on, the description of graphs was made more demanding and so the production of sentences for the writing process. Students had to write longer sentences which included more information to make complete sentences as those used in the introduction of a text. Students were given short sentences like: *The graph shows the world's top ten languages.* Then, by means of Wh-questions such as *What, where, how many/much, and when*, learners had to write a more complete sentence in which basic information of the graph description was conveyed. After including answers from the Wh-questions the new sentence would have this appearance: *The bar graph shows the world's top ten languages spoken in some European countries between 1960 and 2000*.

Each new lesson introduced students to different stages of the writing process. Students were required to write sentences but at the same time they were expected to give sequence to the information interpreted from the graphs. After the third lesson students were more aware of the use of the Information Transfer technique and so their written production was more demanding. They were required to structure their writing in which an introduction, body, and conclusion were present for the graphs being described.   Therefore, students were exposed to model answers of graphs descriptions (Appendix L). They were given samples in which a graph, chart or table was described. Those models were thought as frameworks in which students could find a guide to follow in terms of organization, sequence of sentences, and appropriate lexis to describe visual displays (Harmer, 2004). Students had time to check what the paragraph included when describing diagrammatic

representations. That is, usually the introduction is about one or two sentences which go from a general to a particular aspect shown in the graph. Then, the body of the paragraph includes the details that support the introduction. Lastly, the last sentence or two sentences are often considered the concluding sentence in the paragraph described.

During this stage of the writing process, students concentrated efforts in writing complete paragraphs. In other words, students were in the drafting and revising stages. These two stages required students to spend time in the organization of the paragraph so coherence and cohesion should be present. That is, the overall clarity and fluency of the message should be evidenced by the linking of ideas through logical sequencing and the varied and appropriate use of cohesive devices should be present along with the paragraph organization. Students also had the opportunity to go over and over their written tasks in order to have a quality product. According to Scott (1996) when asking students to revise their writing works, several effective strategies can be taught explicitly. One strategy is that of leading learners to reread (i.e., read aloud, rehearse in their heads, or by voicing) while they are writing for linguistic accuracy and "clarity of expression". Another strategy deals with content and organization. These two strategies were used with students to make them conscious of their writing process. Although they were not easy to work with and learners struggled somehow, they were able, after many attempts, to make slight modifications in their writings. Regarding the approach used, writing tasks were focused on two main objectives. First, to give students the opportunity to write following the process approach while developing their process of writing; second, take care of the final product which may give account of students' writing improvement (Scott, 1996).

In the last lessons, students worked on revising and editing their written paragraphs. The teacher trained students to edit their drafted work by giving them correction symbols. Also, students were allowed to swap their writings with one another which gave students other perspectives to write or improve their papers (Harmer, 2004).

To conclude, all the activities for this research project were carefully planned so that tasks developed from the more controlled, through guided to free practice. All activities were focused to improve students' writing skills. In addition, all the stages (i.e., *planning and pre-writing; drafting, revising, and editing)* of the process approach were used to help the writer (students) understand the way the writing should be organized, and the style used which depends on the audience. Revising is also thought to be productive if the writer alternates between writing and going back over and over to reflect. The idea of rearranging the sentences or deleting what is redundant should improve the writing (Hedge, 1998). It seems that having a set of actions to follow could help the writer produce effective writing (Hedge, 1998).
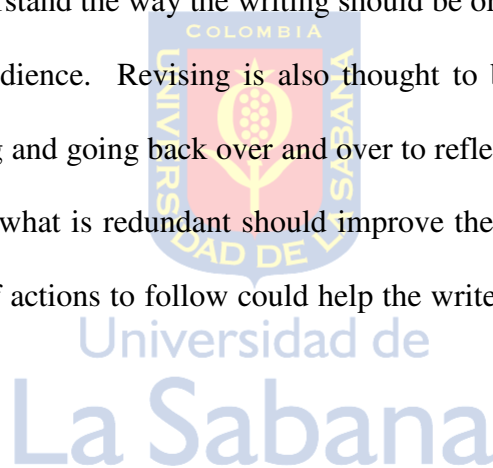
Data Analysis

This chapter is about the analysis done to the data collected during the pedagogical intervention which lasted around 22 hours. Data was validated by presenting information gathered by three different instruments (i.e., learning logs, field-notes, and students' artifacts), and having found commonalities and patterns the researcher put data into categories and subcategories. The researcher followed the grounded theory approach (Strauss & Corbin, 1990) which is a methodology to create theory by analyzing data systematically collected as it has been done in this research project.

Procedures of data analysis

The aim was to provide students with tools to go into the writing process by using the Information Transfer technique and examine their development in writing. In order to validate data found from students' writing process and development, written artifacts, learning logs and field-notes were considered. Those instruments were used to enrich the project as they yielded relevant results for students to gain insights of what their writing learning process entailed.

The information collected was analyzed using the content analysis and grounded theory which are methodologies to reduce and make much more manageable the data gathered (Cohen et al., 2007) from a group of seven therapist professionals getting help to develop their writing. The purpose of using these methodologies is to explain how

information was put together to have a better understanding of the outcomes from the field-notes and learning logs' reflections by contrasting and comparing techniques that could result into words, ideas or concepts towards the establishment of categories. Content analysis allows researchers to classify information systematically into categories (Cohen et al., 2007) in which theoretical constructs of this project played an important part.

Data analysis consists of the separation of abstract units into its constituent elements and the reasons that can emerge from the explanations of these data (Burns, 1999). Therefore, in order to systematize the data, Burns (1999) proposes a framework (adapted from McKernan, 1996) to keep an order of the overall process of analysis. It is assembling the data, coding the data, comparing the data, building interpretations, and reporting the outcomes.

Furthermore, other authors such as Corbin and Strauss (2008) suggest that in order to perform an analysis the researcher can take the data collected and break them apart into their "various components, then examine those components in order to identify their properties and dimensions" (Corbin & Strauss, 2008, p.46). After that, the researcher starts a process of interpretation to give meaning to what the participants have expressed by looking for answers to the research questions. For the purpose of this project some steps were used to analyze all data collected. Firstly, assembling the data which came out from the three instruments used (i.e., pre-test/post-test and students' artifacts, learning logs and field-notes). In this case, it consisted of passing the information into files once were saved on the researcher's personal computer and manual devices (folders); keeping and organizing the data together from the three instruments. Secondly, assigning codes to patterns identified to "reduce the large amount of data that may be collected" (Burns, 1999,

p.157). For instance, some codes such as letters were used to identify where the data came

from; color labels were used to highlight repetitive vocabulary or expressions. Thirdly,

data from the instruments were compared to see whether similar patterns happened.

Fourthly, building interpretations to make some sense of the meaning of the data was done.

As Corbin and Strauss (2008) state this issue of interpretation refers to "the researcher's

understanding of events as related by participants" (p.48).

Furthermore, the field-notes were used up to the point of having repeated data

which gave the researcher overall frequencies during the time observed (Cohen et al.,

2007). It took more than twenty two hours of observation to collect data which helped to

identify and verify categories, also, observed in the other instrument done by students

(learning logs). As to avoid bias with the field-notes, both learning logs and field-notes

were compared together to identify similarities. The similarities in the information gathered

were used as a valid indicator which would give reliability to the data (Cohen et al., 2007).

Assembling the data

Action research is a cycle of action and reflection which requires the researcher to

be aware of the dynamics of data; the researcher should start the process of analysis from

the first day it is decided to get involved into research to avoid the accumulation of big

amounts of data at the end and feel overwhelmed (Burns, 2010).   Analysis of the data

should come at the same time the instruments are applied. It is a dynamic process "in the

sense that they inevitably overlap, interrelate and recur" (Burns, 1999, p.154). Analysis of

data is done when need arises which means it goes forwards and backwards and it does not

have a rigid point of departure as if isolated from the data collection. The researcher of this

project found interesting the fact of having the flexibility to go over the data as many times as thoughts became clear when analyzing. The previous way of organizing thoughts helped a lot to find similarities among the instruments.

The following were some of the steps the researcher used to finally conceptualized and categorize information. The researcher started by entering all the information filled in the learning logs and at the end of the implementation stage the researcher went into the process of analyzing, looking for patterns, and organizing what responses were addressed to answer the research questions. Once the researcher had all the information typed and stored in the computer, files were opened to keep data organized and easy to find. One of the files was to have students' learning logs stored by dates/weeks, and the other was to keep record of the researcher's field-notes which were written almost every single day the implementation stage lasted. Lastly, students' artifacts and pre-test and post-test were kept in manual folders.

Students' logs were organized in chronological order based on the date, and questions respectively. Below each separate question the researcher wrote the names of students with their corresponding opinions. After that, students were given a code letter as their identity in this project for ethical considerations. Having all the learning logs typed in a *MSWord document*, the researcher read each learning log, grouped by date, to find out similarities or differences in what students wrote per question. Similar information was commented on the margins of the word document to look for establishing categories. In each student's responses similar expressions and clue words were highlighted to aid the categorization process. Here the process of looking for **concepts** as the "foundation for the analytic method" (p.51) as described by Corbin and Strauss (2008), started to be applied in

this project. The concepts derived from what the participants expressed and described as experiences and issues through the implementation stage, that is to say, data. However, it was with time that the researcher gained insight and sensitivity to understand and start the process of grouping words, events, and emotions under concepts.

Coding data

Coding data consists of a way to re-organize information, as data can be broken, conceptualized, and put back together in new ways (Cohen et al., 2007). That is to say, codes were developed to identify patterns among the instruments. The purpose of using **coding** is to allow the researcher to reduce large amounts of data into more manageable units such as concepts, themes, or types (Burns, 1999).

Open coding

Once the field-notes and learning logs were typed in *MSWord document*, the researcher started to read all the information contained in both instruments. To be sure that the data collected were useful to the research project, the researcher pasted the two research questions next to each instrument to have a better and clearer picture of what the data could answer. The researcher went over the information several times and used *MSWord highlighting and underlining* function to identify key words and phrases. The researcher also read students' statements one by one and used conventions such as Q1, Q2, meaning question one, and question 2; meaning, those statements would later be important for the analysis process of data.

The following are samples in Figure 2 and Figure 3 show the process followed by the researcher to identify the codes that inform the initial categories:

Figure 2. Screen shot of learning log, August 11th, 2011.

Figure 3. Screen shot of learning log, August 18th, 2011.

Comments and symbols were written next to participant's responses and notes' perceptions. After that, the researcher observed that the majority of the students' answers

had similar expressions and words according to the questions, respectively. Those similarities were highlighted in different colors, and grouped into patterns. At that moment, the researcher had plenty of repeated words, ideas, and phrases which were labeled as the main idea or theme that was expressed around them. Those repeated patterns were part of the conceptual world the researcher took as to categorize the data (Strauss and Corbin, 1990). Similarly, the researcher's notes were also analyzed in a similar way to learning logs. Common information was highlighted and classified by assigning comments and symbols like those used with learning logs.

The process already mentioned is known as "*open coding*" being defined as "the identification of the themes emerging from the raw data (Hoepfl,1997, p.55). *Open coding* method allowed the researcher of this project to analyze and categorize the units of meaning or emerging patterns to select and name the categories from the analysis of data. In addition, *open coding* is one of the analytic tools that Corbin and Strauss (2008) suggest to develop the analysis of the data. Moreover, the techniques of "asking questions and making comparisons" (Corbin, & Strauss, 2008) can be used to code data and through them the researcher could develop concepts which lead to establish categories and subcategories for those data. These two techniques are considered the most relevant analytic tools in action research by Strauss and Corbin (2008) as they allow the researcher with many possibilities to find meaning from the data. For the purpose of this project, these analytic tools helped the researcher to generate ideas and to delve deep into the data opening a variety of broader perspectives and views to describe what it might be meaningful in order to reach conclusions for the research project.

The aim of keeping students' work was to check the first tasks and compare them with the last tasks. The researcher added a new sheet of paper in the front cover of each folder with comments of the changes she could see from the first to the last writing to take them into account for the analysis of data. After that, the researcher's comments were scanned to find patterns with one and another student's progress. Short phrases which described the common factors –labels- were used to group concepts that emerged from the different folders. Moreover, comparing and contrasting the three instruments ensured the validity of the data collected and allowed for triangulation. Triangulation is one of the ways or methods used to validate data in which information gathered from different instruments is corroborated one another (Burns, 1999).

After coding all the information found in the instruments (using color coding and labeling techniques), the researcher started to categorize data by reuniting labels, and short phrases written aside the artifacts, and instruments, all together. Having the expressions, words, and phrases all in one place, two initial sub-categories were named. They are: (1) *Overcoming difficulties to comprehend diagrammatic displays; (2) a. Rehearsal with models (helps paragraph structure); b. Middle and micro level of the writing structure*.

Subcategories emerged from clustering the repeated expressions or words students and the researcher used the most. The idea was to find a more central theme under one phrase or concept which could include all the common responses. In developing a number of different labels for the common responses, the researcher also found that some responses did not fit into any of the two sub-categories. The researcher put those statements into a "miscellaneous" category (Burns,2010) in the meantime, and used that information as useful for the further research chapter of this project. Up to this point, it can be said that as

the information scanned from the three instruments produced similar results, data were likely to be valid. Hence, data were already triangulated.

On top of the two sub-categories, two categories were elaborated. They emerged after the sub-categories were established in order to continue the reduction of data into a more concrete concept. These new concepts or categories showed the researcher direct relationship between the research questions and the information collected in the instruments. The two emergent categories are as follows: *(1) Understanding the utility of the Information Transfer technique in academic writing, (2) Benefits of the technique to writing development.* These two emergent broad themes arose from comparisons made between the three data gathering techniques used in this project. Therefore, frequencies of occurrences (repeated vocabulary and ideas) were identified from the instruments by the researcher in order to come up with the two main categories. In addition, the two mentioned categories had interrelationship which conducted the researcher to concrete into one big and main category. It was defined as *"The Information Transfer as a useful tool to develop academic writing."*

Additionally, the reader can find the two research questions upon what these categories were built:

> **Q1.** How does the technique of Information Transfer contribute to EFL students' academic writing development?
>
> Q2. What does the technique of Information Transfer tell us about students' writing process?

The first category which answers the first question of this study is related to what students did not know at the beginning of the pedagogical intervention, but could achieve at the end of it. It makes reference to all the process in which students went through to get acquainted with the Information Transfer technique. Equally, the second category responds the second research question which let the researcher know about the way students approached the paragraph structure following a set of actions stated by the writing process.

The chart below (see Figure 4) shows a refined version of the categories and sub-categories encountered through the data analysis.

Figure 4. Diagram of categories and sub-categories
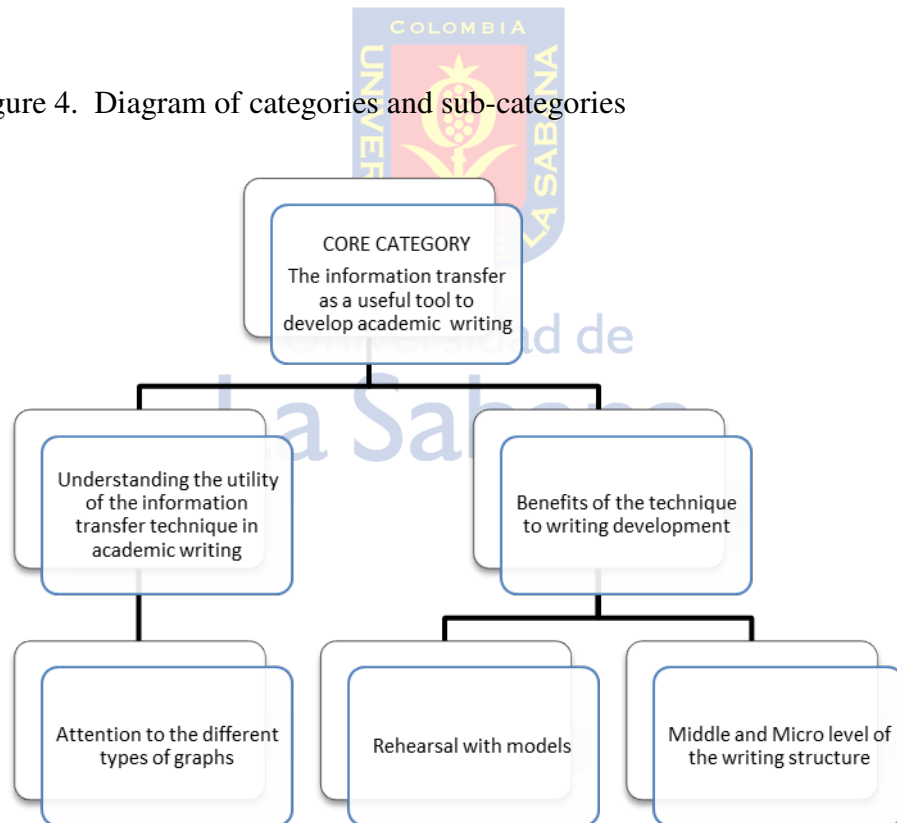
Axial coding and core category

Another way of reducing data is known as "axial coding" which seeks to define a more central category by showing links between categories and sub-categories already identified. This process intends to put data back together again by relating the concepts arranged as categories and sub-categories (Corbin & Strauss, 2008). The linkage of the three sub-categories named as (1) a. Overcoming difficulties to comprehend diagrammatic displays; and (2) a. Rehearsal with models (helps paragraph structure); b. Middle and micro level of the writing structure, brought two new and more elaborated categories named as (1) *Understanding the utility of the information transfer technique in academic writing, (2) Benefits of the technique to writing development, respectively.* After that, a more explanatory descriptor of these two categories came up as the core category which summarizes them: *The information transfer as a useful tool to develop academic writing.* This core category represents the entire structure of the findings of this project; a more concrete name. The following chart (see Table 2) identifies various categories and sub-categories labels that the researcher went through which represented her big efforts to make up her mind. The difficulty to decide final concepts was due to the huge amount of raw data which repeatedly overlapped. However, at the end, the researcher found agreement between the similarities of the concepts.

Table 2. Defining categories and subcategories

RESEARCH QUESTIONS	CATEGORIES	SUB-CATEGORIES
Q1. How does the technique of information transfer contribute to EFL students' academic writing development?	CURRENT CATEGORY: Understanding the utility of the information transfer technique in academic writing. OTHER (PREVIOUSLY): From the unknown to the known in the technique of information transfer. Mastering the technique of information transfer.	CURRENT SUB-CATEGORIES: ▪ Overcoming difficulties to comprehend diagrammatic displays OTHER (PREVIOUSLY): ▪ Attention to the different types of graphs ▪ Language to describe graphs ▪ Understanding the information transfer technique ▪ Being able to use the technique of information transfer
Q2. What does the technique of information transfer tell us about students' writing process?	Benefits of the technique to writing development	CURRENT SUB-CATEGORIES: ▪ a. Rehearsal with models (helps paragraph structure); ▪ b. Middle and micro level of the writing structure OTHER (PREVIOUSLY): ▪ From sentence to paragraph structure ▪ Widening the lexis range ▪ Awareness of mechanics of the language ▪ More accurate use of paragraph organization ▪ Rehearsal of paragraph structure ▪ Repetition of models

Categories

The emerging categories and subcategories derived from the procedures already described will be fully explained in the forthcoming sections of this chapter.

Category 1: Understanding the utility of the information transfer technique in academic writing.

Subcategory: Overcoming difficulties to comprehend diagrammatic displays

Diagrams have mostly been worked in mathematics and geometry for students to represent and reason about phenomena in the world (Novick, 2004). Also, graphs can help students understand science and social science data (Shah & Hoeffner, 2002). However,

certain diagrammatic competence is required to comprehend information depicted in graphs. The following are some samples of what students and the researcher wrote about students' difficulties to cope with understanding diagrammatic representations:

When they were asked about the technique (Information Transfer), the majority of them had not realized that there was a specific way (strategies) of understanding graphs. Moreover, they did not know how to face graphs, what to pay attention to in order to start a description. Students expressed their incompetence to read graphs. Some of them said they even did not know that existed a way to approach graphs.(Researcher's field-notes, August 11th, 2011)

It´s difficult. I didn´t know what to say. Now I know how I should describe any kind of charts according to the data indeed. (Student A, learning log, August 11th, 2011)

I think it´s difficult write, if you have poor vocabulary about statistics and don´t know the way to compair. But also because sometimes I don´t understand how to pass the information of the axis x and y or how to relate. (Student C, learning log, August 9th, 2011)

As read above the researcher took notes of what students expressed at the moment of introducing the technique of Information Transfer. The researcher noticed that most of the students did not know what to say about the graphs given. Students struggled for a while when they were asked to describe a graph. They let the researcher know that they lacked knowledge about the technique. Other concerns such as the comprehension of certain components of graphs (axis X and Y) were put on evidenced as difficult to interpret. Based on the aforementioned statements and according to Pinker (1990) the reader of diagrammatic displays must deal with the understanding of what the two axes in a bar or

line graph represents and the interpretation of mathematical values according to the scales

used. Also, the reader is required to see that the two axes are related to one another and

keep a relation to compare values given in the scales. Moreover, the students in contact

with these types of visual displays should have certain understanding to extract a message

from the graphs. That is, the more the reader is familiarized with the graph's content will

determine his ability to cope with the information a visual display may transmit (Anderson,

Meyer, & Olivier, 2001).

In the next lessons where students started to frequently use the technique students'

responses changed into a more confident opinion. They expressed:

I learned about the technique to approach the picture, about the task and what things I need to consider for describe a graph like: the type of graph, scale title and data written, symbols. The other hand, it is difficult the vocabulary they use, there are words I didn´t know I could use…but I prefer pie charts they are easy. This is new for me. (Student C, learning log, August 9th, 2011)

I learnt to the different kinds of graphs or diagrams that I can find when I am taking the IELTS such as bars charts, pies charts, tables and line graphs. But they are not easy, I didn´t understand that was important in each graph, for example the bar graphs have two different variables but we need to compare them. But also the axis horizontal and vertical are important. (Student E, learning log, August 9th, 2011)

I didn´t know, but now I know that I can build more elaborated data without leave important information. Is easier to describe different kind of charts. I understand that a pie chart is different a bar graph and line graph. (Student A, learning log, August 11th, 2011)

Since the statements above refer to mathematical/statistic content graphs, it is

important to notice that knowledge should enable students to take the essentials of each

type of graph and to extract information that models the specific graph. The students'

excerpts above expressed their lack of knowledge about math/statistic graphs which could have hindered their appropriate and effective development of information behind each graph they were presented. This can be reinforced with Novick's (2004) words when she wrote that "appropriate knowledge is also needed to translate from one type of representation or model to another" (Novick, 2004, p.310). Students were neither familiarize with the variety of graphs that exist nor were they aware of the different kinds of information related to each type of graph. Once students learnt that each graph showed certain and sometimes slightly different information they felt they were able to describe graphs and charts without problem. These students started to show they felt more confident reading images and writing about them throughout the lessons. It was necessary for them to know the minimum of what each graph is about to write properly.

Some other examples from students who felt more at ease to work with the technique once they got acquainted with it are presented here:

Con la técnica siento que pude construir con mayor facilidad el cuerpo del texto. Tengo en cuenta ir de lo general a específico. (Student D,learning log, August 22nd, 2011)

Ahora que entiendo un poco más la técnica realizo introducciones más consecuentes con la gráfica dada.(Student E, learning log, August 22nd, 2011)

me ayuda mucho con el memorizar e integrar adecuadamente el vocabulario.(Student C, learning log, August 22nd, 2011)

The technique information transfer is important to succeed in IELTS writing task, because it has an specific structure not well known, and it is important to learn the details that this exam requires besides a high level of communicative competence in English.(Student B, learning log , August 22nd, 2011)

Nation (1988) states that the Information technique can work better after learners "have had some experiences of the receptive [skills]; these can act as models or examples of the production required" (Nation, 1988, p.17). In other words, the students felt more confident working with the technique after they had read some answer samples (graphs descriptions) which were of help to guide their own descriptions (written production). In addition, one of the students referred to the technique as an important one to succeed in AIWT1, which made the researcher think that these students had not been enough exposed to the technique before starting this implementation. Some other students also expressed that once they understood and differentiated the types of visual representations, they were able to write better statements about the information behind the graphs.

Category 2: Benefits of the technique to the writing development.

Subcategories: a. Rehearsal with models; b. Middle and Micro level of the writing structure.

a. Rehearsal with models

Students also worked with writing models from different graphs and charts. They made revisions by contrasting their draft task with a model with suggested answers. They understood the strategy as a helpful tool which gave them possibilities of assimilating styles of writing and a structure of paragraph organization. The following excerpt showed their capabilities and motivation when understanding and/or being provided with a sample answer. They felt they were not anymore lost or far away of being accurate.

If I have a model I can write faster and with a better structure. (Student B, learning log, August 25th, 2011)

Repeating and repeating in different ways we can remember the same information. It has worked til now. (Student F, learning log, August 25th, 2011)

La repetición y la práctica de la descripción constante de las gráficas .me ayuda mucho con el memorizar e integrar adecuadamente el vocabulario. (Student C, learning log, September 17th, 2011)

I write better the information and to identify better what is the mistake. The examples helped me a lot, that gave me a perspective about what I want to say.(Student C, learning log, August 25th, 2011)

Teniendo presente los modelos de escritos que se me han facilitado, puedo realizar el ejercicio con mayor fluidez. Tengo vocabulario y una guía de estructura para seguir. (Student D, learning log, September 20th, 2011)

As can be read from the excerpts, providing students with writing models help them find patterns which can be recognized from the repetition of similar tasks. Those commonalities found ranged from an appropriate use of words to the improvement of the sentence structure. Similarities found in the texts allowed students to acquire a new type of knowledge as if building their competence towards diagrammatic representations (Novick, 2004). Also, another student pointed that following models could help her in writing fluently as vocabulary and structures are similar in these types of tasks. Helping students with models of finished products will provide them with tools to write improved texts (University writing center, n.d.).

Furthermore, students highlighted the benefits of increasing and learning new words and phrases to describe a visual display. They claimed the importance of having a large amount of words which seemed to give them opportunities to choose the most effective word in the descriptions. It can be assumed that the more words they can have or know, the easier they will write descriptions.

> *How to recognize different graphs. And the vocabulary and expressions to describe them is good to know. I have more to choose, if I forget the verb I will use the noun or similar* (Student F, learning log sample, August 25th, 2011)

> *I can see the importance of the specific vocabulary in description. If I have more words that I can change in verbs, nouns or adjectives I can write more. Understand little differences between words with similar meanings is good for not repetition.* (Student D, learning log sample, September 21st, 2011)

In this type of Information Transfer activities, it is important for the teacher to make the vocabulary evident to students regarding the different words graphs and charts required to describe their trends or changes. As mentioned before, models of written texts were used in the class as guides to provide students with a variety of ways to describe graphs. In these lessons the researcher facilitated strategies to students to find by themselves specific vocabulary and phrases which were frequently repeated in the different studied models. The purpose of doing so was to make students aware of the relevant vocabulary frequently used to interpret information behind different type of graphs. Hence, it could be learnt to use in similar written tasks. Nation (1988) states that in the repetition or high frequency of specialized vocabulary needed for certain transfer of information, learning will take place. In addition, it seems that the issue of understanding graphs goes further beyond the mere use of vocabulary and translation of words. In order to say a person interprets a graph better than another, another issue has to be solve first: the comprehending of a graph is more about a special-purpose mental faculty than just uttering a sentence to say something about the visual display. That is to say, some cognitive processes are involved in order to interpret a graph (Pinker, 1990). The next excerpts evidenced this situation as participants wrote:

> *Working with models many times allowed students to identify patterns (vocabulary) that were repetitive in the different types of graphs (line graphs, bar graphs, pie*

charts, tables). Students looked up some words in the dictionary which had high frequency in the given texts. They made their own table with specific entries such as verbs, nouns, adjectives, and adverbs used to describe graphs. Under each column they developed synonym words as a source to avoid repeating words in the same paragraph. We need to remember that this is a 150-word-writing task. Students found that sentences could be written differently, but keeping similar meaning, just by changing the quality of words. For example, verb phrases could be changed into noun phrases: The production of milk increased 20% more than last year. There was an increase of 20% in milk production. (Researcher´s field-notes, August 23rd, 2011)

Today I learnt vocabulary to describe charts in an accurate and sophisticated way. Now I can know what to say and I don´t confuse much. (Student B, learning log, August 11th, 2011)

The terms like increase and decrease can show me what happen in part of the graph, but I can use other terms that help me to show more details. (Student C, learning log, August 18th, 2011)

Another assumption which can be presupposed in this project, is that the process writing helps to stretch students' vocabulary. Muncie (2002) states that "explicitly concentrating on vocabulary in the pre-writing stage may encourage even greater vocabulary development" (Muncie, 2002, p. 225) The author also states that writing is an opportunity for improving and consolidating vocabulary; which made the researcher think that as students were frequently exposed to similar vocabulary along different written tasks, the internalization of a great amount of new words could have taken place in the students' minds. As can be seen in the following excerpts students expressed their satisfaction not only about having a variety of vocabulary, but its different uses according to the syntactical function in the sentence. Although many of them realized they had learnt a lot of vocabulary, a few thought that learning new vocabulary was sometimes confusing due to its similarities in spelling.

I saw a list of verbs, nouns and adjectives that could be very necessary at the moment of the exam. (Student E, learning log, August 9th, 2011)

Sometimes the use of adjectives confuse me, because they are similar in spelling of verbs, but, I learning that. (Student C, learning log, August 11th, 2011)

I have many new vocabulary, new grammar to describe graphs. I feel better because it is difficult for me. (Student B, learning log, August 11th, 2011)

My progress is vocabulary. A word can be used such a verb, noun, and adjective and it is important understand the differences in meaning and the way to use in a sentence. It is good to have many words for this graphs. (Student C, August 18th, 2011)

I have learnt the ways of using the vocabulary and their differences. I know how to organize and recognize the information to have different productions with the same meaning. The way to organize word to express changes in a chart. (Student F, learning log, August 18th, 2011)

Students worked specifically on content words such as *decrease, steady, go up, go down, gradually* and others which mean nouns, main verbs, adjectives and adverbs, which are all content-carrying. Many of these lexical words used in the description of trends in graphs and tables caused trouble in few students due to their lexical density, meaning, the function of the word. For instance, the word *increase* can have two functions in the sentence: as a verb or as a noun. Likewise, the range of vocabulary the writer can have may affect the quality of writing as to communication, register, or type of text. Additionally, one should add that a well-written composition should make use of well-used rich vocabulary (Laufer & Nation, 1995).

b. Middle and Micro level of the writing structure

This subcategory refers to the different levels writing can be structured. At the middle-level language experts refer to the paragraph, and at the micro-level they refer to sentence structure and academic style (RMIT, n.d.).

As part of the writing process students were assigned exercises that ranged from the composition of simple and short sentences to more elaborated sentences. The idea of providing them with prompts to make elaborated sentences helped them to think of sentences that were appropriate for the description of visual displays. The technique worked well. The researcher and a student expressed it as follows:

> *It seemed to be easy for some students to understand the constructions of sentences by asking questions which lead them to have complete information. For example: Where? When? How much/many? How + verb? (use of adjectives and adverbs) that describes better the trend (if upward or downward movement)*.(Researcher, field-notes, August 18th, 2011)
>
> *Write sentences alone helped me how to use academic vocabulary, and use it well in a sentence*.(Student C, learning log, August 18th, 2011)

Far away from falling into the category of sentence level accuracy, the activities here helped the learner become conscious of the process they had used to compose sentences with a more complex structure: that is, with the inclusion of more information. They learnt that there are varied ways of writing a sentence with the same meaning. They learnt to use the strategy of paraphrasing and functionality of words which worked well for them in the construction of better sentences. In addition, students had gone into a process of building sentences to conclude with a well-structured paragraph.

Moreover, asking students to produce sentences following specific trends, and then organizing them into a paragraph seemed to provide weak students with confidence before composing a full text. Students expressed that despite the challenge they felt they were better prepared than the first time they tried.

I feel I´m facing a challenge. I think I am better prepared now, I understand that having clear details and written in sentences, then I can write a more complete paragraph.(Student D, learning log, 22nd September, 2011)

Ahora es más fácil darle forma a un párrafo.(Student A, learning log simple, 15th September, 2011)

Following the same idea of confidence, this seemed to have resulted after students understood about the information transfer technique and the process approach. The researcher and students expressed it as it as follows:

Se me hace más cómodo ahora ya que tengo un método y es simplemente seguir unos pasos ya establecidos en mi mente, lo cual me hace sentir más relajado y seguro a la hora de escribir. (Student A, learning log, October 4th, 2011)

I feel more confident now because I know the task, I have worked on it a lot and I know what to do. (Student B, learning log, October 4th, 2011)

Me siento más cómoda a la hora de describir las gráficas, ya puedo hacerlo… (Student C, September 20th, 2011)

Despite their difficulties composing complete paragraphs, students see they are capable now to think of the information needed and the structure of the paragraph.

For that reason, they feel happy and motivated to finish the planned activities. (Researcher, field-notes, September 20th, 2011)

Jarvis (2002) claims that confidence is key to learning to write and that all students developing the ability to write should be given enough practice and time in order to obtain courageous and satisfied writers.

Similarly, another aspect students underwent during the pedagogical intervention was related to the production of sentences in order to construct a paragraph. Therefore, some elements of paragraph organization (i.e., coherence, cohesion, logical connectors, discourse markers) were used in students' written tasks up to elaborate a better product. Moreover, the organization and clear division of a paragraph into topic sentences, body, and conclusion sentences are features of the expository paragraph (Time4writing web site, n.d.). As for AIWT1 this writing task follows the same pattern of construction an essay or report should be developed. That is to say, the AIWT1 paragraph obeys a common organizational structure (Harmer, 2004) which could be depicted as the diagram in Figure 5 below shows:

Figure 5. A diagram to represent paragraph structure in AIWT1

INTRODUCTION
- Topic sentence
- It must mention the type(s) of graph(s) to be described

BODY
- Go from the general to the specific
- Mention the trend(s) that are involved
- Details –explanation of data in percentages, numbers, time
- Comparing trends (if suggested)

CONCLUSIONS
- Concluding sentence
- Refering to the topic sentence in brief.
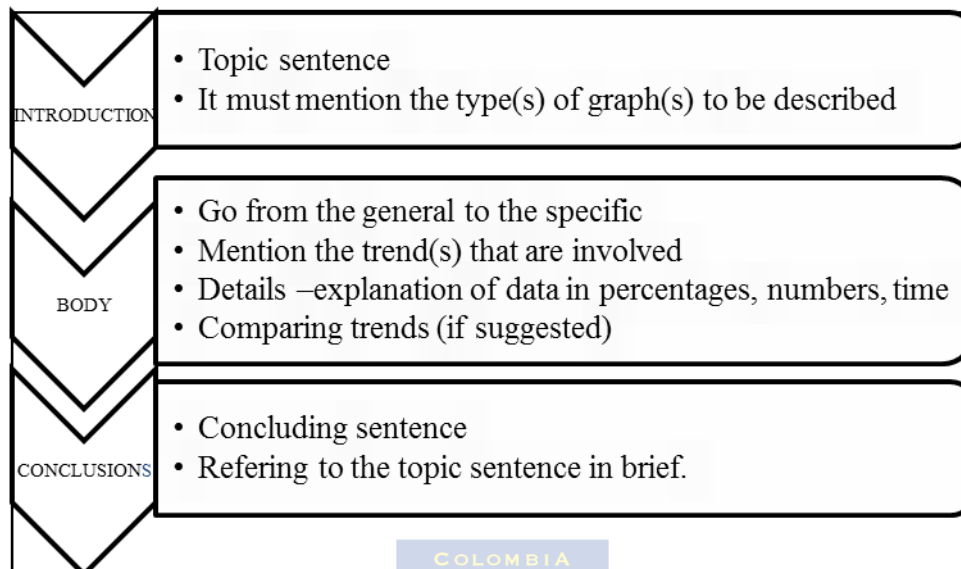
In addition, the shape of academic written texts started to be revealed in the last stage of the pedagogical implementation. Students were able to produce a piece of writing that was clearly organized and sequenced (e.g., coherence and cohesion). The next excerpts illustrate the students' understanding of what a paragraph should be comprised of:

Es más fácil construir un texto coherente identificando muy bien sus oraciones y luego la secuencia.(Student C, learning log simple, September 20th, 2011)

I can write faster, with more organization and more coherence between sentences. (Student B, learning log simple, September 19th, 2011)

Al iniciar el párrafo duro algunos minutos en tratar de organizar mis ideas para plasmar adecuadamente mi escrito. Primero escribo oraciones solas que me digan algo de la gráfica y luego las organizo yendo de lo general a lo particular. Si me faltan cantidades o porcentajes por escribir los completo luego. Creo que poseo

más herramientas para realizar un escrito más coherente y completo. (Student E, learning log, September 17th, 2011*)*

Aprendí acerca de cómo empezar a escribir la introducción y la conclusión. Siento que pude construir con mayor facilidad el cuerpo del texto. Tengo en cuenta ir de lo general a específico. Pienso que va en la introducción y luego en el cuerpo escribo más oraciones relacionadas con la general que va en la introducción. (Student D, learning log, September 20th, 2011)

Realizo introducciones más consecuentes con la gráfica dada. (Student E, learning log, September 20th, 2011)

…Everything is possible if we start with organizing ideas and deciding what is good for the introduction, body and conclusion.(Student F, learning log, September20th , 2011)

Nation (1988) states that coherence within a paragraph means "sentences in the text fit together in a meaningful way." The way these sentences are put together gives the text a structure which helps the reader understand and interpret what the writer wants to say. These sentences also should show the relationships between them within a paragraph, marked by conjunctions and markers (cohesive devices), for the reader to see sequence. Moreover, directing learners' attention to these repetitive language features that happen in well-written texts will help them first familiarize and then be able to identify them in other texts (Nation, 1988). Considering the last statements mentioned, students in this project seemed to be consistent with Nation´s ideas. The excerpts lead the researcher to understand that those language features were understood and identified by these students. Students understood that a paragraph should contain one main idea which usually they place in the

94

first sentence or in a topic sentence. This process makes part of the unity of the paragraph which is one of the features found in the middle level structure of a paragraph (RMIT, n.d.). After that some other sentences were produced and the flow of ideas came smoothly, giving the paragraph a body where supporting details and relationship between sentences happened. Moreover, a logical sequence was possible as they explained they understood that going from the general to the particular was clear in this type of information transfer.

In the next excerpt it can be seen that there is a criteria or strategy followed by the student to insert sentences in the introductory part of a paragraph. The sentence that appears first deals with prominent aspects implicit in the graph and the other sentences that follow it are understood as details. This action, according to Nation (1988), is known as "the amplification relationships" between sentences. That means more sentences will follow that first big idea as details or extension of what has been said. In academic writing terms, the first sentence, which is a general idea, is the topic sentence which will be supported by many more ideas (supporting sentence).

(a) The two pie charts show the different ways an American family spent their budget in 1990 and how their spending customs changed ten years later. (b) Overall, the biggest areas of expenditure are on food, rent, and leisure. (c) In 1990, the biggest single area was food. (d) This accounts for 35% of the average family's expenditure. (e) However, in 2000, food decreased 10% which means that it totaled a quarter of spending. (Student D artifact, Sept 1st, 2011)

The first sentence (a) *The two pie charts show the different ways an American family spent their budget in 1990 and how their spending customs changed ten years later* is the topic sentence of the paragraph. And we can assure this by identifying the

95

conjunction relationship between sentences (a) and (b) *Overall, the biggest areas of expenditure are on food, rent, and leisure.* The relationship is marked by *Overall.* In this paragraph the first sentence is considered the topic sentence as it includes the general topic of what is to follow or be described as in the case of graphs, tables, or diagrams. Then, other sentences (b, c, d, e) which follow the topic sentence expand what it has been said.

To continue explaining the previous excerpts, it is understood that students followed the planning stage of the writing process. Students seemed to have taken into account the three main issues which happen in planning according to Harmer (2004). Firstly, the purpose of their writing, reading a graph, was influenced by the essentials of diagrammatic representations: the language and the information conveyed by graphs, tables, and diagrams. Secondly, the audience the text is written for, thus, the structure of the paragraph and academic language choices were thoroughly considered. Lastly, the content structure which is given by the sequence of facts and ideas students decided to include within the paragraph. Therefore, organizing the information before writing the paragraph was of great help to produce coherent texts. It seemed that it took time for students to put in order ideas as clearly expressed in the excerpts above and which usually happens in the planning stage. In fact, in this stage is important for students to get the habit to think and organize ideas (Lloyd, 2007). In addition, students learnt how to organize a paragraph in a logical order starting with the introduction, developing a sound text (body) and concluding with a brief summary. It is said that once a person masters the planning stage he surely would save time and stay focused on the assignment (Lloyd, 2007). In the researcher's opinion, this step may help these students in the construction of future writing tasks.

In this project the researcher also used students' artifacts to triangulate data with the other instruments. Some written works were collected, kept and analyzed to see students' progress from the first written paragraph to their very last production. Those written works showed how the students improved their drafts by starting with simple sentences lacking information to well-structured, complete topic sentences, supporting details, and closing sentences. The following is an excerpt from a participant during the beginning of the implementation stage. The text below shows the type of sentences she had been able to write at that moment.

> *This is a pie chart. It is divided in 5 segments. The job-related reason is 12%. The personal reason is 34%. The biggest is personal reason. 26% is for other reasons for moving house.* (Student C, August 30th, 2011)

The previous paragraph seems more an isolated description of what the student could observe from the pie chart and it lacks of sequence within it. That is to say, there are no connectors or signal words which make the information flows as one unit between sentences. The paragraph also missed the overall sentence before starting the description and comparison between the different segments in the pie-chart. Also, there is no closing sentence that summarizes what it has been described.

Later on, students' artifacts also showed how their thoughts and ideas were better organized to go into the drafting stage. After a first draft, a second came with more elaborated sentences. In the last stages of the process writing (i.e., revising and editing), students used a checklist to go back over their written works and make sure that they had understood what was demanded from them: to write complete, accurate and structured

paragraphs. To illustrate this, the following example was taken from the last stages of the pedagogical intervention:

(a) *The graph above shows us the percentage of people who used the Internet in a period of three years, from 1992 to 2000.* (b) *The Internet users were organized in four groups, less than 15, 1-30 years, 31 to 50 years and 50 or more.*

(c) *As we can see, in these three periods, people from 16-30 years was the group who used the Internet more frequently, followed by the group between 31 to 50 years whose number decreased softly during the three periods.* (d) *The next age percentage (50 or more) increased gradually from 1998 to 2000.* (e) *Finally, the youngest group, less than 15 accounted for 5% in 1998, 8% in 1999 and 9% in 2000. It grew gradually in this period of time.*

In order to conclude, the group who most used the Internet corresponded to the population from 16-30 years old. It decreased softly during three periods. On the other hand, the group who least used the Internet was people younger than 15 years old. It increased gradually between the three years period (1998-2000). (Student C, artifact, 8th September, 2011)

As in the last example, it is observed the evolution the student C has come to. She improved the structure of a paragraph despite some grammatical mistakes. That is, there is an introduction, the first sentence (a) in the paragraph which let the reader know the type of graph to be described. Equally important, the text provides the reader with key words (nouns, adjectives, verbs) which are appropriate for describing trends or changes over time. The use of appropriate lexis to refer to quantities (numbers and percentages) was introduced making the text coherent and easy to follow. Some signal devices such as *as we can see, finally, the next*, in sentences (c), (d), and (e) were also present and allowed the smooth flow between sentences as well.

Similarly, a pre-test and a post-test were applied in two different weeks. The former was completed a week before the implementation, and the latter was administered the last day of the pedagogical intervention. Having handled these tests in two different periods of time, they were of great help to the data analysis because progress or differences were visible from the first time students took their tasks to the last test applied. These artifacts showed an increase in the number of words and the variety of vocabulary used to describe the visual displays. A clear division of paragraphs –introduction, body and conclusions- was established and accuracy was significantly ameliorated.

To sum up, the findings explained in this chapter are the result of a diligent and comprehensive approach taken by the researcher in order to triangulate data collected in the three instruments used to proof that the Information Transfer technique under the development of the process approach worked satisfactorily for these students. Also, a conclusion could be drawn from these students' advances in writing tasks. Students discovered not only about organization pattern in their writing tasks, but also expanded their language as well; for example, a wider range and use of vocabulary, structure, and coherence within a paragraph. Scott (1996) states that students require explicit guidance when generating ideas as second language writing can be a very complex activity. Students are required to think of ideas on the topic before writing and at the same time, they should think of language of expression which makes it more difficult. The participants of this project were provided with some phrases, lexis and expressions which are useful to link ideas, compare and contrast ideas, and to conclude the paragraph, in order to prompt their writing.

Conclusions and pedagogical implications

In this final chapter the researcher draws some conclusions about the answered research questions, pedagogical implications, limitations, and further research which may encourage other teachers to do research on similar situations this study has worked.

Throughout this project it has been stated the difficulty a group of ESL students faced with a type of writing task which asks them to pass information from one mode to another using the academic style. The objective of this study was to analyze and explain how the use of information transfer affected students' writing. Considering the outcomes and that many institutions in Colombia are asking both undergraduate and professional learners for international exams as a requirement to enter or work with them some other teachers may find this study useful to apply in their high level educational environments. Nevertheless, teachers may find that activities explained here and conducted during the implementation stage need to be adapted to fit the needs of their own settings.

Conclusions

By addressing the research question (How does the technique of Information Transfer contribute to ESL students' academic writing development when interpreting visual displays?) the researcher found that, for the purpose of this project, the Information Transfer technique proved to be effective: It prompted students' writing development and provided them with practice to select information and be able to transfer it from graphic display to written text. The Information Transfer technique helped students organize the information within a paragraph; this information followed an organizational pattern in

which an introduction, a body, and a conclusion could be distinguished; this pattern of structure could lead to produce a more organized text with a certain degree of cohesive and coherent discourse (Abisamra, 2010). It can be, therefore, argued that the strategies used in the implementation stage helped the students focus on the essential elements of a sentence and a paragraph. From these results, the strategies allowed students to learn and find appropriate ways to use the target vocabulary within sentences based on their syntactical order; students gained insight of how to build a complex sentence by starting with a simple one; also, students experienced that using model answers can provide them with elements to compose a complete paragraph in which the structure of organization goes from the general description(s) to the more detailed one(s). Students felt that they had improved their basic structures and vocabulary used in the description of graphs, charts, and tables. Hence, their range of vocabulary increased effectively toward a better descriptive representation of visual forms. In brief, with the introduction of the Information Transfer technique students had a better understanding of how a paragraph could be structured as a whole and how each sentence within it should be related to one another.

In addition, the students' ability to compose description of graphs seemed to be somehow improved. The researcher inferred that the improvement in writing was also stimulated by the process approach used with these students which answered the sub question of this research project (What does the use of the technique of Information Transfer tell us about students' writing process?). In other words, the students effectively perceived the fact of "breaking down the task as a whole into its constituent parts" (Holmes, n.d.). That means that working through stages provided students with a safe and supportive environment to write without pressure and be more ready to corrections and

101

suggestions. Also, the amount of practice during the drafting and revising stages of the writing approach demonstrated to be useful for students to attain certain progress in the development of their writing skills. Students also felt that their anxiety about writing had decreased substantially following a process of writing undertaken into stages.

Furthermore, the researcher cannot agree more with Hedge (2003) that many of these students whose writing process was led through strategies for planning, drafting, and revising may benefit from a process approach even if they had not developed effective writing strategies in their first language. Some of them expressed their satisfaction of having followed steady steps to approach writing before being asked for a final product. It seemed that they had not experienced before the chance of doing by themselves in the classroom, and at the same time getting back feedback after a first draft. Final products were asked mostly as homework and without guidance on how to do it, even least, taking time to do it in their settings.

Moreover, the two research questions were answered as the learners evidenced improvement in their writing skills and learned how to understand their own writing process changing information from visual displays to written forms. Finally and as a particular finding, students could also establish a close relationship with the teacher, so they were not embarrassed anymore to express their limitations when writing.

Pedagogical Implications

Based on the theoretical framework and the findings of this study, a number of implications are identified in relation to the diagrammatic representation's exposure and

comprehension of the student and the approach or approaches used to help students develop their writing process in academic settings.

Considering the time which could be spent to teach writing as a process the current study may be useful for those teachers with small groups of students; in this way, students can get a better assistance in the *revision stage* as it requires going forward and backward many times over the same text in order to refine it. Therefore, each student can get more attention, and doubts or concerns may be solved in a personalized way. Moreover, concentrating efforts on short texts as the ones required in international examinations, will allow the student with much practice as they can go over and over similar tasks. That means, time to refine written works can be taken by students as if non-threatening activities, hence, writing may flow naturally. The previous said can benefit, especially, weak and average students (Tsui, et al., 1996) judging from what they did along the process of writing.

Moreover, strategies used to build a well-constructed paragraph through exercises such as sentence construction and the use of models were seen in this project as effective in improving academic writing quality. Khabiri and Rouhani-Tonekaboni (2009) state that if "writing teachers watch how students go about writing, they can help them develop more effective strategies for writing." That also means that the teacher should adopt appropriate approach (es) for teaching and assessing writing. Some authors (Scott, 1996; Khabiri & Rouhani-Tonekaboni, 2009; Nishigaki, n.d.; Silva, n.d.) agreed that "the process approach to teaching writing skills lends itself more to teaching a wider range of writing strategies." Therefore, one of the reasons in this project to have chosen the *process approach* in combination with other models that chronologically preceded it such as the product

approach and the pattern-paragraph approach, briefly explained in this project, as a methodology to facilitate students their writing as a process.

Another possible pedagogical implication identified in this research project is related to the first contact students may have with diagrammatic representations. The idea is to provide the students' learning about diagrammatic representations with scaffolding by using their own experiences. That is, little by little introduce students to the world of images they face in their school subjects which they are unconsciously familiarized with in their natural environments or ordinary lives. If students are faced with the imagery they are used to seeing everyday one would expect to find a facilitatory effect of visual displays interpretation on texts with diagrammatic representations, such as those present in international exams. Therefore the purpose of reaching students' attention and comprehension of diagrammatic images could be less difficult and fearful in the classrooms. Equally important it seems relevant to make students aware of the variety of visual displays and their conceived purposes the diagrammatic representations serve to for the readers to understand them. For example, a pie chart would be better to model certain variables that a line-graph cannot display. In the world of Economy, a line-graph or a bar chart could be more representative of the analysis performed by the decision maker's perspective on the problem a company might be experiencing. Since this is a group of language pathology therapists and they may be asked to report or interpret an analysis of their patients' progress, these professionals would likely need to understand how to read information put in a table, line-graph, or bar chart.

Limitations

During the implementation of this project there were some situations that contributed to slow the development of the planned lessons. For instance, occasional students' absenteeism as well as the inconsistence of the same number of students attending every single lesson was seen as a difficulty when developing lessons. The group of participants was not the same every class because there were either new students entering the program or students being absent. In both cases, it was like the researcher had to re-start the process to give a little time to explain quickly the purpose of the class, and more, to give some specific details of what the stage and activities were about. Hence, the collection of data could not been done as planned for specific lessons. Further, the smooth continuous writing process was affected by the aforementioned issues around learning the technique which would prompt writing skills. However, despite the difficulties throughout the implementation stage, the majority of the students could complete all the cycles as the process approach states.
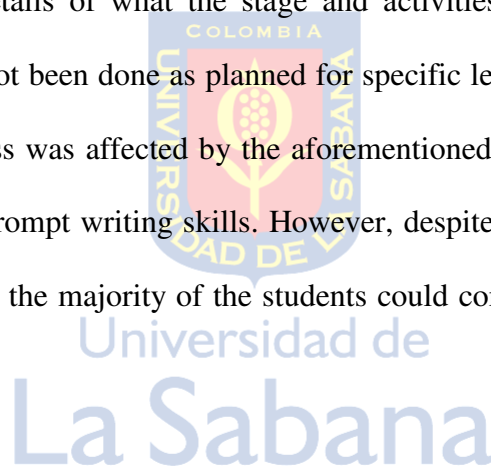
Further research

Tsui (1996) states in one of her research studies that writing involves a lot of thinking and at the same time it also develops thinking. That means that as students have to develop ideas such as how to organize the information, what lexis to properly use, and what linking devices to use, they make great efforts thinking before producing written text. In the researcher's opinion, this could be mentioned as another likely outcome the present study yielded and one of which further research can be done. Meaning, how thinking can affect writing in ESL learners. Nonetheless, it is relevant to mention that Zamel (1983)

already made a study of the composing processes of some ESL students in his writing class and found about how writers write, how their ideas seem to get generated, and what happens to these ideas after they are recorded as well.

Since this project worked with the process approach, students were introduced to peer revision and editing. Many good responses from students towards collaborative work came up. They pointed to the enrichment of learning from others when they exchanged suggestions. Collaborative writing gave students access to others' knowledge, for instance, different writing styles, which can be very motivating for students to enrich their written works (Harmer, 2004). What it was done in the classroom during the revision and editing stages lead the researcher to think of cooperative learning for further research, as students worked together in small groups to help each other in their writing tasks. Johnson, Johnson, and Smith (1991) state that many studies demonstrate that cooperative learning produces higher achievement in students, not before having structured learning groups which the teacher carefully has organized to allow students achieve shared goals. In this project most of the students felt well having their classmates as those in charge of providing feedback on their writings. Both writers and markers saw the importance of reading someone else´s paper. For them, it was enriching the fact that reading other works let them recognize the different styles of writing and much more analyze the structure, content and organization of ideas into the paragraphs.

Moreover, it seems that not many studies have been made around the students' attitude –positive and negative- towards the usefulness of, and preparing for, the IELTS writing tasks. This last statement might work as another topic to do research. That is, the

students' perceptions and progress in writing if they were prepared in class for the types of

writing tasks international examinations propose.

References

Abisamra, N. S. (2010). Approaches to teaching writing. Retrieved from http://www.nadasisland.com/ghaith-writing.html#approaches

Ajayi, L. (2009). English as a second language learners' exploration of multimodal texts in a junior high school. *Journal of Adolescent & Adult Literacy, 52(7)*, 585–595. doi:10.1598/JAAL.52.7.4 Retrieved from http://connection.ebscohost.com/c/articles/37294813/english-as-second-language-learners-exploration-multimodal-texts-junior-high-school

Alcón, S., E. (2002). *Bases linguísticas y metodológicas para la enseñanza de la lengua inglesa.* Publicaciones de la Universitat Jaume I. Retrieved from http://books.google.com.co/books?id=gJuitmqCkpEC&printsec=frontcover&hl=es &source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

Ariza, A. (2005). The process- writing approach: An alternative to guide the students' compositions. Profile, 6, 37-46. Universidad Nacional de Colombia.

Baker, J.H. (n.d.). Teaching tip: the learning log. *Journal of Information Systems Education, vol.14(1).* Retrieved from http://jise.org/Volume14/14-1/Pdf/14(1)-011.pdf

Barker-Plummer, D., Cox, R. & Swoboda, N. (Eds.). (2006). Diagrammatic representation and inference. Proceedings. Library of Congress.Standfor, CA, USA. Retrieved from http://books.google.com.co/books?id=ls2N8dUQ878C&pg=PA9&lpg=PA9&dq=di agrammatic+literacy&source=bl&ots=knuJ1QZb1t&sig=_B-

4GXlmBMWpHyzAhm5tm1JZJXs&hl=es&ei=QBXJTsbwMMrgggeq6pQ6&sa=X
&oi=book_result&ct=result&resnum=7&sqi=2&ved=0CEoQ6AEwBg#v=onepage
&q=diagrammatic%20literacy&f=false

Bamford, A. (n.d.). *The visual literacy white paper.* [PDF document] Retrieved from http://wwwimages.adobe.com/www.adobe.com/content/dam/Adobe/en/education/p dfs/visual-literacy-wp.pdf

Blanton, L.L. (1987). Reshaping ESL students' perceptions of writing [Abstract]. *ELT journal, volume 41/2*, 112-118. doi: 10.1093/elt/41.2.112. Retrieved from http://eltj.oxfordjournals.org/content/41/2/112.short

Bowker, N. (Ed.). (2007). Academic writing: a guide to tertiary level writing. Massey University. Retrieved from http://owll.massey.ac.nz/pdf/Academic-Writing-Guide.pdf

Brown, H. & Abeywickrama, P. (2010). Language assessment: principles and classroom practices. Second edition. Pearson Education, Inc.

Burns, A. (2010). Doing action research in English language teaching: a guide for practitioners. ESL & Applied linguistics Professional series. Eli Hinkel, series editor. Routledge, Taylor and Francis group. New York and London.

Burns, A. (1999). Collaborative action research for English language teachers. Cambridge University Press. United Kingdom.

Burgess, S. & Head, K. (2005). How to teach for exams. Serie editor: Jeremy Harmer. Pearson Education Limited. England.

Chamot, A., Barnhardt, S. &Dirstine, S. (1998). Conducting action research in the foreign language classroom. National Capital language resource center. Washington. Retrieved from http://www.nclrc.org/about_teaching/reports_pub/conducting_action_research.pdf

Chokwe, M. (2011). *Academic writing in English second language contexts: perception and experiences of first year university students and tutors*. [PDF document] Retrieved from http://uir.unisa.ac.za/bitstream/handle/10500/5702/dissertation_chokwe_m.pdf?sequ ence=1

Cohen, L., Manion, L., &Morrison, K. (2007). Research methods in education. Sixth edition. Routledge, Taylor and Francis e-library. London and New York.

Cooper, J. D. (2000). Literacy: Helping Construct Meaning. Boston, New York: Houghton Mifflin Company.

Corbin, J & Strauss, A. (2008). Basics of qualitative research: Techniques and procedures for developing grounded theory. Third edition.Sage Publications. United States of America.

Diem, T.T. &Thi, L.N. (n.d.). *Information transfer use in English teaching*. [PDF document] Retrieved from http://www.tht-japan.org/proceedings/2010/098_103_thi.pdf

Dyer, B. (1996). L1 and L2 composition theories: Hillockc's environmental mode and task-based language teaching. *ELT Journal, Volume 50/4* . Retrieved from: http://203.72.145.166/ELT/files/50-4-4.pdf

Elliot, J. (n.d.). *Motivating students to write. A aplicaçao da teoria a metodologia do ensino das linguas*. [PDF document] Universidad de Lisboa. Retrieved from http://ler.letras.up.pt/uploads/ficheiros/6021.pdf

Elton, L. (2010). Academic writing and tacit knowledge [Abstract]. *Teaching in Higher education,Vol. 15, N.2, 151-160*. DOI:10.1080/13562511003619979 Routledge, Taylor and Francis group. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/13562511003619979

Family Health International (FHI) web site (2011). *Qualitative research methods: a data collector´s field guide.* [PDF document]. Retrieved from http://www.fhi.org/nr/rdonlyres/ed2ruznpftevg34lxuftzjiho65asz7betpqigbbyorggs6 tetjic367v44baysyomnbdjkdtbsium/participantobservation1.pdf

Felten, P. (2008). *Change. Vol.40 Issue 6*, p60-64. Retrieved from http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=6&hid=112&sid=1b064c 7b-6199-4a39-adf0-d98171478c92%40sessionmgr104

Ferrance, E. (2000). *Action Research.* [PDF document]. Retrieved from: http://www.alliance.brown.edu/pubs/themes_ed/act_research.pdf

Goodman, S. (1996). Visual English. In Goodman, S. and Graddol, D. (Eds.), *Redesigning English: new text, new identities*, London: Routledge.

Harmer, J. (2004). How to teach writing. England: Pearson education limited.

Hedge, T. (2003). Teaching and learning in the language classroom. New York: Oxford University Press.

Hedge, T. (1998). Writing. Oxford: Oxford University Press.

Hewitt, R. & Little, M. (2005). Leading action research in schools. State of Florida: University of Central Florida.

Hinkel, E. (2004). *Teaching academic ESL writing: practical techniques in vocabulary and grammar.* Retrieved from http://books.google.com.co/books?id=6g-0NreoXeIC&printsec=frontcover&dq=ESL+academic+writing&source=bl&ots=Xli 0BG8Ef-&sig=FF_3yazpmZUlAdiZfJ9xkynAW5A&hl=es&sa=X&ei=IDsYUMnXKeHa0Q Hl5YGICA&ved=0CDMQ6AEwAA#v=onepage&q=ESL%20academic%20writing &f=false

Hoepfl, M. C. (1997). Choosing Qualitative Research: A Primer for Technology Education Researchers. *Journal of technology education,Volumen 9, N. 1*.

Holmes, N. (2009). The use of a process-oriented approach to facilitate the planning and production stages of writing for adult students of English as a Foreign or Second Language. *Developing teachers web site*. Retrieved from http://www.developingteachers.com/articles_tchtraining/processw1_nicola.htm

Irvin, L. (2010). What is "academic" writing. In Ch. Lowe & P. Zemliansky (Eds.), *Writing spaces: Readings on Writing. (Volume 1).* Retrieved from http://writingspaces.org/sites/default/files/writing-spaces-readings-on-writing-vol-1.pdf

Jackel, B. (2011). Thinking critically about diagrams: a theoretical framework for general diagrammatic literacy. *EDULEARN11 Proceedings*. Retrieved from http://library.iated.org/view/JACKEL2011THI

Jarvis, D. (2002). The process writing method. *The Internet TSESL Journal, Vol. VIII, N.7*. Retrieved from http://iteslj.org/Techniques/Jarvis-Writing.html

Johnston, S. (2011). Learning log. Faculty strategies for promoting student learning. Retrieved September 26, 2011 from http://www.csudh.edu/titlev/learninglog.htm

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1991). Increasing College Faculty Instructional Productivity. Washington D.C.: The George Washington University, School of Education and Human Development.

Key, J. (1997). *Qualitative research. Research design in occupational education.* Retrieved from http://www.okstate.edu/ag/agedcm4h/academic/aged5980a/5980/newpage21.htm

Khabiri, M & Rouhani-Tonekaboni, F. (2009). How to boost academic essay writing: A choice between process and product writing. *Journal of teaching English as a foreign language and literature, 1(3), 53-74.* Retrieved from http://www.sid.ir/en/VEWSSID/J_pdf/1018220090304.pdf

Kroll, B. (2003). (Ed.). Exploring the dynamics of second language writing. Cambridge University Press.

Latorre, G. & Garfinkel, A. (1982). The information transfer techniques in ESL/FL reading and listening comprehension [Abstract]. Retrieved June 10, 2012 from: http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED222068&ERICExtSearch_SearchType_0=no&accno=ED222068

Lewthwaite, M. (2007). Teacher and Student Attitudes to IELTS writing tasks: positive or negative washback?. *UGRU Journal, volume 5*. Retrieved from: http://www.ugru.uaeu.ac.ae/UGRUJournal/UGRUJournal_files/SR5/TSA.pdf

McTigue, E. & Flowers, A. (2011). Science visual literacy: learners perceptions and knowledge of diagrams. The Reading Teacher, 64(8),578-589. [Abstract]. DOI: 10.1598/RT.64.8.3

Retrieved from http://onlinelibrary.wiley.com/doi/10.1598/RT.64.8.3/abstract

Mickan, P., & Slater, S. (2003). Text analysis and the assessment of academic writing [PDF document] *IELTS research reports, Vol. 4, 59-88*.

Mulhall, A. (2002). In the field: notes on observation in qualitative research. *Journal of Advanced Nursing, 41(3), 306–313*. Retrieved from http://www.angelfire.com/theforce/shu_cohort_viii/images/UnstrucObservationpaper.pdf

Muncie, J. (2002). Process writing and vocabulary development: Comparing lexical frequency profiles across drafts. Pergamon. Retrieved from: http://danielfan923.wikispaces.com/file/view/label+2.pdf

Nation, P. (1984). Understanding paragraphs. *Language learning and communication, 3(1), 1-92*. Retrieved from http://www.victoria.ac.nz/lals/about/staff/publications/paul-nation/1984-Understanding-paragaphs.pdf

Nation, P. (1988). Using techniques well: information transfer. *A periodical for classroom language teachers, V.10, N.1, p.17-23*.

NCES Kid's Zone. (2012). Web site. Retrieved from http://nces.ed.gov/nceskids/graphing/classic/line.asp

New York University libraries.(2011). Web site. Retrieved from: http://nyu.libguides.com/content.php?pid=38530&sid=612300

Nishigaki, Ch. (n.d.). *A comparative study for three different strategies used in composition class to learn target sentences* [PDF document]. Retrieved from http://mitizane.ll.chiba-u.jp/metadb/up/AN10494742/KJ00004297090.pdf

Novick, L. (2004). Diagram Literacy in preservice Math teachers, computer science majors, and typical undergraduates: The case of matrices, networks, and hierarchies. *Mathematical thinking and learning, 6(3), 307-342.* Retrieved from: http://www.tandfonline.com/doi/abs/10.1207/s15327833mtl0603_3#preview

Nunan, D. & Bailey, K. (2009). Exploring second language classroom research. A comprehensive guide. Heinle, cengage learning.

O'Louglin, K. & Wigglesworth, G. (2003). Task design in IELTS academic writing task 1: The effect of quantity and manner of presentation of information on candidate writing. In *International English Language Testing System, volume 4*, ISBN: 0864030452. Retrieved from: http://www.ielts.org/PDF/Vol4_Report3.pdf

Pinker, S. (1990). A theory of Graph comprehension. In R. Freedle (Ed.), *Artificial Intelligence and the future of testing* (pp.73-116). Retrieved from http://books.google.com.co/books?hl=es&lr=&id=LkRp2dPPkgUC&oi=fnd&pg=PA73&dq=A+model+of+the+perceptual+and+conceptual+processes+in+graph+com

prehension&ots=Z9zeUyWVkt&sig=hsSfKrPGcA6XbGuiRSqo72Udx8Y#v=onepage&q&f=false

Raimes, A. (1991). Out of the woods: Emerging traditions in the teaching of writing. *TESOL Quarterly, Vol. 25, Issue 3, 407-430.*

Richards, J.C. (1990). The language teaching matrix. England: Cambridge University Press.

Richards, J. & Lockhart, C. (Eds.).(1994). Reflective teaching in second language classrooms. United States of America: Cambridge University Press.

RMIT University Study and Learning Unit. (n.d.). Web site [PDF document]. Retrieved from   http:// http://emedia.rmit.edu.au/learninglab/sites/emedia.rmit.edu.au.learninglab/files/academic_style.pdf

Sanchez, C. (2001). Ensayos: Anotaciones preliminares sobre su composición en el entorno escolar. *Revista educación y pedagogía. Vol. XIII, N. 31.* Retrieved from http://aprendeenlinea.udea.edu.co/revistas/index.php/revistaeyp/article/viewFile/5908/5319

Sanders, A.(1985). Learning logs: a communication strategy for all subject areas. *Educational Leadership, Vol. 42 Issue 5, p7, 2/3p*

Scott, V. M.   (1996). Rethinking foreign language writing. USA: Heinle&Heinle publishers.

Secondary English LIG. (2002). *An introduction to the grammar of visual design* [PDF document]   Retrieved   from

http://www.curriculumsupport.education.nsw.gov.au/secondary/english/assets/pdf/g

rammar.pdf

Seglem, R. & Witte, Sh. (2009). You gotta see it to believe it: Teaching English literacy in

the language classroom. *Journal of adolescent and adult literacy 53(3). 216–226.*

doi:10.1598/JAAL.53.3.3. Retrieved from

http://facstaff.unca.edu/nruppert/2009/visual%20literacy/digitalliteracy/vlinenglish.

pdf

Serafini, F. (2011). Expanding perspectives for comprehending visual images in

multimodal texts. *Journal of Adolescent & Adult literacy 54 (5),,.342-350.*

Retrieved from http://www.frankserafini.com/PubArticles/3VisPersp.pdf

Shah, P. (1997). *A model of the cognitive and perceptual process in graphical display*

comprehension [PDF document]. Retrieved November 10, 2011 from:

http://www.aaai.org/Papers/Symposia/Fall/1997/FS-97-03/FS97-03-012.pdf

Shah, P. & Hoeffener, J. (2002). Review of graph comprehension research: Implications

for instruction. *Educational Psychology Review, Vol. 14, N.1.*

Silva, T. (n.d.). *Second language composition instruction: developments, issues, and*

directions in ESL [PDF document]. Retrieved from

https://netfiles.uiuc.edu/rsadler/shared/Process%20and%20Post%20Process/SilvaT-

Second%20Language%20Composition%20Instruction.pdf

Silva, T. (1993). Toward an understanding of the distinct nature of L2 writing: The ESL

research and its implications. *TESOL Quarterly, Vol. 27, N.4, pp.657-676.*

Social Research Association. (2003). *Ethical Guidelines* [PDF document]. Retrieved from
http://the-sra.org.uk/wp-content/uploads/ethics03.pdf

Steele, V. (2004). Product and process writing. British council Web site. Retrieved from
http://www.englishonline.org.cn/en/teachers/workshops/teaching-writing/teaching-
tips/product-process

Stephens, K. &Winterbottom, M. (2010). Using a learning log to support students'
learning in biology lessons. *Journal of Biological Education*, *44*(2), 72-80.
Retrieved from Academic Search Complete database.
[[http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=49802731&site
=ehost-live and
http://rhambyarticlenotes.wikispaces.com/Stephens_Using+a+learning+log+to+sup
port+students'+learning+in+biology+lessons

Storla, S. (1993). *Writing for critical thinking: problem solving and information transfer*
[PDF document]. Retrieved from
http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERI
CExtSearch_SearchValue_0=ED364882&ERICExtSearch_SearchType_0=no&acc
no=ED364882: http://www.eric.ed.gov/PDFS/ED364882.pdf

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory
procedures and techniques. Newbury Park, CA: Sage Publications, Inc.

Thibault, M. & Walbert, D. (n.d.). Reading Images: An Introduction to Visual Literacy.
Learn NC. Retrieved from http://www.learnnc.org/articles/vlintro0602

Time4writing web site. (n.d.). Expository paragraphs. Retrieved from http://www.time4writing.com/uncategorized/expository-paragraphs/

Turan, M. (n.d.). *Constructivist approach to developing academic writing skills.* [PDF document]. Retrieved April 25, 2011 from: http://library.atilim.edu.tr/kurumsal/pdfs/elt2/meltem_turan_eroglu.pdf

Tsui, A. (1996). *Learning how to teach ESL writing.* In D. Freeman & J.C. Richards (Eds.), *Teaching learning in language teaching* (pp.97-117). England: Cambridge University press.

Villa, N.H. (2008). Propuesta de alfabetización visual para estudiantes de educación básica apoyada en recursos hipermediales. Un aporte a la comprensión lectora. *Revista Interamericana de Bibliotecologia,, vol. 31, N.1, p. 207-225.* Retrieved from http://eprints.rclis.org/bitstream/10760/12332/1/ARTICULO8.pdf

Weissberg, R. (1987). *Information transfer in the teaching of academic writing* [PDF document] Educational Resources Information Center (ERIC). Retrieved from http://www.eric.ed.gov/PDFS/ED292100.pdf

Woods, P. (2006). Qualitative Research. University of Plymouth. Retrieved from http://www.edu.plymouth.ac.uk/resined/qualitative%20methods%202/qualrshm.htm

Yu, G., Rea-Dickins, P., &Kiely, R. (2007). *The cognitive processes of taking IELTS academic Writing task one* [PDF document]. Retrieved from http://www.ielts.org/PDF/vol11_report_6_the_cognitive_processes.pdf

Zamel, V. (1985). Responding to student writing. *TESOL Quarterly, Vol. 19, Issue 1,79-101.* Retrieved from http://onlinelibrary.wiley.com/doi/10.2307/3586773/abstract

Footnotes

1 AIWT1. It stands for Academic IELTS Writing Task 1. It is an international English language testing system that enables candidates to start their journey into international education and employment. This proficiency test is comprised of components of listening, readin, writing, and speaking skills. The Writing Task 1 deals with the description of diagrammatic representations.

2 CEFR. It stands for Common European Framework of Reference for languages.   "The CEFR is a document which describes in a comprehensive manner i) the competences necessary for communication, ii) the related knowledge and skills and iii) the situations and domains of communication. The CEFR defines levels of attainment in different aspects of its descriptive scheme with illustrative descriptors scale."   Taken from: http://www.coe.int/t/dg4/linguistic/cadre_en.asp

3 ICELT. It stands for In-service Certificate in English Language Teaching. It is a teaching program which main aim is to prepare teachers on their development of language skills in areas such as language awareness and language use in the classroom; planning, teaching and evaluation, and assessment and evaluation.

4 Transmilenio public transportation system. TransMilenio is a system (articulated, two-hinged and feeders) that mobilize 69% of the population in Bogotá, Colombia. This system has exclusive lanes to ensure rapid movement to the population.

Appendices

Appendix A Pre-questionnaire

PRE- QUESTIONNAIRE /E-FUTURE INSTITUTE
NAME _____Date: _____

Instructions: The following questionnaire is anonymous. Please answer the questions carefully. Choose only one answer. Circle the most appropriate for you.

1. Writing is…
   a. A very important skill
   b. As important as all the other skills
   c. Not so important as all the other skills
   d. Not important at all
   e. Other (please specify)_____

2. How do you see writing?
   a. As a difficult but necessary task
   b. As a way of creating homework
   c. As a creative process
   d. As a means of communication
   e. Other (please specify)_____

3. How do you usually feel when asked to write a composition? Why?
   a. Interested
   b. Enthusiastic
   c. Incapable
   d. Bored
   e. _____

4. What are the most difficult characteristics of writing? (list in order of importance, being 1 the most important)
   a. Remembering grammar and vocabulary
   b. Organizing
   c. Thinking of arguments and points
   d. Planning
   e. Spelling
   f. Other (please specify)_____

5. What is the most frequent challenge to beginning a writing task?
   a. The topic
   b. Lack of ideas
   c. Time
   d. Fear of making mistakes
   e. Not knowing how to begin (lack of plan)
   f. Other (please specify)_____

6. Based on the previous question, what would improve this situation?
   a. If students were allowed to be more creative.
   b. If the teacher gave more help with organization and planning
   c. If the teacher gave more help with vocabulary and grammar
   d. If the teacher chose some interesting topics

7. When writing a formal composition, my most important concern is…
   a. The structure of the composition
   b. The ideas expressed
   c. The accuracy of the English
   d. Use of the appropriate language style
   e. Other (please specify)_____

8. How do you feel when you have to describe a graph (pie chart, bar graph, line graph)?
a. Anxious
b. Ignorant
c. Demotivated
d. Other (please specify)_____

Explain Why? _____

Resource adapted from Motivating students to write. A aplicaçao da teoria a metodologia do ensino das linguas. Universidad de Lisboa. By Elliot, J. (n.d.).

Appendix B Consent letters to School Director

Bogotá D.C., 10 de marzo de 2011

Señora Adriana Posada
Directora E-FutureInstitute
Bogotá, D.C.

Apreciado Señora:

Actualmente soy docente de inglés en el horario de la mañana y de la tarde con un grupo de nivel avanzado de su institución, además de ser estudiante de maestría en "Didáctica del Inglés con énfasis en ambientes de aprendizaje autónomos". Como parte de este programa estaré llevando a cabo un estudio de investigación titulado "Promoting the technique of information transfer to prompt writing", dirigido a estudiantes de Inglés nivel avanzado con el fin de contribuir en el enriquecimiento de los procesos de aprendizaje en la habilidad de escritura de los jóvenes participantes. Además me gustaría invitarla a ser parte de este proyecto el cual puede aportar beneficios para su institución.

Estoy realmente interesada en observar, desde lo simple hasta lo más complejo, cómo los estudiantes desarrollan, entienden y se interesan por mejorar su proceso de escritura haciendo uso de la "técnica de transferencia de información", es decir, llevar a texto escrito lo que se interpreta de una gráfica o imagen.

Cabe mencionar que es bienvenido a contribuir con su saber y experiencia. Es así que solicito su permiso y colaboración para llevar a cabo mi propuesta de investigación. Esta investigación requiere de la recolección de datos y el análisis de los mismos, por lo tanto, se hace necesario la aplicación, manejo y revisión de trabajos escritos y otros documentos como "learninglogs" y cuestionarios que los alumnos realizarán. Dichos documentos se convierten en recursos base para la satisfactoria continuidad del proyecto.

De otro lado, este estudio garantizará a sus participantes confidencialidad con la información recogida y su identidad será tratada en anonimato.

Agradezco de antemano su valioso aporte para llevar a buen término mi investigación.

Atentamente,

_____

Josefina Quintero Jiménez

He leído la información y he decidido permitir que se lleve a cabo la investigación en el aula de clase de los estudiantes nivel avanzado, horario de la mañana y de la tarde.

_____

Firma Adriana Posada

Appendix B Consent letter to students

Señores:
ESTUDIANTES NIVEL INTERMEDIO
Programa de Inglés
E-FUTURE INSTITUTE
Bogotá D.C.

Apreciados estudiantes:

Actualmente estoy realizando una investigación titulada "Promoting the technique of information transfer to prompt writing", dirigida a estudiantes del Programa de inglés nivel intermedio del instituto E-FUTURE, la cual intenta contribuir y enriquecer los procesos de aprendizaje de la lengua extranjera y al mismo tiempo reorientar las prácticas docentes en escritura académica.

El objetivo de este estudio es examinar la forma como los estudiantes desarrollan y mejoran el proceso de escritura desde escribir un corto mensaje informal hasta unas más complejas utilizadas en los textos académicos. Cabe anotar que dicha investigación hace parte de mi trabajo de grado de la Maestría en Didáctica del Inglés de la Universidad de la Sabana.

Por lo anterior, comedidamente solicito su consentimiento y colaboración como participantes de mi propuesta de investigación, que se realizará durante el segundo semestre académico del presente año. Usted es libre de participar y además ha de tener en cuenta que durante el proyecto se le pedirá llenar algunos documentos como cuestionarios, journals y algunos tests informales, los cuales son útiles para recolectar datos. También se analizarán los resultados, por lo cual debo tener acceso a sus proyectos escritos y textos con comentarios o percepciones personales (learning logs) que desarrollarán en algunas clases con el fin de conocer y analizar su experiencia en el proceso de escritura académica.

Igualmente, a los participantes se les garantizará el uso de nombres ficticios para mantener su identidad en el anonimato, así como estricta confidencialidad con la información que se recolecte. Es así que usted decidirá su participación total o parcial en este proyecto. Además el proyecto no tendrá incidencia alguna en las evaluaciones y notas parciales y/o finales del curso.

Agradezco de antemano su valioso aporte para llevar a buen término mi investigación.

Atentamente,   Acepto participar

Josefina Quintero   Nombre _____

Profesora de Inglés   Firma   _____

Appendix C Learning log

LEARNING LOGS /E-FUTURE Name _____ Note: The following journal is intended to keep your thoughts and feelings about your learning and writing process. Please be aware that this paper will be kept confidential. Students directions: After each lesson keep a record of your language learning tasks and strategies when doing writing tasks. Last 5 minutes of each class will be provided for your reflection.		
Process Writing stage. Check the stage you worked using the technique of information transfer. Planning ___ Pre-writing ___ Drafting ___ Revising ___ Editing ___	What I learnt in this stage using the technique of information transfer…	
▪ What progress do you see in your writing process using the technique of information transfer? ▪ How is it easy? Give examples.		
▪ How is it difficult? Give examples. ▪		
▪ How do I feel when I have to compose a paragraph using the technique of information transfer? Explain		
▪ How did the technique of information transfer work? ▪ …or did not work to improve my writing?		

Appendix D Field-notes

TEACHER´S FIEL-NOTES E-FUTURE INSTITUTE
Name _____ Date _____ Time began: _____Time ended:_____ Number of students present:____ Teacher Directions: Use the observation form to take notes on students´ strategic behaviors.
Specific details: a.   How might you describe the scene where students are applying exercises related to writing tasks? b.   What tasks/texts are being done and what is the function of these tasks/texts?

| FACTS /OBSERVATIONS /description of activities

_____
_____
_____ | REFLECTION / EXTENSION / ANALYSIS
_____
_____
_____

Resource taken from National Capital Language Resource Center. (1998). |

Universidad de

La Sabana

Appendix E Student's artifacts Revising/editing stage

Student D, artifact, final stage, 1ˢᵗ September, 2011

Appendix E Student's artifacts Revising/editing stage

Appendix F A 10-week plan of activities developed in the classroom

Activities Week	1	2	3	4	5	6	7	8	9	10	11
Introduce the research project and new curriculum to the students. Introducing what IELTS academic writing task 1 exam is about.	*										
Building the necessary understanding of how to interpret a graph, table and diagram.	*	*	*	*	*	*	*	*	*	*	*
Developing writing skills related to the organization of a paragraph (from sentence level to complex sequences of sentences)	*	*	*	*	*	*	*	*	*	*	
Writing paragraphs that describe visual displays. Working on some samples from IELTS books. Set of vocabulary-phrases-writing sentences, connecting sentences, making relationships. Drafting stage			*	*	*	*	*	*	*	*	
Practising interpretation of graph(s), table(s), diagram(s) through collaborative work. Revising stage.								*	*	*	
Preparing students to edit their written work.										*	*
Using sample texts to compare details of data found in a chart, table or graph. Using comparative structures and phrases.				*	*	*	*	*	*	*	
Data collection — Pre-test	*										
Data collection — Students´logs		*	*	*	*	*	*	*		*	*
Data collection — Teachers´logs	*	*	*	*	*	*	*	*	*	*	

Appendix G Action plan of the project

Research Project Timeline (Action Plan)

ACTIVITIES / WEEKS	FEBRUARY				MARCH				APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
STEP 1: Iniciation, research questions, objectives and justification	X	X	X	X	X	X	X	X	X	X	X	X																												
STEP 2: Preliminary investigation	X	X	X	X	X	X	X	X	X	X	X	X																												
STEP 3: Literature review					X	X	X	X	X	X	X	X	X	X	X	X																								
STEP 4: Design of action plan									X	X	X	X																												
STEP 5: Research design									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STEP 6: Needs analysis									X	X	X	X	X	X	X	X																								
STEP 7: Creation of instruments									X	X	X	X	X	X	X	X																								
STEP 8: Piloting instruments													X	X	X	X	X	X	X	X																				
STEP 9: Pedagogical intervention																													X	X	X	X	X	X	X	X				
STEP 10: Monitoring data collection																																	X	X	X	X				
STEP 11: Analysis of data collection																																	X	X	X	X				
STEP 12: Reflection and decision making																																					X	X	X	X
STEP 13: Sharing findings																																						X	X	X

Universidad de
La Sabana

PROMOTING THE INFORMATION TRANSFER TECHNIQUE

Appendix H Lesson plan model

| LESSON 3	LESSON 5	LESSON 7
CONTENT WORKED		
▪ Use of expressions, phrases and words that refer to the same idea. ▪ Describing facts and figures. ▪ Introducing nouns, verbs, adverbs and adjectives that describe a graph. ▪ Material used: photocopies p. 67, 68, 115. "Describing facts and figures" by Vanessa Jakeman and Claire McDowell (2001). *Insights into IELTS.* Cambridge University Press. Updated edition. United Kingdom.	▪ Different charts showing punctual vocabulary used in line graphs. Material taken from: The language of change, describing each graph. Retrieved 2th August, 2011 from: http://www.slideshare.net/ala7lam/ielts-preparation. ▪ Vocabulary and writing short sentences. Homework assigned and checked in class. Taken from a web page, retrieved 2nd August, 2011from: http://www.vub.ac.be/khnb/itv/oktober/jan/gb97-2.htm ▪ Isolated description of trends by using verbs, adjectives, adverbs of upward and downward movements. ▪ Identifying and classifying verbs into two groups: those with implicit adverb, and those with additional adverbs.	▪ Pie-charts, and bar charts: To start drafting stage. ▪ Objectives: To compare versions from the same pie-chart sample ▪ To write short sentences using models. ▪ To share answers with classmates.
ACTIVITIES	**ACTIVITIES**	**ACTIVITIES**
▪ Prompts to compose new sentences using different expression that convey the same meaning: e.g. 50% of the students passed the exam/half of the students passed the exam/the majority of the students passed the exam. ▪ Fill in the gap exercises. ▪ Building complete sentences (using Wh-questions to check)	▪ Completing graphs with the appropriate vocabulary based on the trends. ▪ Writing short sentences going from the whole to the parts. Starting with general ideas, and then, the second sentence is to give detail information of what was previously said. ▪ Think of what to write in the introduction, body and conclusion following models.	▪ Students look some specific verbs up in the dictionary. ▪ Students were led to identify specific characteristics and commonalities of some verbs. ▪ Analysis of a model's structure going from the whole to the parts. ▪ Consolidation activity of the first stages (planning and pre-writing) to get into drafting.

Appendix I A sample of adapted material from the Internet

Read the following paragraph and answer the questions:

Changes in Chinese Consumption

Over the last two decades, urban Chinese consumers have dramatically increased their consumption of meat, other livestock products, and fruits and have decreased consumption of grain-based foods such as rice. China's per capita grain consumption declined from 145 kilograms in 1981 to just 78 kilograms per person per year in 2004 in urban areas, while the per capita consumption of meats, eggs, and fish increased respectively from 20, 5, and 7 kilograms in 1981 to 29, 10, and 12 kilograms in 2004.

 Use the information above to complete these line graphs. Add a legend or key.
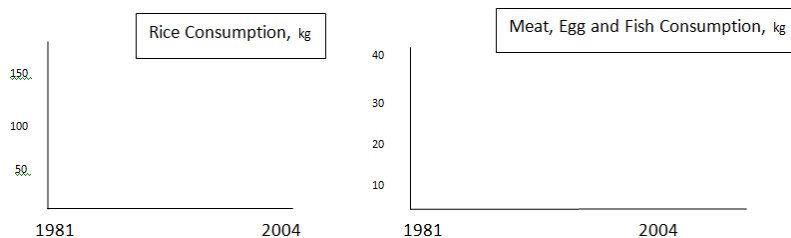
Simplify!

The sentences above are very long and complicated. Write shorter sentences.
Example:

The Chinese are eating less rice. The amount per person fell from 145 kg per person in 1981 to 78 kg in 2004.

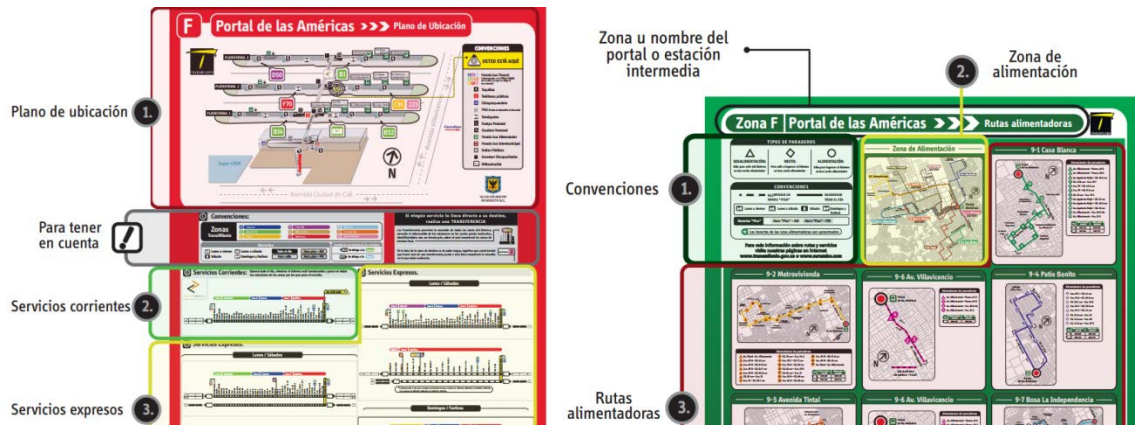Write pairs of sentences like the ones above for meat, fish, and eggs.

Meat:

Fish:

Eggs:

Appendix J *Transmilenio public transportation map,* in Colombia, Bogotá

(Screenshot, pictures taken 16th April, 2012 from

http://www.transmilenio.gov.co/WebSite/Contenido.aspx?ID=ComoUtilizarElSistema_UsoDelPlanoDeUbicacionEnPortales)

Appendix K Workshops

E-FUTURE Institute / Describing a bar chart / A wrap-up activity
Name_____ Date_____
To describe the movement, there is some language which will always be useful. Below is a list of language you can use.

Check with your dictionary words that you don't understand and practice using the words/phrases so you use them in the right way. As you will see, there are a number of words which are similar in meaning. This means that you will be able to use a variety of vocabulary which gives a good impression to the examiner who will read and mark your writing. The words below are particularly useful for line graphs but they can also be used where appropriate to describe the other types of graph.

Expressing the Movement of a Line

Verbs	Nouns
Rise (to)	a rise
Increase (to)	an increase
Go up to
Grow (to)	growth
Climb (to)	a climb
Boom	a boom
Peak (at) (reach)	a peak (at)
Fall (to)	a fall (of)
Decline (to)	a decline (of)
Decrease (to)	a decrease (of)
Dip (to)	a dip (of)
Drop (to)	a drop (of)
Go down (to)
Reduce (to)	a reduction (of)
A slump
Level out	a leveling out
No change	no change
Remain stable (at)
Remain steady (at)
Stay (at)
Stay constant (at)
Maintain the same level

Adjectives | Adverbs

PROMOTING THE INFORMATION TRANSFER TECHNIQUE

Dramatic   dramatically
Sharp   sharply
Huge   hugely
Enormous   enormously
Steep   steeply
Substantial   substantially
Considerable   considerably
Significant   significantly
Marked   markedly
Moderate   moderately
Slight   slightly
Small
Minimal   minimally

Describing the Speed of a Change

Adjectives   Adverbs

Rapid   rapidly
Quick   quickly
Swift   swiftly
Sudden   suddenly
Steady   steadily
Gradual   gradually
Slow   slowly

VERB	NOUN	ADJECTIVE	ADVERB
Rise (to)			
Increase (to)			
Go up (to)			

Resource taken from: http://www.ieltshelpnow.com/academic_writing_test_1.html

134

Appendix L Workshops

Interpreting graphs

Line graphs

The verbs in the box on the right can all be used to describe changes commonly represented on line graphs. Use your dictionary to look up the meanings of the verbs and then answer the following questions:

1 Which 5 verbs mean go up?
2 Of these, which 3 mean go up suddenly/a lot?
3 Which 5 verbs mean go down?
4 Which verb means reach its highest level?
5 Which verb means stay the same?
6 Which verb means go up and down?

plummet	increase
peak	soar
rocket	fluctuate
level out	drop
decrease	decline
rise	fall

Changes can also be described in more detail by modifying a verb with an adverb. Using a verb from the box on the left, and an adverb from the box on the right, make sentences describing the changes represented on the line graphs on page S26 for the years or months shown. The first one has been done for you as an example.

increase	fall		slightly	slowly	sharply
decrease	rise		rapidly	steadily	gradually
decline	drop		moderately	dramatically	

1 1990 — 1992
  Sales increased/rose dramatically/sharply.
2 1992 — 1994
3 1994 — 1997
4 1997 — 1999
5 July – August 2000
6 November – December 2000

Look at the following two ways of expressing the same idea:

— Sales **increased dramatically** from 1990 to 1992.
  subj + verb + adverb

— There was **a dramatic increase** in sales from 1990 to 1992.
  There was/were + adjective + noun + in + sth

(Screenshot of Photocopiable material-Oxford University Press, taken from IELTS website

Academic Writing

60 Minutes 02
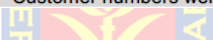
400

Task 1 – The Language of Change

plummeted, plunged

fell	dramatically
dropped	sharply
	significantly

peaked
highest position

decreased	slightly
fell	gradually
declined	slowly

levelled off

increased	dramatically
rose	significantly
	sharply
	suddenly
	rapidly
	considerably

100
80
60
40
20
0

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

Appendix L Workshops to identify line graphs

was upward.
ii. Customer numbers fluctuated slightly.
iii. There were considerable fluctuations in customer numbers.
iv. There were fluctuations in customer numbers.

B

i.   The number of customers fell dramatically
ii. Customer numbers fell.
iii. Numbers fell steadily.
iv. There was a dramatic drop in customer numbers.

C

i.   The trend in customer numbers was upward.
ii. Customer numbers fluctuated wildly.
iii. There was a downward trend in customer numbers.
iv. Customer numbers were erratic.

i.   The trend in customer numbers was downward.
ii. Customer numbers fluctuated slightly.
iii. There were wild fluctuations in customer numbers.
iv. There were fluctuations in customer numbers.

E

i.   The trend in customer numbers was upward.
ii. Customer numbers hit a peak.
iii. There was a peak in customer numbers.
iv. There was a slight dip in customer numbers.

F

i.   The trend in customer numbers was flat.
ii. Customer numbers rose.
iii. Customer numbers rocketed.
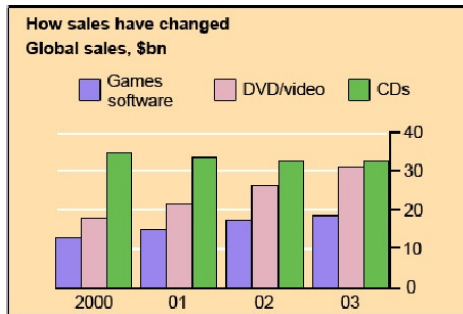iv. There was steep rise in customer numbers.

136

PROMOTING THE INFORMATION TRANSFER TECHNIQUE

Appendix M Answer models

E-FUTURE Institute / Describing a bar chart

Name_____ Date_____

The chart below gives information about global sales of games software, CDs and DVD or video. Write a report for a university lecturer describing the information.

model answer:

 The chart shows the changes in the sales of video material /DVDs, games software and CDs around the world in billions of dollars over a three-year period. It can be seen that the sales of videos / DVDs and games software have increased, while thesales of CDs have gone down slightly.Between 2000 and 2003, the sale of videos and DVDs rose byapproximately 13 billion dollars. In 2000, just under 20 billiondollars worth of these items were sold, but in 2003, this figurehad risen to a little over 30 billion dollars. The sales of games software also rose during this period, butless sharply. Sales increased from about 13 billion dollars in2000 to just under 20 billion dollars three years later. Bycontrast, during the same time period, the sale of CDs fell from35 billion dollars in 2000 to about 32.5 billion dollars in 2003.
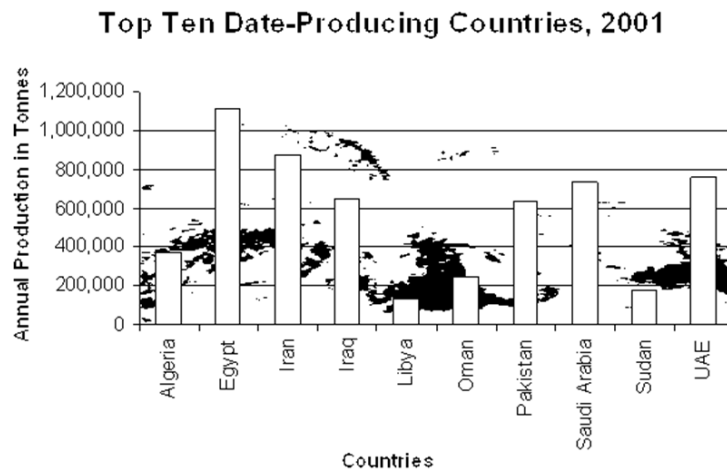
PROMOTING THE INFORMATION TRANSFER TECHNIQUE

Appendix M Answer model

E-FUTURE Institute / Describing a bar chart
Name_____ Date_____

Bar Chart: Date Production
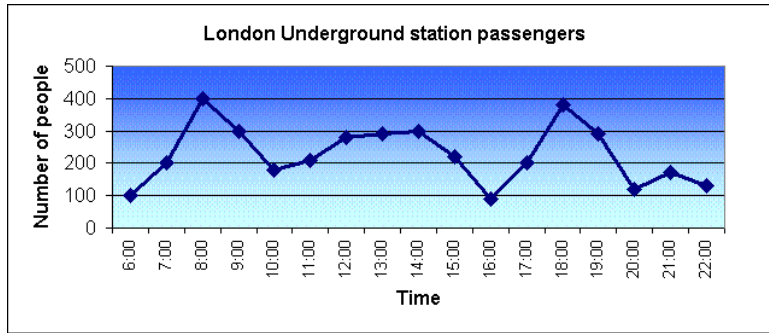The chart shows the top ten date-producing countries and their annual production in tons, 2001.

Find one error in each sentence below, then order them to make a model essay.

a)   Finaly, Sudan's and Libya's crops yielded under 0.2 million.
b)   In summary, date production is the most abundant in Egypt and Iraq.
c)   Pakistan and Iraq, with outputs of approximately 630,000, were not far ahead.
d)   First, Egypt took the lion's share of production with over a million tons but Iran is a close second with almost .9 million.
e)   The bar graph shows date production of tons for the world's top producer in 2001.
f)   The rest nations, however, were far less productive.
g)   Algeria supplied the world with nearly 400,000 tons and Oman around a half million.
h)   Following them came the UAE and Saudi Arabia, rival each other with about 740,000 tons each.
i)   Overall, Egypt and Iran account to the majority of goods whilst Sudan and Libya are in the minority.
j)   In contrast, harvests in Oman and countries in northern Africa are far more plentiful.
k)   Ten countrys in the Gulf region and northern Africa are featured.

(source: http://www.mapsofworld.com/world-top-ten/world-top-ten-date-producing-countries-map.html)

138

Appendix N Worksheet Sentence transformation

Line Graphs: Sentence Transformation

*Re-write the sentences below, changing the italicised word from a verb to a noun. Use "**There is a**
…" in all your sentences. #1 is done for you as an example.*
Why use "there is"? You will vary your sentence structure AND increase word count!

1. Numbers *rise* sharply from 6 to 8 am.

   __*There is a sharp rise in numbers from 6 to 8 am.*_____

2. At 8 in the morning, passenger numbers *peak* at about 400.
   _____

3. In the next two hours, figures *fall* sharply to under 200.
   _____

4. Next, numbers *rise* slightly in the afternoon.
   _____

5. In the late afternoon, numbers *fall* rapidly, reaching a low of approximately 100.
   _____

6. Numbers *increase* in the next two hours, peaking at around 400.
   _____

7. Between 6 and 10 pm, figures *fluctuate* greatly.
   _____

8. From 6 to 8 in the evening, numbers *drop* dramatically.
   _____

9. The number of passengers *decreases* significantly from 6 to 8 pm.
   _____

10. Finally, numbers *rise* and *fall* marginally in the last couple hours.
    _____

11. Last, the number of commuters *increases* and *decreases* slightly in the final two hours.

    _____