



# **UNIVERSIDAD DE MURCIA**

## **DEPARTAMENTO DE FILOLOGÍA INGLESA**

**Development of Mental Models of Writing in a Foreign  
Language Context: Dynamics of Goals and Beliefs**

**La Evolución de Modelos Mentales de Escritura en un  
Contexto de Lengua Extranjera: Dinámica de Objetivos y  
Creencias**

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*In loving memory of Francisco Javier Saura Castaño*



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# Introduction

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<b>Chapter I</b>
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<b>Introduction</b>
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## **I.1. Background of the study**

Producing coherent and effective academic texts from a communicative point of view is a difficult skill to master. This is true even when students are writing in their native language. A good grasp of the subject matter combined with more general writing skills does not in itself guarantee the production of good academic texts. Difficulties are compounded when writers have to produce a text in a second or other language in which they may still need to gain fluency or accuracy. This difficulty increases in countries like Spain where there is a lack of tradition in the training of L1 writing skills in primary and secondary schools and learners are left to their own devices to develop those abilities (Camps, 1994).

The Spanish official curriculum aims to promote the study of L2 written composition at primary and secondary levels, but the writing tasks that are actually carried out in the classroom apart from the written exams, tend to be occasional and based on one single-draft submission for which there is no feedback or the promotion of rewriting processes. As a result, students tend to write to convey their knowledge about a subject matter, but do not practise writing according to the conventions of academic texts. At a university level, many English philology departments in Spain include writing courses or English for Academic Purposes (EAP) Courses as part of their second language teaching so as to help learners to improve their academic writing skills in their L2.

Studies carried out in English medium universities about the effect of EAP courses on writing ability show mixed results like no gains (e.g. Read & Hays, 2003), no changes in

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accuracy or complexity but development of formal language when writing (e.g. Shaw & Liu, 1998), gains in linguistic accuracy (e.g. Polio, Fleck & Leder, 1998; Storch & Tapper, 2009), improvement in overall proficiency (e.g. Elder & O'Loughlin, 2003) or development of written performance (e.g. Green & Weir, 2003; Manchón & Roca de Larios, 2011). The different results obtained in those studies can be attributed to the way of measuring changes through gains in average band scores in holistic rating (Purpura, 2004; Storch, 2009), differences in the time-span of data collection to register changes (short periods versus long ones) and/or the kind of feedback provided (e.g. direct or indirect) to learners. Apart from these factors, most of the research about the development of writing in EAP courses has focused on the written product rather than on the analysis of writers' process factors that can help to explain writing development (Leki, 2007).

Within process factors, the representation of the task is important due to the empirical evidence that indicates that learners interpret the same task differently through their engagement in the writing process, which in turn also affects the final quality of the texts (Flower, 1990; Ruiz-Funes, 2001; Wolfersberger, 2007; Zhang, 2006). Furthermore, during students' engagement in the task to compose their intended text as they have represented it to themselves in their minds, they also pursue different goals (Flower, 1990). The joint effect of task representation and goals can be equated with a mental model of writing that guides writers' behaviour (Devine, Railey and Boshoff, 1993). Up to date, there have been no longitudinal studies that have delved into the development of students' task representation for writing and the concomitant goals that may evolve not only while working for specific tasks, but also across a long period of time of writing instruction and practice in an EAP course. The exploration of both variables and their possible relationship could throw light on writers' processes related to successful written performance, motivation and self-regulation.

## **I.2. Focus of the present study**

The present empirical study is an attempt to begin to fill this gap in research. The study was carried out in a Spanish university and involved 23 student-writers who were pursuing an English degree and were taking an EAP course during the period of data collection (9 months). Data on the participants' beliefs about the writing task, goals and written performance were gathered throughout an academic year through journals, interviews, and timed L2 essays. In addition, we also used proficiency tests to examine our participants' L2 language level before and after the period of writing instruction due to the fact that language proficiency has been found to be related to task representation (e.g. Wolfersberger, 2007), goals (e.g. Haneda, 2000; Hoffman, 1998) and writing quality (e.g. Roca de Larios, Manchón & Murphy, 2006; Roca de Larios, Murphy & Manchón, 1999).

Differing from previous studies about task representation that focused on compositions from sources (Flower, 1990; Ruiz-Funes, 2001; Wolfersberger, 2007; Zhang, 2006), we opted for gathering data on learners' self-reported views on the writing task through journals regardless of task types since different tasks could influence their representation and the resulting quality of the compositions (Cumming, 1989). As for the participants' goals, we used journals to elicit specific goals for a writing task carried out at the beginning of the academic year as well as to gather data on their self-evaluation about goals at the end of the EAP course. Moreover, information on the possible development of goals for writing throughout the academic year was elicited through interviews conducted at two points in time eight months apart. Along the same lines, L2 argumentative essays that were written in a limited time were also collected at the beginning and at the end of the instructional period in the EAP course.

A mixed method approach that involved quantitative and qualitative analyses was used to provide a more comprehensive view of the variables explored. Regarding written performance, the texts produced by the participants were analysed from a double perspective which involved the use of analytical measures (complexity, accuracy and fluency) and holistic

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ones (overall quality of the written texts from a communicative point of view). The contribution of this study lies in the understanding of individuals' processes when writing that could both deepen researchers' knowledge about second language writing and improve pedagogical practices with regard to learners' beliefs and goals that are shown to be related to writing achievement, motivation and self-regulation for L2 composing.

## **I.3. Organisation of the thesis**

The ensuing study is organised in seven chapters. Following this introduction, **Chapter II** explains and discusses the importance of mental models since they are the basis of individuals' networks of beliefs and goals which condition behaviour. We start with the description of the origin and composition of mental models in psychology. After this general overview, we concentrate on the importance of beliefs in second language acquisition (SLA henceforth), and explain how learners' mental models can be developed through changes in their beliefs system, which also leads us to a review of the conceptualisation and approaches to the investigation of beliefs in SLA. Then, we concentrate on the domain model of writing, the field of interest in this study, and present Flower and Hayes' cognitive process model in L1 as well as other socio-cognitive investigation that followed and expanded the model. Afterwards, we highlight the importance of students' beliefs about the task or task representation for successful composition. Drawing on the assumption that such representation constitutes the core element of learners' mental models of writing by activating a network of goals, we report the main findings of several studies carried out in L1 and L2 writing. The chapter closes with a summary of the main theoretical and empirical issues reviewed and their relationship to our own investigation.

**Chapter III** focuses on goals, the other main variable in mental models. Drawing on studies in educational psychology, we first describe how earlier motivational theories moved

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from the construct of needs to the construct of goals. Then, we delve into the exploration of goals in theories on motivation (goal setting, the motivational system and goal orientation) and emphasise the importance of goals for learning in self-regulation models. Within the area of L2 learning, we present Dörnyei and Ottó's (1998) process model of L2 motivation and the influence of personal and contextual variables on goal striving. We then move to the research on goals in L2 writing reporting interventionist studies in English as Second Language (ESL from now onwards) and descriptive studies in both ESL and English as a Foreign Language (EFL henceforth). The chapter concludes with a summary of the main findings of research on goals in the area of L2 writing. The need for carrying out longitudinal studies on goals from a cognitive, motivational and self-regulatory perspective to explain patterns of achievement and development in writing is emphasised. Then, the possible contribution of our study is mentioned.

**Chapter IV** explains the ultimate aim of the empirical study and describes the research questions, which are grouped into three main blocks. Afterwards, a rationale for each research question is provided and the contribution of the study to the field of L2 writing is clarified.

**Chapter V** presents the mixed methodology adopted for the analysis of the data owing to our interest in quantitative and qualitative information about the shaping of learners' mental models of writing. We also describe the data sources used in our study (journals, interviews, proficiency tests and L2 essays), as well as the coding and analysis of the data.

**Chapter VI** brings together the results and discussion of the four research questions following the three main blocks under which the questions were grouped: (i) dynamics of task representation and their relationship to the learning environment; (ii) the development of writing goals and their link with the learning environment; and (iii) the connections between learners' task conceptualisation, writing goals and performance.

**Chapter VII** briefly summarises the main findings of the study. Afterwards, we offer some theoretical and pedagogical implications and mention the limitations of the investigation as well as new avenues for research.

# Introduction

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## Chapter II

### Mental models

The present chapter is devoted to the investigation of mental models (MMs henceforth). We start by explaining the origins of MMs in psychology and their conceptualisation in the field of system dynamics by Doyle and Ford (1998), who offered an encompassing definition that could be applied to different domains. We then explain how MMs are made up of beliefs that can evolve through instruction and result in conceptual change, which draws attention to cognitive processes as well as sociocultural factors as fundamental elements to account for this change. With the purpose of describing how beliefs have been explored in SLA, the area of interest of this empirical study, we offer an overview of three approaches adopted in the research on language learning beliefs. After that, we concentrate on a set of beliefs related to language use in SLA and more specifically on beliefs about writing, which constitute a domain model.

A domain model can be defined as a part of a MM applied to a particular area of knowledge, like writing. Within this area of knowledge, we offer a description of Flower and Hayes' (1981) cognitive process model of L1 writing, which is based on learners' dynamic mental processes when composing and the consequent goals that are activated during writing. Then, we report how Flower and Hayes' cognitive model was subject to some revisions from a sociocognitive stance (Flower, 1994; Hayes, 1996), which also opened the field to a new research agenda on task representation (Ruiz-Funes, 2001; Manchón and Roca de Larios, 2011; Wolfersberger, 2007) from the readers' and writers' point of view. Afterwards, we concentrate on the importance of writers' task representation for written performance, describing those representations in relation to the way they have been investigated at different stages of the writing process (before and while composing) and as stored task representations.

Finally, we offer a summary of the theoretical and empirical research reviewed in the chapter and its relationship to our own empirical study.

## II. 1. Research on mental models

The construct of MMs was originally postulated by the psychologist Kenneth Craik in his book *The Nature of Explanation* (1943), where he proposed that individuals construct a small scale model of the world. In this view, human reasoning involves the construction of dynamic and symbolic representations of the external reality as it is perceived by people. Some years later, the cognitive psychologist Johnson-Laird (1983) developed Craik's thoughts and proposed that individuals use their MMs to understand and experience the events they encounter, to determine the actions they take and to control them. Since then, MMs have been researched in theoretical and applied fields such as cognitive psychology (e.g. Anderson, 1983; Kosslyn, 1990; Pennington & Hastie, 1991), organisational studies (e.g. Walsh & Ungson 1991; Langan-Fox, Code, & Langfield-Smith, 2000), business management (e.g. Axelrod 1976, Senge 1990), human decision making systems (e.g. Endsley 1995), knowledge management (e.g. Davison & Blackman 2005), or system dynamics (e.g. Doyle & Ford 1998).

Within the field of system dynamics (also known as information studies), one of the central areas of research is the idea that individuals create MMs based on their interaction with the world, which, in turn, conditions their behaviour. In this sense, information studies followed the line of thinking initiated by cognitive psychologists and began to explore MMs from a socio-cognitive approach. Accordingly, it was assumed that MMs are internal cognitive structures that people create on the basis of their experiences, perceptions of the world or formal knowledge acquisition and that help them interpret and understand their environment (Jacob & Shaw, 1998) as well as interact with it (Moore & Gollidge 1976).

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Doyle and Ford (1999) posited a definition of MMs for information studies that aimed at synthesizing ideas within that field and being inclusive, clear and not circular. In Doyle and Ford's terms:

"A mental model of a dynamic system is a relatively enduring and accessible but limited, internal conceptual representation of an external system (historical, existing or projected) whose structure is analogous to the perceived structure of that system" (Doyle & Ford, 1999: 414).

In what follows, we break down the definition into its component parts. First of all, the concept of *model* implies, in opposition to the concept of theory, that MMs can lack coherence and completeness since they are based on individuals' internal belief structures that stand for their perceptions of an external reality ( Craik, 1943; Rouse & Moriss, 1986). On these grounds, MMs have been referred to as "beliefs", "a set of beliefs" and "belief systems" (e.g. Chi, 2008; Ford, Hou & Seville, 1993; Haim, Strauss & David, 2004; Norman, 1983).

Following Doyle and Ford's conceptualisation, the model should be *relatively enduring* because it involves cognitive structures that are stored in and retrieved from long-term memory when they have been shown to be useful in past experiences. However, MMs are also dynamic and generative mental representations created by individuals to deal with the specific demands of problem-solving situations. Therefore, MMs may also be altered. The malleability of MMs has been attested by researchers in information studies who have referred to "the mental model uncertainty principle" (see Doyle, Ford, Radzicki & Trees, 2002) according to which the mere attempt to collect information to understand or evaluate MMs can change them. The instability of MMs over time is more evident in that their details can vary according to the specific cues activated in individuals' minds as a result of their particular decision making processes in a given context (Doyle et al. 2002). Since people can articulate their MMs in context through elicitation procedures, MMs are *accessible* to conscious introspection. However, there can also be structures that can be elicited outside

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individuals' awareness and considered to be "implicit models" (Rouse & Morris, 1986). MMs are *limited* because they cannot refer to all kinds of knowledge that may be recalled from memory but rather to a "precompiled" set of information within individuals' memory that is constrained by the encounter of similar prior experiences or by the structure of the human processing system (Norman, 1983). In this respect, they are "working models" ( Craik, 1943; Johnson-Laird, 1983) or dynamic representations exposed to time and to learning that can be inconsistent and imperfect since they are continuously revised, changed and used in different contexts that are similar by analogy.

MMs are also *internal* because they are cognitive phenomena that may be functional for individual purposes (Rouse & Morris, 1986), although not necessarily scientific (Norman, 1983). As *conceptual representations of ideas* related to *external* elements, MMs can exist in different form states (past, present or future) within the minds of individuals who create them. The referent for a MM may be a *historical* system that has its roots in the past, but the referent can also *exist* in the present or be *projected* into the future as desired or planned events.

MMs have a *structure* because they include information about how knowledge is organised and interrelated within the model using links and nodes according to individuals' experience. The nature of the links and nodes that form a model may change as people develop expertise. For instance, scholars have shown that the level of abstractness in MMs varies among individuals (De Jong & Ferguson-Hessler, 1986; DiSessa, 1983), with experts being found to rely more on abstract rules than novices (DiSessa 1983; Galotti, Baron, Sabini, 1986; Greeno 1983; Larkin 1983) or having more complete and richer MMs for reasoning (Staggers & Norcio, 1993). While reasoning, MMs guide decision making processes (Doyle et al. 2002) through goals, which are cognitive structures activated in "dynamic problem representations" and contained in conceptual nodes. The importance of problem solving in the shaping and enactment of MMs has been emphasised by some researchers who have conceptualised them as cognitive representations that are enacted while solving particular problems (e.g. Halford, 1993; Shih & Alessi, 1993).

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The structure of individuals' MMs is similar to or *analogous* to the external system they represent and, therefore, they maintain the structure of the external systems as *perceived* by individuals. Nonetheless, MMs can be only partially successful since they are subject to errors and omissions, especially in the case of novices. Individuals may be unaware of the possible imprecision and incompleteness of their MMs but, even in this situation, MMs are important because people who have them believe in them and consequently these MMs determine individuals' reasoning processes, decision making (Doyle et al. 2002) and behaviour. For instance, Norman (1983) indicated that his observations of people's interactions with calculators revealed that their MMs included beliefs that were "imprecisely specified and full of inconsistencies, gaps and idiosyncratic quirks" (Norman, 1983: 8). In spite of these limitations, their MMs guided them in the resolution of an arithmetic task. The participants had developed behaviour patterns that made them feel secure in their actions, although they knew that what they were doing did not make sense or was not needed. In other words, their unscientific or superstitious beliefs guided them in their problem-solving actions through a parsimonious type of behaviour that led them to take extra physical operations to reduce mental complexity. In this respect, one participant claimed that she had done more operations than needed and had never taken any shortcuts in her computations with calculators, as she had written down the partial results in a count sums problem instead of using the calculator's memory. These beliefs resulted in unproductive and unnecessary actions for performing the task. At other times, students' beliefs may also create problems for learning.

In the field of physical science it has been shown that children develop their own MMs or naïve framework theories about scientific concepts that can be inaccurate and misconceived in relation to scientifically accepted theories. For instance, children's MMs of heat are based on the assumption that hotness is a property of physical objects that can be transferred to other objects by direct contact (Vosniadou, 1994), while in thermodynamics heat is conceptualised as the energy exchange when two objects that have different temperatures are in contact. This means that energy will be exchanged when two objects with

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different temperatures are put in contact long enough so that their temperature becomes the same. Children's prior beliefs about heat constrain their subsequent interpretation of thermal phenomena to form a set of interrelated beliefs. Accordingly, beliefs can be obstacles for learning by determining students' evaluation of new conflicting information or knowledge to be entered into the already existing system of beliefs (Feiman-Nemser & Remillard, 1996). However, these beliefs, which are formed through prior experiences either in school or in everyday life, can also promote reflection and the shaping of new knowledge. This issue illustrates the paradoxical nature of beliefs (Eisner, 1991; Feiman-Nemser & Remillard, 1996; Pintrich, Marx & Boyle, 1993).

Other researchers (e.g. Chi, 1988, 1992, 2000, 2005, 2008; Limón, 1995; 2001; Limón & Carretero, 1997, 1998, 1999; Pintrich, Marx & Boyle, 1993) have also described learning in terms of conceptual change but focusing on the role played by prior knowledge rather than beliefs in this process. In this respect, prior knowledge can both hinder the integration of new knowledge within a belief system and also facilitate its integration by providing a framework to understand and judge new information.

Beliefs and knowledge can be distinguished following Nespors's (1987) classification of the characteristics of teachers' belief systems (reviewed here via Pajares, 1992). Nespors's categorisation was in turn based on Abelson's (1979) definition of artificial intelligence in terms of: (i) existential presumptions; (ii) alternation; (iii) affective and evaluative loading; and (iv) episodic structure. Existential assumptions are personal truths that all individuals make and involve that some beliefs about oneself and society are immutable and taken for granted (Rokeach, 1968). Furthermore, individuals can create ideal or alternative situations, which differ from truth but guide their actions on account of personal experiences. For instance, Nespors reported how a teacher's beliefs about her traumatic experience as a student led her to try and create an ideal teaching environment in her lessons, which in fact resulted in constant students' interruptions and incomplete lessons. In this respect, beliefs also have an important affective and evaluative component that works separately from the merely cognitive aspect that is normally associated with knowledge. As the previous example also illustrates,

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beliefs are also episodic in nature, that is, they have their roots in previous episodes or events that condition individuals' comprehension and behaviour of future events. The existence of these beliefs is independent of a general consensus that can validate their appropriacy. According to Nespor (1987), belief systems do not need consensus for the validity of the beliefs that integrate them, which also entails that they are more disputable and less dynamic than knowledge systems. Beliefs are value-related and tend to be more difficult to change than knowledge (Alexander & Dochy, 1995; Wenden, 1999). Nevertheless, since beliefs are integrated within systems, which are not necessarily organised in a logical form and usually refer to all types of dimensions of social reality (Rokeach, 1968), the earlier a belief is included in the structure, the more difficult it is to alter it. Therefore, new beliefs are more prone to be easily changed (Abelson, 1979; Clark, 1988; Lewis, 1990; Munby, 1982; Nespor, 1987; Nisbett & Ross, 1980; Posner, Strike, Hewson, & Gertzog, 1982; Rokeach, 1968). In contrast, knowledge systems are subject to evaluation and critical examination since they are based on objective facts and are defined in terms of reason.

In spite of the differences between knowledge and beliefs systems, Lewis (1990) contended that the origin of knowledge is rooted in beliefs and that both constructs can be considered synonymous. Along the same lines, Woods (2003) argued that knowledge is a subset of beliefs because knowledge stands for those beliefs that have the greatest consensus and demonstrability. Accordingly, knowledge represents "how things are" while beliefs include not only this representation but also an implicit assumption about "how things should be". In this view, knowledge and beliefs are considered intertwined although the affective evaluative component of beliefs makes them a filter for the interpretation of new phenomena (Abelson, 1979; Calderhead & Robson, 1991; Eraut, 1985; Goodman, 1988; Nespor, 1987; Nisbett & Ross, 1980; Posner et al. 1982; Schommer, 1990). For this same reason, Woods (1996) posited that beliefs, assumptions and knowledge (BAK) could be treated as ends of a continuum in which there is provisional acceptance of truth (assumptions), and an intimate relationship between knowledge and beliefs. There are propositions that compete for being worth believing and when they achieve that status, they are raised to the objective level of

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knowledge. From another point of view, in a special 1999 issue of *System* on metacognitive knowledge and beliefs in language learning, learners' beliefs were defined as a subset of metacognitive knowledge (students' understanding of learning) (Flavell, 1979, 1987). These beliefs were therefore "used interchangeably with metacognitive knowledge" (Wenden, 1999: 436).

Regardless of whether beliefs are a subset of knowledge or the other way round, what seems to be certain is that individuals tend to filter new information on the basis of its consistency with the already existing information in their MMs. In this sense, MMs have predictive and explanatory power for their possible development since once shaped, they may constrain the new ideas that can be added to the model and determine the construction of new ones (Vosniadou, 2002). For instance, Vosniadou and Brewer (1994) conducted a study about the development of children's beliefs about the day/night cycle. Those children who believed that the earth had a spherical shape interpreted its rotation as an up/down movement, which was consistent with the responses to other questions like the appearance of the sun "up in the sky" or the hiding of the sun behind the mountains or at the other side of the earth. In contrast, those children who believed that the earth was a hollow sphere thought that the earth rotated in an east/west movement, which was consistent with other beliefs such as the "up/down gravity" or that people live inside the earth because otherwise they would fall down. What was more interesting about this study was that the method to elicit MMs consisted of generative questions that could not be responded on the basis of already stored knowledge but had to be originally generated for the problem that was given. Therefore, early answers on the shape of the earth restricted the interpretation of other questions related to its movement or the day/night cycle. This issue is related to the conditions under which information is represented in individuals' MMs and how it could consequently develop on the basis of already existing previous information, as we shall explore in the next section.

## II.1.1. Development of beliefs that compose mental models

Following Chi (2008), the representation of individuals' prior knowledge can be considered at three different levels of abstraction from the lowest to the highest: *individual beliefs, mental models and categories*.

Regarding *individual beliefs*, they can be represented by single ideas or beliefs that can be false. These false beliefs can be corrected through conceptual change when learners are confronted with the correct information by contradiction and refutation of beliefs (Broughton, Sinatra, & Reynolds, 2007; Guzetti, Snyder, Glass, & Gamas, 1993). This revision of beliefs entails the activation of metacognitive monitoring which allows learners to notice gaps in their current knowledge and set goals to revise it and to eradicate possible contradictions (Chi, 2000; Winne & Hadwin, 1998; Zimmerman & Campillo, 2003). For instance, learners may believe that it is the heart rather than the lungs that reoxygenates blood and these false beliefs can be revised and refuted directly or indirectly (Chi, de Leeuw, Chi & LaVancher, 1994; Chi & Roscoe, 2002).

On the other hand, single ideas or beliefs can be missing or incomplete. In these cases, learning occurs by adding and filling the missing components, which entails enriching knowledge rather than conceptual change as learners do not need to modify or get rid of prior misconceptions to improve their knowledge (Carey, 1991). For instance, learners may not know that the heart has four chambers, which is a missing model that can be enriched by adding this knowledge to their prior beliefs. If they know about the existence of four chambers in the heart but not their names, this would be considered filling a gap in learners' knowledge.

As for *mental models*, when people hold a number of organised individual beliefs, these are considered to compose MMs, or in other words, internal representations of external concepts (Gentner & Stevens, 1983). As in the case of individual beliefs, MMs can conflict with scientific or standardised models at different levels: missing models (non existing), incomplete MMs and flawed MMs. When MMs are incomplete, individuals have

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disconnected and unstructured prior conceptions that make it difficult to recognise a coherent structure in them (Chi, de Leeuw, Chiu, & LaVancher, 1994) and disentangle whether the beliefs that compose MMs are in conflict with the correct scientific model. Therefore, in the case of missing and incomplete models learning only requires adding and filling the missing features within the models, but does not entail conceptual change. In contrast, when they have flawed mental models, learners respond coherently although incorrectly to the questions posed to them (Chi, 2000; Chi et al. 1994; Vosniadou & Brewer, 1994). Flawed MMs are thus composed of consistent but incorrect systems of beliefs, and it is this consistency that allows researchers to capture their structure. Conceptual change or the transformation of flawed MMs into correct ones involves the refutation of false beliefs by instruction and the recognition of such contradictions on the part of the students (Chi, 2000). If learners do not perceive a conflict between prior beliefs and the new belief through instruction, the new information may be assimilated into the flawed model and there will be no transformation. For example, Chi (2008) reports that in several studies conducted by her research group half of the participants had a “single-loop” model of the human circulatory system instead of the correct “double-loop” model with two paths. In the flawed model, the participants thought that the blood goes to the heart to be oxygenated, it is then pumped to the rest of the body and finally sent back to the heart. The correct model however consists of two paths. In the first path the blood goes from the heart to the lungs where it is oxygenated before going back to the heart. In the second path, the blood is pumped from the heart to the rest of the body and finally goes back to the heart. The two models are in conflict because they make distinct predictions about the direction of the blood when it leaves the heart, provide diverse explanations regarding the place where the blood is oxygenated and include different elements for oxygenation (lungs versus heart). Following Chi (2008: 69), when learners with a single loop model read the sentence “The right side [of the heart] pumps blood to the lungs and the left side pumps blood to other parts of the body”, they do not find a contradiction between this statement and their beliefs since they interpret that “the right side pumps blood to the lungs to deliver oxygen (rather than to receive oxygen), just as it does to the rest of the

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body” (Chi, 2008: 69). Accordingly, for these students, new information can be integrated into their flawed mental model (single-loop model) and they may not perceive the contradictions involved (Chi, 2000). However, the accumulation of multiple belief revisions can result in the transformation of a flawed mental model into a correct one but for this to happen students must be aware of the contradictions in their belief systems. This transformation into correct MMs can be done either through direct instruction or through life experience and its success heavily depends on the revision of critical false beliefs.

Finally, in the case of robust misconceptions, conceptual change needs to be addressed at the categorical level. This refers to the last level of abstraction of individuals’ prior knowledge mentioned above, that is, *categories*. Some beliefs are resistant to being modified because they have been ontologically miscategorised (Chi, 2008) and their elimination involves radical conceptual change (Carey, 1985). Students need to become aware of having a category mistake and learn to discriminate between different categories, which can be difficult when there is a low frequency of occurrence of one phenomenon in everyday life or when there are superficial similarities among many phenomena. It should be recalled that MMs are also shaped by analogy and when people are confronted with an unfamiliar domain, they tend to tap into an already existing model that is perceived as similar (Collins & Gentner, 1987). As an example Chi (2008) refers to children’s tendency to see whales as a kind of fish because they look like sharks and can swim in water. On account of this mistaken categorisation, children attribute to whales other features of fish like breathing through osmosis. Although this belief can be refuted at the belief level indicating that whales breathe through a blowhole, children will keep implicitly assuming that whales are fish instead of mammals and will run into difficulties to understand, for instance, why sharks suffocate when they are out of water but whales do not. Consequently, when a wrong categorisation is refuted only at the belief level, the revision only leads to superficial understanding because the concepts keep on being wrong at the categorical level. In these cases, instruction needs to drive students’ attention to a real categorical shift.

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Although conceptual change is important for learning through the accommodation of new beliefs when there is conflicting knowledge to be added to individuals' MMs, Limón (2001) noticed that, in the field of educational psychology, many of the studies focused exclusively on students' cognitive processes to explain academic learning. Theorists described four cognitive conditions for conceptual change to take place in individual learners: (i) dissatisfaction with present conceptions; (ii) intelligibility of the new concept; (iii) plausibility of the concept to be learned; and (iv) explanatory power of the new concept for new areas of inquiry. Following Pintrich, Marx and Boyle (1993), this description of the necessary conditions for conceptual change may be an accurate model of how learners shape their beliefs for learning. Nevertheless, it also restricts academic learning to "cold and isolated" cognition (Brown, Bransford, Ferrar & Campione, 1983: 78) as if learners behaved as scientists when they are dissatisfied with their current knowledge and would look for intelligible, plausible and fruitful concepts to restructure their conceptual model. In contrast, there are theoretical and empirical reasons to contend that academic learning is not purely cognitive and isolated. In fact, deep changes in students' understanding involve their personal involvement not only with regard to cognitive issues but also to motivational variables (Pintrich, Marx & Boyle, 1993) and interactional factors (Blumenfeld, Soloway, Marx, Krajcik, Guzdial & Palincsar, 1991) within classroom contexts.

Consequently, in order to understand learners' beliefs and their development, we need to consider not only cognitive factors but also social ones related to the learning context. In order to appreciate this change in research orientation, we must review how beliefs, which compose MMs, have been conceptualised and the methods that have been used to research them. We shall concentrate on the approaches to the investigation of beliefs in SLA, which is the area that we explore in the present empirical study since the examination of these approaches will be methodologically relevant for our own investigation.

## **II.2. Conceptualisation and approaches to the investigation of beliefs in SLA**

As reported in section II.1, MMs are made up of belief systems, which individuals use to make sense of the world and themselves (Abelson, 1979; Dewey, 1983 -reviewed here via Barcelos- 2000; Lewis, 1990; Nisbett & Ross, 1980; Rokeach, 1968; Schutz, 1970). These beliefs are therefore part of human beings' experience. In the field of learning, beliefs are normally contextualised in relation to a learning task or situation (Biggs, 1987, 1992) and they affect students' behaviour (Abelson, 1979; Bandura, 1986; Brown & Cooney, 1982; Clark & Peterson, 1986; Eisenhart, Shrum, Harding, & Cuthbert, 1988; Ernest, 1989; Goodman, 1988; Harvey, 1986; Kitchener, 1986; Lewis, 1990; Nespor, 1987; Nisbett & Ross, 1980; Rokeach, 1968; Sigel, 1985; Tabachnick & Zeichner, 1984). According to Barcelos (2000), in language learning research, behaviour or actions may in turn be understood in relation to students' conceptualisation of learning (Richards & Lockhart, 1994) and strategy use (e.g. Horwitz, 1987; Wenden, 1987).

Learnners' beliefs about the task itself are related to the successful use of strategies. Chamot and O'Malley (1994) claimed that students' conceptions of task characteristics are determinant of an efficient language learning process. Those students who have greater knowledge of the characteristics of the task at hand know what strategies they should use and how they should apply them to solve their learning problems (Paris & Winograd, 1990). Accordingly, how individuals approach a task may be mediated by their conceptions of it and in turn the resolution of the task may also involve the activation of some mental processes or strategies. In Dewey's terms (1986), we encounter the problem of discovering the influence of past experience in the present achievement or failure. In other words, past experiences will positively or negatively affect individuals' attitudes and beliefs towards similar experiences in the future. In turn, these experiences will also activate previous knowledge and expectations for the resolution of similar tasks. Nevertheless, beliefs can also be modified through

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instruction. For instance, Sengupta (2000) carried out an exploratory study on the effects of explicit instruction in revision strategies on student-writers' performance and shaping of beliefs. After the instructional period, students' beliefs about task definition were found to have changed because learners did not continue to equate the improvement of their essays with the need to correct grammatical errors. Moreover, as a result of the instructional intervention, there was a change in the students' cognitive models since they moved from a uni-dimensional model of writing, in which accuracy was the main factor, to a multidimensional model which included awareness of other factors such as the reader of the text.

In addition to beliefs about the task, beliefs about oneself may affect students' behaviour. Learners' beliefs about their ability to perform a given task may influence their goals and motivation and these, in turn, will have an impact on their strategy use (Bandura, 1986; Palmer & Goetz, 1988; Pintrich, 1989; Weiner, 1976). Following Pintrich (1989), students' self-efficacy beliefs, or their perceived competence to perform a given task, can be related to their use of cognitive and metacognitive strategies and effort management for performance. This is because students who have strong self-efficacy beliefs about their capacity to perform a given task are more likely to be cognitively engaged in their learning process and more likely to use strategies more efficiently. Along the same lines, an increase in self-efficacy beliefs through instructional strategies such as goal setting, feedback and rewards can also result in better performance and academic achievement (i.e Schunk, 1982a, 1982b, 1983a, 1983b, 1984a, 1984b, 1984c, Schunk, Hanson & Cox, 1987; Schunk & Swartz, 1993b).

The whole body of research on the beliefs that L2 learners hold and on the social factors that influence the shaping of these beliefs has been framed under different theoretical and methodological paradigms. These views have recently been summarised under three main comprehensive approaches by Barcelos (2000, 2003, 2006) in what can be considered to be the most exhaustive classification of language learning beliefs. These approaches are (i) the *normative approach*; (ii) the *metacognitive approach*; and (iii) the *contextual approach*. They

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differ with respect to their definition of beliefs, the methodology adopted, and the purported relationship between beliefs and actions, as we shall explain next.

The *normative approach* receives its name from Holliday's "normative" term (1994) that was used to designate those studies that considered culture as an explanation of learners' behaviour in class. In this approach, beliefs about SLA are seen as precedents of learners' future learning behaviour and defined as preconceived notions (e.g. Horwitz, 1987, 1988) that can be inferred from a pre-determined set of statements and be examined out of context. The instruments used for the analysis of these beliefs are Likert scale questionnaires, such as the Beliefs About Language Learning Inventory (BALLI), designed by Horwitz (1985) which has been widely used in several studies (cf. Kern, 1995; Kunt, 1997; Mantle-Bromley, 1995; Oh, 1996; Park, 1995; Truitt, 1995; Yang, 1992). Other researchers have used a modification of the BALLI instrument (Kuntz, 1996; Mantle-Bromley, 1995), designed their own questionnaires (cf. Cottrell, 1995; 1999; Mori, 1997) or made use of both their own questionnaires and interviews (cf. Sakui & Gaies, 1999). The combination of different instruments (such as interviews and questionnaires) allows researchers to shed light on the contextual and dynamic nature of beliefs and, at the same time, may help them account for the inconsistencies in learners' beliefs that appear when only questionnaires are used. According to Sakui and Gaies (1999), the use of interviews provide reliable data by scrutinising the reasons, sources, behavioural results and other dimensions of beliefs that are not captured by closed questionnaires since they limit students' responses to a set of beliefs.

Barcelos criticises the studies conducted within this approach on the grounds that they describe and classify students' beliefs about SLA and make inferences about their influence on behaviour without actually investigating the actions performed. For instance, Horwitz (1987, 1988) developed the BALLI instrument to measure students' beliefs about a range of issues related to controversies in language learning and found that students tended to show moderate levels of instrumental or integrative motivation. The author also speculated that most language learners would give up language learning when it became more difficult and time consuming.

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Barcelos also argues that, within the normative approach, beliefs are studied out of context, which involves some limitations on (i) the possible interpretation of the items in the questionnaires; (ii) the significance of the normative statements about beliefs in learning from the students' point of view; or (iii) the relationship between elicited beliefs and students' actions. On a more positive note, the normative approach provides a quantitative account of learners' beliefs through the use of questionnaires, which allows the investigation of a large number of students.

The second approach in the study of beliefs, the *metacognitive approach*, has considered beliefs as a subset of metacognitive knowledge. The latter is defined by Wenden as "the stable, stable, although sometimes incorrect knowledge that learners have acquired about language, learning and the language learning process" (Wenden, 1987: 163). Flavell (1979, 1981) distinguished three different types of beliefs within metacognitive knowledge: person, task and strategic knowledge. *Person knowledge* involves what students think about themselves as learners, their self-efficacy beliefs, and their ability to use resources to sustain their effort in their learning process. *Task knowledge* includes what learners believe about the characteristics of the learning task and its purpose, which is different from domain knowledge (what the learner knows about a given subject matter). Lastly, *strategic knowledge* applies to what students think about what strategies are, why they are useful, and how and when they should be used to achieve various cognitive goals. The underlying assumption in this approach is that metacognitive knowledge helps students to reflect on what they are doing and develop their potential for learning. Students are assumed to reflect on their learning process and be able to describe their beliefs related to their target language, their L2 proficiency, the results of their learning approach, their role in language learning or their views on the best way to learn languages (Wenden, 1987). Semi-structured interviews and self-reports are therefore the instruments most frequently used within the metacognitive approach because they allow learners to reflect and comment on their learning experiences. A case in point is Wenden's (1987) study in which twenty-five foreign language students were found to hold prescriptive beliefs about the use of language in a natural context, the importance of learning

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formal features of the language or the role played by personal factors in the learning process. Nevertheless, some of these beliefs were very different from those reported in the normative approach (BALLI studies) while others were not even mentioned in those studies, which indicated the need for establishing a more comprehensive set of beliefs in addition to those captured by questionnaires.

Along the lines of the normative approach, a cause and effect relationship between beliefs and actions is established and although beliefs are supposed to be linked to experience, researchers within this *metacognitive approach* do not usually investigate the influence of the learning context. However, according to Barcelos (2000), the main limitation of this approach is that learners' beliefs are derived from statements and intentions, not from actions. In addition, beliefs are considered to be abstract mental phenomena and conceived of as a means to turn students into successful learners (Benson & Voller, 1997).

There are not so many empirical studies carried out under the *metacognitive approach* (e.g. Victori, 1992; Victori & Lockhart, 1995) as there are within the normative one. One of the defining characteristics of the former is the relationship between beliefs and learning autonomy. For instance, Victori (1992) conducted a study in which many of the participants believed that in order to learn a language one has to be extrovert, have a fair degree of intelligence, and start learning the language as a child. As Victori indicates, these factors have been found to be beneficial in learning a second language (Ellis, 1985; Van Els, Bongaerts, Extra, van Os, & Janssen-van Dieten, 1984), but it does not necessarily entail that introvert people or those who start learning a language as adults cannot learn a language efficiently. If students have misconceptions such as these about the process of language learning, they may be discouraged from learning and become reluctant to adopt an active stance towards their learning process. As Victori and Lockhart (1995) contend, learners may be discouraged if they attribute more importance to external factors and do not consider themselves responsible for their own learning. Therefore, it is necessary to confront students' metacognitive knowledge with real facts in order to reconstruct possible misconceptions about learning that

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may prevent them from adopting an autonomous approach towards their learning process (Victori, 1992).

Finally, the last group of studies on learners' beliefs is represented by the *contextual approach*, one of its basic tenets being that beliefs are to be investigated in learning contexts. As a result, the main aim of this approach is to shed light on the function of beliefs in specific learning environments rather than to make generalisations of beliefs about SLA. Context here is regarded as "socially constituted (...) in which each additional move within the interaction modifies the existing context while creating a new arena for subsequent interaction" (Goodwin & Duranti, 1992: 5-6). In this respect, learners' beliefs are responsive to the context (Benson & Lor, 1999) and considered to be part of the experiences which play a role in the dynamic and social construction of the environment. To investigate these beliefs, researchers try to shed light on learners' emic perspectives by triangulating data collected through journals, narratives, metaphors (Miller & Ginsberg, 1995), ethnographic classroom observation, semi-structured interviews (Allen, 1996; Barcelos, 1995, 2000), open ended questionnaires (Barcelos, 1995), and discourse analysis (Riley, 1994; Grigoletto, 2000; Kalaja, 1995). These instruments allow researchers to delve into students' interpretive meanings and perspectives about language learning and to detect possible contradictions in their belief systems. Beliefs and actions with this approach are therefore investigated in the context in which they occur so as to understand the intricacies of their relationship. One of the advantages of this approach, as acknowledged by Barcelos (2000), is that it offers a more positive conception of learners as human beings who develop in a specific environment, although the analyses of the data collected by means of the instruments used to capture students' beliefs can be quite time consuming. In contrast, the normative and the metacognitive approaches exclude from the analyses of beliefs the social aspect by concentrating only on students' mental traits.

The three approaches share the assumption that beliefs influence students' use of language learning strategies or their approach to language learning (Abraham & Vann, 1987; Horwitz, 1985, 1987, 1988; Mantle-Bromley, 1995; Wenden, 1987), although, as previously

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indicated, only the contextual approach investigates both beliefs and actions in context. However, according to Barcelos (2003), the connection between beliefs and action is not simple because beliefs can lead to actions but also actions can change beliefs (Yang, 1992). Therefore, she underlines the need to understand the interrelationship between thought and action and suggests that the latter could be investigated following Dewey's (1933) definition of action in terms of purposes and intentions intimately connected to thought, which is the line of research proposed by activity theory (Lantolf & Appel, 1994; Lantolf & Pavlenko, 2001). In this way, the investigation of beliefs in SLA could move from a mere description of beliefs as predictors of feasible actions on the basis of students' statements to the analysis of beliefs in context on account of their actions and intentions (Pajares, 1992; Richardson, 1996). Following this line of argument, Barcelos (2003) underscores some issues for further research, among which we highlight the need to set up longitudinal studies that investigate how students' beliefs about SLA develop over time in a specific context in which personal experiences may determine both their beliefs and their actions. This is an objective that we partially endeavour to achieve in the present empirical study, within the field of language use and, more specifically, in the area of writing in a foreign language setting.

As previously stated, the field of writing can be considered a domain model. Domain models can be regarded as a specification of MMs applied to the way people understand a specific area of knowledge (Stevens & Gentner, 1983). They are usually established by experts but are also approved by social practice (Stahl, Hynd, Glynn & Carr, 1996; VanSledright, 1996). However, even those individuals who are honoured as experts in a domain model only possess some measure of knowledge related to their areas.

In the field of SLA, little is known about the construction and use of domain models related to language use (e.g. speaking, listening, reading and writing). However, within the area of writing, Flower and Hayes (1981) proposed a cognitive process model of L1 composition which we shall explain in what follows. The model is based on the dynamic mental processes that are woven together as writers attempt to respond to a rhetorical problem posed by a writing task for which they activate a network of goals. The writing process is thus

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understood in the model as a kind of problem-solving behaviour which can differ from writer to writer on account of each participant's beliefs about the task or representation of the rhetorical problem. In this sense, this cognitive model of writing shares some general characteristics of MMs like the network of elements. Those elements are activated in dynamic problem representations and they are generated and idiosyncratically represented by individuals to guide their behaviour by the specific demands of a problem-solving situation.

In the sections that follow, we shall explain both the investigation that has been conducted within the domain model of writing focusing in particular on Flower and Hayes's (1981) cognitive model as well as the similarities between this model of writing and the overall characteristics of MMs. Then, we shall report other studies that followed the line of research initiated by Flower and Hayes.

## **II.3. Research on the domain model of writing**

In this section, we shall describe how Flower and Hayes (1980a, 1980b, 1981, 1984) developed their cognitive process model of L1 writing on the basis of protocols of mature writers over a period of five years. The protocols allowed the examination of what writers actually do when they write and not what researchers and theorists think that writers should do. The model was conceived as purely cognitive in nature and was intended as an attempt to describe the complex network of goals during writing and the cyclical nature of composing, which was later followed by other studies (e.g. Bereiter & Scardamalia, 1987; Beminger, Whitaker, Feng, Swanson & Abbott, 1996; Fayol, 1991; Kellogg, 1996; 2008; McCutchen, 1996; Raimes, 1987; Zamel, 1983). Although the model attempted to describe the writing context, which was referred to as "task environment", Bizzell (1986) noted that this construct was barely a framework for the activity that went inside the writers' head and that, as a result, it did not describe the real influence of the context on learners' cognition. For this reason, the model was subject to some revisions from a sociocognitive stance (Flower, 1984; 1994; Hayes, 1996) and more recently, some scholars further developed the task environment by

delving into learners' task conceptualisation (e.g. Ruiz-Funes, 2001; Manchón and Roca de Larios, 2011; Wolfersberger, 2007).

## II.3.1. Flower and Hayes' model

As against the traditional paradigm of sequential stages that only take into account the growth of the written product, Flower and Hayes' model (1980a, 1980b, 1981, 1984) was an attempt to account for the basic mental processes that underline the act of composing in expert writers using think-aloud protocols. The model represented a hierarchical cognitive process of writing that is dynamic because of its recursive nature since writers can move backwards and forwards among planning, translating, and reviewing.

Three main aspects must be highlighted as representative of Flower and Hayes' cognitive model: (i) writing is a distinctive thinking process that is orchestrated during the act of composing; (ii) composing processes have a recursive structure, so that any process can be embedded within any other process and they can interact; and (iii) writing is a goal directed process in which writers activate multiple goals. These features are similar to the dynamic mental representations of problems described in MMs since they are created by individuals and guide decision making processes through goals.

According to Flower and Hayes (1981), the act of writing can be summarised in three main components: the *task environment*, the *writer's long-term memory* and the *writing processes*. The task environment includes the rhetorical problem assigned by the writing task that learners try to resolve or respond to by writing. Long-term memory is the place where the composers store their knowledge of the topic, audience and plans when composing. Finally the writing process is made up of three main processes, namely planning, translating and reviewing which are not necessarily activated in this fixed order since the movement among them is determined by the writers' goals. These goals, which can be shaped and refined during the whole writing activity, also work as a monitor to control progress in writing. Goals can be drawn from writers' long-term memory as stored plans, or from the writing process itself when composers define a rhetorical problem in terms of a series of factors such as the

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writer's concerns about the audience, the impression that composers want to produce on the audience or the difficulty of creating a coherent network of ideas. Goals are also considered to be intimately linked with the discovery process of writing and are thus responsible for moving the composing process forward since writers work to achieve the goals they give to themselves for composing. The working of goals in this model is similar to the investigation of MMs that postulate the existence of dynamic cognitive structures that are drawn from previous experiences and are stored and retrieved from long-term memory so as to deal with specific problem-solving situations. Bearing this assumption in mind, in the present study we will analyse students' MMs of writing by drawing on Flower and Hayes' model of writing as composed of beliefs on the task, or task representation, and a set of goals.

In Flower and Hayes' writing model, goals are organised in a hierarchical fashion whereby subgoals are set in motion as a result of the activation of a main higher goal that is pursued while the text is being generated. The construction of new knowledge and/or an aspect of the already produced text can modify the direction of the text, which results in the revision of previous leading goals. In this sense, the conflict between students' knowledge that is stored in long term memory and writing goals in the course of composing is important in shaping and modifying the writing process. The writing process is portrayed as a continuous movement of generation and evaluation of goals that follow these patterns: *explore and consolidate goals, state and develop those goals, write and regenerate the goals.*

Consequently, writers' thinking process is also a problem solving process in line with Newell and Simon's (1972) problem solving models. Writers engage in a problem solving process by moving from an initial problem state to the resolution of it, which involves a clear definition of the goals to be accomplished. They decide the rhetorical goals of a task in terms of the interests of the potential audience, the persona they want to project, the meaning they want to convey and the characteristics of the text they want to compose. Flower and Hayes' (1980a) argued that experts pursue more sophisticated goals when writing, and that these goals are continually developed and modified during the composing and revision process in relation to an overall rhetorical function of the text (rhetorical goal). Accordingly, during

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writing different subgoals are generated that can, in turn, result in new ideas and knowledge through a discovery process that can lead to learning. In contrast, novices base their writing process on specific content goals related mainly to the topic rather than to an overall rhetorical goal.

Some years later, Bereiter and Scardamalia (1987) referred to these differences between expert and novice writers as characteristic of immature and mature writers and proposed the existence of contrasting models of writing that were labelled as *knowledge telling* and *knowledge transforming*.

## **II.3.2. Bereiter and Scardamalia's model**

Bereiter and Scardamalia' (1987) distinguished two contrasting models of writing with regard to how knowledge is used and integrated into the composing process. They suggested that knowledge telling is characteristic of immature writers, who tend to implement strategies that allow them to carry out the task without engaging in a cognitively difficult process. In contrast, knowledge transforming is typical of mature writers, who view the task as an ill-defined problem, whose solution entails cognitively complex demands, goals and constraints during the heuristic searches activated to that end. The distinction between the two models of writing is also in line with research on MMs in that there are differences in individuals' belief structures. Most importantly, differences in thinking processes between the two writing models also result in distinct problem representations and activation of goals, which determine individuals' behaviour in the same way as postulated in research on MMs (Doyle et al. 2002).

In contrast to "well-structured" problems in which knowledge and goals are already specified in task instructions, ill-defined problems, like writing, require problem solvers to identify their own problem-spaces. Problem spaces are defined as a series of knowledge states and mental operations that can be used to transform one initial knowledge state in which a problem is conceived into another final state in which a solution to the problem is reached or the search is stopped (Scardamalia, Bereiter & Steinbach, 1984). Problem spaces

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are made up of all the possible goals and actions that writers may take during composing and may range from lexis and content to rhetoric and discourse. Scardamalia et al. (1984) distinguished a content space and a rhetorical space in writers' composition process. The content space includes general beliefs about the topic for making inferences about the subject matter and working out the problem. The rhetorical space consists of the writer's mental representations of the rhetorical situation and how to express ideas given the rhetorical constraints.

The *knowledge telling* model involves retrieving information from long term memory in order to produce content for the writing task, which is in opposition to *knowledge transforming*, in which the writer adjusts the retrieved information on account of rhetorical goals. Consequently, in the knowledge telling model the writing process can take place without an overall goal involving some kind of problem-solving behaviour, this being the reason why this model is associated with young or immature writers. The composing process is reduced to simply telling what the writers know about the topic using as sources for the retrieval of content the topic itself, the text type and the already written text. Writers are inclined to present the content in the same order in which it is thought. The resulting written text can be characterised as "writer based prose" (see Flower, 1979) because it merely reflects the writer's train of thought instead of aiming to convey clearly the intended meaning of the text. Knowledge tellers adapt their writing to the reader only by controlling surface features of the text without worrying about the organisation of information.

For this reason, the knowledge telling approach only involves local problems instead of multiple constraints, which results in a "what to say next strategy" while composing (Bereiter & Scardamalia, 1987). Therefore, when composing a text, writers tend to consider problems at a local level as if they need to be dealt with in isolation without taking into account the whole text (e.g. Tetroe, Bereiter, & Scardamalia, 1981). In other words, the approach focuses on a "dead end" because writers concentrate on what to say next and how to say it in appropriate language, which reduces the writing process to a routine. The texts produced can be incoherent at a global level, but not at a local level (sentences). This issue

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illustrates the cumulative approach (what to say next) adopted for text formulation (e.g. McCutchen & Perfetti, 1982).

Knowledge tellers do not lack goals or concerns when writing, but they may not have the cognitive resources to integrate their goals into the composing process (Bereiter & Scardamalia, 1987). For instance, children may usually follow a knowledge telling model because they have less ability to engage in complex reflective processes that tend to develop later with cognitive maturity (Scardamalia et al. 1984). However, the knowledge telling approach does not need to automatically disappear at a certain age. Mature writers may also make use of it when there are external constraints such as time limits or deadlines (e.g. Bryson, Bereiter, Scardamalia & Joram, 1991).

The writing of adults or mature writers is better characterised by a *knowledge transforming* approach that is the outcome of complex problem-solving procedures and cannot be therefore considered as simple refinement of the knowledge-telling model, although it preserves the knowledge-telling model as a subprocess. The model is based on the interplay between the content and the rhetorical spaces. Writing is therefore an emergent process whereby content is generated during composing. Content is retrieved in response to an elaborated representation of the rhetorical problem posed by the task and to a series of rhetorical acts that emerge during composing. Most importantly, the content generated in the text is not a mere reproduction of writers' knowledge (content space), but an adaptation to the rhetorical purpose of the text (rhetorical space), which is indicative of reflective thought.

Accordingly, mature writers set rhetorical goals as well as a subset of subgoals in the content space to achieve higher rhetorical goals. For instance, one rhetorical goal could be to convince the reader about a claim, which could entail the subgoal in the content space of giving support for that claim. The search for support within the content space would lead the writer to further develop the claim by offering evidence. However, the writer may also find inconsistent information to support the claim, which could lead him/her to change it. This information would be passed to the rhetorical space where the writer decides how to encode this information in the text, which would entail the pursuit of new goals. Likewise, the search

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for rhetorical transitions among topics can result in the discovery of new ideas within the content space (e.g. Scardamalia & Bereiter, 1985). In this sense, the knowledge-transforming model shows that writing can lead to (i) understand relationships among ideas (e.g. Langer, 1986b; Newell & Winograd, 1989; Schumacher & Nash, 1991; Wiley & Voss, 1996); (ii) discover new ideas (e.g. Flower & Hayes, 1980a; McLeod, 1992); (iii) construct meaning (e.g. Spivey, 1990); and (iv) create conceptual change (e.g. Bereiter and Scardamalia, 1987; Fellows, 1994; Schumacher and Nash, 1991) through writers' attempts to adapt their texts to the communicative goals of the readers, which in turn also results in writers' further understanding and development of their own ideas. In other words, the creative act of writing can result in the transformation of knowledge and learning, although there is a more recent approach to the study of knowledge transformation which is related to professional writing, as we explain next.

To summarise, according to the writing model that students have, they will transform their knowledge when composing or remain in a knowledge transmission pattern without engaging in the resolution of an overall rhetorical problem. Nevertheless, both models are "working models" ( Craik, 1943; Johnson-Laird, 1983) in the same way as we described before when referring to MMs because although they can be deficient (especially in the case of knowledge telling), they both equally guide and determine the writing process. Finally, the possible existence of inconsistencies in the models, especially in the knowledge-telling one, also illustrate their internal structure as cognitive phenomena created by individuals that do not need to be scientific (Norman, 1983), which is also consonant with some findings of research about MMs. Nevertheless, the models can become richer as individuals develop their expertise in writing, which is what Kellog (2008) argued in the *knowledge crafting* model, as we describe next.

### II.3.3. Kellog's knowledge crafting model

Kellog (2008) proposed the existence of a third model of composition that is characteristic of professional expertise in writing. It is known as *knowledge crafting* because the author's planned content, the text to be composed and the possible reader's interpretation of the text are simultaneously maintained and manipulated in working memory while writing processes are fully orchestrated and intertwined. Knowledge crafting occurs when writers can keep a high cognitive control over multiple representations of the text. This approach involves writing a text bearing in mind readers' interpretation of the intended meaning, which influences the revision process (Sommers, 1980). The writer can engage in both deep and surface conceptual revisions so as to make sure that readers will interpret the intended meaning correctly. This is a typical feature of professional academic writers (Hyland, 2001). For instance, Hyland (2001) identified how the authors of 240 published research papers integrate readers into a text and make them agree with the author's position by (i) using second person pronouns that include both readers and the writer; (ii) appealing to readers' willingness to agree with the reasoning argument; and (iii) using directives such as "to concede" or "to consider" that draw readers to a particular interpretation.

Several years of writing practice are needed in order to master these domain specific rhetorical skills and to handle mentally and simultaneously the writer's ideas, the text meaning and readers' interpretation of both the author's intended meaning and the produced text (e.g. Rymer, 1988). This reminds us of the structure of MMs that can be divided into different nodes according to individuals' experiences, but the relationship between the nodes can be modified when individuals develop their expertise and therefore the models become more abstract, complete and richer.

The knowledge crafting approach moves away from purely cognitive models of writing that depict writers as solitary individuals struggling with their thoughts. In Flower and Hayes' (1981) cognitive process model, the audience was not a central element in the writing process, but rather an aspect of the task environment. Furthermore, as Flower (1989) later on

highlighted, the cognitive model that was proposed in 1981 also failed to explain how the situation in which writers compose could influence the act of writing or the shaping of writers' long term memory. For this reason, Flower and her colleagues became aware of the importance of context and of how individuals' cognition could mediate the interpretative processes of writing. The investigation of these aspects required the analysis of reading and writing activities outside laboratories, that is, in natural contexts. By emphasising the cognitive but also the social and affective factors that affect composition, Hayes (1996) revised Flower and Hayes' model of writing, as we describe now.

### **II.3.4. Hayes' writing model**

In an attempt to expand Flower and Hayes' (1981) model, Hayes distinguished two further elements in the writing process: *the task environment* and *the individual*. The former is composed of two types of environments: *the social* and *the physical*. *The social environment* refers to factors that are external to the writer but influence the writing process, such as purpose, audience, collaborative work or the culture in which the writing process is embedded. In contrast, *the physical environment* embraces all the tangible elements that can determine the way in which the text is written such as the computer or reference books. The inclusion of environmental factors in the writing model is consonant with the creation and development of MMs for which not only cognitive but also environmental factors are needed. These factors refine MMs when individuals try to interpret social phenomena and interact with them (Jacob & Shaw, 1998; Moore & Gollidge, 1976).

As for *the individual dimension*, the model includes the affective component of motivation and the cognitive factors of working memory, long-term memory and cognitive processes. *Motivation* is linked to various cognitive, social and environmental factors including possible conflicting goals, the perceived difficulty of the writing task and writers' beliefs regarding their ability to accomplish it. *Working memory* is a cognitive component that is essential in the writing process because it controls logical reasoning, problem solving or writers' information retrieval from long-term memory of previous writing experiences. *Long-*

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*term memory* includes three main elements: task schemas, audience knowledge, and extended practice. In contrast to long-term memory, *working memory* is limited by the amount of information it can hold and the length of time it can retain it.

According to Hayes (1996), during the writing process, different *cognitive processes* are activated by the writer, namely, *text interpretation*, *reflection* and *text production*. With regard to *text interpretation*, writers create a mental representation of the task through different types of reading. Firstly, writers read to gather information to be used in their texts (i.e. they read for comprehension). There is also reading for revision so as to locate problems in their texts to solve them. Thirdly, there is another type of reading in which writers attempt to grapple with the focus and restrictions of the task. The second cognitive process is *reflection* in which three subprocesses can be distinguished: *problem-solving*, *decision making* and *inferencing*. Problem-solving and decision making are linked to goal achievement, which entails a process of evaluation and selection of different alternatives during composing. Inferencing, in contrast, is related to the use of the available information to infer implicit information in the text and continue writing. Finally, the third cognitive process, *text production*, refers to the actual act of composing through which writers transform their ideas developed during text interpretation and reflection into language.

Flower and Hayes (1981) highlighted as the unavoidable cognitive part of the writing process the confrontation of the writer with a rhetorical problem that is posed by each specific writing task and the interpretation of which differs from writer to writer. As we have just reported, in the revision of the model, Hayes described text interpretation or the writers' creation of a mental representation of the task through different types of reading. However, interpreting a task that is imposed by an external person involves more cognitive processes than just reading (Prior, 1995). In order to shape a representation of a task, writers must also draw on their past writing experiences and interpret contextual cues (Flower, 1990). This representation or understanding of the task is intimately linked to problem solving (Duncker, 1945; Greeno, 1977) since the former is a requisite for the latter (Cummins, Kintsch, Reusser,

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& Weimer, 1988). People cannot solve a problem they do not understand, unless they do it by chance.

In what follows, we focus on learners' task representation to account for mental models of writing because we consider it is the core element of a writing model that activates a network of goals for composing, as Hayes, Flower, Schriver, Stratman and Carey similarly did (1987) when they described a theoretical model for revision processes in writing. They claimed that the notion of task representation was at the top of the model because goals emerged around it for specific problem processes that need to be solved. The parallelism should be noticed between the importance of students' task representation in writing models and the structure of MMs in other research fields that were mentioned above since both are composed of a set of beliefs that guide decision making processes through the activation of goals for problem-solving situations. In other words, we believe that in the domain model of writing, task representation can be equated with writers' sets of beliefs about a task that guide them in their decision making processes and problem-solving behaviour. Accordingly, task representation will be considered in our study as the central factor of learners' mental models of writing and we shall concentrate on this construct in the sections that follow.

Writers may spend plenty of time representing the task and trying to find a way to solve the problem posed by it. The difficulty in solving the problem posed by the writing task is shown in constant changes in original plans designed before and while composing (e.g. Flower, Schriver, Carey, Haas & Hayes, 1989), and in writers' different views on the same assignment, which may in turn condition the final written text (Flower, 1990; Ruiz-Funes, 2001). In addition, the complexity of learners' mental representation does not always correspond to the final text (cf. Flower & Hayes, 1984; Ruiz-Funes, 2001) since there may be a gap between learners' cognitive representation of the task and their ability to write the text as it is mentally represented (Wolfersberger, 2007).

Readers in turn can guide and shape the writing task and be therefore part of the composers' task representation although as previously reported, the influence of the possible audience on the shaping of the writing task is more likely to be stronger in the case of mature

than immature writers. Children seem to have more problems in detaching themselves from their own texts so as to read them without thinking about their own communicative intentions as writers. Therefore, children also find it more difficult to detect ambiguity in their texts or, in other words, to differentiate between their intended meaning and the actual meaning conveyed in the text. As Bartlett (1981) showed, fifth grade students were able to notice grammar mistakes in texts written by other students and by themselves. However, their ability to spot ambiguous references in the texts composed by other students was much higher (50% of the total number of ambiguous errors) than in their own texts (10% of the problems).

These findings come to show the importance of learners' beliefs about the task at hand or task representation, but as highlighted by Burns (2000: 3), "it is vacuous to talk about mental representations without also talking about how these presentations are used to accomplish specific tasks". Consequently, we shall also consider the implications of task representation for written outcomes.

## II.4. Research on writers' task representation

Some researchers (e.g. Carey, Flower, Hayes, Schriver & Haas, 1989; Flower, 1990; Kantz, 1990; Ruiz-Funes, 2001; Wolfersberger, 2007) have explored writers' *task representations*, so as to elicit their beliefs about the writing task and to examine the implications for composing. Task representation has been conceived as a complex and dynamic interpretative process in which the composer deciphers the rhetorical situation as he or she understands it and writes about it (Flower, 1990). In Flower's terms:

"The process of task representation begins when the problem solver begins consciously or unconsciously to represent the givens and constraints of this situation, the goals she would attain, and the strategies or actions she might take, since together these constitute the problem she is solving". (Flower, 1990: 38)

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This conceptualisation of task representation is in line with the above mentioned definition of MMs as cognitive representations that are put into motion within a specific environment while reasoning and solving particular problems. Flower and Hayes (1980a) claimed that one of the crucial aspects in expert writing is the kind of rhetorical problems that writers decide to address because “people only solve the problems they give themselves” (p.23). A rhetorical problem is made up of two units. The first unit includes the rhetorical situation, the audience and the assignments, which are given to writers and with which they must work. The second unit is made up of the goals that are pursued by the composer (Flower & Hayes, 1980a) and that will affect written performance. In the present study, we follow Flower and Hayes’ (1981) line of research because it is in line with research on MMs in other fields of knowledge by including beliefs and goals under the term of task representation. As for the exploration of task representation, different approaches have been adopted. Some studies have drawn on reading-to-write tasks and have reported different complex cognitive interpretations of the same task, while other studies have based their research focus on learners’ mental representations of expository texts without sources. Both trends of research throw light on writers’ cognitive understanding of the task, although not all the studies in both strands have also explored the goals that guide the evolving nature of task representation.

Regardless of the approach adopted for the investigation of task representation in previous studies (which have operationalised task representation either as the different interpretations of a reading-to-write task or as the different mental representations involved in the writing of expository texts), they seem to share some common assumptions about the rhetorical problem posed by the writing task. Firstly, writing tasks may require writers to build unique task representations which entail problem solving processes in which they engage to achieve their goals in writing (Scardamalia, Bereiter & Steinbach, 1984). Accordingly, the establishment of goals in a planning stage allows the simplification of the task (Hayes & Nash, 1996) and the consequent activation of problem-solving strategies. Nevertheless, the representation of the task extends throughout the entire course of composing and even during the revision process for which writers need to write their texts and assess

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whether their drafts correspond to or differ from their intended meaning (Flower, Hayes, Carey, Schriver & Stratman, 1986). On these grounds, some empirical studies have explored learners' task representation before beginning to write (while planning) and during the writing process.

On the other hand, people may have stored rhetorical problem representations about common written situations like how to write a letter, for example, which include conventions about audience, purpose or even formulaic expressions. In this case, other studies have delved into students' stored task representations for composing and their relationship to performance.

In what follows, we shall account for the investigation of task representation bearing in mind (i) different stages of the writing process (before writing or during the course of composing); and (ii) learners' stored knowledge for composition. The reader should bear in mind that the studies reported in both cases could be based on reading-to-write tasks or on writing texts from experience.

## **II.4.1. Writers' task representation before beginning to write**

In this section, we shall delve into writers' task representations in L1 and L2 writing before starting to compose, and their effects on performance. The investigation of writers' task representations before writing has been undertaken using think aloud protocols as the elicitation procedure. In addition, some potential factors that may influence task representations have also been considered such as writing expertise when composing in L1 (e.g. Carey, Flower, Hayes, Schriver & Haas, 1989) or in L2 (e.g. Cumming, 1989), and L2 language proficiency when composing in a foreign language (e.g. Manchón, Roca de Larios and Murphy, 2009).

Carey et al. (1989) set up an exploratory study with twelve L1 writers of different degrees of experience in composing (five expert writing teachers and seven student writers with writing difficulties). They were given an ill-defined task to complete in one hour. Ill-defined problems require problem solvers to create their own task representation in response to some general task requirements by specifying their own goals and criteria for the task. The writing task consisted of writing about the participants' jobs for a teenage magazine. The activity was ill-defined because the writers could create a unique body of personal knowledge and draw on a set of particular goals to reach the young audience to which the paper was addressed.

The results indicated that divergences in writing quality, quality of planning, and quantity of planning (extensive versus minimal) were not related to L1 writing experience, although it is also possible that the small number of students who participated in the study made it difficult to discern any patterns for L1 experience. However, there were two main findings that highlighted the influence of learners' task representations before writing on the final quality of the produced texts. First, there was a correlation between the amount of planning and the writing quality: extensive planners obtained higher quality written scores than minimal planners. Second, the writers who composed the most successful texts (3 experts and 3 novices) did less "content planning" in their initial task representation but planned for

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all rhetorical categories (audience, purpose and overall organisation and coherence). There was a high correlation between the quality of planning and the quality of the written texts. In addition, planning for audience (.778) and purpose (.741) resulted in better correlations with text quality than planning for structure (.489). This was in contrast to the writers who composed less successful texts, since they ignored one or more rhetorical categories and tended to place emphasis on content plans. Four students who scored the lowest in their texts lacked concerns for rhetorical aspects of their writing because they did not have enough knowledge to deal with those features or because they did not realise that they should plan rhetorically. These writers were guided by a “knowledge telling or topic-oriented representation of their task which ignored the rhetorical constraints of the assignment” (Carey et al. 1989: 11), while the students who obtained the highest written scores built a “rhetorical representation” of the task that was characterised by including in their planning all the rhetorical categories mentioned above.

Other studies have found that writing expertise in the learners’ native language is important in both L1 and L2 writing. For instance, as we will discuss below, Cumming (1989) found that expert L1 writers displayed similar writing behaviour in both L1 and L2, and could engage in different types of planning. These writers could frame their compositions in advance (advanced planners), or gradually refine their mental representations through composing (emergent planners) as a result of the mental models that guided them in their cognitive processes when composing.

Finally, when students compose in L2, their task representation may also vary in relation to their L2 proficiency level. In this respect, Manchón, Roca de Larios and Murphy (2009) showed that the higher the L2 proficiency level of their EFL participants was, the more time they spent on their pragmatic and ideational representations before beginning to write and the more able they were to successfully integrate these representations in their texts. As for the different composing processes, participants with low L2 language proficiency were found to plan more in L1 than in L2 writing and to have problems to structure their ideas in the L2, which contrasted with their ability to construct a coherent network of ideas in the L1

task. In contrast, the more advanced language students tended to plan more in the L2 task and did not show any performance loss in this condition because their L2 proficiency allowed them to maintain their approach and to preserve their planning goals across languages.

As a whole, the findings from the different studies show that learners' shaping of task representation before writing may be constrained by writer-internal factors (L1 writing expertise or L2 proficiency). Nevertheless, although composers generate their task representation (goals and overall task constraints) before writing, there are some features of task representation that may be modified during the composing process (Carey et al. 1989), as we further analyse in what follows.

## **II.4.2. Writers' task representation while writing**

This section is devoted to the analysis of various studies that have looked at the development of writers' task representation while they try to find solutions to the constant ill-structured problems that come up when writing (Simon, 1973). We will start by reporting Flower's (1990) description of a tentative theory of task representation that was based on an exploratory study designed to investigate the process of reading to write in L1 with the aid of verbal protocols and writers' retrospective accounts. To our knowledge, Flower was the first researcher who carried out an in-depth analysis of writers' task representations. Later on, Ruiz-Funes (2001) followed this line of research and set out to investigate the relationship between L2 writers' task representations and the linguistic production in written texts. Both Flower's (1990) and Ruiz-Funes' (2001) research looked at task representation using one-shot data collection processes, while researchers like Wolfersberger (2007) delved into the dynamics of L2 writers' task representation by exploring the elements that were important at different stages of the writing process. However, in spite of Wolfersberger's dynamic approach, his study did not examine the problem solving dimension of writing, which is inherent to the evolving nature of task conceptualisation. In this respect, it should be recalled that dynamic problem representations also involve constant problem-solving behaviour, as postulated in research on MMs (e.g. Doyle et al. 2002). For this reason, we also discuss

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Cumming's (1989) investigation in which students' mental representations for writing are examined in relation to their decision making processes and problem-solving behaviour when confronting different task types.

## **II.4.2.1. Flower's research**

The exploration of L1 writers' online process of task representation was initiated by Flower (1987, 1990), who analysed writers' think aloud protocols and personal accounts when composing. The participants were asked to think aloud while they read a source text, planned and wrote their own text, which was "designed to simulate a typical, open-ended, underspecified, and overloaded assignment; it asked for everything: to read, interpret, synthesize, use all the 'relevant' data, write their own statement, and be comprehensive" (Flower, 1990:42). The source text was based on findings on the revision process in writing and included quotes, notes and different claims on revision by different authors. Some of the authors' views were conflicting and there was not an organizing principle in the text so that the writers could interpret and organise their own assignment. One week after the participants composed their texts, they made a short presentation of an interesting feature of their writing process. Flower observed that the writers' task representation differed in the goals formulated, the writing strategies used, the text format, the features adopted, the main source of information used and the plans for organizing their assignment.

Plans for organizing the texts predominated in all writers' task representations and guided their process of reading and writing, which could in turn influence text coherence and the final evaluation of the papers. Five different organizing plans were distinguished. The first was the *organizing plan to summarise* the main ideas of each paragraph within the source text and to select the audience for which they wrote. Other students *organised their plan to write about the topic* as they used the source text as a springboard to develop their own ideas and talk about what they already knew. Many learners adopted a middle position between summarising and ignoring the ideas of the source text since they *reviewed the source text and added personal comments to them*. Others organised their plans to *synthesise ideas under a*

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*controlling concept* and finally some writers *organised their plans to interpret ideas for a rhetorical purpose in addition to synthesising*. For this last organizing plan, writers needed to transform information from their source text and personal knowledge to carry out their rhetorical goals. The individual differences that emerged in the students' task conceptualisation showed that through their own constructive processes they created different tasks to do, which could determine whether the produced texts agreed with the teachers' expectations and how they were consequently evaluated. In addition, the complexity of the texts did not always correspond to the writers' cognitive complexity because some simple texts were at times the outcome of sophisticated thinking. Accordingly, cognitive complexity was suggested to be a characteristic of the writers' process when composing rather than an inherent feature of the type of text or genre. In this way, it was proposed that although a synthesis is normally considered a more cognitively complex task than a summary, a summary could be transformed into a harder task to write than a synthesis on account of the knowledge transformation that writers are willing to assume by selecting and pursuing goals when composing their texts.

On the basis of the different types of task representation created by the writers about the same composing task, Flower suggested that task representation is a constructive process that is built around three principles: (i) writers construct an initial representation of the task by integrating elements of the social, cultural and academic context; (ii) during composing, the task representation is shaped by noticing cues from source materials and by evoking relevant memories or past writing experiences that can lead to planning, reviewing, updating and revising the task representation and the establishment of new goals to be pursued; (iii) changes in writers' task representation may result in problems for constructing an integrated text because the new ideas may be in conflict with the ones already expressed but the writer may not realise that there is lack of integration. The result would be a written text that does not entirely correspond to the writer's intended task representation. It is important to note that Flower's principles of task representation include the incorporation of goals for the development of the representation as postulated in research on MMs in other areas of

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knowledge, whereas the studies that followed this line of research of task representation in L2 (e.g. Ruiz-Funes, 2001; Wolfersberger, 2007) did not account for writers' goals when representing the task. We shall now report Ruiz-Funes' study (2001), which looked at foreign language (FL) students' task representations *when writing* and the relationship of these to the linguistic quality of the written texts.

## **II.4.2.2. Ruiz-Funes' research**

As against Flower's study, in which task representation was based on the analysis of writing processes captured either on line through think aloud protocols or by means of retrospective learners' accounts, Ruiz-Funes' (2001) research focused on foreign language learners' task representation as reflected in their final written products. To that end, she applied Kantz' (1990) categories that were the same as those identified by Flower (1990): *summary*, *summary and comment*, *free response to the topic*, and *synthesis interpretation with rhetorical purpose*. The participants were fourteen junior-year Spanish majors or minors in a third year Spanish reading class that was intended as a bridge course between the intermediate and advanced level classes. The course included the four instrumental language skills and was language oriented, although it also embraced Hispanic cultural issues. The participants were required to write an essay based on a Hispanic short novel, which was rich in cultural references, by analyzing the changes in the protagonist's cultural identity. The students composed their texts in class over the period of a week and were allowed to use the source text, dictionaries, class notes and other references. As for the linguistic quality of the compositions, the syntactic complexity (number of T-units and mean length of T-units or MLTU) and the grammatical accuracy (total number of errors and ratio of number of errors per T-unit) of the compositions were analysed.

In line with Flower's (1990) results, Ruiz-Funes found that in the same reading-to-write assignment, foreign language students interpreted the task differently and composed distinct types of texts. Three learners wrote a *summary*; five students an *interpretative text with a rhetorical purpose*; and six participants composed a *summary and comment* text. None

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of the learners wrote a *free response to the topic*, which was probably due to the fact that the task was better defined than in Flower's (1990b) study. In fact, students were given concrete instructions to analyse the main character's changes, how these changes affected his cultural identity and whether the character found a solution to his identity problem.

More interestingly, the complexity of L2 students' task representation did not always relate to the linguistic sophistication of the produced texts. The most cognitively elaborated task representation, *interpretative texts with a rhetorical purpose*, resulted in texts that showed the highest ratio of grammatical errors per T-unit and did not get high scores in syntactic complexity. In contrast, the *summary and comment* papers, which were less cognitively sophisticated since the learners did not engage in finding connections or resolving conflicts in their compositions, got the highest scores both in syntactic complexity and in grammatical accuracy. This led the researcher to suggest that the students' ability to compose syntactically complex sentences and create grammatically accurate texts did not necessarily result in cognitively sophisticated compositions. Nevertheless, Ruiz-Funes also indicated that the difference in the mean length of T-units among the three categories of task representation was not significant, which in our view calls into question whether any assertions should be made about the relation between the cognitive elaboration of task representation and the syntactic complexity of the texts. We rather believe that a different analysis of the written performance in terms of the communicative adequacy of the texts could have offered a more accurate view of the relationship between task representation and written performance. In this respect, Pallotti (2009: 596) underlined that the adequacy of texts represents the extent to which "a learners' performance is more or less successful in achieving the task's goals efficiently" and should be considered as a theoretically independent dimension of other linguistic measures (complexity, accuracy and fluency or CAF measures) that are normally assessed to evaluate written performance. In other words, adequacy measures a different aspect of learners' development from complexity, accuracy and fluency (CAF) and should therefore be regarded as independent constructs, although both adequacy and CAF measures could be found to be empirically related. Pallotti (2009) argues that many researchers seem to

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agree that high scores in CAF is an indication of good writing quality while low scores are suggestive of difficulties in language. However, these assumptions are questionable since as pointed out by Pallotti (2009), a text obtaining high scores in CAF measures can be inadequate to reach the goal of communicative adequacy as shown in this example: “colorless green ideas sleep furiously on the justification where phonemes like to plead vessels for diminishing our temperature”. In contrast, another text can achieve those communicative goals but score poorly in CAF measures such as “No put green thing near bottle. Put under table” (Pallotti, 2009: 596). In other words, a text can be grammatically correct but pragmatically deviant like in the first example, whereas the opposite is true for the latter example.

In Ruiz-Funes’ study (2001), this two-fold perspective for the investigation of written performance was missing. We could suggest that if the communicative adequacy of the written texts had been examined, some coherence could have been found between the complex cognitive representation of the task (interpretative text versus summary) and the quality of written performance (communicative adequacy). In fact, the representation of the task in the most cognitively demanding way (interpretative texts) involved learners’ engagement in elaborate thinking and transformation of knowledge according to writers’ purposes, which is in line with the knowledge-transforming model of writing (Bereiter & Scardamalia, 1987). In contrast, the simplest representation of the task (summary and comment) involved summarising the main points of the texts without making connections or solving conflicts in the compositions.

To conclude, although Ruiz-Funes’ study was a worthy attempt to show the interrelationship between students’ mental representation of the writing task and written performance, it still offered a limited analysis of such potential relationship by restricting written outcomes to linguistic accuracy and syntactic complexity. It also offered a static analysis of task representation in L2 since the results were constrained to the analysis of one assignment with a single draft. Other researchers, like Wolfersberger (2007), have explored the dynamic process of L2 writers’ task representation and its relationship to written

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performance by examining the different elements that may have an influence on the shaping of the task at different stages of the composing process, as we go on to describe now.

## **II.4.2.3. Wolfersberger's research**

Wolfersberger (2007) researched changes in L2 students' task representation when composing from sources and proposed the inclusion of two elements which, although missing in Hayes' model, were linked to the notion of task representation: *projected task* and *perceived task*. The former fits with Hayes' *task environment* element and is associated with the person who sets the guidelines for its accomplishment, which would correspond to the teacher in an academic environment. In contrast, the *perceived task* dimension further develops Hayes' *individual* element and, as mentioned above, is linked to the writer's mental interpretation of the task on the basis of previous writing experiences and present contextual cues. According to Wolfersberger, the projected and the perceived task can be completely different and this is crucial to understanding writers' performance. When they differ, the final text may not meet the expectations of the teacher, in which case learners can get low grades even though they have the necessary writing ability to obtain a good one (Hamp-Lyons, 1991 reviewed here via Wolfserberger, 2007). As we will see, Wolfersberger showed a linear development in task representation with different factors exerting an influence on the learners' shaping of the task at different stages.

The participants were four Chinese learners, who were studying English in New Zealand and were enrolled in a bachelor's degree programme in international business. They were taking writing classes for which they needed to write three English drafts of an argumentative assignment from sources over a period of three weeks. They received feedback from the teacher after the first draft and from the peers after the second draft. Data collection procedures included four interviews with each participant, the texts written by the participants with their corresponding drafts, and three classroom observations.

Drawing on the qualitative data collected during the three weeks and bearing in mind the small number of participants, Wolfersberger developed a tentative model of writing from

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an ethnographic perspective. The model distinguished two time-sequential stages to trace the development of learners' task representation. According to the model, at the first stage the writers form an initial mental representation of the task after having received instructions from the writing teacher and drawing on useful information from past writing experiences that could be used for the present essay. The result is a unique task representation which may be regarded as a hybrid of prior experiences and current requirements. Once an initial task representation has been formed, previous writing experiences become less prominent and the current writing context becomes more dominant and leads the writing process.

At a second stage, fourteen factors were found to influence the development of the learners' task representation and were grouped into four categories: (i) *historical factors* like previous writing experiences; (ii) *the teacher*, who is a permanent and the highly influential factor in the construction of learners' task representation through classroom interactions, comments on students' drafts and writing instruction; (iii) *other-people*, like students, who prompt learners to think about their task from different perspectives and which can result in some changes in task representation to integrate new knowledge; and (iv) *writing process factors*, which also involve some changes in task representation when the occurrence of unanticipated problems force writers to reconsider their task.

Wolfersberger's model (2007) bears some similarities with Flower's theory (1990) in that it (i) emphasises the use of previous writing experiences for the development of task representation, (ii) acknowledges contextual cues such as students and the teacher in the formation of the writer's mental image of the task, and (iii) underscores the difficulties involved in creating a text that may perfectly match with the writers' mental task representation. However, it also expands Flower's theory by suggesting a linear development of the construct of task representation in which different factors have an influence at different sequential stages.

In addition, Wolfersberger also examined the factors that led the participants to write a text that was considered to be plagiarised. In this respect, the limited L2 language proficiency of two participants (evaluated by the time learners lived abroad and their scores in an

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admission test for their course programme) seemed to have inhibited the transfer of L1 writing skills and expertise to the L2 task. For this reason, they borrowed fragments from the source texts that were interpreted as plagiarism by the teacher. In addition, these two participants also found it difficult to sustain their discourse and to write the minimum number of words required in the task.

To summarise, Wolfersberger's research explained how different elements during the writing process intervened in the shaping of writers' representations of the task, which is what we consider as the core element of learners' mental models of writing. In addition, the study also illustrated how one writer-internal variable like L2 proficiency constrained written performance in reading-to-write tasks. Nevertheless, it did not examine the shaping of task representation in relation to writers' goals. Such goals are postulated in research on MMs as essential cognitive structures for dynamic problem representation (Doyle et al. 2002) and in the field of writing, they are considered as essential elements to monitor and shape the writers' discovery process (Flower & Hayes, 1981). In this respect, Zhang (2006) incidentally found that the task representation of six L2 writers was mediated not only by previous writing experiences but also by personal goals.

Consequently, the problem solving dimension that is inherent in the shaping of task representation during the discovery process of writing was missing in Wolfersberger's investigation. In contrast, other studies like the one conducted by Cumming (1989) examined the complexity of learners' mental representations while thinking aloud and writing different cognitively demanding tasks, as we shall discuss next.

## **II.4.2.4. Cumming's research**

Cumming (1989) investigated L2 learners' representation of the task by analysing both their problem-solving behaviours and their corresponding attention to decision making processes while performing three cognitively different writing tasks. This kind of research reminds us of the "dynamic problem representations" that, as previously mentioned, are part of learners' MMs and are activated when solving particular tasks. Nevertheless, the investigation of problem representation cannot be considered to be dynamic from a methodological perspective since the study involved just a one-shot data collection process. As we will report now, the study is important because it offered a different perspective for the analysis of learners' engagement in task representation when writing with regard to their writing expertise and L2 language proficiency.

Cumming's (1989) participants were twenty-three Canadian Francophone students at three levels of L1 writing expertise (professional, average and basic) and two levels of English proficiency (intermediate and advanced) who were studying in an English-French bilingual programme. The participants wrote three writing tasks in English while thinking aloud. Each task was intended to impose different demands on students' writing ability. One of them was an informal writing task (a letter) which learners could compose on account of their familiar experiences. The second task (an argumentative text) represented the kind of compositions that learners write for tests and courses and involved composing about an intellectually demanding topic in formal academic English. Finally, the third task (a summary of a booklet) asked learners to read a lengthy booklet of forty pages and write a summary of it as in a typical academic assignment in which learners need to write on the basis of a reading task.

The quality of the essays was assessed by two raters who used a modified version of Jacob, Zinkgraf, Wormuth, Hartfiel and Hughey's (1981) ESL composition profile in which *content*, *organisation* and *language use* were evaluated. As for students' mental representations of the tasks, they were captured while learners composed texts using think-aloud protocols which were coded by looking at the decisions taken and the aspects attended

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to by the participants. It should be underscored, in contrast with other studies of task representation in which the analysis was based on the participants' overall interpretation of the same reading-to-write task (Flower, 1990; Ruiz-Funes, 2001), that the focus of interest in Cumming's research was the linguistic and textual features to which the participants paid attention while making decisions in three cognitively dissimilar task types. These aspects were categorised by means of an adapted version of a coding scheme developed by Scardamalia and Paris (1985) which included *language use*, *discourse organisation*, *gist*, *procedures for writing* and *intentions*. These constructs in turn were also used to form combinatorial categories that distinguished whether the participants focused on more than one aspect while making decisions (double, triple, quadruple or quintuple configurations) in writing.

The results indicated significant differences in the students' attentional behaviour when writing as a function of task type. The participants displayed more complex mental representations when composing the two more cognitively demanding tasks (the argument and the summary tasks) than in the informal letter. Likewise, problem-solving heuristics also varied according to task type. The least cognitively demanding task (the informal letter) resulted in fewer heuristic searches than the other two (the summary and the argument).

Regarding the complexity of mental representations, or, in other words, whether the participants attended simultaneously to different writing aspects, basic and professional writers followed a similar pattern in that they were inclined to attend to two or more aspects of their compositions, although the percentage of attention was higher among the expert writers (67% to 89%) than among the basic ones (45% to 60%). Nevertheless, the think-aloud protocols revealed that the more expert writers approached their task with clearer notions of what they should do to organise the discourse, use language, follow rhetorical plans and evaluate their intended expressions. They also (i) used specific strategies to solve problems when writing (Flower & Hayes, 1980a, 1984); (ii) transformed their knowledge in the course of the writing process (Bereiter & Scardamalia, 1987); (iii) displayed more complex mental representations in their decision making processes (Bereiter & Scardamalia, 1987; Flower &

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Hayes, 1984; Scardamalia & Paris, 1985); (iv) wrote compositions that were better organised and more effective in content (Breland & Jones, 1984); (v) interrelated the composing process with planning (Burtis, Bereiter, Scardamalia, & Tetroe, 1983); and (vi) paid attention to lexical choices (Gardner, 1983). In contrast, the less expert writers seemed to be guided by a what-next strategy (Bereiter & Scardamalia, 1987) which resulted in unmonitored production of writing.

The main results of the two types of analysis regarding writing processes (attention paid to writing aspects and problem solving behaviour) led the researcher to conclude that writing expertise and L2 proficiency were psychologically different constructs and contributed independently to L2 writing. L2 proficiency did not seem to entail qualitative differences in writers' thinking or decision making processes and consequently, as reported by Cumming, it was only an additive component that helped writers compose more effective texts by allowing them to concentrate more deeply on some features of their writing process but without determining the characteristics of their texts. Conversely, the quality of the thinking processes was largely conditioned by writing expertise that could be acquired in L1 or in L2.

As a whole, Cumming's research offers a different perspective of learners' task representation from the studies presented before by underlining the importance of writing expertise when learners deal with the ongoing process of writing and engage in decision making processes for specific problems that emerge during composing. It should be recalled that the study was conducted in a second language (SL) context with students who were participating in an English/French bilingual programme and therefore L2 proficiency level (intermediate and advanced) did not seem to be a constraining factor in written performance either in writing from source texts (the summary of a booklet), as posited by Wolfersberger (2007), or in tasks that involved composing from experience (the letter and the argumentative text). Nevertheless, these results may be different when students of English as a Second Language (ESL) are compared to native speakers. For instance, Connor and Kramer (1995) found that when ESL writers were compared to American writers, the L2 proficiency level of the former group constrained their task representation in reading-to-write-tasks as well as

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their written performance (at the level of coherence and communicative effectiveness). Along the same lines, the role of L2 proficiency has also been highlighted as a restricting factor in foreign language contexts. For instance, Manchón, Roca de Larios and Murphy (2009) showed how L2 proficiency seemed to be related to the shaping of MMs in the case of learners of English as a Foreign Language (EFL), which in turn also affected performance, as we go on to explain now.

## **II.4.2.5. Manchón, Roca de Larios and Murphy's research**

Manchón, Roca de Larios and Murphy's (2009) programme intended to look at the regularities that direct writers' cognitive activity when completing two L1 and L2 writing tasks (argumentative and narrative) while thinking aloud. The participants were twenty-one EFL students at three different levels of L2 proficiency: seven secondary school students at a preintermediate level of English, seven university students at an intermediate proficiency level and seven recent graduates in English at an advanced English level. None of the participants had had specific writing instruction, although they had received some writing guidance in language courses. The advanced learners had had more contact with English and more L2 writing practice in academic issues.

The researchers showed how an increase in L2 proficiency made available for the learners more cognitive resources that could be used for higher level concerns in writing such as upgrading the text produced. Consequently, according to their level of language expertise, students had different MMs of writing which were considered to be composed of beliefs about the task and goals that determined their performance. The preintermediate participants were guided by a monodimensional mental model whose main concern was language and the text length of their texts. This was in contrast with the more advanced participants' multidimensional models that led them to be concerned with both higher and lower level issues in writing (linguistic, ideational and textual) and with the consequent pursuit of more sophisticated goals. Differences were also found in the allocation of resources for problem solving behaviour that were mediated by proficiency. The probability of attending to higher

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level concerns in writing increased with the proficiency level and the corresponding types of problems that writers posed themselves within the different stages of composing. In this respect, the writers engaged in two main types of problems: “compensatory” and “upgrading”. The former were aimed at compensating for the lack of linguistic resources, while the latter had as their main target the enhancement of lexical, stylistic and rhetorical aspects of writing. As a whole, the lower the L2 proficiency level was, the more the learners engaged in compensation for linguistic shortcomings (Roca de Larios, Manchón & Murphy, 2006).

During the formulation process the preintermediate learners spent twice as much time engaged in compensatory problems than in upgrading ones, while the intermediate students did the opposite and the more advanced participants assigned nine times more time to upgrading their ideas and the coherence of their texts than to compensating for linguistic problems. Nevertheless, the researchers do not make strong claims about the development of a multidimensional mental model of writing as an outcome that may only be attributed to L2 proficiency since the more advanced language learners were also the ones with more L2 writing practice. Therefore, these writers could have been able to deal with deeper problem solving activities as an outcome of their literacy and language learning experiences in the L2 that developed in tandem as part of their education.

To summarise, although these results are not conclusive about the effects of L2 proficiency on the development of MMs of writing, they do seem to give evidence of EFL learners’ capacity to represent the task at different levels of problem-solving behaviour. However, when L2 writers’ MMs are compared to L1 writers’, the picture seems to be different. Along the same lines of what was indicated above about the disadvantage of ESL learners’ task representation and written performance in comparison with native writers, Devine, Railey and Boshoff (1993) also contended that L2 writers were more prone than L1 students to have conflicting multidimensional models that negatively affected their texts, as we further explain in our next section about learners’ stored task representation for writing.

## II.4.3. Learners' stored task representations for writing

Although writers' task representation can be viewed as a dynamic construct that is continuously reviewed during the different stages of the writing process (planning, formulation, revision), it can also be contemplated as a complex of stored conceptions in long term memory. MMs of writing can vary from individual to individual on the basis of their metacognitive content (person, task and strategy variables) their potential for success and their impact on performance (Devine, Railey & Boshoff, 1993), as also shown in the field of reading (Devine, 1984, 1988). In this section, we shall review Devine et al.'s (1993) research, which examined the content of L1 and L2 writers' MMs by decomposing the different elements of metacognitive knowledge that integrate them and for which not only beliefs about the task were important, as was the case in previous studies, but also other dimensions were considered essential .

As indicated in Section II.2., from a metacognitive stance, *task knowledge* is just one type of belief that, together with *person knowledge* and *strategic knowledge*, constitutes learners' knowledge of cognition, which may have an impact on written performance. Following this metacognitive view, Devine et al. (1993) looked at what they defined as L1 and L2 writers' cognitive models, which were made up of learners' knowledge of the task, of themselves as learners and of the strategies they could implement for achieving their goals in writing. This definition of cognitive models did not differ much from Flower's (1990) conceptualisation of task representation as a problem solving process in which writers understand the constraints of the writing task and set up strategies and goals to solve it. As writers establish their own strategies and goals for the task, it may be assumed that these are selected by composers not only on account of their understanding of the specific writing task but also consciously or unconsciously on the basis of what they consider more appropriate for them as writers, which would correspond to *person knowledge*. The examination of the three components of metacognitive knowledge, which we shall describe, is also in line with the definition of MMs as an interrelated set of beliefs.

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After reporting Devine et al.'s study, we shall go on to analyse Manchón and Roca de Larios' (2011) investigation, which also delved into writers' stored mental representations when composing but focused only on L2 writers' beliefs about the task and goals (which are considered to compose a MM) and the possible connections between beliefs, goals and the language learning potential of composing. Finally, we shall also report Smeets and Solé's study (2008), which was also framed under the scope of the learning potential of academic tasks. In their study, Smeets and Solé explored learners' stored knowledge for writing a synthesis in terms of a knowledge-telling versus a knowledge-transforming model (Bereiter & Scardamalia, 1987) as well as the effects on written performance. However, writers' goals were not explored.

## **II.4.3.1. Devine, Railey and Boshoff's research**

The participants in Devine et al.'s (1993) study were twenty first-year university students in New York. Ten of them were L1 learners and the other ten were L2 students of English with a variety of L1 backgrounds (9 different nationalities). Information on the students' overall MMs of writing in the three areas of metacognitive knowledge (personal, task and strategy variables) was gathered by a general open-ended questionnaire, which focused on writers' conceptions of the nature of writing task demands and their writing approach regarding the dimensions of grammaticality, personal voice or communicative intention, among other factors. On the basis of students' attention to only one dominant dimension in writing or to a variety of them when composing, their cognitive models were classified as single-focused or multidimensional, respectively. In turn, the multidimensional models were further subdivided into integrative and conflicting. Multidimensional integrative models were those in which the writers reported incorporating the different writing task demands without tension, whereas in multidimensional conflict models the writers considered that there were different competing demands that were usually confronted in the composition process. These conflicting notions could come from the failure to combine distinct demands that had their origin in the student-writers themselves and in the perceived teacher's demands.

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In order to relate the information on the learners' cognitive models to their written performance, once the learners had filled out the questionnaires, they were given ninety minutes to write an essay based on two readings previously commented on in class. The evaluation of the essays was holistic in nature and was done by two raters. After the holistic rating, those essays that had been given low scores were reassessed paying attention to two aspects that were considered problematic: compositional and grammatical proficiency.

The findings indicated that seven out of ten L2 writers obtained low scores in their compositions, and coincidentally the analysis of their written texts revealed that they lacked adequate knowledge of *compositional* and *grammatical proficiency* or of the combination of both dimensions. In contrast, only two out of ten L1 composers obtained low scores in their compositions although no patterns could be found for their low performance since one of the learners did not finish the essay. The conclusion drawn by the researchers was that when some kind of knowledge is insufficient, the necessary interaction of the different elements of knowledge is impossible and this results in inappropriate cognitive models.

As for the responses to the questionnaires used to elicit the MMs, the data showed that both L1 and L2 writers had multidimensional models of writing because they were concerned at least with two out of three different aspects when composing their texts (grammar, communication and personal voice). According to the researchers, the L1 writers were more likely to have multidimensional models than the L2 students, although we believe that due to the small number of participants and the small difference between the two groups (9 out of 10 L1 writers compared to 7 out of 10 L2 writers) this superiority may be dubious from a statistical point of view.

On the other hand, both the L1 and the L2 writers had their multidimensional models similarly distributed over two patterns (grammar and communication or grammar and personal voice) but the researchers argued that this similarity across languages was only superficial because further analyses of the students' MMs of writing revealed that only one L1 writer had a conflicting multidimensional model whereas five out of the seven L2 writers who were ascribed to multidimensional models showed some tension between the different

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components. This finding had important implications for performance as the L1 writers were found to accomplish the writing task better than the L2 students. Therefore, the researchers contended that L2 students' metacognitive knowledge did not help them with their performance.

Nevertheless, we could also suggest another potential reason for the conflicting nature of L2 students' multidimensional models. In comparison with the L1 learners, who seemed to form a homogenous group of students at New York University, the ten L2 students came from nine different backgrounds (Taiwan, Korea, Nicaragua, Hong Kong, Somalia, Japan, Haiti, Greece and Trinidad). Accordingly, we believe that their responses to the questionnaire might have been influenced not only by the difficulty of writing in the L2 but also by their variety of cultures. It should be recalled that the questionnaire gathered information on the students' understanding of good academic writing as well as the person and strategy variables related to this definition. This definition, however, has been shown to be troublesome because its understanding varies in different cultures (Leki, 1995), learning situations and pedagogical stances (Bartholomae, 1995; Hayes, 1996; Kruse, 2003 reviewed here by Ezer and Sivan, 2005).

As a whole, although Devine et al's (1993) research is exploratory due to the small sample size, it focuses on the examination of the content of writers' cognitive models and emphasises that misconceptions about task demands or the writing approach may affect L2 writers' performance. These models could be challenged and shaped by instruction because the development of metacognitive knowledge, and by extension, the shaping of students' MMs, is slow, progressive and dependent on the confrontation with the experience of suitable cognitive activities (Flavell, 1985). Therefore, the investigation of writers' development of MMs can benefit from longitudinal research designs that can trace back the effect of instruction and writing experiences on the shaping of writers' models of writing. This line of research was followed by Manchón and Roca de Larios' (2011) study, as we explain below.

### **II.4.3.2. Manchón and Roca de Larios' research**

Manchón and Roca de Larios (2011) investigated the influence of instruction on learners' conceptualisations of writing, the shaping of their goals for writing and the actions they carried out for learning the L2 through composing. Although the main focus of the study was the students' perceptions of the language learning potential of L2 writing, the researchers based their research on the hypothesis that this writing potential was linked to the nature of the problem solving behaviour learners engage in while composing their texts (Manchón & Roca de Larios, 2007). In turn, it was also assumed that the depth of their problem solving behaviour was also related to their MM of writing, which was characterised, following Manchón (2009), as learners' beliefs and conceptions that guide their written performance. These MMs were therefore considered crucial to determining learners' goals for writing, the aspects they attended to when composing and the depth of problem-solving behaviour they engaged in, as shown in Figure 1:

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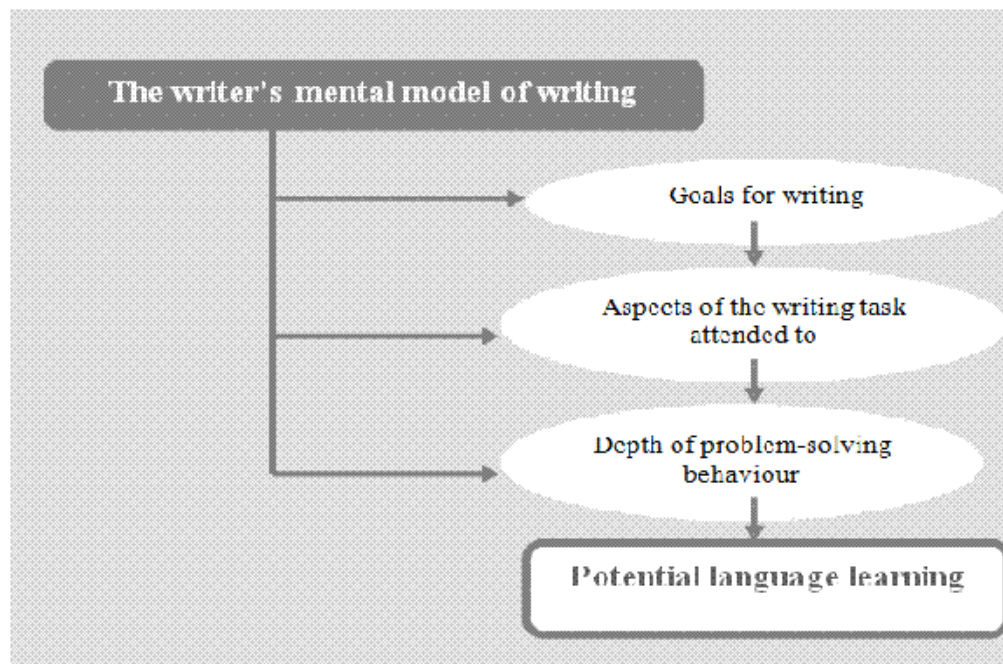


Figure 1. The relationship between writers' mental model of writing and the language learning potential of L2 composing (taken from Manchón and Roca de Larios, 2011)

The assumption about the association between MMs and goals draws on a double research tradition. On the one hand, it is in line with Cumming's (1989) investigation, in which both the attention devoted to different aspects while writing and the depth of problem solving behaviour were explored, and on the other with the socio-cognitive approach to MMs according to which goals form part of MMs as nodes that are activated in dynamic problem situations. Accordingly, Manchón and Roca de Larios (2011) define MMs as learners' mental representations, beliefs and conceptions that lead one's writing performance and that, similarly to Devine et al. (1993) and Cumming (1989), may range from one dimensional (basic ideas about the nature and functions of writing) to multidimensional ones (attention to higher and lower level concerns in writing).

The participants in the study were 18 Spanish University students at an advanced proficiency level in English who were taking an English for Academic Purposes (EAP) nine-month long writing course, which happened to be the same writing course that the participants

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in the present study took one year later. As primary sources of information, the scholars used in depth semi-structured interviews at two points in time nine months apart (T1 and T2), which were adapted from Cumming's (2006) research, and self-reflection journals at one point of data collection (T2). The data from primary sources were triangulated with other sources used in a wider research project in which the study was framed. These sources were argumentative texts and proficiency tests at T1 and at T2, classroom observation, and information about the writing teacher obtained via an in-depth interview and a retrospective narrative.

After the period of writing instruction, the students reported self-perceived changes in their conceptualisation of the writing task regarding both writing processes and written products. As for writing processes, they claimed that they had realised that composing involved problem-solving behaviour, which in turn entailed continuous decision making and rewriting processes. Perceived changes in the conceptualisation of written products indicated that learners developed more multidimensional MMs of writing, as they paid attention to different dimensions (ideational, textual and linguistic) involved in text production. A holistic assessment of the compositions written by the students at T1 and at T2 confirmed a significant improvement in their communicative abilities in writing, the organisation of their texts and their linguistic ability to write appropriately.

The reported changes in task conceptualisation at product and process levels were analysed with respect to the writing instruction received and the continuous and diverse writing practice involved. These findings are in line with Wolfersberger's (2007) results on the changes of task representation that were found to be related to the combined effects of writers' internal and external factors. Far more interesting was the fact that in Manchón and Roca de Larios' research (2011) the changes in task conceptualisation were considered to have had an influence on the expansion of writers' goals both along the learning-to-write and writing-to-learn dimensions of composing. In other words, the changes in learners' task conceptualisation resulted in the development of goals along the dimensions of L2 writers (ideational and textual) and of L2 learners (linguistic concerns).

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Students' perceptions of changes were corroborated by their significant improvement across time both in a language test and in a number of analytical measures regarding the accuracy, fluency and linguistic variety of their written texts. These learning outcomes were also associated with the linguistic processing that the complex and demanding tasks of the EAP course involved and with the students' development of task conceptualisation regarding the complexity of writing. As for the improvement in writing ability, the researchers found that in their EFL context the students experienced three conditions that were also present in Sasaki's research (2009) with study abroad students and were deemed responsible for the enhancement of L2 writing ability: (i) extensive and frequent writing practice; (ii) authentic audience; and (iii) explicit instruction about how to write in an L2.

Although Manchón and Roca de Larios' research (2011) was exploratory in nature, it showed learners were able to develop a complex network of goals in relation to their perceptions of changes in their conceptualisation of the writing task and in their realisation of the language learning potential of writing. In addition, the study offers empirical evidence in support of Flower and Hayes' (1981) contention that writing is a goal-directed thinking process, while it also follows a new avenue of research initiated by Cumming regarding intentional learning (Cumming, 1986) and the motivational function of goals in L2 writing (Cumming, 2002) that can result in the pursuit of more challenging writing as a result of students' perceptions of language learning. Other researchers like Smeets and Solé (2008) have also based their research on stored knowledge for task representation and have also highlighted the importance of representing the task in a sophisticated way, which in turn entails reflection processes and the pursuit of goals for the transformation of knowledge and the achievement of good academic texts. However, they have not explored the shaping and working of goals in relation to learners' task representation, as we explain next.

### **II.4.3.3. Smeets and Solé's research**

Smeets and Solé (2008) undertook the investigation of a group of twenty-three postgraduate students who were taking an academic English course at a British university so as to explore their task representation in a reading-to-write task and the influence of the representation on performance.

The participants were asked to write a synthesis task in the classroom during two and a half hours. In line with other studies of task representation in writing from sources (e.g. Flower, 1990; Ruiz-Funes, 2001) the representation was operationalised as the learners' interpretation of the task. Nevertheless, instead of identifying whether their writing plans or the resulting written products corresponded to different degrees of text elaboration (i.e. summary, summary and comment, free response, synthesis interpretation with a rhetorical purpose), the study was based on students' stored beliefs about the transformation of knowledge required to accomplish a synthesis before engaging in it. Afterwards, students' task representation was compared to their written performance.

The researchers drew on the assumption that representing the task as a knowledge-transforming one would result in further elaboration of the written performance and in the intertextual integration of different data sources, while a knowledge-telling representation would lead to less written elaboration and intertextual integration of sources. To test these assumptions, the participants were required to complete an assessment sheet about their task representation for writing a synthesis. Six different task representations were offered that ranged from a knowledge-telling to a knowledge-transforming task with different degrees of intertextual integration. Along the same lines, the analysis of the written products was carried out by identifying the text structure (the degree of the reorganisation of the source texts into a new macro-structure), and the text elaboration (the degree of the intertextual integration of ideas).

The results showed the influence of the students' particular representation on the elaboration of their texts. Although there was a tendency among these postgraduate students to represent the task as knowledge-transforming, there were also some learners who

represented the task in terms of knowledge-telling. In addition, students who represented the task as knowledge-transforming tended to elaborate their texts in terms of intratextual and intertextual integration to a higher extent than students who viewed the task in terms of a knowledge-telling approach. However, as the researchers did not clarify whether the participants were L1 and/or L2 writers, we have doubts whether the results are indicative of the task representation of experienced writers and/or of advanced L2 learners. Furthermore, as was also acknowledged by the researchers, the process of data collection about learners' stored task representation could have influenced the results since the participants were not asked what they thought they should do to write their synthesis. They were rather offered a list of task representation ranging from descriptions of knowledge-telling to knowledge-transforming, which could have guided them to choose the most complete description from the ones offered and try to perform their task accordingly. Finally, although goals were assumed to be important for guiding the writing process, these goals were not explored, as was also the case with some of the studies on task representation reviewed so far. Accordingly, the role played by goals in leading writers to higher reflective processes in the case of knowledge-transforming models was taken for granted.

## **II.5. Summary and connections to the present study**

In this chapter we have reviewed the origins, characteristics and shaping of the components that constitute MMs through learning experiences and instruction. As we have reported, MMs are made up of beliefs that have been investigated from different theoretical and methodological perspectives. Barcelos (2000) classified these different perspectives under three comprehensive approaches (normative, metacognitive and contextual) that are important for the present research. In the present empirical study, we shall concentrate on language use beliefs, and more precisely on beliefs in foreign language (FL) writing, which are practically unexplored. By doing so, we expect to extend the available empirical research that has mainly focused on language learning beliefs (cf. Alanen, 2003; Barcelos, 2000; Cotterall, 1999; Dufva, 2003; Hosenfeld, 2003; Horwitz, 1987, 1999; Kalaja, 2003; Kalaja & Barcelos, 2006;

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Kramersch, 2003; Mantle-Bromley, 1995; Mori, 1999; Sakui & Gaies, 1999; Wen & Johnson, 1997; White, 1999; Woods, 2003; Yang, 1999).

Students' beliefs about a given domain of learning can be considered to constitute a domain model. Flower and Hayes (1981) looked at the domain model of L1 writing by describing writers' dynamic mental processes when composing and the network of goals that were activated. This research was followed by other studies in L2 writing that explored learners' beliefs about the task, or task representation, and their relationship to written performance. In the present study we intend to investigate the shaping of L2 writers' MMs of writing, which are composed of beliefs and goals, and their connection to L2 written texts. Learners' beliefs about the task will be drawn from their stored mental representations for writing and they will be subsequently related to the quality of the written texts, as Manchón and Roca de Larios (2011) previously did. Nevertheless, in contrast with Manchón and Roca de Larios' study, in which the development of writers' task representation was restricted to learners' self-reported perceptions of changes throughout an academic year of writing instruction, we shall examine task representation at two points in time within a time span of nine months. The study in this sense is more longitudinal in nature than previous research on task conceptualisation. As pointed out before, Wolfersberger (2007) collected data over a three week period, while Ruiz-Funes (2001) carried out her research over the period of a week. In addition, following Ruiz-Funes' study we shall explore the possible connection between task representation and written performance, as well as their shaping across time. In this sense, bearing in mind Ruiz-Funes' (2001) findings about the lack of correspondence between the complexity of students' task representations and the level of linguistic accuracy and syntactic complexity of their texts, we shall also consider in our analyses the communicative adequacy of the written texts produced by the students.

As for the analysis of learners' beliefs about the task or task representation, we shall follow Barcelos' classification of language learning beliefs in SLA. From a conceptual and methodological point of view and given the dynamic nature of language use beliefs as they develop and shape in context, we mainly subscribe to the contextual approach although we

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also draw on the metacognitive one and acknowledge the influence of the social and cultural academic context and individuals' ability to notice cues and recall past writing experiences (Flower, 1990; Wolfersberger, 2007). In Hosenfeld's words:

“Learners’ beliefs are part of learners’ constructions of their experiences (Dewey, 1938; Kalaja, 1995; Barcelos, 2000). Since beliefs change along with the experiences in which they are embedded, it follows that beliefs are dynamic, socially constructed and contextual” (2003: 39)

Given the shaping of beliefs in relation to the environment and aiming to triangulate our data, we shall also delve into students' introspective views of their learning context and examine the instructional forces that could mediate the possible changes in their beliefs. The conditions of our learners' research context are different from most studies on L2 writing since in our instructional setting (EFL) both learning-to-write (feature of the texts; composing processes) and writing-to-learn (writing to learn about the L2 language) approaches (see Manchón, 2011) are fostered as a result of the ill-defined nature of writing and its problem solving dimension (Flower & Hayes, 1981) on the one hand, and the limited language learning opportunities outside the classroom on the other. These two areas have traditionally been separated. With few exceptions (cf. Manchón, Murphy, & Roca de Larios, 2007; Manchón, 2009; Manchón & Roca de Larios, 2011), most L2 writing studies have mainly focused on learning to write contexts, the writing to learn dimension being normally theorised and explored within SLA research. Accordingly, we also expect to contribute to the investigation of FL writing and SLA interfaces (Ortega, 2010; Ortega & Carson, 2010).

Apart from the investigation of beliefs, we shall also look at the development of goals for writing. Composing is a goal oriented activity (Bereiter & Scardamalia, 1987; Graham & Harris, 1994; Hayes, 1996) that fosters a problem solving approach, but research on this area is scarce both in second language and in foreign language contexts (for exceptions see Cumming, 1986; 2006; Manchón & Roca de Larios, 2011; Sasaki, 2009, 2011). Furthermore,

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although goals are intimately linked with the discovery process of composing (Flower & Hayes, 1981) and with the dynamic nature of task conceptualisation (Flower, 1990; Wolfersberger, 2007), they are the missing components of some of the studies that have researched MMs of writing (e.g. Devine et al. 1993) or the specific aspect of task representation within MMs (e.g. Ruiz-Funes, 2001; Smeets & Solé, 2008; Wolfersberger, 2007). By exploring goals, we also follow Barcelos' (2003) suggestion that beliefs should be investigated in relation to actions and intentions.

In addition to the cognitive function of goals to direct dynamic thinking processes (Flower & Hayes, 1981), goals also have a motivational component that can result in the pursuit of more challenging writing (Manchón & Roca de Larios, 2011). These issues draw our attention to the need to investigate the “insider dimension of tasks” (Manchón, 2009) paying attention to learners’ agency in writing, individual differences and affective influences that facilitate learning when students engage in demanding composition tasks (Manchón & Roca de Larios, 2011). In this respect, goals are important to understand “students’ efforts to improve their writing in English for academic purposes” (Cumming, 2006:159) and the “hows” and “whys” of learners’ behaviour (Manchón, 2009) when composing, as we further clarify in the second part of our theoretical chapters.

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## Chapter III

### Learners' goals

The present chapter describes research on goals in educational psychology, starting with earlier motivational theories and then describing three theories on motivation (goal setting, the motivational system theory, and goal orientation) that have their roots in a socio-cognitive stance and portray goals as an essential component. The three theories complement each other by examining goals from different viewpoints concerning (i) the properties of goals that affect learners' motivation and behaviour; (ii) the internal structure of goals as well as the personal and the environmental influences on the shaping and enactment of goals; and (iii) individuals' goal orientation to learning or personal styles for motivated behaviour. Although motivation and self-regulation are intimately linked constructs and goals are important for the development of both, they are not exactly the same phenomenon. For this reason, we look at learners' self-regulation of behaviour, drawing on self-regulation models and other theories that also emphasise the temporal dimension of motivation (Heckhausen & Kuhl's, 1985). Taking into account empirical research, we will report how experimental studies in the field of language use have explored the effects of goal setting instruction on learners' motivation and achievement. As we shall explain later, although these studies were conceived as motivational, they also have an important influence on learners' self-regulation. Moving to the area of L2 learning, we will describe Dörnyei and Ottó's (1998) model which aimed to synthesise various models on L2 motivation so as to explain the influence of various personal and contextual factors on students' goal striving. Then, we will discuss the analyses of the research on goals in the field of L2 writing, which is the area of interest in the present

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empirical study. We shall describe the development of goals as reflected in interventionist and descriptive studies pointing out the effects of sociocultural and intra-individual factors (like L2 proficiency) on motivation, written performance and self-regulation. Finally, we bring together the main findings from the studies reviewed and explain the connections to the present research highlighting in what respects we expect to contribute to the theoretical and empirical knowledge of goals.

## **III.1. Research on goals in psychology**

The investigation of goals dates back to earlier motivational theories that relied on the construct of needs to cater for the behaviour of individuals (Maslow, 1954; Murray, 1938). Within this field of inquiry, researchers postulated that people have different needs originated by individuals' internal drives or more likely by environmental pressures, which they try to satisfy in their environment by means of enacting actions. Murray (1938) stated that needs generate tension that motivates individuals to some approach or avoidance behaviour until the tension is released and the need is satisfied. The same pattern of tension and release in the fulfilment of needs was also followed in Maslow's hierarchy (1954), but in this theory it was argued that if the environment was not adequate for the achievement of needs, growth and development would not take place.

The notion of "needs" created an operationalisation problem in motivational research due to its abstract nature and to the difficulty in providing a definition and categorisation of the construct that could be encompassing and predictive of behaviour. In addition, the investigation tended to be tautological because, as noted by Pintrich and Schunk (2002: 197), "almost any behaviour can be referenced to a need as the cause of the behaviour and, in turn, when someone has these needs, the needs cause the behaviour". For these reasons, needs are no longer studied in current motivational research and the construct has been redefined as "goals" within a social cognitive approach to motivation that underscores the interaction of personal and environmental influences in individuals' behaviour (Bandura, 1986, 1991, 1997;

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Zimmerman,1994). Within this social cognitive view, goals are considered as devices that enact actions and establish the direction to act. In the next sections we discuss three main theories that have looked into goals following a socio cognitive approach: the *goal setting theory* (Locke & Latham, 1990), Ford's *motivational system theory*, and the *goal orientation theory* (i.e. Ames, 1992b; Nicholls, 1984). We will then move on to the description of self-regulation, which is intimately linked with motivation and with the establishment and regeneration of goals for proactive behaviour.

## III.1.1.Goal setting theory

Goal setting theory (Locke & Latham, 1984, 1990, 2002) was developed in work settings within industrial and organisational psychology during a period of 25 years on the basis of 400 laboratory and field studies. The theory relies on introspective data for the measurement and formulation of psychological concepts and has its roots in Aristotle's concept of *final causality*, which means that action is motivated by a purpose (Locke, 1996). Following goal setting theory, we shall account for the attributes and properties of goals and their relation to performance.

In this theory, goals are referred to as "intention" (Locke & Latham, 1990) or "goal intention" (Gollwitzer, 1993; Heckhausen, 1991). The attributes of goals are *content* and *intensity*. From a qualitative point of view, content includes what the individual desires or wants whereas intensity comprises commitment to the goal or, in other words, individuals' determination to achieve a goal and persistence in goal striving. Commitment can increase or decrease over time (Austin & Vancouver, 1996), the former occurring when people think they can attain their goals and attach importance to their attainment (Locke, Latham & Erez, 1988). The motivational effect of goals is thus determined by commitment but also by the properties of goals, which are *specificity proximity*, and *difficulty*.

*Specific* goals enhance performance, self-regulation and self-efficacy because they establish better standards to evaluate progress than vague or general goals, such as "do my

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best" (Locke & Latham, 1990). *Proximity* refers to how far into the future goals are projected. Proximal goals are achieved earlier in time and result in higher motivation and self-regulation than distant goals (Boekaerts, Pintrich & Zeidner, 2000; Locke & Latham, 1990). This is because proximal goals provide immediate motivation and guide performance whereas distant goals are too removed in time to mobilise effort (Bandura & Schunk, 1981). Proximal goals are also considered to increase self-efficacy by allowing more frequent evaluation of progress (Schunk, 1995). Self-efficacy in turn is positively associated with performance since individuals with high self-efficacy beliefs tend to respond more positively to setbacks by increasing their efforts to reach their goals (Bandura & Cervone, 1986), implementing successful task strategies and establishing difficult goals. *Difficulty* refers to the time, thought, effort and resources that are needed to achieve a goal. Easy goals result in more satisfaction than difficult ones (Locke, 1965) because they are more frequently obtained and can therefore, enhance self-efficacy and motivation in the early stages of skill acquisition.

Those goals that are too easy or too difficult to attain do not motivate (Schunk, 1995), although people tend to devote more effort to a difficult goal than to an easy one. Accordingly, goals of moderate difficulty have the best effects on motivation and self-regulation (Locke & Latham, 1990) and lead to higher performance than easy ones or vague goals such as "do one's best" by activating and regulating effort expenditure (Locke & Latham, 1990). Goals also affect performance by conditioning the direction of action since they also foster planning and the use of task strategies.

When individuals set goals, they also establish quantitative or qualitative standards of performance (Locke & Latham, 1990). Standards are based on social comparisons with current performance and they can enhance motivation when individuals perceive goal progress. For these purposes, individuals need to know how well they are doing towards attaining their goals since just adopting a goal without knowledge of performance does not have any motivational impact (Locke, 1986). Progress towards the attainment of goals is more effective when there is feedback that allows people to trace their development. In this view, goals also work as a benchmark or standard of self-satisfaction to assess whether the feedback individuals receive

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reveals acceptable or unacceptable performance in relation to their goal aspirations. However, the degree of satisfaction is also affected by the nature of the task. For instance, it has been shown that in work settings greater satisfaction is derived from tasks that involve personal significance, variety, feedback, responsibility, autonomy, and identity (Hackman & Oldhman, 1980; Stone, 1986).

To sum up, the social cognitive theory of goal setting describes goals and their properties (specificity, proximity and difficulty) that “orient individuals towards certain standards or definitions of performance” (Pintrich & Schunk, 2002:204) and affect people’s motivation and regulation of behaviour for the attainment of desired outcomes. Nevertheless, the influence of context on the shaping of goals is largely ignored in this theory, which contrasts with Ford’s motivational systems theory, as we shall explain now.

## **III.1.2. Ford’s motivational systems theory**

Ford tried to offer an encompassing theory of motivation, which was defined as a “psychological, future-oriented (anticipatory) and evaluative phenomenon” (Ford, 1992: 248). This theory describes how motivation dwells within the person and it is regarded as a quality of individuals to evaluate, maintain or change an existing state and to struggle for new desired outcomes (Pinder, 1984; Weiner, 1990). In this section we shall explain the two main elements that are distinguished in this theory: the content of goals and the processes of goals. The former refers to the object pursued, which may give rise to the display of a hierarchy of goals, while the latter involves the methods used by individuals to achieve their goals.

In *motivational systems theory* (MST henceforth), motivational processes are future oriented because they prepare individuals to behave in certain ways so as to achieve desired aims and to avoid undesired consequences in the future. Those psychological processes that are oriented towards past or current events are regarded as skill-related factors rather than motivation. As for the components of motivation in MST, they constitute “the organized patterning of an individual’s personal goals, emotions, and personal agency beliefs” (Ford,

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1992: 78). If any of these components is missing, individuals will lack motivation since it is regarded as an integrative construct.

Goals in MST are labelled as *personal goals* to emphasise their motivational nature since they are chosen by the individuals or at least adopted by them as personal when assigned by external authorities. These personal goals are psychological processes that stand for aspired future states and outcomes and direct individuals' behaviour at the same time as they provide criteria for the regulatory processes of performance. However, the criteria for the standards of attainment and performance can also have their origin in contextual information about normative behaviour.

As for *emotions*, they comprise the affective experience generated by the interaction with the context that can enhance or inhibit the movement towards the goal. Once the action is initiated, expectations about the possibility of attaining a goal are known as *personal agency beliefs*. These beliefs are composed of *context beliefs* and *capability beliefs* and both of them in conjunction determine whether an individual will engage in or inhibit behaviour. Context beliefs include the responsiveness of the environment that surrounds the goal in terms of perceived controllability of plans and outcome expectations (Bandura, 1986). If the environment is not responsive to learners' goals by offering them a challenging and supportive context, it may affect the achievement of goals even though students have all the necessary cognitive skills to succeed. Nonetheless, context beliefs will not influence learners' behaviour if individuals have no desire to achieve goals in a given area. In this respect, capability beliefs are similar to self-efficacy beliefs (Bandura, 1977, 1986) about individuals' ability and personal resources (i.e. time, effort) to achieve goals. Nevertheless, according to Ford, capability beliefs have greater scope and precision for two main reasons. First, capability beliefs refer to confidence or doubt about different skills, such as communicative skills, self-regulatory skills, or ability to deal with stressful situations, while Bandura did not distinguish the different kinds of skills that may be active in self-efficacy judgement. Second, self-beliefs are constrained to task goals in given contexts, whereas capability beliefs refer to any kind of goals (i.e. affective goals, cognitive goals) at any level of abstraction.

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Two important aspects of goals in Ford's theory are *goal content* and *goal processes*. Goal content refers to what individuals are trying to accomplish, as in the case of the content of goals in *goal setting theory*. Ford classified the content of goals into a taxonomy of 24 categories that may merge into larger units or "themes" since behaviour is assumed to be directed by multiple goals simultaneously. Accordingly, goals can be organised into two main categories: *intrapersonal goals* (composed of affective goals, cognitive goals and subjective organisation goals) and *person-environmental goals* (made up of self-assertive social relationship goals, integrative social relationship goals and task goals). Furthermore, bearing in mind the concept of multiple goals, Ford proposes the existence of *goal hierarchies*, which reminds us of Flower and Hayes' (1981) hierarchy of goals. However, Ford also explains the possible problems that can derive from hierarchies as the existence of multiple goals can give rise to *goal conflict* or *goal alignment* within the hierarchy, as we shall explain now.

Similarly to Flower and Hayes' cognitive process model of L1 writing, Ford asserts that the hierarchy of goals allows individuals to coordinate the multiple goals that may be active in a situation and establish priorities. The priority will be set by a general goal backed up by many subgoals or proximal goals, which help individuals to assess their progress towards the general goal and to keep the direction towards it. Goal alignment occurs when, for example, students pursue several similar goals, such as obtaining an A on different tests of a course. In this case of alignment, goals have a synergistic result (Wentzel, 1999, 2000). In contrast, goal conflict would arise when motivation is diverted into multiple goals that affect performance, such as when a student wants to get an A but s/he also wants to spend time with friends (Pintrich & Schunk, 2002). These academic and social goals interact and influence achievement patterns in ways that academic variables cannot predict on their own.

As for goal processes, they involve people's behaviour towards multiple goal striving. In this sense, Ford and Nicholls (1991) distinguished three individuals' styles when struggling towards a goal: *the active-reactive style*, *the approach avoidance style*, and *the maintenance-change*. The active-reactive style differentiates whether the behaviour towards the attainment of goals is initiated by the individual or by the situational characteristics of the context. An

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active goal orientation entails self-direction and planning behaviour whereas a reactive style involves a passive behaviour on account of the influences of the context. The approach-avoidance style refers to whether individuals conceptualise goals in terms of approaching positive consequences or avoiding undesired consequences. In this case, although the goal content can be the same, the orientation can result in different motivational patterns (Raynor & McFarlin, 1986). Finally, the maintenance-change style describes whether individuals have a maintenance style or a self-improvement orientation in which change is sought. Learners with a maintenance approach would be satisfied with their level of performance, whereas change-oriented individuals would aspire to change and enhance their previous level of achievement.

In sum, Ford's MST focuses on the individual but also on the environmental influences on motivation and proposes that "actual achievement and competence are the result of a motivated, skilful and biologically capable person interacting with a responsive environment" (Ford, 1992: 70). This line of thinking can help to explain similarities in individuals' behaviour on account of their basic motivation to satisfy needs related to autonomy and competence in a supportive environment. However, there are also contexts that diminish learning opportunities and students' motivation since people are also influenced by their past experiences in social contexts. These experiences have also an impact on individuals' cognition, affection and behaviour in learning without denying the importance of their personal characteristics and styles when pursuing goals.

As we shall explain in our next section, apart from Ford and Nicholls'(1991) distinction of three styles to approach goals, there is also research on more general strategies implemented for goal pursuit. This research is known as goal orientation theory and the aim of this strand is to explain achievement behaviour. Research on goal orientation has focused on *why* learners try to achieve goals in academic contexts rather than on *which* specific goals they are trying to accomplish (cf. Wentzel, 1993). Scholars show disagreement about the definition, nature, or functioning of goals in goal orientation theory (Ames, 1990; Ames & Archer, 1988; Dweck & Leggett, 1988; Maehr & Nicholls, 1980), as we report below.

## III.1.3. Goal orientation theory

Goal orientation theory was developed by educational psychologists to explain children's achievement behaviour in academic contexts. Researchers interested in goal orientation are more concerned with the quality of motivation (that is, learners' purposes for engaging in a task) rather than with its quantity (Ames, 1992; Dweck, 1986; Maehr & Nicholls, 1980). Achievement orientation is conceptualised as students' approach to learning through the establishment of goals that determine how they define and respond to tasks (Brett & VandeWalle, 1999; Dweck, 1986; Dweck & Leggett, 1988; Elliot & Harackiewicz, 1996). We shall now account for different goal orientations for learning and their implications.

There are different goal orientations that have been studied under distinct names, such as learning and performance goals (Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988), mastery and performance goals (Ames, 1992; Ames & Archer, 1987, 1988) or task-involved and ego-involved goals (Nicholls, 1984). Although there is some conceptual overlap among these pairs of goal orientation, there is also some disagreement regarding whether all of them refer to the same constructs or not. The investigation of mastery and performance goals is usually referred to as *normative goal theory* and the distinction between mastery and performance is taken to be similar to the difference between intrinsic motivation (equivalent to mastery goals) and extrinsic motivation (comparable to performance goals). Within goal orientation theory, however, goals are more situationally and contextually understood than they are in the general distinction between intrinsic and extrinsic motivation.

Mastery goals are characterised by the pursuit of knowledge and learning, whereas performance goals focus on showing ability or trying to outperform or not being worse than other learners (Ames, 1992; Dweck, 1986, 1989; Dweck & Leggett, 1988). Consequently, mastery goals have been related to high intrinsic motivation (e.g. Elliot & Church, 1997) positive affect, higher self-efficacy beliefs, and better performance, while performance goals have been associated with less adaptive or maladaptive outcomes for the future in terms of

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motivation, affect and performance since performing better than others can be achieved without learning (Ames, 1992).

Further refinement of goal orientations resulted in the differentiation between approach performance and avoidance performance goals (Elliot, 1997; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Middleton & Midgley, 1997). The former referred to learners' approach to the task to outperform others and achieve positive outcomes whereas an avoidance performance orientation aims to avoid failure and can therefore result in maladaptive outcomes (Elliot, 1997; Elliot & Church, 1997; Elliot & Harackiewicz, 1996). However, this distinction within performance goals could not explain why mastery and performance goals sometimes gave rise to similar objective outcomes. In this respect, Pintrich (2000c) proposed that there may be multiple developmental trajectories regarding motivation, affect, strategies and performance on account of different goal orientations. These orientations may guide learners through distinct pathways and experiences although learners may finally end up with the same level of achievement. Thus, mastery goal students may experience positive affect, whereas performance goal learners may have less interest, less positive feelings about their learning and even experience more anxiety as a result of their concerns about performing better than others. Researchers have focused on the maladaptive consequences of performance goals, like negative affect or effort withdrawal, that are deemed to be more evident when learners confront difficult tasks (Dweck & Leggett, 1988).

As indicated by Cumming (2006), bipolar dichotomies in the classification of goals can only explain existing differences in learners' approach towards desired outcomes. It is also possible that learners may have performance and mastery goals simultaneously but one of them predominates (Anderman & Maehr, 1994; Meece & Holt, 1993; Pintrich & García, 1991), or that both types of goals are interrelated (Pintrich, 2000), which would allow students to have different levels of both goals at the same time. In this sense, some studies have found positive correlations between mastery and performance goals using separate scales for the measurement of both goal orientations while students take a particular course (Archer, 1994; Harackiewicz, Barron, Carter, Lento & Elliot, 1997; Roeser, Midgley, & Urda, 1996).

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Some studies even indicate that learners who can have high levels of both mastery goals and performance goals can get better performance (Harackiewicz, Barron, Pintrich, Elliot & Thrash, 2002), higher self-regulation and grades than learners who only had one or neither goal (Ainley, 1993; Bouffard, Boisvert, Vezeau & Larouche, 1995; Wentzel, 1991).

As a whole, in goal orientation research learners' goals are assumed to provide a framework that results in distinct sets of cognition, affect and behaviour (Midgley, 2002: xi). However, one of the main limitations of these studies is the focus on the consequences of goals rather than on their dynamics. There is need for research about the shaping of goals and whether they can clarify the development of individuals' learning process. In this sense, the notion of self-regulation is essential when students' behaviour is not externally controlled or regulated by other people and conditions. Self-regulation concerns the degree to which learners proactively regulate their learning process at a metacognitive, motivational and behavioural level during their learning process (Zimmerman, 1986, 1990a).

Self-regulation is sometimes confused with motivation since self-regulated learners are also characterised by their self-motivational capability (García & Pintrich, 1994; Pintrich & DeGroot, 1990). However, although self-regulation and motivation share some features, there are also some essential differences between both constructs. Motivation may derive from internal sources but also from perceived external necessities (Bargh & Ferguson, 2000), while self-regulation always involves learners' intentional behaviour to achieve desired goals. In addition, motivational theories depict how motivation may be affected by personal and environmental factors but they do not include a description of how individuals can control their cognition and behaviour as in the case of self-regulation (Pintrich, 2000d).

Goals seem to be in an intermediate state between motivation and self-regulation and, in fact most theories of regulation underline their inherent relation to goals. As posited by Deci (1992), a complete theory of motivation requires both the analysis of learners' goals to explain the content of motivation and the investigation of multiple self-regulatory processes so as to delve into the qualitative aspects of performance. Goals can play this dual function because they reflect students' purposes when learning and direct action by focusing

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individuals' attention on task features and strategic actions to successfully accomplish task demands. In addition, goals also regulate learners' effort, and persistence in the task (Locke & Latham, 1990) and enhance self-evaluation of efficacy, progress and learning achievement in relation to the learning environment (Bandura, 1997; Schunk, 1995), as we further develop in what follows.

## **III.1.4. Goals and self-regulation in social cognitive theory**

Social cognitive theory is based on an agentic view of individuals according to which people anticipate and self-evaluate their motivation and actions through a reciprocal interaction system (Bandura, 1989, 2001), as shown in Figure 2:

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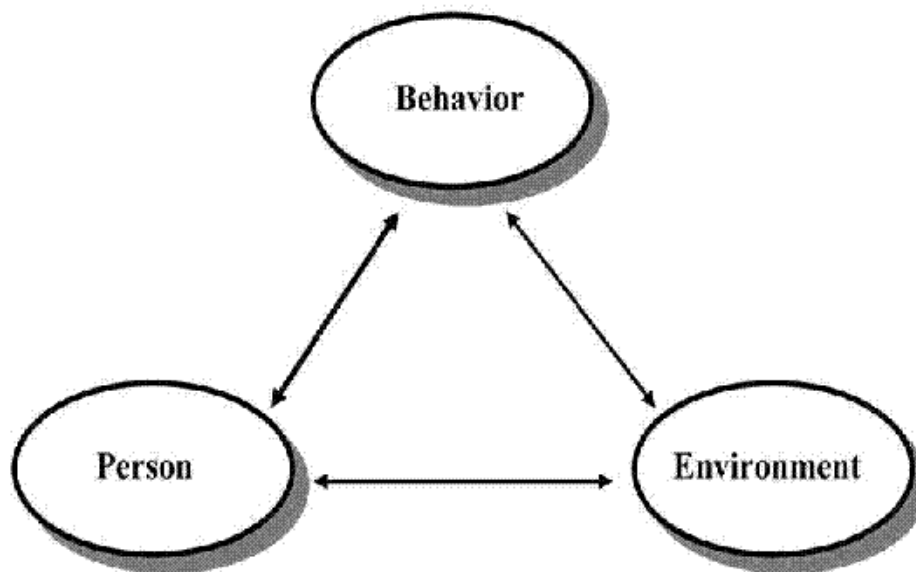


Figure 2: Bandura's model of reciprocal interactions. Figure taken from Schunk (2007)

Self-regulation is considered to be composed of the interaction between personal, behavioural and environmental factors (Bandura, 1986; Zimmerman, 1994). In this view, individuals are producers and products of social systems. In the early phases of learning, social factors influence people, who later internalise skills and strategies in unique ways and therefore begin to control their environment to further improve their skills. Along these lines, individuals' goals set the standards for success and for assessing progress and they also prompt self-regulation for attainment (Bandura & Cervone, 1986). In turn, self-regulation enhances learning achievement (Zimmerman, 2001) since other factors like learners' abilities cannot fully explain it. Accordingly, self-regulation has been defined as being made up of learners' thoughts, feelings and behaviour that are cyclically changed and oriented towards the achievement of goals (Zimmerman, 1998, 2000) through a dual control system that involves a proactive discrepancy production system working concurrently with a reactive discrepancy method (Bandura, 1991). In other words, motivation derives from proactive behaviour that allows individuals to set challenging standards (goal setting) resulting in a disequilibrium state, which in turn mobilises effort in the pursuit of the accomplishment of goals. After

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attainment, there is discrepancy reduction and new challenging standards can be set for which new discrepancies must be mastered. However, discrepancy reduction is not the main reason for action because individuals are proactive, not just reactive, which means that people are motivated by the anticipation of goals they aim to achieve rather than by the reduction of shortfalls. It is also postulated that surpassing a standard will raise the aspiration level for future endeavours because individuals readjust their standards as a result of their previous attainments. In Pintrich's words, self-regulation is:

“an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000d: 453).

This quotation also illustrates four characteristics that all models of self-regulation share (Pintrich, 2000d; Zimmerman, 1998, 2000; Zimmerman & Schunk, 2001), which are: (i) constructive learning; (ii) potential control; (iii) standards for achievement; and (iv) mediation for attainment. These features are based on the active role of the participants in learning, the control that students exert on their tasks, the goal criterion that learners impose to assess their progress and the relation between personal factors and resulting outcomes. Learners are considered active agents who construct their own learning through the establishment of goals and actions bearing in mind the available information in the external environment and in their own minds. Consequently, individuals are able to control and mediate the relationship between personal factors (cognition, motivation and behaviour) and the specific environment to influence attainment (Pintrich, 2000d; Pintrich & Zusho, 2002) through different regulatory phases as we describe next.

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## III.1.4.1. Phases of self-regulation

Self-regulation theorists consider learning as a cyclical activity that occurs in three major phases that are characteristic of personal agency when learning: *the forethought phase, the performance control phase, and the self-reflection phase*, as illustrated in Figure 3.

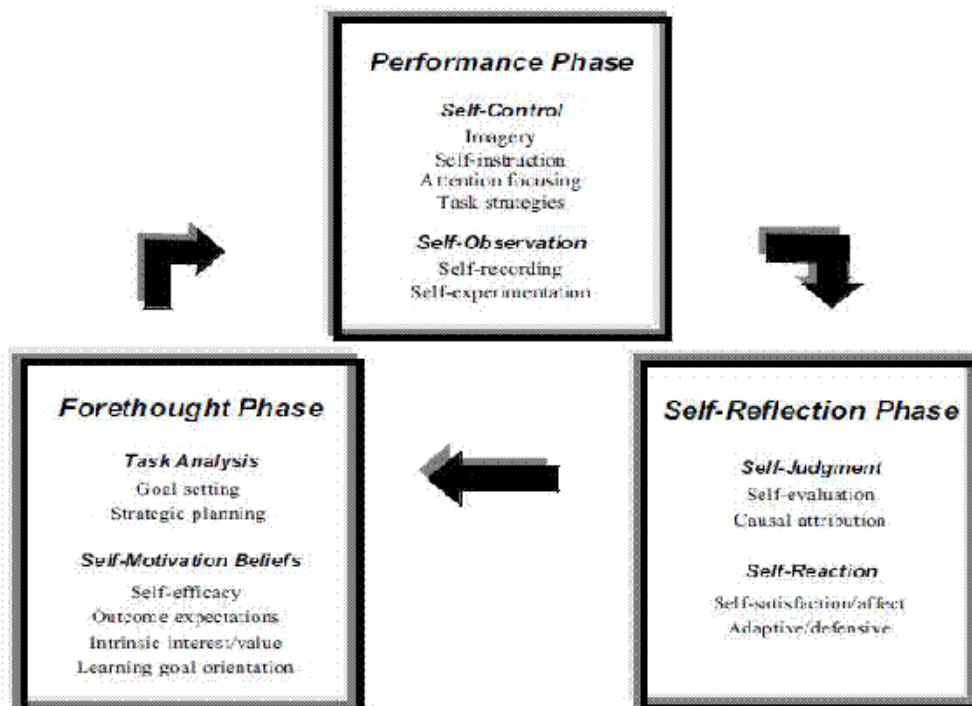


Figure 3. Phases and subprocesses of self regulation taken from Zimmerman and Campillo (2003)

Goals are involved in the different phases since individuals establish a goal and set a plan of action (forethought), pursue goals through actions, monitor performance on account of those goals (performance control), and assess their performance in relation to goals and modify their strategic actions (self-reflection).

The *forethought phase* includes the processes and beliefs that are set in motion before action is taken to learn. This phase is based on the assumption that most human behaviour is

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purposeful and regulated by forethought, that is, by the anticipation of possible outcomes (outcome expectations) for which goals must be established to achieve desired outcomes (Bandura, 1989). Two main types of forethought processes are distinguished on account of the task and the individual who performs it: task analysis and self-motivation. The former includes goal setting (Locke & Latham, 1990) or in other words, deciding on the aspired outcomes and strategic planning to learn (Weinstein & Mayer, 1986). However, goal setting and strategic planning are not enough for action if individuals are not motivated to learn. For this reason, there are a number of self-motivational beliefs underlying forethought processes which are self-efficacy beliefs (Bandura, 1997; Schunk 1984a), outcome expectations about learning (Bandura, 1997), intrinsic interest for the task (Zimmerman, 1985) and goal orientations (Ames, 1992; Nicholls, 1984). The two former aspects are closely related since outcome expectations are dependent on self-efficacy beliefs (Bandura, 1986) and people expect to achieve success (outcome expectations) in tasks in which they feel confident.

The *performance phase* refers to those processes that occur during behavioural implementation and includes two main processes: self-control and self-observation. Self-control entails individuals' deliberate attention to their behaviour (Mace, Belfiore & Shea, 1989) so as to enhance concentration and eliminate the influence of external events, while self-observation involves keeping track of one's own progress and the conditions that surround performance (Zimmerman & Paulsen, 1995). Self-observation may also lead to motivational enhancement when individuals become aware of their deficient behaviour by self-recording their progress (Zimmerman & Kitsantas, 1996) or self-experimenting with certain aspects of their functioning to improve their performance (Bandura, 1991).

The *self-reflection phase* involves those processes that occur after each learning effort. There are two main types of self-reflection: self-judgement and self-reaction. The former involves the comparison of the current performance with the goals that are set. Individuals make self-judgements about goals they personally value, which means that when individuals do not attach importance to goals (maybe because goals are imposed by other people and not appropriated), they are less likely to assess their performance for improvement (Bandura,

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1986). Attributions for achievement are also essential for future learning behaviour because negative evaluation towards the attainment of a goal may be assigned to ability variables, which will negatively affect self-efficacy and performance. In contrast, when learners attribute their negative evaluation to lack of effort or inadequate strategy use, they may be led to believe that they can perform better by working harder, looking for help or changing their strategies (Schunk, 1996).

Behavioural, cognitive and affective responses to self-judgments are considered self-reactions, which can result in the reallocation of attention and effort. Deficient performance or violations of personal standards may prompt individuals to react self-critically, while the attainment of personal standards may result in pride and self-satisfaction (Bandura, 1986). These affective reactions are predictors of subsequent performance (Cervone, Jiwani, & Wood, 1991; Prussia & Kinicki, 1996) since the higher individuals' dissatisfaction with their performance is, the more effortful the behaviour that can be predicted for the future.

Self-reactions can involve feelings of positive affect and self-satisfaction in response to one's performance. An increase in self-satisfaction may raise motivation and self-efficacy while a decrease in self-satisfaction tends to slacken future learning efforts (Schunk, 2001). Nonetheless, learners' dissatisfaction with their performance can also become an incentive for increasing their endeavour (Simon, 1979). This apparent dissonance about the effects on effort when there is a discrepancy between standards of achievement and actual performance is related to students' self-efficacy beliefs. Individuals who are doubtful about their own capabilities are easily unmotivated when facing obstacles, while those who are confident about their abilities choose challenging tasks, persist in their task until they are successful and tend to achieve their goals (Bandura, 1993, 1997; Pajares, 1996; Schunk, 1991). Along the same lines, perceived self-efficacy also influences self-set goals, the strength of commitment to them and the ultimate level of performance (Locke, Frederick, Lee & Bobko, 1984).

Self-reactions to performance can also result in defensive responses and adaptive behaviour. The former refers to the attempt to protect one's self-image by withdrawing or avoiding learning or performance opportunities. In contrast, adaptive reactions entail

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adjustments oriented to increase one's learning by discarding or modifying strategy use. In turn, self-reflection may also affect future forethought processes, which indicates the cyclical nature of self-regulation (Zimmerman & Bandura, 1994). In fact, the cyclical process of self-regulation has been shown by the high correlations among the forethought, performance and self-reflection processes (Zimmerman & Kitsantas, 1999). For instance, as noted by Bandura and Schunk (1981), individuals who set proximal goals (forethought) also tend to self-observe their performance, achieve goals (performance) and show high self-efficacy beliefs (reflection). Likewise, after achieving the goals that were pursued, individuals with high perceived self-efficacy can set higher standards for performance (Bandura & Cervone, 1986).

To sum up, self-regulation for learning involves cognition, motivation, affection and social contextual factors and students who are better at using self-regulatory skills are also more motivated and perform better (Pintrich, 2000c, 2003). Self-regulation is a cyclical process because the interaction of personal and environmental factors changes during learning and needs to be monitored. Learners can try to regulate their behaviour while performing the task through setting plans and looking for help for which social interaction and certain control of the environmental context are needed. In contrast to the regulation of cognition, motivation and behaviour, the monitoring of the environment tends to be more difficult since it is not always under control. Nevertheless, although contextual influences may be important to shape learners' actions, they are not as essential as individuals' internal dynamics that result in action. For the enactment of actions, effective self-regulation involves having goals and the motivation to attain them (Bandura, 1986; Kanfer & Kanfer, 1991; Pintrich, 2000a; Zimmerman, 1989). We mentioned before that a key aspect in forethought processes is goal setting and strategic planning. These two constructs have also been conceptualised as *goal setting* and *goal striving* (Lewin, Dembo, Festinger & Sears, 1944). The former makes reference to the goals that learners will choose, while the latter comprises the behaviour set in motion to achieve the chosen goal.

The difference between goal setting and goal striving is important when goals are imposed by external agents since goals do not influence performance if individuals do not

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accept them as their own (Locke, Shaw, Saari & Latham, 1981; Mento, Cartledge, & Locke, 1980). Furthermore, just because individuals believe that a goal is desirable, it does not imply that they will pursue it since individuals must make a commitment to enact actions (Locke & Latham, 1990). On account of the lack of theories on *goal striving*, Kuhl (1984) developed the *Control Theory*, which was based on Atkinson and Birch's (1970) assumption that individuals are constantly influenced by abundant motivational trends and therefore can pursue various actions simultaneously. Kuhl posited that effective goal striving was associated with individuals' effort to control the actions that result in the attainment of some specific goals and in the avoidance of competing action tendencies. Later, Heckhausen and Kuhl (e.g. Heckhausen, 1987; Heckhausen, 1991; Heckhausen & Kuhl, 1985) developed the *action control theory* or the *rubicon model* of action phases, as we explain next.

## **III.1.4.2. Heckhausen and Kuhl's action control theory**

In line with models of intentions and planned behaviour (Ajzen, 1988; Gollwitzer, 1996), Heckhausen and Kuhl's action control theory (1985) emphasises one area of the self-regulation process, namely the monitoring of behaviour. The theory keeps the distinction between goal setting and goal striving but it also provides a chronological perspective about the pursuit of goals that begins with individuals' wishes before establishing a goal and ends with a self-reflection process that follows the ending of goal striving (Gollwitzer, 1990). In other words, the research concentrates on how intentions are formed and how they are implemented following different phases. In what follows, we shall report such phases of action control theory, which are basically similar to the phases underlined by self-regulation theorists, although here the emphasis is not so much placed on the affective elements that influence self-regulation as it is on the temporal perspective of goal striving and on its hierarchical organisation.

*Action control theory* differentiates four phases for goal attainment (the *predecisional phase*, the *postdecisional but still preactional phase*, the *actional phase* and the *postactional*

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*phase*) on account of three boundaries that distinguish the stages of decision making, the beginning of action, and the ending of actions.

The *predecisional phase* entails individuals' deliberation to act on some wishes, which can be conditioned by the criteria of feasibility and desirability. As for feasibility, individuals may consider whether they can obtain the outcome they wish and whether the context will facilitate or impede the struggle for the outcome. The desirability of the outcome is dependent on the expected value or pleasant and unpleasant consequences of the outcome. The *postdecisional phase* involves the transformation of the chosen wish into an intention, which entails a sense of commitment or, in Heckhausen's words (1987), "crossing the Rubicon".

When the intention is shaped, the *preactional phase* begins. Planning then needs to be done since all intentions may not be implemented immediately such as, for instance, when the context does not offer the necessary opportunities, or when the goal intentions involve a process that cannot be attained in a single step (e.g. goal states such as graduation). When individuals commit themselves to the implementation of the intention, the behaviour oriented towards the pursuit of the goal is known as *behavioural intention*, which differs from goal intentions in that the latter just concentrate on the choice of the desired goal. The initiation of action towards the achievement of the goal intention signals the transition towards the *actional phase*. This beginning depends on learners' volitional strength in comparison with other competing intentions and on how favourable the situation is for the enactment of goal intentions.

Finally, when the outcomes are attained, the *postactional phase* starts. Individuals compare the outcomes that have been achieved with the desired outcomes and decide whether goal striving was worthwhile. This postactional evaluation may help future deliberation in the predecisional phase. If individuals consider that the achieved outcome did not agree with the desired consequences, goal intentions may be changed.

*Action control theory* does not exclude the possibility of an overlap among the different actional phases, although there is a distinction of temporally ordered phases in the motivational process. For instance, in the *predecisional phase*, the choice of wishes before the

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formulation of a goal may be interrupted so as to give more cognitive capacity to the goals that have already been chosen and require the enactment of actions. The theory has inspired subsequent research about motivation, affect and self-regulation for learning. A case in point is Dörnyei and Ottó's process model of L2 motivation (1998), which was intended as an attempt to explain the dynamics of language learners' motivation in the classroom and to synthesise many of the motivational conceptualisations within a unified framework, as we will explain below.

## **III.1.5. Summary and connections to the present study**

In this section we have reviewed how earlier motivational theories moved from the original construct of needs to goals so as to account for learners' behaviour and achievement. Within a socio-cognitive stance, we have summarised three main theories on goals (*goal setting; MST; goal orientation theory*) that respectively reveal the importance of intentional learning, contextual influences on motivation, and individuals' orientations for achievement. Then, we have described the role of goals in self-regulation processes. All these aspects of goals (motivational factors, contextual influences and self-regulation processes) will be considered in our own investigation. Within this self-regulation view, we have explained Heckhausen and Kuhl's *action control theory* (1985) so as to describe learners' monitoring of their behaviour through the dynamics of goal striving, which entails the enactment of action and the subsequent self-evaluation process. We shall now move on to empirical research on goals in learning and will explain the effects of interventionist studies about goal setting on students' achievement. Then, we will describe the specific area of research of goals in L2 and we shall focus on Dörnyei and Ottó's (1998) study that tries to offer an encompassing model drawing on several theories.

## III.2. Research on goals in learning

There is empirical evidence that highlights the impact of goals on motivation and learning (Bandura, 1986; Locke & Latham, 1990; Locke, Motowidlo, & Bobko, 1986; Locke, Shaw, Saari, & Latham, 1981). Some experimental studies have delved into the effects of instructional interventions which aim to develop students' goals on achievement as we describe in this section. However, we should notice that interventionist studies on goal setting with different experimental conditions (e.g. product goals versus process goals; or goal setting conferences versus no conferences) seem to represent different teaching practices in the classroom; that is, teaching practices that focus on what learners should be able to do as a result of instruction (product), and other practices (process view of learning) that emphasise the use of strategies to foster and develop learning. Along these lines, Ellis (1994) distinguished between formal instruction that aims to develop learners' cognitive goals such as linguistic or communicative skills, and metacognitive goals that are oriented towards the use of effective learning strategies. Accordingly, the studies that we report below conceptualise and investigate goals as their main construct, but their treatment conditions and the subsequent results seem to be in line with the investigation of strategies. This is not surprising for two main reasons. First, there are plenty of theoretical inconsistencies in the investigation of strategies, which have led scholars like Ellis to conclude that "definitions of learning strategies have tended to be *ad hoc* and atheoretical" (Ellis, 1994: 533). Second, goals seem to be embedded in the definition of strategies according to cognitive psychologists who, as noticed by Manchón (2001:48), define them as "deliberate actions or sets of procedures that learners select, implement and control to achieve desired goals and objectives in the completion of learning or performance tasks".

Interventionist studies on goal setting in the field of reading have found that school children show different levels of reading comprehension attainment depending on the intervention group to which they are assigned. Gaa (1973, 1979) designed an intervention programme that involved 54 students grouped into three condition treatments which included

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conferences with goal setting, conferences without goal setting and no conferences, during a period of four weeks. The children in the first condition met with the researcher once a week to receive feedback on their reading attainment from the previous week and then the learners were asked to choose new reading goals from a list for the following week. In the second condition, children were not given feedback about their performance but general information on the material they had dealt with and what they would do in the following week. The control group did not receive any guidance but just the same classroom instruction as the other two groups. Those children who held conferences showed the highest attainment in reading and the most realistic pursuit of goals. In contrast, learners without goal setting practice were prone to believe that they would achieve all their goals without any help. A replication of the main study (Gaa, 1979) indicated that children who held conferences and established goals also showed more responsibility for their attainment than those who did not set them, and that they also obtained higher achievement and better goal setting behaviour.

Similarly, Schunk and Rice (1989) investigated the effects of goal setting on reading comprehension outcomes but focused their research on learners with reading skill deficiencies. The participants were 33 elementary school students, who were assigned to one out of three conditions: process goals, product goals and general goals. There were 11 participants in each experimental condition and all of them received a training session of 35 minutes for 15 days. Students in the process goal condition were instructed to bear in mind what they were trying to do and to use comprehension strategies to answer questions on their texts; those in the second condition (product goals) were just asked to answer comprehension questions; and the ones in the third condition (general goal) were required to "work productively".

The results indicated that the students who were assigned a specific goal, may be it a process or a product one, held higher self-efficacy beliefs than those learners who were given a general goal. In addition, those subjects who pursued process goals emphasised their desire to become better readers, which is important for learners to engage in purposeful behaviour to improve their performance and achieve goals (Paris & Wixson, 1986). In a follow-up study

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(Schunk & Rice, 1991), the researchers delved into the effects of process and product goals, bearing in mind that setting a standard for performance is an important motivational source (Bandura, 1988; Locke & Latham, 1990; Locke, Shaw, Saari, & Latham, 1981). Therefore, some students were assigned a product goal, a second group was given a process goal to use a strategy and other children received instruction on process goals combined with feedback on goal progress. Learners in the last condition held higher self-efficacy beliefs and performed better in their reading than the students in the process and product goal conditions. The results highlighted the importance of feedback for goals to be effective in the case of learners with reading difficulties. This is probably because, as highlighted in other studies, children with cognitive deficiencies have problems determining their effective use of strategies (Borkowski & Buechel, 1983) and may need guidance about their learning development (Licht & Kistner, 1986). In this sense, progress feedback informs learners about the effective use of strategy, their progress and their ability to improve further (Borkowski, Weyhing, & Carr, 1988).

As for writing ability, students with writing and learning difficulties also tend to approach writing in a way that hampers the establishment of clear goals (Graham, 1990; Thomas, Englert, & Gregg, 1987), partly as a result of their lack of skills to monitor cognitive processes (Graham & Harris, 1989). For example, students with learning disabilities find it more difficult to write a text according to their readers' needs, to the topic and organisation constraints (cf. Englert, Raphael, Fear, & Anderson, 1988; Thomas et al. 1987) or to the genre requirements like purpose, convention or features (cf. Englert & Thomas, 1987; Graham & Harris, 1989; Laughton & Morris, 1989). Page-Voth and Graham (1999) postulated that teaching students with learning and writing difficulties to establish goals for their writing could have beneficial effects on their achievement for three main reasons. First, from a merely cognitive point of view, setting specific goals for a task helps learners to better structure their compositions and to address their attention to important aspects when composing (Graham, MacArthur, Schwartz, & Page, 1992; Scardamalia & Bereiter, 1986). This is especially important for students with difficulties who tend to start writing before establishing such goals due to their lack of advanced planning (MacArthur & Graham, 1987). Second, the

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establishment of goals also involves an important motivational factor since writers must mobilise and maintain their efforts to achieve their goals (Cervone, 1993). Task persistence is interesting for students with learning and writing difficulties because they tend to put an end to their task before exploring the whole topic (Graham, 1990), which results in short and incomplete texts without enough elaboration (Graham, Harris, MacArthur, & Schwartz, 1991). Third, as a result of the self-regulation component of goals, writers get information on their goal achievement through their own goal monitoring or through others' feedback. This information can result in subsequent learning from their behaviour (Zimmerman, 1989) and in adjustments to behaviour, as previously explained in self-regulation models. As a whole, instructional studies about goal setting in writing with students having learning difficulties have found (i) improvement in the learning of writing strategies (cf. Sawyer et al. 1992; Schunk & Swartz, 1993); (ii) a focus on learners' attention when revising or composing (cf. Graham, MacArthur, & Schwartz, 1995; Matsubashi & Gordon, 1985; Page-Voth & Graham, 1990); or (iii) an increase in the writers' productivity (cf. Hopman & Glynn, 1989; Hull, 1981).

Apart from the investigation of students with learning difficulties, the effects of goal instruction in average and gifted learners when composing have also been explored. Training in process goals (learners are told to use a strategy) together with progress feedback have been shown to be more beneficial for the development of self-efficacy beliefs, strategy use and achievement than instruction in process goals or product goals on their own (Schunk & Swartz, 1993a, 1993b). These findings highlight the importance of modelling and feedback even for strategic individuals like gifted students who can choose their own goals and self-regulate their learning process (Borkowski & Peck, 1986; Rogers, 1986).

To summarise, we can highlight two main common points in all the studies about goals for learning described above. First, all the interventionist studies involved the presence of external influences, such as a researcher or writing instructor, for the modelling of goal setting. It is therefore understood that authoritative external sources may be needed until learners can set realistic goals for themselves (Schunk, 2003), which is in line with

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sociocognitive research that maintains that there is a wide variety of human competencies that are initially acquired through social factors (Schunk & Zimmerman, 1997). Second, the findings reported in all the studies show the positive effects of goal setting on students' performance. However, there is also a concomitant effect of goal setting on self-regulation due to the thin borderline that separates the constructs of goals and strategies, as explained before.

In this sense and in consonance with the research on goal setting, there are plenty of self-regulation studies (cf. De la Paz & Graham, 2002; Englert, Raphael, Anderson, Anthony & Steven, 1991; Fidalgo, Torrance & Nicasio, 2008; García & De Caso, 2007; Ching, 2002; García & Fidalgo, 2003; 2006; García & De Caso, 2007; Graham & Harris, 1996; 2003; Graham, Harris & Mason, 2005; Torrance, Fidalgo & García, 2007) that investigate the effects of instructional interventions on the achievement of learners with and without learning disabilities. Nevertheless, this self-regulation approach is based on the operationalisation and experimental treatment conditions applied to strategies rather than goals. Contrasting with the abundant interventionist studies on self-regulation, there is not so much descriptive research on the development of students' self-regulation (see Graham & Harris, 1997). In what follows, we shall concentrate on research on SLA in general, and on writing goals in particular, which is our area of interest in this study. We shall start explaining first Dörnyei and Ottó's process model of L2 motivation, which in spite of its name, describes not only the motivational but also the self-regulatory function of goals in learning.

## III.3. Research on goals in L2 learning

With the objective of motivating language learners in classroom intervention, Dörnyei and Ottó (1998) looked for existing motivational models that could be applied to the classroom but they did not find any adequate model for three main reasons. First, the reviewed models lacked a comprehensive description of motivational factors that could affect learners' behaviour. Second, those models focused on the reasons why people decide to follow certain actions and neglected the influence of motivational sources for the enactment of such actions. Third, the models did not consider motivation as a dynamic construct that can be developed over time. An important exception to these studies was the line of research initiated by Kuhl, Heckhausen and their associates (Gollwitzer, 1990; Heckhausen 1991; Heckhausen & Kuhl, 1985; Kuhl, 1985, 1987, 1992; Kuhl & Beckmann, 1994) that distinguished temporally ordered action phases and influenced the development of Dörnyei and Ottó's *process model of L2 motivation*, as we describe now.

### III.3.1. Dörnyei and Ottó's process model of L2 motivation

Goals have been ill-defined constructs in some motivational theories (Gardner, 1985), whereas in others, such as *goal setting theory*, for example, they have been considered the most important motivational factor in action. In Dörnyei and Ottó's model, goals have an intermediate position because they do not determine action but are needed for motivated behaviour since they are the first mental representations of the desired outcomes. In this section, we shall describe the two dimensions of Dörnyei and Ottó's process model of L2 motivation that include the *action sequence* and the *motivational influences*. This model is needed to understand the shaping and development of goals in naturalistic contexts in which students are exposed to environmental influences, without denying the significance of changes in learners' internal factors for self-regulatory processes when learning.

The *action sequence*, which is very similar to *actional control theory* and includes the same phases, comprises learners' behavioural processes that involve initial wishes and

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desires, which are transformed first into goals and then into intentions. These intentions in turn enact actions towards goal achievement. When the action is finished, there is a postactional evaluation. The term *motivational influences* refers to the forces that lie behind the different phases of action and can enhance or impede goal implementation.

As for the *action sequence*, the motivated behavioural process is made up of three phases following Heckhausen and Kuhl's *action control theory* (1985): *preactional phase*, *actional phase* and *postactional phase*. In the preactional phase, learners chose the goals to be pursued in a task following three subprocesses: *goal setting*, *intention formation* and the *initiation of intention enactment*. Goal setting is preceded by initial wishes/hopes, desires and opportunities and when learners choose among them a goal to be pursued, the motivated behavioural process gets started. However, the goal does not immediately enact an action because there must also be commitment to it or, in other words, a concrete intention as well as an action plan and the necessary means and resources. Learners choose certain goals on account of individual factors for which the external environment will be influential. Döörnyei and Ottó distinguished motivational factors that influenced the process of goal setting to transform fantasies into real-oriented goals. These factors are *subjective values and norms* developed over the past, individuals' *incentive values linked to L2 learning*, the *general potency or expectation to achieve the goal*.

During the actional phase, individuals engage in a continuous appraisal process of the action sequence using the stimuli coming from the environment. Closely connected to this appraisal process is the action control mechanism that is well known in educational psychology as "self-regulatory strategies". There is a process of evaluation of the feasibility and desirability of the available options on account of learners' self-evaluation (the *expectancy of success*, the *perceived relevance of the goal* and the *individuals' evaluation of cost-benefits*), individual influences such as the *need for achievement and failure* (based on achievement motivation theory) *learners' autonomy* (following self-determination theory) and goal properties (drawn on goal setting theory) like specificity, proximity, goal harmony/conflict, and level of aspiration. The interaction between appraisal and control

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processes results in an *actional outcome* which can involve the achievement of the pursued goal or the ending of the action. Even though the action is finished, there may not be action abandonment if the individual revises the goal originally pursued and forms a new intention.

Finally, the postactional phase starts when the goal has been achieved, the action has finished or there is an interruption in action for a long period of time (e.g. holidays). During this phase, there is an evaluation of the accomplished action outcome and inferences are made for future actions drawing on the comparison between the initial expectancies and plan of action with what happened in reality. The accomplished intentions may play a role in the shaping of new intentions by fostering distant superordinate goals for which a new preactional phase begins and the cycle starts again, as was described in self-regulation models. Learners' self-evaluation in the postactional phase is crucial for their perceived success, achievement and satisfaction, which will in turn condition their approach to future tasks.

To summarise, Dömyei & Ottó's (1998) process model emphasises the dynamic nature of motivation by which a learner initiates, monitors and retrospectively evaluates initial wishes and desires that are selected, prioritised and acted out in different phases. In this respect, the time dimension is relevant since motivation evolves gradually in complex mental processes that range from "initial planning and goal setting, intention formation and task generation, and finally implementation and control" (Dömyei, 2000:524).

Dömyei and Ottó show the complexity of learners' motivation in an instructional context by synthesizing different motivational models in a unique scheme. The resulting model illustrates how various mental processes and motivational factors coming from internal and external sources influence learners' behaviour in the classroom and evaluation of achievement at different points of an action sequence. Most importantly, the model also underscores that there is not just one single component that can explain learners' motivation and consequently, multiple factors have to be considered in any model that wants to fully capture this complexity.

In our study, we are interested in the temporal perspective of the development of goals in one area of language use, writing, within an instructional context in which we will bear in

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mind the motivational dimension of goals (goals to be pursued and be enacted), and their evaluative dimension (self-regulation). In order to have a complete picture of the shaping of goals in these dimensions, we shall also look at learners' self-reported personal factors (self-efficacy beliefs, outcome expectations or expectations of success, perceived achievement in the past) and contextual influences (instruction in the EAP course). There are some interventionist and descriptive studies on goals in L2 writing that have reported the influence of some of these factors on written outcomes, as we shall describe in what follows.

## **III.3.2. Research on goals in L2 writing**

Some interventionist studies have delved into learners' agency when writing (Cumming, 1986, 2006; Haneda, 2000; Hoffman, 1998) by examining the effects of students' goals on written performance and self-regulation bearing in mind instructional factors and individual variables like L2 proficiency. On the other hand, other descriptive studies have examined the development of goals without establishing experimental conditions (Cumming, 2006, 2012; Sasaki, 2009, 2011), as we shall report in the following sections.

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## **III.3.2.1. Interventionist studies about goals for writing**

Cumming (1986) carried out an exploratory study about the abilities of 20 ESL students at the University of Toronto to select, act and monitor their own goals for writing improvement over a period of twelve weeks. The learners came from different cultural backgrounds and were doing the first or second year of engineering. The study involved an instructional period that included all the necessary conditions for "intentional cognition" following Bereiter and Scardamalia's contention (1982) that learning is more effective when students choose their own goals than when they react to the goals imposed by the context. Nevertheless, the modelling of students' goals was done on the basis of an expert writer. Specifically, learners were asked to (i) compare their performance and texts with the ones of a more expert writer so as to facilitate the selection of goals for writing development; (ii) choose and establish their own goals; (iii) complete a sufficient number of writing tasks that they might have the opportunity to act on the chosen goals; (iv) monitor their goals and achievement; (v) be part of a supportive environment in which other students performed the same tasks.

On the basis of these conditions, the instructional design involved five phases that lasted one week and were implemented twice. The first four phases were targeted to develop the students' cognitive abilities in relation to the goals they chose to pursue. Therefore, in the first phase, the author tried to model students' thought processes by completing a writing task thinking aloud in front of the learners and while they took notes of his writing process. Afterwards, the learners wrote with peers a similar composition while thinking aloud and, then, they wrote about the writing procedures used. Next, the instructor rewrote the students' compositions maintaining the content but improving the stylistic features and the grammatical aspects of the original texts. Finally, with the aid of their own notes and the reformulations of their compositions, the learners were required to select one goal to improve their writing over the next five weeks. In the second phase, the students wrote an essay to act on their chosen goal and subsequently wrote a self-analysis about the achievement of that particular goal. This self-analysis was then discussed with peers. In the third phase, the instructor gave feedback to each individual student on their pursued goal. The fourth phase involved repeating the second

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and third phases but using different writing tasks. Finally, in the fifth phase and with a view to developing the metacognitive awareness of their writing process, learners reflected on the achievement of their goals in the different compositions and wrote about it to their instructor.

The results indicated that the participants in the study pursued goals in the areas where they thought they had previously achieved other goals. An increase was also noticed in the number of learners (from 60% to 95%) who reported attaining their goals throughout the two periods of implementation, either because they had become more skilful in writing, or because they had developed confidence in their achievement. In addition, the learners also pursued more goals in their compositions, although that did not mean that they thought they could achieve all of those goals. However, the analysis of the compositions using the Jacobs et al's (1981) scale revealed (i) a mean gain score from the initial compositions to the last ones which was higher than expected for freshman learners' compositions, and (ii) a relation for most learners between their perceived areas of achievement (i.e. content, organisation, vocabulary or language use) and their actual areas of improvement according to the gain scores. These findings showed that adult ESL learners were able to select suitable goals for writing improvement, act on them, and monitor correctly their perceived achievement. In addition, the instructional technique of thinking aloud and carrying out peer analyses of writing processes resulted in learners' self-regulation through peer collaboration. That is, peers pointed out some problems that prevented students from achieving some of the pursued goals and about which they were not conscious when composing their texts. Along the same lines of a socio-cognitive view of writing development, Hoffmann (1998) explored the implementation of a goal setting intervention with three ESL students, who came from different cultural backgrounds (Japanese, Chinese and Hebrew) and were taking a 12 week writing course for which the instructors had modelled the use of metacognitive strategies such as planning, monitoring or self-evaluating. During the course, the students dealt with the problem solving dimension of writing (Carter, 1990) by means of which they could move from a knowledge telling approach to a knowledge transforming one (Bereiter & Scardamalia, 1987) and produce texts of high quality.

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In line with Cumming's assumption (1986) that students develop their writing by working with more expert writers from whom they can appropriate goals, Hoffmann (1998) modelled students' task goals. The writing tutor first discussed the characteristics of academic texts with learners so as to set the standards of achievement. Then, learners established their own learning goals on account of their perceived needs in writing. Afterwards, the teacher commented with learners their efforts to achieve the goals as reflected in the essays and, finally, the students set new goals for the next essay bearing in mind the teacher's feedback. These goals could be about the process of writing (improvement of writing strategies) or the written product (i.e. language, discourse). Although the results may be considered to be tentative due to the limited number of participants (three learners), it was found that a moderate level of language proficiency in two of three students restricted their ability to discuss their writing problems with their tutors. Likewise, the researchers also hypothesised that the establishment of goals leading to writing expertise should be limited to learners with higher language proficiency and writing confidence since less proficient counterparts lacked the ability to solve the problems they were aware of when writing. L2 proficiency limited the goals that could be achieved and learners' metatalk about those goals with their instructor. Accordingly, it was suggested that less proficient English language learners may need the teacher's help to set their goals for writing.

Other studies point out that, rather than a limitation in the learners' establishment of goals, there is a different selection of them according to L2 proficiency level. For instance, Haneda (2000) explored the writing goals of nine participants (intermediate and advanced learners of Japanese as a foreign language) from four different ethno-linguistic backgrounds (Chinese, Anglo-Canadian, Korean, Japanese ancestry). They were taking a fourth year Japanese as a foreign language reading and writing course for 13 weeks and held discussions with their teachers about their written texts. They were first asked to set their own revision goals in collaboration with the teacher both at a micro-level of analysis (i.e. mechanics, grammar) and at a macro-level (i.e. discourse organisation). Afterwards, the students wrote an essay and had individual conferences with their teacher to discuss the revision of their text on

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account of the first draft and the stated goals. Then, the learners revised their texts and participated in two retrospective interviews to describe the changes in their compositions and their perceptions of the conference as well as their subsequent revision. The same process was repeated with two more essays. In total, the learners wrote three first drafts and three final drafts.

In the discussions with the teacher, the intermediate level students showed their concern with language issues, while the advanced group focused on language use but also on ideational content and rhetorical aspects of their writing. Furthermore, the number of discussions resulting in substantial revision was significantly higher in the case of the advanced language students. When there were revisions without a preceding discussion, those provided by the intermediate language students concentrated almost equally on language use and content, whereas the revisions of the advanced group were related basically to content.

As a whole, the three studies reviewed show the positive effects of goal setting on learners' attention and effort when performing tasks and on helping them become more self-regulated learners. However, Hoffmann (1998) and Haneda (2000) found divergent results in the establishment of goals as a result of proficiency level. The learning context in both studies differed (second language versus foreign language setting respectively) and it is uncertain whether the "moderate language level" of two of the participants in Hoffmann's research could correspond with the intermediate level of Haneda's study. Nevertheless, both studies shared some design features related to the small sample size and the limited time span (12 and 13 weeks) of the intervention that might have restricted the results, since it is well known that many learners establish various goals for writing but their attainment may not be evident in a few days (Cumming, 1986).

In contrast to these instructional designs for the investigation of goals, there have also been descriptive studies that have focused on the development of writing goals in natural learning contexts without experimental conditions, as we describe next.

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## **III.3.2.2. Descriptive studies about goals for writing**

Cumming carried out two longitudinal research projects about goals in a second language context (Cumming, 2006, 2012) in Toronto with different students and social and educational contexts (international students preparing for their university studies versus learners at risk of failing at the secondary school). The first project was devoted to the development of learners' goals for writing whereas the second one explored goals as one additional feature of their learning process rather than as the main focus of the study, as we report below.

In 2006, Cumming and his research team carried out a two-year multiple case research framed in goal theory and activity theory. Both theories attempt to explain human learning in general and individual differences in particular drawing on personal agency and motivation within a social context but from different perspectives. As explained before, *goal setting theory* emphasises the role of goals from a motivation and self-regulation point of view, while *activity theory* concentrates on a sociocultural perspective for the development of learning. This theory proposes goals as central constructs for learning in social contexts underlining their role as standards to assess learning within and across groups over time. Leont'ev (1972, 1978) proposed the existence of an activity system that is composed of *motives*, *goals* and *instrument conditions*. To accomplish the motive, people engage in actions that entail specific operations in pertinent *conditions*. These principles are especially relevant for the learning of composition in virtue of the problem-solving dimension of writing that involves the establishment of written objects to be pursued.

Cumming (2006) assumed that an *activity* such as learning to write in a SL language is mobilised by particular *motives*, such as studying a career for which composing in the target language is needed. Learners perform actions such as composing assignments bearing in mind the *instrumental conditions* of the classroom which include, for example, the available material resources. On the basis of these assumptions and drawing also on goal theory, Cumming and his associates carried out a research project that involved 10 researchers, 45 students from a variety of cultural backgrounds, 14 instructors and 11 different courses that learners took during the two years of data collection and analysis. To the best of our

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knowledge, this longitudinal study is the most encompassing investigation on the development of writing goals in a natural learning context in ESL. In this sense, this study is different from previous investigation since, as noticed by Cumming, Busch and Zhou, (2002), the vast majority of the studies in SL writing have been conducted in controlled experimental settings created for research that do not maintain the natural activity system in which people write. As Cumming et al. (2002) contended, that kind of research offers a restricted analysis of SL writing which is insufficient to explain why people write and how they do it (Cumming et al. 2002) or the connection between learning and teaching (Cumming, 1998, Cumming & Riazi, 2000; Grabe, 2001; Grabe & Kaplan, 1996). Since in this present study we are interested in students' writing goals as they naturally develop in a natural learning context, we shall devote special attention to the methodology and results reported in Cumming's (2006) multi-year project investigation.

## ❖ *Cumming's (2006) research on goals in ESL writing*

The purpose of Cumming and his colleagues' research was to examine: (i) the features of ESL learners' goals for writing improvement; (ii) the development of learners' goals from an ESL programme to the first year of university; and (iii) the relationship between students' goals and those of their instructors. The ESL programme, which received students from the entire world who wanted to improve their English and study at universities in Canada, was an intensive three-month course that involved the four skills in foreign language learning (speaking, reading, listening and writing) and was intended to enhance learners' comprehension and production in English. After having taken the ESL course, the participants were contacted again the following academic year for the second phase of the study, but only 15 out of the 45 students (most of them Chinese) participated in this second phase of the investigation.

Data about the students were collected twice at the beginning and at the end of the two phases by means of (i) profile questionnaires; (ii) semi-structured interviews about their goals

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for writing improvement in English (Cumming, Busch & Zhou, 2002); (iii) writing samples from their courses; and (iv) stimulated recalls about their goals for some of their writing samples. The instructors were also interviewed both about the content and aims of the courses and about the writing tasks on which the learners had previously produced stimulated recalls. In addition, some of the instructors' lessons were observed. Regarding data analysis, the researchers developed a coding scheme about goals for ESL writing improvement that was theoretically grounded (theories about goals, intentionality, self-regulated learning and teaching on writing) and empirically based on iterative analyses of the students' and teachers' interviews and stimulated recalls following grounded theory (Strauss, 1987) and the constant comparative method (Miles & Huberman, 1994). Afterwards, the frequencies of each category were calculated to analyse their distribution across phases and types of participants. In what follows, we shall report the results in relation to the three main aims of the study mentioned above.

### ➤ *Features of ESL learners' goals for writing improvement*

One of the main findings of the longitudinal investigation was the systematic taxonomy that was developed to describe learners' goals for ESL writing improvement in their academic studies. Zhou, Busch, Gentil, Eouanzoui and Cumming (2006) reported that all the ESL students' goals involved (i) a particular *force*, which means that goals can appear in different states of development, namely, intention, dilemma and outcome; (ii) an *object* of intention (i.e. language, rhetoric, affective states); (iii) a specific *action* to accomplish the goal; (iv) a *context of action* for realizing the goal that may involve either the students' classes or other contexts like tests, work situations or home situations; (v) a connection to *aspirations* either for university studies or for the future career; (vi) a certain *origin* that may come from the learners themselves, the teachers, the peers, or family; (vii) a perception of the *responsibility* for the attainment of goals that could be within the learners or in external sources (teachers, peers or others).

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The findings also indicated that learners' goals also had multidimensional realisations, as highlighted by *activity theory*, since all the students had multiple and interacting goals and even those students who were concerned about certain categories (i.e. grammar, genres) also expressed different specific goals within those categories. The frequencies of the goal objects were consistent throughout time, which points to the stability of learning goals as indicated in previous research (Leont'ev, 1972; Pintrich, 2000a). However, there was a decrease in the number of goals from ESL courses to university and their precise qualities also differed across time as a function of literacy contexts and students' individual development and socialisation patterns, as we describe next.

## ➤ *Shaping of learners' goals*

Cumming and his colleagues found that students tended to keep the same goal objects in the ESL class and in the university setting, which indicates that goals for improvement can be maintained over time and be transferred across learning contexts. There were more similarities than differences across the four points of data collection in the two phases of the project as a result of the slow development of goals over time. The frequencies and types of goals remained the same at the beginning and at the end of the ESL course and one year later at university but a few learners were found to expand their goals in the second phase as a function of the context of instruction.

The aspirations for writing increased in the university courses when the students became aware of the particular demands of composing for their careers and assigned themselves responsibility for the achievement of goals. Accordingly, the role attributed to university instructors for goal achievement was less important than that of ESL teachers, which is also consistent with the instructional approaches of both groups of instructors. As Cummings, Erdösy and Cumming (2006) explained in one of the studies of Cumming's (2006) research project, the ESL teachers provided personal assistance to learners through individual conferences about their essays, the technique of multiple drafting, peer editing or

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portfolio writing and this set of teaching practices contrasted with those of university teachers, who only required one final draft submission. Along the same lines, although the ESL instructors considered the students responsible for attaining their writing goals, these instructors also viewed themselves as the origin of learners' actions to attain goals more frequently than the university teachers. Consequently, although the students' goals for writing improvement persisted over time, some changing factors like the context of instruction affected their development. In fact, in phase 2 some learners' goals increased in the university when they socialised with other classmates in Canada and some other students even broadened their goals by including in them not only language, rhetoric and ideas, but also composing processes, affective states, and learning.

Apart from this distinct shaping of goals as a function of the learning opportunities offered by the context, there was also one study included in Cumming's research project (2006) and conducted by Barkaoui and Fei (2006) that also reported differences between students' and teachers' views about the assessment of goal attainment. The exploration of these divergences answers the third objective of the overall investigation, which concerned the association between students' and teachers' goals.

## ➤ *Relationship between students' and teachers' goals*

As a part of the overall study, Barkaoui and Fei (2006) analysed a subsample of 11 learners who produced stimulated recalls about their writing tasks in both phases of the research (ESL programme and university) and 9 instructors' interviews (4 ESL teachers and 5 university lecturers) about the students' writing samples. Most of the students did not distinguish between their teachers' goals and their own and they mostly appropriated their perceived instructors' goals.

Both instructors and students had goals for the accomplishment of written tasks, which differed not only between the groups of students and teachers but also within the group of teachers (ESL versus university instructors). ESL teachers focused on rhetoric and language

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more than knowledge and ideas. Conversely, the university teachers based their evaluation on ideas and knowledge and then on language and rhetoric through their effects on content.

When there was some correspondence between the learners' and the teachers' goals, it was due to the appropriation or reinterpretation by the former of the goals of the latter. This result confirms previous findings suggesting that students try to match their teachers' modelled or suggested goals (i.e. Nassaji & Cumming, 2000). Gentil also highlighted in his parallel study, which was also included in the overall project, "the interpersonal, intersubjective nature of goal formulation" (Gentil, 2006: 146) since his participants considered themselves as the main originators of their goals but such goals seemed to echo those of their instructors.

### ➤ *Summary of the main findings in Cumming's research, contribution to the field and limitations*

The investigation carried out by Cumming and his research team in their project gave rise to a "theoretically informed and empirically substantiated framework" (Cumming, 2006: 159) to account for the development of learners' writing goals. Its longitudinal design allowed the authors to demonstrate that goals for writing improvement were partially stable over time, but also that they varied among individuals and situations in the same learning context. In addition, those goals were found to have multidimensional realisations, to be transferable to other learning contexts and to differ in quality as a result of students' personal growth and socialisation processes in the second language setting.

However, it is questionable, as the researchers also acknowledge, whether students' goals for writing actually developed or were just adapted to different writing situations throughout the period of data collection. Although adult learners may have goals for writing improvement at different levels of self-awareness and explicitness, these goals may vary not only because of individual development but also because of different learning situations and opportunities. In this respect, students reported that their goals were directly related to the

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context of instruction in which they were engaged, that is, the ESL courses first and the university courses afterwards. It should be recalled that phase 1 of the study involved learners' participation in an ESL programme during three months to improve their overall comprehension and production in English so as to enter university in Canada. In contrast, phase 2 of the project was developed at a university context where the students took mainly disciplinary subject courses, although there were also bridging and foundation courses aimed at introducing learners to critical thinking and to academic writing conventions. As the researchers also recognised, drawing on Fishman and McCarthy (2001), composition and content academic courses provide different learning opportunities to learners. Therefore, it is arguable that the ESL programme, which was not fully focused on composition but offered a highly supportive instructional treatment intended to develop the four skills in English, was nevertheless qualitatively different from freshman university courses, and that, accordingly, distinct goals could have been fostered in both programmes. In fact, the teaching practices in both contexts differed. The ESL instructors arranged individual conferences with students, peer editing or multiple drafting, whereas the university teachers preferred giving written feedback and only allowed students to submit one final draft of their written work. These teaching practices could have even fostered, as reported by Cummings et al. (2006), different students' goal orientations, that is, mastery versus performance goals (cf. Midgley, 2002).

In addition, students in phase 2 formed a less heterogeneous ethnographic group of participants than in phase 1, but they were involved in different university programmes (commerce, economics, architecture, engineering, computer science, political science) or even completing Canadian secondary school in the case of one student. We could suggest that the attrition of the heterogeneity of the groups from phase 1 to phase 2, which the authors also acknowledged as a limitation, could have conditioned the results. Furthermore, the different university programmes in which learners were enrolled in phase 2 might have also biased the results by possibly contributing to the development of individual differences in goals as a result of distinct instructional contexts in the university programmes. Along these lines, Gentil found in his parallel study, for which he collected new data in a different context from the

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overall research project, that there were differences between the goals of learners who were studying English or French as a Second Language (ESL and FSL respectively). Learners in both groups were studying in the same bilingual context but at a university with distinct curriculum policy for different languages. Both the curriculum policies and the teaching practices at the university determined the instructors' goals which in turn conditioned the students' goals for writing improvement. This means that the greater number of courses available for French dominant students, who were studying ESL, made them more likely to set and attain higher-order goals than their English dominant counterparts, who were learning French.

On a more positive note, the multi-year investigation could capture the complexity of students' goals by describing their multiple realisations both from a macro (clusters of goals) and a micro perspective (individual differences). As the researchers themselves contend, their empirical research offers a robust framework for the analysis of goals but, as goals for writing can vary as a function of cultural standards in different types of texts and locations (Connor, 1996; Heath, 1983; Johns, 1997), they also acknowledge that further research is needed to confirm their findings in other educational contexts. In addition, Cumming and his research team did not triangulate students' goals for writing improvement with their actual shaping of writing ability in the ESL programme or in the courses at university, although this triangulation is desirable to fully explore the motivational impact of goals on the development of writing skill. Such investigation was undertaken by Sasaki (2009, 2011) by comparing the goals that a group of learners who stayed at home (EFL context) had with those goals of another group who spent different periods of time abroad during their university studies (from freshman to senior). Before moving to the report of goals in EFL writing, we shall first refer to another longitudinal study about goals in an ESL context carried out by Cumming (2012).

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### ❖ *Cumming's (2012) investigation of goals about learners at risk for their literacy skills*

In 2012 Cumming reported some of the main findings of a longitudinal project whose process of data collection lasted for six months and was intended to look into the goals for writing of 21 students who were at risk of failing at secondary school and had agreed to receive help after school hours. The use of a questionnaire about goals adapted from Middleton and Midgley (1997) did not show changes in the students' goal orientation (mastery goals, performance goals or performance avoidance goals) during the school year in spite of having been tutored. This result was probably due to the time-span of the intervention, which was not long enough to show changes, but it might have also been related to the learners' over-estimation of their literacy abilities when responding to the questionnaire. Apart from this, two distinctive groups of learners were found according to their engagement with literacy. There was a group of students with little interest in reading and writing, whereas other learners were shown to be interested in both reading and writing so as to expand their knowledge. Accordingly, the former group was intentionally oriented to learning (Bereiter & Scardamalia, 1989), whereas the other group only developed interest in literacy with the help of a tutor.

The results of this study contrast with Cumming's (2006) research in which international students moved from preparatory ESL courses to university studies and were highly motivated to improve their writing. Accordingly, the difference between both studies illustrate that the development of goals may vary as a function of the socio-economic status of the learners. Considering the importance of context for the development of goals, Sasaki (2009, 2011) also investigated writing goals but in an EFL setting, as we explain next.

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## ❖ *Sasaki's research on goals in EFL writing*

On account of Cumming's (2006) results about students' motivation to improve their writing in an ESL context, and noticing that there were no previous studies on goals in an EFL setting, Sasaki carried out a longitudinal study (3.5 years) on the dynamics of foreign language students' L2 writing ability and motivation. She postulated that "FL students do not always have to set goals to survive in their L2 learning situations" (Sasaki, 2009: 54) and therefore proposed that findings about motivation in SL writing may not be applied to a FL setting. To account for social situations with which learners interacted, the researcher adopted a sociocognitive design that could throw light on the cognitive aspects of L2 writing within a sociocultural environment (Riazi, 1997).

The participants were twenty-two freshmen university students pursuing British and American degrees in Japan. During the three and a half years of data collection, five learners stayed in their home country, whereas seventeen students spent different periods of time in Canada, the USA or in New Zealand, as part of their participation in study abroad (SA) programmes. Learners who stayed abroad were divided into three different groups according to the length of their stay (2 months; 3 months; between 8 and 11 months).

As for data collection, information on L2 writing and motivation were gathered through argumentative essays and interviews at four points (in the first month of the learners' freshman year and in the third month of their sophomore, junior and senior years). The interviews were conducted after the learners wrote the compositions and revolved around L2 writing strategies, L2 classes, and goals for writing improvement in English. Four months after the learners had written their compositions in their mid-senior year, they were interviewed about their perceived changes in their writing ability, strategy use and motivation from the freshman to the senior years. Questions about motivation concerned what aspects (goals) they wanted to improve in their compositions, why they had those goals and what they did (actions) to achieve them. When they did not mention any area of improvement, they were shown a list of potential areas that was based on Cumming's (2006) scheme.

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Regarding data analysis, the essays were scored by two EFL writing experts using the Jacob et al.'s (1981) English composition profile, while for the interview data Sasaki followed Miles and Huberman's (1994) approach, which involved noting patterns in the collected data and clustering information on the basis of recurrent comparisons. For the coding of learners' motivational changes, the researcher drew on Yang, Baba and Cumming's (2004) framework, which was in turn based on Engeström's (1987) expanded activity system. In addition, two further categories (imagined L2-related community and imagined-non-L2 related community) based on Kanno and Norton's (2003) concept of "imagined community" were added to Yang et al.'s scheme.

The findings indicated that all the students aimed to improve some aspect of their writing (basically grammar and vocabulary) in their freshman year and that, in contrast with the at-home group learners (60%), all the study abroad students reported using mediating artifacts to achieve such goals (i.e. textbooks, dictionaries, and teachers). Furthermore, 60% of the at-home students stated that they had done nothing to improve their writing during the three and a half years of the study. For this reason, Sasaki concluded that the at-home group remained in a preactional phase (Dömyei & Ottó, 1998) without actually engaging in the task since they did not take any action to improve their L2 writing. The differences in motivation between learners who stayed abroad and at-home were also reflected in the written performance. During the three and a half years that the study lasted, the composition scores of the at-home group tended to decrease while they increased for the stay abroad learners, even though both groups had a similar number of L2 lessons as seniors. Sasaki argued that the stay abroad learners formed "L2 related imagined communities (imaginary contexts in which people would use the target language for communicative purposes) that helped them to improve the content and the rhetorical expressions of their texts. In contrast, the at-home group did not form these imagined communities and found it difficult to find a reason to write in their L2 classroom. Differences were also found among the groups who spent time abroad as a result of their length of stay. Only the learners who spent the longest period of time abroad (between eight and eleven months) became intrinsically motivated to improve their

## Learners' goals

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writing and Sasaki consequently speculated that they might be the only ones expected to further improve their writing in the future within the FL context. As a whole, the results indicate that learners in a FL situation may not be motivated to enhance their writing ability once they have passed their exams, a finding which is consistent with many teachers' description of writing in FL settings as less purposeful and needs driven than in SL contexts (Ortega, 2009). Nevertheless, it is questionable whether these findings could be generalised to all FL situations due to several reasons. First, the at home group was made up of a small number of participants, five students. Only 60% of these 5 learners, that is, 3 students, reported that they had not used mediating artifacts in their freshman year to achieve their goals but what happened with the other 40% of the students (2 learners) is not explained. In addition, one may also wonder whether these 3 students of the at-home group in their freshman year were the same who did not embark on actions in their sophomore, junior and senior years. Given the scarce number of participants in the at-home group, it is questionable whether their lack of motivation could only be attributed to the learning context or to individual factors.

Moreover, when comparing the at-home group (5 students) with the stay abroad students (17 learners), who were divided into three groups on account of the length of their visits abroad, one may notice that the learners who had studied abroad (between their sophomore and junior years) started the freshman year reporting the use of mediating artifacts. This initial difference between the two groups was maintained during the three and a half years of the study, which raises the question of whether there were motivational differences at the outset in favour of the stay abroad group that were maintained over time. In fact, Sasaki explains that even before going abroad, two of the three stay abroad groups had to study a lot to get high scores in the TOEFL. These possible motivational differences between the groups could also potentially help to explain the shaping of L2 related imagined communities in the case of the stay abroad students.

In a follow-up study, Sasaki (2011) replicated the investigation with a bigger sample size (37 students) but again there were more learners who stayed abroad (28 students) for

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different periods of time than students who stayed at home (9 students). The initial difference in the use of mediating artifacts between the two groups was also the same as in the previous study, which could point to the existence of starting motivational differences among the students that may in turn have conditioned the results. Furthermore, the study also draws the same conclusion about the learners' lack of action to achieve goals on account of the limiting function of the FL environment in which L2 writing improvement is not necessary for communicative purposes.

Even though ESL and EFL settings are supposed to offer students different kinds of interaction, input, affective and social relations that will condition their learning, Sasaki's contention (2009) that learners in a FL context do not need to pursue improvement in their L2 writing beyond their exams could be hasty. In this respect, it should be recalled that Manchón and Roca de Larios (2011) found in an EFL context that after an academic year of writing instruction students improved their writing ability, were motivated to improve their compositions and consequently claimed that they intended to achieve more complex goals in their future assignments after the EAP course. Curiously enough, in Manchón and Roca de Larios' study, the EFL learners experienced the same conditions in their FL context as the ones reported by Sasaki concerning the learners who stayed abroad (writing practice, explicit instruction and authentic audience). This issue highlights the influence of teaching practices on learners' motivation and achievement rather than learning contexts (second language versus foreign language situations).

### **III.3.3. Summary and connections to the present study**

In section III.3.2 we examined research on goals in L2 writing. First, we described the results of an interventionist study (Cumming, 1986) that using a socio-cognitive approach delved into the effects of goal setting on learners' self-regulation and written performance. Following the same sociocognitive stance, the influence of L2 proficiency on the establishment of goals (Hoffman, 1998; Haneda, 2000) was also discussed. Afterwards, we concentrated on the major contribution to the analysis of L2 writing goals, i.e., the longitudinal research projects in natural ESL learning contexts conducted by Cumming and his research team in 2006 and 2012. This line of research was later followed by Sasaki (2009, 2011) in an EFL setting by relating students' goals for composing with their written performance.

In light of the studies reviewed, we may conclude that the investigation of students' goals has thrown light on the variation of written performance, motivation and self-regulation. However, as suggested by Cumming (2006), to move theories of language learning forward, there is still a need for research on the relationship between learners' social and cognitive features in natural educational contexts which can help to throw light on the guiding role of goals for students' learning process and their impact on writing development (Dömyei, 2003). In this respect, there is still a dearth of theoretically informed studies that investigate, systematically and longitudinally, the role of students' goals for writing from cognitive, motivational and self-regulatory perspectives. This is what we intend to do in the present empirical study in an EFL context. In addition to examining the development of students' writing goals in an EFL course, we will also delve into (i) the perceptions of goal achievement and actual performance as measured quantitatively and qualitatively in the texts written by the learners 9 months apart; and (ii) the connection between goals and individual factors (task conceptualisation and L2 proficiency). By analyzing writing goals from their cognitive (problem-solving), motivational (motives and actions) and self-regulatory dimensions in relation to beliefs, we also expect to contribute to the expansion of writers' MM of writing,

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which could ultimately help to explain patterns of achievement and development in FL writing ability. The specific research questions related to these concerns are specified in what follows.

## Learners' goals

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## Chapter IV

### Research questions

In this chapter we describe the ultimate aim of our study on account of the previous empirical literature we have reviewed and the gaps in research we intend to fill. The consideration of these gaps has led us to the formulation of our research questions which are grouped into three main blocks and are also illustrated in a diagram. We then elaborate on each specific research question in each of the blocks and provide both a rationale for their inclusion in our study and their particular contribution to the ultimate aim of the investigation.

#### IV.1. Ultimate aim of the present empirical study

The rationale for our empirical study has to be related, first, to the lack of empirical evidence on the influence of learners' task representation on performance in reading-to-write tasks (cf. Ruiz-Funes, 2001; Wolfersberger, 2007) and, second, to the scarcity of studies on the evolution of goals for writing (Cumming, 2006) and on the impact of goals on composing (cf. Cumming, 1986; Sasaki, 2009, 2011). Accordingly, our ultimate aim was to investigate longitudinally the development of students' MMs of writing (understood as stored beliefs about the task and their corresponding network of goals associated with beliefs) in an instructional EFL context and the contribution of these to the development of L2 written performance. The identification of students' internal factors that could potentially be related to writing improvement can be important for the enhancement of pedagogical practices in foreign language writing as well as for the advancement of theoretical knowledge in the SLA field. Therefore, our study was designed with theoretical and applied aims in mind. To our knowledge, no previous studies, with the exception of Manchón and Roca de Larios (2011),

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have empirically investigated the simultaneous evolution of L2 students' stored beliefs about the task, their goals for writing, the interrelationship between these two, and their possible effect on performance.

On account of the general aim of the research, we formulated four research questions which were grouped into the following three main blocks:

- (1) the dynamics of task conceptualisation and its relationship to the learning environment (Research Question (RQ henceforth) 1 );
- (2) the development of writing goals and their link with the learning environment (RQ2 and RQ3); and
- (3) the connection between learners' task conceptualisation, writing goals and performance (RQ4).

In Figure 4 we illustrate the interrelationship between all the variables that make up learners' MMs of writing and that have been mentioned in the three previous blocks. The numbers (1, 2, 3) that appear in circles within the diagram refer back to the variables included in the three sets of research questions and to the research questions contained within each block.

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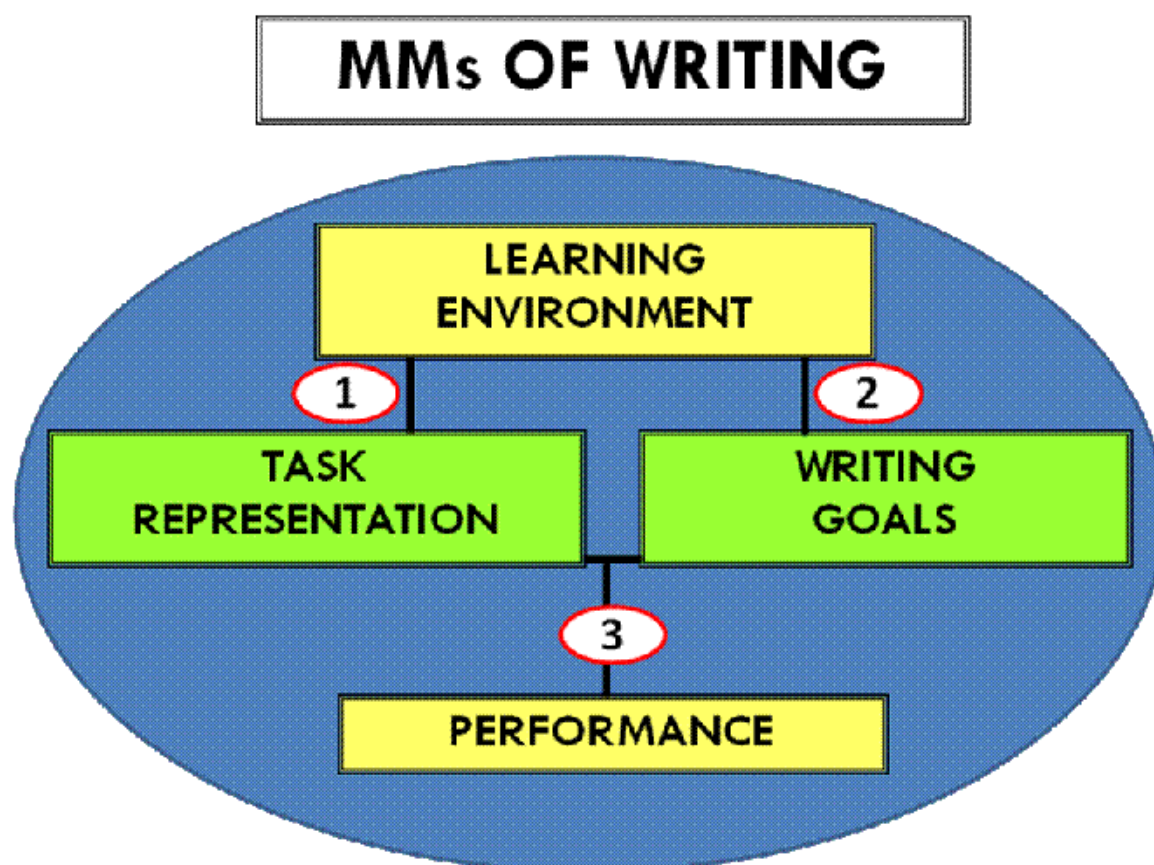


Figure 4. Mental models of writing: interrelationship between variables in the present study

Number 1 in Figure 4 represents the first block of research questions about *the dynamics of task conceptualisation and its relationship to the learning environment*. Number 2 refers to research questions related to *the development of writing goals and their link with the learning environment*, while number 3 comprises the research questions about *the connection between learners' task conceptualisation, writing goals and performance*. The four research questions contained within the three blocks were:

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## **Block 1:**

*RQ1: Were there changes in students' task conceptualisation after having taken the EAP course?*

## **Block 2:**

*RQ2: What were the characteristics of EFL students' writing goals for the EAP course and their perceptions of changes over time?*

*RQ3: Were there actual changes observed in EFL students' writing goals for their university studies and future careers bearing in mind their self-efficacy beliefs, past performance, outcome expectations and context of action?*

## **Block 3:**

*RQ4: Were students' goals, task conceptualisation and written performance related?*

We now move on to the description of the rationale behind each research question and the way in which each question relates to the ultimate aim of the study.

## **IV.2. Rationale behind the research questions**

In spite of the empirical studies carried out on task conceptualisation, on the one hand, and writing goals, on the other, there are still several issues that need further research. As we explain next, our research questions aim to offer new insights by exploring (i) the development of MMs; (ii) potential factors that can mediate student-writers' goals and pursuit of actions for writing improvement; and (iii) the effects of task representation and goals on

# Research questions

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written performance under different conditions from the ones researched so far following Flower and Hayes' (1981) cognitive model of L1 writing.

Figure 5 offers a visual display of what follows. The visual organiser is composed of two main figures. The figure on the left describes three main aspects (ultimate aim; how we contribute to current empirical research; what we explore in this study) by means of which the figure on the right should be interpreted. The numbers (1, 2 and 3) in both figures indicate the three different levels represented in the visual organiser.

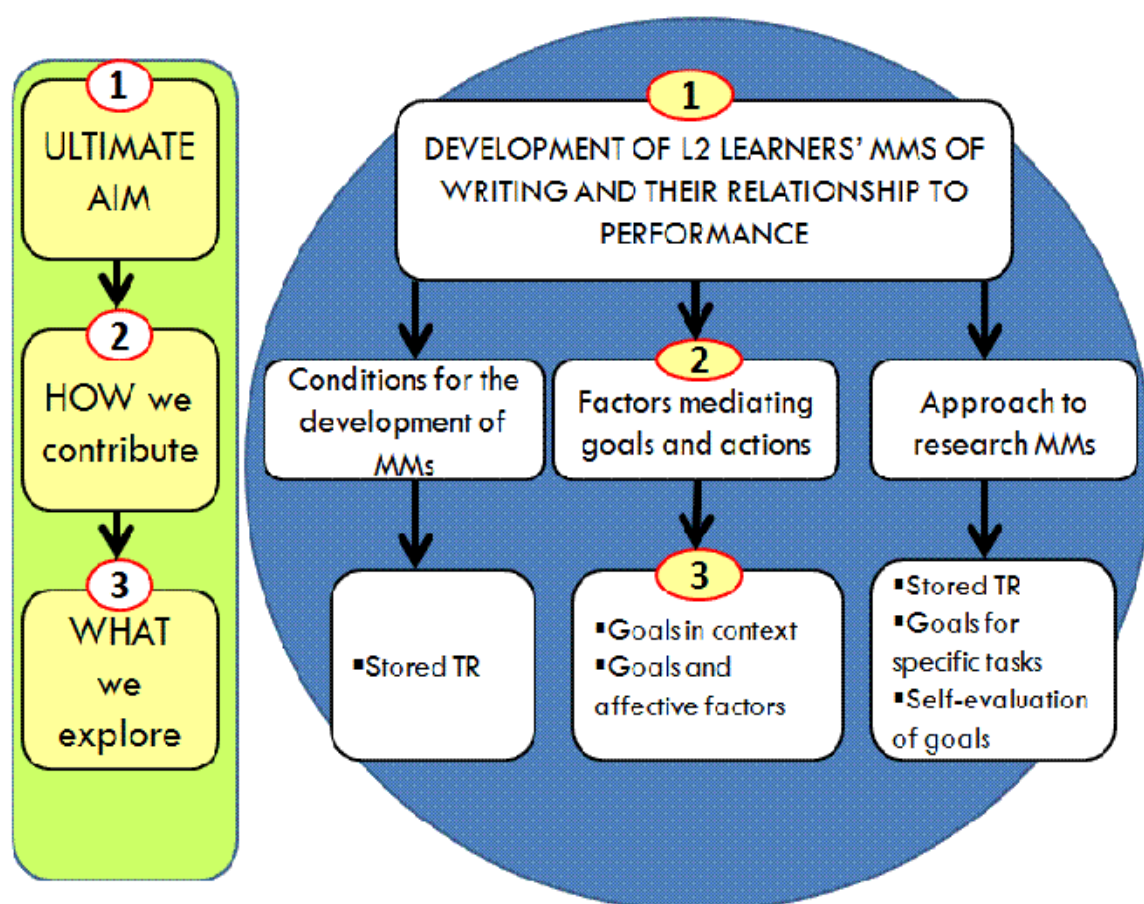


Figure 5. Overview of the present empirical study

NOTE: MMs= Mental models; TR= Task representation.

# Research questions

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Accordingly, number 1 in the visual organiser indicates that the ultimate aim of the study is *the development of L2 learners' MMs of writing and the relationship of these to performance*. Number 2 shows that we expect to contribute to the present empirical research by (i) *considering the conditions for the development of MMs*; (ii) *exploring potential factors that can mediate goals and actions*; and (iii) *adopting a new approach for the investigation of MMs*. Finally, number 3 specifies the aspects we explore in the present study, which include learners' stored task representation, goals in context, goals and affective factors (outcome expectations and self-efficacy beliefs), goals for writing specific tasks, and students' self-evaluation of goals. In what follows, we describe these two last levels.

## **IV.2.1. Conditions for the development of MMs**

As explained in Chapter II when discussing learners' MMs, research on learners' task representation has been based on specific tasks that involve writing from sources in L1 (Flower, 1990) or in L2 (Ruiz-Funes, 2001; Wolfersberger, 2007). Some of these studies (Flower, 1990; Ruiz-Funes, 2001) explained how different representations of a specific task determined the quality of the participants' written texts, while Wolfersberger (2007) identified the factors that influenced learners' development of task representation. Wolfersberger also showed how learners' L2 proficiency level constrained written performance by inhibiting the transfer of L1 writing skills to L2, a process which resulted in texts that were considered to be plagiarised. Other studies have focused on the comparison of L1 and L2 writers' stored MMs of writing (Devine et al. 1993) -understood as metacognitive knowledge about person, task and strategy variables- and their relationship to the writing quality of their composed texts at one point in time. Finally, some researchers have also investigated students' stored beliefs about the task (e.g. Manchón & Roca de Larios, 2011; Smeets & Solé, 2008) under different perspectives. On the one hand, Manchón and Roca de Larios (2011) focused on the perceptions of changes in task representation and their relationship to the language learning potential of composition. On the other, Smeets and Solé (2008) delved into learners' stored

## Research questions

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representations of synthesis tasks in terms of knowledge-telling or knowledge-transforming and the influence of such representations on performance.

However, no studies so far have addressed the development of students' stored mental representations for composing academic texts in a foreign language during a long instructional period (9 months) devoted to enhancing L2 learners' writing abilities. Accordingly, we formulated the following question:

*RQ1: Were there changes in students' task conceptualisation after having taken the EAP course?*

The possible changes in task representation will be related to the participants' perceptions of the writing instruction in the EAP course that could mediate those changes since beliefs develop in context within a given learning environment (e.g. Barcelos, 1995, 2000, 2003).

We believe that the exploration of writers' insider dimension of tasks (Manchón, 2009c) may reveal the existence of possible differences in learners' understanding of the features of good academic writing that may be shaped by instruction (previous and present) and may condition their performance. Therefore, research on the shaping of learners' stored task representation could help to explain the possible changes in their approaches to writing.

### **IV.2.2. Exploration of potential factors that can mediate participants' goals and pursuit of actions for writing improvement**

In Chapter III we reviewed the research on goals for writing and reported the main findings of the empirical investigation led by Cumming (2006) which represents the most comprehensive empirical work to date on the development of writing goals in a natural ESL learning context. Among the main findings of this investigation, it was noteworthy that students' goals for writing improvement were to some degree stable across time although they also varied across individuals and situations. In this respect and as acknowledged by the researchers themselves, it is questionable whether learners' goals for writing actually developed over time or were tailored to the writing demands of distinct learning contexts. It should be recalled that Cumming's (2006) project involved the investigation of a group of participants who moved from a preparatory ESL programme for overseas learners who intended to enter universities in Canada (3 months) to different degree studies at two universities (7 months of data collection). In an attempt to expand on the line of research initiated by Cumming (2006), we aim to explore learners' development of goals for writing over a period of nine months of writing instruction but within a single learning context, the university. We therefore expect to account for student-writers' development of goals rather than learners' adaptations of goals to different learning contexts. Nevertheless, in the present research and for comparison purposes, we shall also bear in mind the aspects underlined by Zhou et al. (2006) as responsible for students' apparent shaping of goals for writing improvement. These aspects include (i) the context of action for the accomplishment of goals; and (ii) the connection of goals to affective factors such as self-efficacy beliefs or learners' aspirations for writing in their future studies and careers. These issues will be further developed in the following subsections.

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## **IV.2.2.1. The context of action for the accomplishment of goals**

As underscored by Cumming et al. (2002), there are multiple factors that are interrelated in students' goals for writing improvement since these goals can be idiosyncratic as well as shaped by the contexts learners are in when composing. Aiming to better examine the context of action in which writers' goals are embedded, we explore the development of our EFL learners' goals within a given context as well as several factors that surround students' views on their present literacy situation. These factors include (i) intra-individual perceptions of goals and their development; and (ii) goals and their enactment in relation to students' previous and present literacy experiences.

### ***❖ Intra-individual perceptions of student-writers' goals and their development within their learning context***

In our attempt to look into learners' longitudinal shaping of goals within a unique learning context, we shall also examine our participants' perceptions of goal achievement. This is important to understand the cyclical development of goals drawing on learners' views after a process of goal selection and pursuit. The examination of students' perceptions of goal achievement is in line with self-regulation theories, according to which after the pursuit of goals there is a self-reflection process and evaluation of achievement that can affect future learning behaviours (e.g. Pintrich, 2000d; Zimmerman, 1998, 2000; Zimmerman & Schunk, 2001). We believe that the examination of learners' perceptions will offer insights into student-writers' introspective views on their development of goals and will also shed light on some questions posed by Cumming et al. (2002) about the cyclical shaping of goals for writing. In this respect, Cumming, et al. suggested that we could expect learners to formulate dilemmas first, by means of which students would acknowledge their problems or conflicts when writing. These dilemmas could then be subsequently transformed into goals, although

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these scholars could not show this cyclical process in their own data and therefore their claim remains in need of empirical verification. Along the same lines, but following self-regulation theories in educational psychology, it is postulated that students' realisation of an accomplished goal in the postactional phase may result in the establishment of a new goal to be pursued in a new preactional phase, although these theoretical assumptions need to be explored in FL writing. In this respect, Zhou et al. (2006) reported learners' perceptions of accomplished goals and referred to them as "outcomes", but they did not examine whether these outcomes could lead to the formulation of new goals for the future.

Consequently, in the present empirical work we shall address these open questions about the development of goals drawing on learners' own perceptions of the transformation of their dilemmas when writing into new goals as well as the possible reformulation of outcomes after achievement into new goals. Accordingly, we formulated the following research question:

*RQ2: What were the characteristics of EFL students' writing goals for the EAP course and their perceptions of changes over time?*

### *❖ Student-writers' shaping of goals and actions in relation to socio-cognitive and affective factors within their learning context*

According to Cumming (2006), goals are formulated in relation to particular aspirations within the students' immediate contexts or in reference to future career plans. In one of the studies included in Cumming's project (2006), Zhou et al. (2006) reported that learners' goals for writing increased when the participants became aware of the particular characteristics of their careers, while their aspirations related to writing improvement for passing tests decreased after having entered the university programmes.

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However, there was a limitation in Cumming's project related to the process of data collection in the different learning contexts (from preparatory courses for university entrance to university studies). In this respect, changes in students' goals and therefore in aspirations could have been related to their adaptation to distinct academic situations since goals are interrelated with perceptions of the situational conditions for writing as well as the possibilities that are offered for development (Cumming, 2006; Cumming et al. 2002). In this study, we examine the shaping of goals for both learners' present studies at university and future careers during a period of eight months in relation to a single context of action, that is, a complete academic year of their university studies.

In addition, Cumming did not consider whether learners' reported aspirations for their present studies or future career could be derived from past learning experiences, their self-efficacy beliefs or outcome expectations (expected grades). We consider these factors as antecedents of goals following self-regulation models reviewed in Chapter II according to which there are self-motivational beliefs that underline forethought processes and could affect students' views on their possibilities of failure or achievement as well as their goals.

As explained in Chapter III, self-regulation theories postulate that when learners meet a certain standard of achievement, they will raise their aspiration level for future situations as a result of their motivation. Self-efficacy beliefs are postulated as being essential for the establishment of self-set goals, the commitment to the goal, the persistence in the task and the level of attainment (Bandura, 1993, 1997; Locke, Frederick, Lee & Bobko, 1984; Pajares, 1996; Schunk, 1991). In addition, learners pursue goals when they are confident about their abilities to achieve them (Bandura, 1997; Pajares & Johnson, 1996), which may in turn derive from similar successful experiences in the past (Lewin, Dembo, Festinger & Sears, 1944; Weiner, 1992). Apart from holding self-efficacy beliefs, learners must also be motivated by expected outcomes or expectations of success (Bandura, 1986; Locke & Latham, 1990; Weiner, 1985b) so as to engage in the task with effort and persistence (Bandura, 1986) and obtain a positive outcome that they value (Schunk, 1991). Although these antecedents of goals may help us to better understand their shaping across time, they have been unreported in

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previous studies about writing (Cumming, 2006; Cumming et al. 2002; Manchón & Roca de Larios, 2011; Sasaki, 2009, 2011). In view of these observations, we formulated RQ3:

*RQ3: Were there actual changes observed in EFL students' writing goals for their university studies and future careers bearing in mind their self-efficacy beliefs, past performance, outcome expectations and context of action?*

## **IV.2.3. Approach to the investigation of mental models following Flower and Hayes' (1981) cognitive model of L1 writing**

As previously explained in Chapter II, we undertake the investigation of MMs within an empirical perspective that integrates and explores the possible interrelationship between student-writers' goals and task representation following Flower and Hayes' (1981) study. These researchers proposed a cognitive model of L1 writing according to which learners' goals are enacted in relation to the rhetorical problem that writers pose to themselves when composing.

After Flower and Hayes' (1981) cognitive model, some studies just focused on task representation and its effects on performance (cf. Carey et al. 1989; Ruiz-Funes, 2001; Wolfersberger, 2007) without paying attention to the evolving nature of the problem-solving dimension of composing that entails the establishment and pursuit of goals (Hayes, 1996). Similarly, there has also been research on MMs of writing that has reported learners' metacognitive knowledge about the person, task and strategy knowledge of composing without delving into students' goals for writing (cf. Devine et al. 1993). Furthermore, the investigation of learners' task representation has normally been based on reading-to-write tasks. In the present work, we depart from those studies by focusing on learners' stored task representation for writing without sources since in our view the conceptualisation of the task

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might be constrained by the type of activity they encounter. In this respect, there is empirical evidence in the field of writing about distinct attentional behaviour to aspects of writing as a function of task type (Cumming, 1989). Other studies have instructed learners to set an expert-like standard of achievement to strive for goals as expert writers would do (Cumming, 1986; Hoffmann, 1998), instead of finding out their particular task representation and goals for writing. Cumming (1986) revealed the beneficial effects of instructing students to set goals that resulted in (i) improvement of self-regulation behaviour; and (ii) coherence between perceived areas of improvement and actual written performance. The findings of this study were nevertheless limited in their time-span (12 weeks) and were very much constrained by the instructor, who modelled thought processes for the attainment of goals and also gave feedback about the pursued goals. This means that learners improved their performance, but the authoritative figure of the instructor was essential for both the pursuit of goals and writing achievement. Some studies on the development of goals in natural learning contexts without establishing experimental conditions for writing did not examine the association between goals and written performance (Cumming, 2006; Cumming, Busch & Zhou, 2002; Cumming, Kim & Eouanzoui, 2007).

From a descriptive perspective, some models of writing that followed Flower and Hayes' research (1981) underscored differences in beliefs and goals for writing resulting in the distinction between knowledge-telling and knowledge-transforming models (Bereiter & Scardamalia, 1987). Following this line of research, Smeets and Solé (2008) explored learners' representation of a synthesis task in terms of knowledge-telling or knowledge-transforming and its effects on performance (elaboration of the text and integration of different sources of knowledge), but goals were not studied and their influence on reflective processes were taken for granted.

It is relevant to understand how learners' representation of the task could be related to their goals as well as to written performance since successful learning has been suggested to be related to both the establishment and pursuit of goals and appropriate representation of the task. For this reason, we shall explore student-writers' stored task representation and their

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goals for particular tasks in hand. We also believe that learners' self-reported and selected goals for writing could be important in understanding differences in achievement and motivation. These differences may lead students to pursue further improvement once they have perceived the attainment of previous goals, along the lines of studies of self-regulation and motivation (e.g. Dörnyei & Ottó, 1998; Heckhausen & Kuhl, 1985). Accordingly, we shall analyse learners' perceptions of goal achievement at the end of the instructional period in the EAP course. On these grounds, we formulated our last research question:

*RQ4: Were students' goals, task conceptualisation and written performance related?*

We also believe that our research could allow us to examine the possible existence of idiosyncratic features within an EFL context that distinguish learners who self-regulate their writing. In the chapter that follows we shall explain our methodology to respond to all the research questions formulated for our investigation.

## Chapter V

### Method

#### V. 1. The research context

The study was conducted in an English writing course for Academic Purposes (EAP course), which was a fourth-year compulsory unit in the participants' five year English degree programme at the University of Murcia. According to the official course syllabus and the teacher's own account in an interview, the main aim of the course was to help learners to develop their reading and writing abilities in English, although it was also conceived as an instrumental language course in the English degree programme. It lasted for thirty weeks with three contact hours per week, one devoted to theory and the two remaining hours to practical activities concerning language and writing practice.

The EAP course involved plenty of writing practice at home because student-writers had to compose three assignments as well as 45 journals during the academic year. Each assignment had to be written at least three times following the feedback provided by peers (at the level of content and rhetoric) and of the writing teacher (at the level of content, rhetoric and indirect feedback on language by highlighting recurrent problems in yellow). The 45 journals were written individually by learners at home and they were free to write about any topic of their choice. Our participants handed in two or three journals per week and a native English teaching assistant commented first on the content of the journals and later on content and language issues. The latter feedback was provided by the highlighting of repeated problems in yellow. The aim of the journals was to help students develop their fluency and confidence in writing since the journals did not form part of the evaluation for the final grade. For clarification purposes, we specify in Table 1 the theoretical and practical aims of the course as well as the transferable skills that the teacher wanted to foster in the EAP course according to the syllabus:

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Table 1. Aims of the EAP course and transferable skills

AIMS AND SKILLS OF THE EAP COURSE	DESCRIPTION
Theoretical aims	<ul style="list-style-type: none"> <li>• To help the students to further their knowledge of <b>English grammar, lexis and, in particular, discourse</b> at an advanced level in order to put this knowledge to use in understanding and producing academic texts.</li> <li>• To promote an understanding of the ways writers use English in structured texts with a <b>particular purpose and audience in mind</b>.</li> <li>• To develop in the students an awareness of the main features of academic discourse, such as the need to <b>acknowledge one's sources</b> and avoid plagiarism.</li> <li>• To develop an awareness of the processes involved in the creation of academic texts, including <b>revision based on constructive criticism</b> by "detached" peers.</li> <li>• To develop a feeling of <b>self-efficacy</b> in learners so that they are able to face the struggle involved in producing an academic text and criticising those of their peers without feeling overwhelmed by the complexities involved.</li> </ul>
Practical aims	<ul style="list-style-type: none"> <li>• Develop strategies to read a wide range of sources <b>critically and analytically</b>.</li> <li>• Focus on reading/writing connections in arguing, <b>critiquing, persuading and exploring</b>.</li> <li>• Read and <b>synthesise information</b> from multiple sources, select appropriate data and use these in creating their own texts.</li> <li>• <b>Analyse</b> academic writing assignments and the relation of <b>essay types</b> to these.</li> <li>• Use all the <b>resources</b> at their disposal including library facilities and information technology such as Internet in the development of their background knowledge and in the <b>creation of their own texts</b>.</li> </ul>
Transferable skills	<ul style="list-style-type: none"> <li>• <b>Confidence and proficiency</b> in their use of academic English in oral and written communication,</li> <li>• Intellectual abilities to engage in <b>critical and independent reflection</b> and enquiry,</li> <li>• Interest in problems in our present-day society.</li> </ul>

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In the classroom, students were required to (i) work in cooperation with others, as well as individually; (ii) look for help from colleagues and from teachers, especially for feedback, idea generation, peer editing, and individual and group revision; (iii) be actively involved in solving their own writing problems; (iv) participate actively and take responsibility for the ongoing evaluation of class activities; and (v) build up a portfolio of written texts (45 journals and three assignments with their corresponding three drafts) produced throughout the year.

The assessment was based on the coursework, that is, the three assignments (the obtained marks counted as 70% of the final course mark) and a final examination (30% of the final grade) for which the learners had to compose an argumentative text of about 500-600 words about an academic topic.

## V. 2. Participants

The participants were a group of 23 Spanish university students who were studying the fourth year of their English degree and were enrolled in the EAP course for the first time. All the student-writers participated on a voluntary basis; they were not paid for that participation and they all signed a consent form in which they were informed that they were the participants of a large research project about writing at the University of Murcia, although the specific research focus was not revealed. They were informed that they would be required to write essays and journals, do proficiency tests, be interviewed and fill out personal questionnaires. They were told that the collected data would be used for research purposes and would be disseminated in conferences, papers and a dissertation.

There were two participants who did not complete all the processes of data collection and were excluded from some parts of the analysis. Nevertheless, whenever possible, we shall report the results of the 23 participants. The personal questionnaires we collected indicated that there were 18 women and 5 men. As for their age, 19 participants were in their twenties (between 21 and 27 years), 3 students were in their thirties (30, 31 and 32 years) and one student was in her forties (41). They were all studying their English degree in a foreign language context although eighteen of them had been to an English speaking country. The

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participants who spent time abroad also differed in the length of their stay. Some of them had stayed in an English speaking country from a few days or weeks up to 3 months (10 participants), and others had lived abroad from 6 months up to 12 months (8 participants). By the time these students reached the fourth year, they had already done three compulsory annual language courses in the English degree covering the four language skills and grammar, which are designed to take learners from pre-intermediate to proficiency level. Some participants (6) had not passed the last instrumental language course and at the time of data collection they were taking both the language course and the EAP course. As a whole, participants' grades were not very high, as shown in Table 2:

Table 2. Participants' grades in language courses

GRADES	FIRST LANGUAGE COURSE	SECOND LANGUAGE COURSE	THIRD LANGUAGE COURSE
	N° P	N° P	N° P
A	0	0	1
B	7	3	8
C	15	20	5
D	0	0	6
No answer	1	0	3

NOTE. N°P= number of participants

In the first language course, 15 participants passed the course with the minimum required level (C), 7 participants got a B and 1 participant did not report the obtained grade. In the second language course, 20 participants got a C and 3 participants obtained a B. Finally, in the third language course, some student-writers improved their grades (8 participants got a B, 1 participant got an A, 5 participants got a C) while others failed the exam (6 participants) or did not report their marks (3 participants).

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At the beginning of the EAP course, the 23 participants had an upper intermediate level of English (B2 level according to the Common European Framework) as attested by the Oxford Placement Test ( $\bar{x}$  =149.43; SD=8.98).

## V. 3. Data collection

Three main data sources were used in the present study, namely, journals, semi-structured interviews and written texts, as shown in Table 3. We also used the Oxford Placement Test as a secondary source of information.

Table 3. Instruments, data and time of data collection in the present study

INSTRUMENTS	COLLECTED DATA	TIME 1	TIME 2
Journals	• Task representation	X	X
	• Writing goals	X	X
	• Perceptions of the EAP lessons at T2		X
Semi-structured interviews	• Antecedents of goals • Goals and strategic actions • Context of action for the accomplishment of goals	X	X
Written texts	• Argumentative written text under time constraints (1 hour) without the help of external sources such as dictionaries	X	X
Oxford Placement Test	• L2 language proficiency level	X	X

## **V.3.1. Instruments and data collection procedures**

In this section, we explain the rationale behind the use of instruments for the present study, the data that were collected and the process that was followed to collect data. We shall start by describing the L2 written texts. Then, we shall move on to the description of the journals in the study and the semi-structured interviews. It should be noted that the journals that were used in the present study as well as the interviews that were conducted were piloted the previous academic year with a group of EFL participants, who were also taking the same EAP course as the present student-writers in this research. Finally, we shall account for the use of the Oxford Placement Test.

### **V.3.1.1. Written texts**

Participants were asked to write an argumentative essay under time constraints, that is, within one hour in controlled conditions in class without the help of external sources such as dictionaries. The participants wrote about the same topic before starting the writing instruction in the EAP course, mid-September, (Time 1) and 9 months later, that is, in June (Time 2). At both times of data collection, participants were not explicitly asked to think about the audience when composing because the previous writing instruction of these learners during their university years had been in relation to argumentative texts without reference to an explicit audience. Therefore the writing prompt at Time 1 had to be appropriate for the learners with respect to their previous writing experiences and instruction. In this way, possible changes in participants' performance at Time 2 after having taken the EAP course could be measured in relation to their starting level of written performance in the course using the same writing prompt as at Time 1, which was based on Raimes (1987):

*Success in education is influenced more by the students' home life and training as a child than by the quality and effectiveness of the educational program. Do you agree or disagree?*

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The repetition of the same task at both times of data collection was motivated by our attempt to avoid possible problems in measuring the development of writing given that different task topics could affect the quality of the written texts (e.g. Elder & O'Loughlin, 2003; Shaw & Liu, 1998, Storch & Wigglesworth, 2007; Storch & Tapper, 2009). Because of our aim of checking whether our participants were influenced by the repetition of the same task, they were required at Time 2 to report whether they had previously written about the same topic and to assess their level of engagement immediately after having completed the essay using a simple Likert scale (from 1 to 5), which rated how seriously they had performed the tasks (see Table 4).

Table 4. Participants' self-reported level of engagement in the writing task at Time 2

<b>NUMBERS OF THE LIKERT SCALE</b>	<b>CATEGORIES</b>
1	Not involved
2	Not very involved
3	Somewhat involved
4	Involved
5	Very involved

### **V.3.1.2. Journals**

Reflective journals have been used in language teaching and learning research (Allison, 1998; Nassaji and Cumming, 2000; Peyton and Staton, 1993; Staton, Shuy, Peyton & Reed, 1988) to account for the analysis of communication between teachers and students without disrupting the linguistic, psychological and sociocultural aspects of the learning context. It should be mentioned that our EFL students wrote journals on a weekly basis as part of their

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coursework. Therefore, the use of journals as an instrument of data collection helped us to preserve the naturalistic classroom conditions in which the participants were immersed. We should also remind the reader that, as pointed out in Chapter II, this study is conceptually and methodologically rooted in the contextual approach to the study of beliefs. The research conducted within this approach regards learning as situated experience in relation to the learning environment, which is needed for the development of cognition. Within the contextual approach, the instruments for the collection of data are normally journals or semi-structured interviews among other instruments since these allow researchers to delve into the students' cognition within their learning environment. For all these reasons and most importantly because of the journals' potential to tap into the various dimensions and variables (task representation, goals and perceptions) included in our research questions, we used these journals as instruments in our data collection.

## ❖ *Journals on task representation*

These journals were collected at the beginning (mid-September 2008) and at the end of the EAP course (June 2009). Before starting the writing instruction, participants were asked to explain what good academic writing was for them drawing on their previous knowledge and writing experiences, as shown in this prompt:

*In the light of what you have learned at university please write a journal entry to try to explain to a prospective student in our department what you think good academic writing is and what it involves. Try to focus on anything you have discovered in your first three years at university.*

In the last week of the EAP course, participants were required to describe good academic writing but focusing on new aspects that they did not know before taking the writing course. The prompt used for the journal was the following:

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*In the light of what you now know, please write a journal entry trying to explain to a 3<sup>rd</sup> year student in our department what good academic writing is and what it involves. Try to focus on anything that you have discovered during this year that you did not know before.*

## ❖ *Journals on goals*

Regarding goals, we gathered data on task-specific target goals by asking our participants to reflect on their goals as well as on the actions that they took to accomplish those goals when writing the argumentative L2 essay at the beginning of the EAP course, in mid-September 2008. Participants were given the following prompt:

*Think of the essay you have just completed. Tell us about the goals and strategies you had in mind while you were writing your text.*

The other journal about goals was collected in June 2009, that is, at the end of the period of writing instruction. This time student-writers were asked to reflect on their perceptions of changes in writing goals throughout the academic year and describe those changes as requested in the following prompt:

*Can you tell us if your goals for academic writing (both in Lengua Inglesa IV and in all your other courses) have changed since you've been doing this course? If you think they have changed, can you tell us how? (e.g. Are you more/less ambitious now than before? Are you aiming to do something more simple/more complex/longer/shorter or whatever?)*

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## ❖ *Journals on perceptions of the EAP lessons at Time 2*

The last week of the EAP course, participants were also asked to describe the writing lessons to prospective learners who would take the course the following year as shown in this prompt:

*Explain to a third year student what they should expect next year in Lengua Inglesa IV lessons. Try to give them a flavour of what the classes are like. Here we are not referring to what you have done at home outside the classroom but to the actual work in class.*

### **V.3.1.3. Semi-structured interviews**

We conducted in-depth semi-structured interviews with each participant, which lasted from 40 to 90 minutes, at two points in time nine months apart (October and mid-June) so as to triangulate the data on the journals on goals and allow participants to reflect on their shaping of goals throughout time in their learning environment. With this aim, we adapted the interview protocols from Cumming's research about goals (2006) as well as other questions we added to elicit data on the participants' writing processes. However, only a selection of the questions, which we describe now, was later analysed. Although the participants were advanced language learners of English, the questions were translated from English into Spanish and the interviews were conducted in Spanish so as to prevent the possible influence of participants' shyness or even some possible L2 language constraints when expressing complex ideas about their goals for writing. We focused on questions that were divided into three main groups: (i) antecedents of goals; (ii) goals and strategic actions; and (iii) context of action.

Within the group of antecedents of goals, we included questions about our participants' self-efficacy beliefs, expectation of success or outcome expectations and past performance following previous research according to which those factors precede forethought processes for the formulation of goals (Bandura, 1997). As for goals and strategic

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actions, we asked participants about their goals for writing in their present studies and future careers. Finally, the context of action included questions about expectations of writing in their present literacy context and in their future careers since research on goals has highlighted the importance of the context of action for the enactment of actions and the accomplishment of goals (Cumming, 2006).

The interviews were conducted by the present researcher in October and June. Our participants were contacted in their lessons one week before the interviews and they were asked to choose the day of the following week on which they could be interviewed as well as their preferred time. It took five days of a week to interview all the participants. In cases where two participants asked to be interviewed on the same day and at the same hour, a senior researcher with broad experience in EFL writing and who knew the aim of the study came to help as another interviewer. Before conducting the interviews, the present researcher commented and discussed with the senior researcher the questions that he would need to formulate following an interview schedule. He was also asked to formulate the questions in the same order as well as using the exact form in the schedule so as to avoid possible differences between the two researchers in the conduct of interviews. Table 5 contains the specific questions that were formulated in the semi-structured interviews and finally analysed.

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Table 5. Formulation of questions in the semi-structured interviews

GROUPS OF QUESTIONS	FORMULATION OF QUESTIONS IN THE SEMI-STRUCTURED INTERVIEWS
Antecedents of goals	<ul style="list-style-type: none"> <li>▪ <b>Self-efficacy beliefs</b> <ul style="list-style-type: none"> <li>▪ Do you feel confident in achieving the writing goals of this academic year in the EAP course?</li> </ul> </li> <li>▪ <b>Past performance</b> <ul style="list-style-type: none"> <li>▪ What mark did you get in your last instrumental language course (Lengua Inglesa III) last year?</li> </ul> </li> <li>▪ <b>Outcome expectations</b> <ul style="list-style-type: none"> <li>▪ What mark do you aspire to achieve in the EAP course?</li> </ul> </li> </ul>
Goals	<ul style="list-style-type: none"> <li>▪ What goals do you have for improving your writing for your studies at university?</li> <li>▪ What goals do you have for improving your writing for your future career or occupation?</li> </ul>
Context of action	<ul style="list-style-type: none"> <li>▪ <b>Present literacy context</b> <ul style="list-style-type: none"> <li>▪ What kinds of writing in English do you expect to do in these two final years of your degree?</li> </ul> </li> <li>▪ <b>Future literacy context</b> <ul style="list-style-type: none"> <li>▪ What kinds of writing in English do you expect to do in your future career or occupation?</li> </ul> </li> </ul>

## **V.3.1.4. Oxford Placement Test**

Apart from the L2 essays and the journals, we also collected secondary information through proficiency tests at the beginning and at the end of the EAP course using the Oxford Placement Test, which could help us to triangulate data and to understand possible changes throughout time in learners' task representation and goals.

The Oxford Placement Test has been calibrated against the level system provided by the Common European Framework and it consists of two main sections (Listening Test and Grammar Test) made up of 100 items each one. The Listening Test is a test of reading, listening and vocabulary size. Learners have to make use of their knowledge in those areas at a task speed with the competence of a native speaker of English. The items are taken from a corpus of examples of "slips of the ear" recorded in conversations between native and non native speakers resulting in communication failure or misunderstandings of meaning. The selection of the correct choice cannot be inferred from grammatical or semantic correctness since all the available options are possible. Therefore, inaccurate responses are a direct reflection of failure of listening skills. As for the Grammar Test, it is a written multiple choice test of grammatical and lexical items that are contextualised so as to test grammar in relation to meaning. The correct responses are based on both reading comprehension and language knowledge.

The test was administered in September and in June following the OPT guidelines. The Listening Test lasted for 10 minutes. During that time learners listened to a CD that started with an introduction to the test in which some examples were given. Learners had to tick the correct box immediately after hearing each of the 100 items that were said just once, without repetition, at a normal speed. The instructions for turning pages were also included in the recording. When the test was over, the learners were given the Grammar Test that could be completed in 50 minutes by ticking the correct box for each question, although advanced students can finish the test in half an hour, as was the case for some of our participants. The total number of correct items from both the Grammar Test and the Listening Test gave a

general score for learners' L2 proficiency level. We shall now explain the coding and analysis of the data obtained for the present study.

## **V. 4. Coding and statistical analysis**

Data analysis was carried out using both quantitative and qualitative techniques. Inter-coder reliability in the development and application of all the coding schemes from different data sources was sought, and when it was not possible, we made sure to achieve a high intra-coder reliability, as we explain next. For the rating of the written texts, two different analyses were performed (holistic and analytical) by several raters.

The following subsections are organised according to the instrument of data collection, that is, written texts, journals and semi-structured interviews. We shall start by explaining the coding of the data obtained through each instrument and then we shall move on to the description of statistical analyses.

### **V.4.1. Rating of L2 essays**

The L2 essays were analysed from a dual perspective: doing holistic rating and using analytical measures. We also computed the number of participants who fell into different categories of our Likert scale (from 1 to 5) according to their self-reported level of involvement in the L2 essay at Time 2.

#### **V.4.1.1. Holistic rating**

Participants' essays were evaluated using the Hamp-Lyons' (1991) rating scale. Out of the 23 participants, only 22 essays could be analysed because one of the participants did not follow the prompt given at Time 2 and wrote about the writing experience in the EAP course instead of an argumentative essay about success in education as requested in the prompt.

Following Hamp-Lyons (1991), the rating of the essays was done using the global version of the scale through a gradual approximation to its 5 different traits, which were *communicative quality, organisation, argumentation, linguistic accuracy and linguistic*

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*appropriacy*. These categories measure a mixture of overall language proficiency (descriptor of linguistic accuracy), good academic writing (descriptors related to communicative quality, organisation and argumentation) and a blend of language proficiency and writing quality in relation to pragmatics (linguistic appropriacy). As indicated by Cumming and Riazi (2000: 61), this holistic scale that distinguishes several traits allows the examination of “the multi-faceted nature of second language writing, permitting analyses that can determine on which of these traits students’ achievement may appear” (61).

The global version of the scale involves 10 steps (ranging from 0 to 9) which are labelled as “bands” and the description of performance within each band is referred to as “band descriptors” (see Appendix). For instance, Band 6 had the following band descriptors:

- The writing displays an ability to *communicate* although there is occasional strain for the reader.
- It is *organised* well enough for the message to be followed throughout.
- *Arguments* are presented but it may be difficult for the reader to distinguish main ideas from supporting material. Main ideas may not be supported; their relevance may be dubious. Arguments may not be related to the writer’s experience or views.
- The reader is aware of *errors* of vocabulary, spelling, punctuation or grammar
- and or/limited ability to manipulate the linguistic systems *appropriately*, but these intrude only occasionally.

As shown in this description of written performance, it included the five different traits mentioned above. The higher the band was, the better the description of performance in the five traits. For instance, the highest band (9) had the following band descriptor:

- The writing displays an ability to *communicate* which gives the reader full satisfaction.

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- It displays a completely *logical organisational structure* which enables the message to be followed effortlessly.
- *Relevant arguments* are presented in an interesting way, with main ideas prominently and clearly stated, with completely effective supporting material; arguments are effectively related to the writer's experience or views.
- There are *no errors* of vocabulary, spelling, punctuation or grammar
- and the writing shows an ability to manipulate the linguistic systems with *complete appropriacy*.

Aiming to ensure the reliability of the scoring process, we decided to establish an anchor text as a reference point that three independent and expert raters could use to evaluate the quality of the whole set of the participants' essays at both times of data collection. The anchor text was chosen out of the total sample of the compositions gathered in the pre and post-task on account of the average quality of the paper (the chosen text was not distinctive for being either too good or too bad). All the compositions were typed to avoid any bias in the rating process due to the learners' handwriting, but the transcriptions kept the layout of the authentic text (number of paragraphs, lines per paragraphs) as well as the spelling mistakes. Then, we created an Excel file to randomise all the essays from both times of data collection and prepare them for blind coding. One column specified the number assigned to each participant who wrote the essay and the time of data collection. In another column random numbers were generated for each participant's essay. These random numbers were written down at the bottom of each essay and they were given to the three raters, who evaluated the writing quality of the essays in relation to the anchor text. Two of the raters were English teachers in Amsterdam who had been trained the previous academic year by another researcher in the assessment of writing ability using anchor texts. The third rater was a PhD student in Amsterdam who was doing her research on creative writing processes and motivation. Due to the raters' knowledge and expertise in English writing, no further training was needed for the assessment of the essays. The three raters were neither informed about the number of

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participants in the present study nor about the fact that half of the total essays given to them had been written by the same participants at two points in time. In addition, the random numbers assigned to each essay did not reveal any chronological order of data collection.

As for the rating process, the present researcher designed guidelines for the raters after consulting the scholar who had previously trained two of the raters in the evaluation of essays using anchor texts for another study. A senior researcher from the University of Amsterdam who had also worked on the evaluation of essays on the basis of anchor texts read the guidelines and suggested some modifications. The guidelines were changed until they were deemed to be clear and straightforward for the raters by the experienced researcher in the evaluation of essays.

For the rating process, the final version of the guidelines asked the raters to follow a series of steps arranged in order:

1. Read 10 essays at random out of the total 44 essays to be rated so as to have an idea of the variation of writing quality in the total sample of compositions;
2. Read all essays individually and compare the quality of each essay with the anchor text that had been assigned by the researcher a standard score of 100;
3. Assign a score (from 0 to infinity) to each essay by answering the key question of "how many times is this essay better or worse than the anchor essay?";
4. Write the scores of each essay in the first column of the "scores document" (this was a document that kept track of the rater's scoring);
5. Arrange the essays in order from the weakest essay to the best one once the rating is finished;
6. Read quickly through the essays again and check the scores;

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7. If needed, change some of the initial scores provided to each essay and write the second assigned score in the second column of the “scores document”;
8. Use the column “notes” of the “scores document” to make any comments on the rating of one or several essays.

Apart from these instructions, the raters were given the following example (created by the present researcher) to illustrate how the rating should be done using the anchor text:

*One essay can be as good as the anchor text, in which case the score should be 100. If an essay is twice as good as the anchor essay, the score for that text should be 200. If you decide that the essay to be rated is 5 times better than the anchor one, then the score is 500. Another essay can be half as good as the anchor essay (in other words, some kind worse than the anchor text) and the score would be 50. You can also consider that an essay is slightly worse than the anchor text and the score could be 75, or 80, or 85 etc.*

We should remember that the raters were asked to assign scores to each essay in relation to the anchor text but also bearing in mind the analytical scale. In order to facilitate the use of the anchor text in combination with the Hamp-Lyons’ step scale, the descriptions of performance at each band was done qualitatively (absolutely worse, worse...) as shown in Table 6:

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Table 6. Correspondence between the Hamp-Lyons' band scale and the categories we created for the rating process

HAMP-LYONS' BAND SCALE	OUR CATEGORIES FOR THE RATERS
1	<b>Absolutely worse than the anchor text</b>
2	<b>Even much worse than the anchor text</b>
3	<b>Much worse than the anchor text</b>
4	<b>Worse than the anchor text</b>
5	<b>Slightly worse than the anchor text</b>
6	<b>Anchor text</b>
7	<b>Slightly better than the anchor text</b>
8	<b>Better than the anchor text</b>
9	<b>Much better than the anchor text</b>

The three raters were just provided with the descriptors that characterise each of the 9 bands of the scale (right column of Table 6) in relation to the anchor text (i.e. much better than the anchor text; better than the anchor text...), but they were not given numbers (from 1 to 9). The raters were asked to assess each essay comparing it with the anchor text and (i) evaluating whether each text was better or worse than the anchor text; (ii) deciding to what degree each text was better or worse (slightly, somewhat, a lot) and; (iii) assigning a score (from 0 to infinity) to each composition.

As shown in the above-mentioned table, there are more bands (5 bands) in the Hamp-Lyons' scale that assess negatively the quality of the essays than those that rate positively the compositions (3 bands). We think that the use of the anchor text that forced raters to assign any potential score from 0 to infinity in relation to an anchor text could do away with the problem of restricting the scores from 1 to 9. The latter scoring system could have potentially

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restricted the rating to two or three numbers (e.g. 4, 7, 8). This issue could be related to one of the criticisms raised against holistic scales that claim that these scales are not specific enough to accurately distinguish between members of a homogenous population, that is, learners who have roughly the same language level (Polio, 1997). Scoring compositions with an anchor text also allows raters to measure how well writers did as a whole, bearing in mind each trait in comparison with other texts written by a homogeneous sample. In other words, the use of an anchor text that allowed raters to weigh up their judgements better in relation to other texts and assign scores in a similar way to when using a Likert-scale (how many times is this essay better or worse than the anchor text) could do better justice to learners' written performance by allowing raters to be less strict about the rating process (see Schoonen, 2005).

All the raters followed the guidelines and made comments on their rating process using either the "scores document" or directly on each essays. The marking and comments of the raters showed that they considered the five traits (communicative quality, organisation, argumentation, linguistic accuracy and linguistic appropriacy) within each band. In a second rating process, two raters subtly changed some of their scores after having arranged all the essays in order and having checked the initial scores. The other rater was quite experienced and explained that after having arranged all the essays in order, he did not find it necessary to change his initial scores. He also deemed the quality of the anchor text quite low.

There was a high inter-rater reliability rate (Cronbach Alpha: .778) using the first scores of the two raters who changed their scores in their second rating process. This inter-rater reliability was improved using the second scores of the two raters (Cronbach Alpha: .806). As the two raters considered their second rating as an improvement on their first scoring, the second scores of these two raters as well as the first and only score given by the third rater were used for calculating the inter-rater reliability of the essay scores, which was .786. As the reliability was high, we used the scores of the three ratings to create a total mean score for writing ability for each participant's essay measured at Time 1 and at Time 2.

## **V.4.1.2. Analytical measures**

Regarding the analytical measures, we assessed the writing components of complexity, accuracy and fluency (CAF) using a tagging software for English texts. The software was the Constituent Likelihood Automatic Word-tagging System (CLAWS) C5 tagger, developed and updated since 1980 by the University Centre for Computer Corpus Research on Language (UCREL) at Lancaster University. The tagger allows us to tag writers' essays grammatically so as to create a corpus which the word class is distinguished: nouns, verbs, adjectives, adverbs, articles, determiners, pronouns, prepositions, prepositional adverbs, conjunctions, numerals and miscellaneous. The miscellaneous category included the following: existential there; the genitive morpheme; infinitive markers (to); and negative particles (not). The tagset comprised 60 tags as shown in the following figures:

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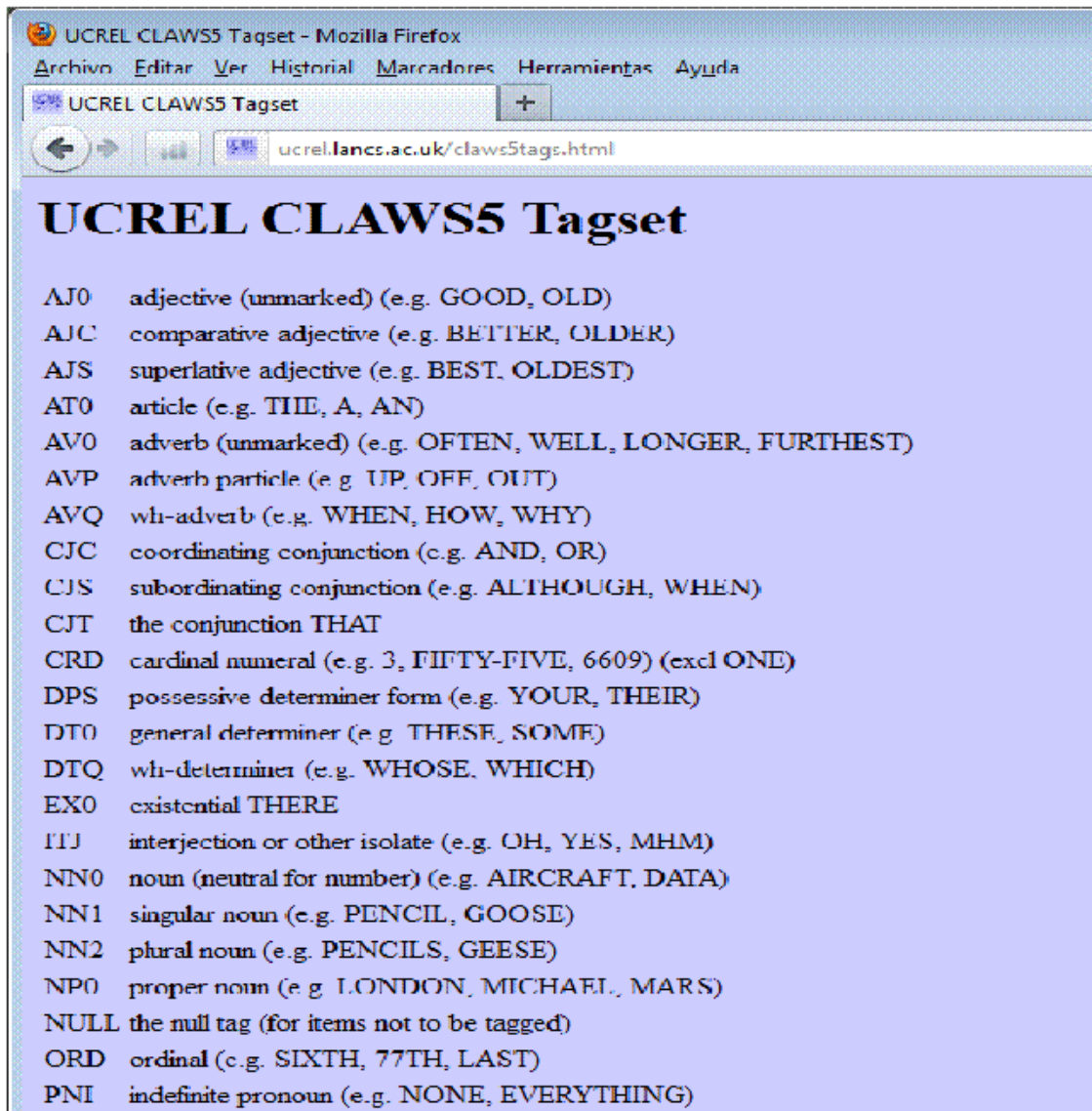


Figure 6. Tagset of CLAWS C5 tagger developed by UCREL at Lancaster University. Part 1

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PNP	personal pronoun (e.g. YOU, TIEM, OURS)
PNQ	wh-pronoun (e.g. WHO, WHOEVER)
PNX	reflexive pronoun (e.g. ITSELF, OURSELVES)
POS	the possessive (or genitive morpheme) 'S or '
PRF	the preposition OF
PRP	preposition (except for OF) (e.g. FOR, ABOVE, TO)
PUL	punctuation - left bracket (i.e. ( or [ )
PUN	punctuation - general mark (i.e. . ! , ; - ? ... )
PUQ	punctuation - quotation mark (i.e. ' ' " )
PUR	punctuation - right bracket (i.e. ) or ] )
TOO	infinitive marker TO
UNC	"unclassified" items which are not words of the English lexicon
VBB	the "base forms" of the verb "BE" (except the infinitive), i.e. AM, ARE
VBD	past form of the verb "BE", i.e. WAS, WERE
VBG	-ing form of the verb "BE", i.e. BEING
VBI	infinitive of the verb "BE"
VBN	past participle of the verb "BE", i.e. BEEN
VBZ	-s form of the verb "BE", i.e. IS, 'S
VDB	base form of the verb "DO" (except the infinitive), i.e.
VDD	past form of the verb "DO", i.e. DID
VDG	-ing form of the verb "DO", i.e. DOING
VDI	infinitive of the verb "DO"
VDN	past participle of the verb "DO", i.e. DONE
VDZ	-s form of the verb "DO", i.e. DOES
VHB	base form of the verb "HAVE" (except the infinitive), i.e. HAVE
VHD	past tense form of the verb "HAVE", i.e. HAD, 'D

Figure 7. Tagset of CLAWS C5 tagger developed by UCREL at Lancaster University. Part 2

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VHG	-ing form of the verb "HAVE", i.e. HAVING
VHI	infinitive of the verb "HAVE"
VHN	past participle of the verb "HAVE", i.e. HAD
VHZ	-s form of the verb "HAVE", i.e. HAS, 'S
VM0	modal auxiliary verb (e.g. CAN, COULD, WILL, 'LL)
VVB	base form of lexical verb (except the infinitive)(e.g. TAKE, LIVE)
VVD	past tense form of lexical verb (e.g. TOOK, LIVED)
VVG	-ing form of lexical verb (e.g. TAKING, LIVING)
VVI	infinitive of lexical verb
VVN	past participle form of lex. verb (e.g. TAKEN, LIVED)
VVZ	-s form of lexical verb (e.g. TAKES, LIVES)
XX0	the negative NOT or NT
ZZ0	alphabetical symbol (e.g. A, B, c, d)

Figure 8. Tagset of CLAWS C5 tagger developed by UCREL at Lancaster University. Part 3

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Once the compositions had been tagged, an Excel database was created in which the words tagged by the morphosyntactic tagger were included. The present author and another PhD student, who was also doing her thesis on EFL writing, systematically checked the mechanical tag provided by the CLAWS C5 tagger and removed all possible inconsistencies. For instance, the tagger did not distinguish whether the coordinating conjunctions (tagged as CJC) applied to clauses, that is, units made up of at least one finite verb (Sotillo, 2000), or phrases (nouns). Therefore, the two raters checked all the coordinating conjunctions distinguishing between the coordination of clauses (CJC) and the coordination of phrases (CJP), as shown in the figure that follows. The distinction was important for the final computation of total number of clauses written by our participants.

	A	B	C	D	
1	INPUT	INPUT	INPUT	MANUAL	
2	STUDEN	ID_WOR	CLAWS	CLAWS_MANUAL	
1186	004014	213	but_CJC	but_CJP	
1187	004014	214	from_PRP		
1188	004014	215	its_DPS		
1189	004014	216	base_NN1		
1190	004014	217	_		
1191	004014	218	Thirdly_AV0		
1192	004014	219	_		
1193	004014	220	according_PRP21		
1194	004014	221	to_PRP22		
1195	004014	222	many_DT0		
1196	004014	223	thinkers_NN2		
1197	004014	224	such PRP21		
1198	004014	225	as PRP22		
1199	004014	226	Aristotle_NP0		
1200	004014	227	and_CJC		and_CJP
1201	004014	228	Socrates_NP0		
1202	004014	229	_		
1203	004014	230	human_AJ0		
1204	004014	231	beings_NN2		
1205	004014	232	are_VBD		
1206	004014	233	imitating_VVG		
1207	004014	234	and_CJC		
1208	004014	235	social_AJ0		
1209	004014	236	animals_NN2		
1210	004014	237	_	and_CJP	
1211	004014	238	Certainly AV0		
1212	004014	239	_		
1213	004014	240	one_PNI		
1214	004014	241	can_VM0		
1215	004014	242	deny_VVI		

Figure 9. Example of manual tagging of the coordination of phrases (CJP)

# Method

	A	B	C	D
1	INPUT	INPUT	INPUT	MANUAL
2	STUDEN	ID WOR	CLAWS	CLAWS MANUAL
2399	008014	165	We_PNP	
2400	008014	166	are_VBB	
2401	008014	167	rather_AV0	
2402	008014	168	similar_AJ0	
2403	008014	169	regarding_PRP	
2404	008014	170	personality_NN1	
2405	008014	171	,	and CJC
2406	008014	172	we_PNP	
2407	008014	173	live_VVB	
2408	008014	174	under_PRP	
2409	008014	175	the_AT0	
2410	008014	176	same_DT0	
2411	008014	177	home_NN1	
2412	008014	178	life_NN1	
2413	008014	179	influence_NN1	
2414	008014	180	((	
2415	008014	181	not_XX0	
2416	008014	182	a_AT0	
2417	008014	183	bad_AJ0	
2418	008014	184	one_PNI	
2419	008014	185	I_PNP	
2420	008014	186	think_VVB	
2421	008014	187	)	
2422	008014	188	,	
2423	008014	189	but_CJC	
2424	008014	190	my_DPS	
2425	008014	191	marks_NN2	
2426	008014	192	were_VBD	
2427	008014	193	good_AJ0	
2428	008014	194	while_CIS	

Figure 10. Example of manual tagging of the coordination of clauses (CJC)

As noticed in these examples, the commas were also tagged as CJC or CJP when appropriate. Regarding subordination, some participants omitted in their compositions the non compulsory subordinator “that” in nominal clauses and relative clauses. We manually typed them and tagged them as subordinators (CTR) when they were elliptical so as to compute the total number of subordinate clauses in each composition. In addition, “that” (CJT) was also manually tagged as a conjunction introducing a relative clause (CTR) when appropriate.

# Method

Likewise, the pronouns “which” and “who” that were by default tagged as determiner pronouns or personal pronouns introducing a question (DTQ; PNQ) were systematically checked and recoded as relative pronouns (PNR) introducing relative clauses when appropriate, as the reader can see in this figure:

	A	B	C	D
1	INPUT	INPUT	INPUT	MANUAL
2	STUDEN	ID_WORI	CLAWS	CLAWS_MANUAL
6315	023014	65	type_NN1	
6316	023014	66	of_PRF	
6317	023014	67	learning_NN1	
6318	023014	68	and_CJC	and_CJP
6319	023014	69	teaching_VVG	
6320	023014	70	methods_NN2	
6321	023014	71	that_CJT	that_CTR
6322	023014	72	are_VBB	
6323	023014	73	used_VVN	
6324	023014	74	_	
6325	023014	75	and_CJC	
6326	023014	76	it_PNP	
6327	023014	77	also_AV0	
6328	023014	78	depends_VVZ	
6329	023014	79	on_PRP	
6330	023014	80	the_AT0	
6331	023014	81	person_NN1	
6332	023014	82	who_PNQ	who_PNR
6333	023014	83	is_VBZ	
6334	023014	84	teaching_VVG	
6335	023014	85	and_CJC	and_CJP
6336	023014	86	the_AT0	
6337	023014	87	person_NN1	
6338	023014	88	who_PNQ	who_PNR
6339	023014	89	is_VBZ	
6340	023014	90	taught_VVN	
6341	023014	91	_	
6342	023014	92	For_AV021	
6343	023014	93	instance_AV022	
6344	023014	94		

Figure 11. Example of manual tagging of relative pronouns

# Method

When the two raters finished the manual post tagging, they read each student essay recursively evaluating each clause and sentence of every essay. Any disagreements were solved by consensus. The inter-rater agreement was therefore always 100%. Clauses and sentences were evaluated as error free if they did not contain any type of grammatical error. Clauses had to be correct in isolation while sentences were only error free when all the clauses that made them up were grammatically correct, as shown in what follows:

	A	B	C	D	E	F	G	H
1	INPUT	INPUT	INPUT	MANUAL	MANUAL	OUTPUT	OUTPUT	OUTPUT
2	STUDEN	ID WOR	CLAWS	CLAWS	EVAL	TIPO	TAG FINAL	CLAWS_FINAL
2943	011014	1	I_PNP				PNP	I_PNP
2943	011014	2	an_VBB		W	Léxico	VBB	an_VBB_W
2950	011014	3	completely_AVD				AVD	completely_AVD
2951	011014	4	disagree_VVB	disagree_VVI			VVI	disagree_VVI
2952	011014	5	with_PRP				PRP	with_PRP
2953	011014	6	this_DTO				DTO	this_DTO
2954	011014	7	idea_NNI				NNI	idea_NNI
2955	011014	8	.		W	Oraciones	.	.W
2955	011014	9	I_PNP				PNP	I_PNP
2957	011014	10	consider_VVB		R	Léxico	VVB	consider_VVB_R
2958	011014	11	that_CJT			Subordinadas	CJT	that_CJT
2959	011014	12	the_ATO				ATO	the_ATO
2960	011014	13	education_NNI				NNI	education_NNI
2961	011014	14	that_CJT	that_CTR		Subordinadas	CTR	that_CTR
2962	011014	15	a_ATO				ATO	a_ATO
2963	011014	16	child_NNI				NNI	child_NNI
2964	011014	17	receive_VVB		W	Léxico	VVB	receive_VVB_W
2965	011014	18	at_PRP				PRP	at_PRP
2968	011014	19	home_NNI				NNI	home_NNI
2967	011014	20	is_VBZ		R	Léxico	VBZ	is_VBZ_R
2968	011014	21	very_AVD				AVD	very_AVD
2969	011014	22	important_AJD				AJD	important_AJD
2970	011014	23	.		W	Oraciones	.	.W
2971	011014	24	It_PNP				PNP	It_PNP
2972	011014	25	is_VBZ		W	Léxico	VBZ	is_VBZ_W
2973	011014	26	the_ATO				ATO	the_ATO
2974	011014	27	base_NNI				NNI	base_NNI
2975	011014	28	of_PRF				PRF	of_PRF
2975	011014	29	his_DPS				DPS	his_DPS
2977	011014	30	character_NNI				NNI	character_NNI

Figure 12. Example of manual coding of clauses and sentences as correct or incorrect

## Method

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Once the evaluation of clauses and sentences was finished, fluency, accuracy and complexity measures were calculated for each student's essay. *Fluency* was assessed in terms of the total number of words per essay, following Wolfe-Quintero, Inagaki and Kim (1998), who claimed that the total number of words is the most neutral way of analysing fluency in timed essays. The WordSmith 4.0 software (Scott, 1996, 1997, 1999, 2004) was used for the calculation of the exact number of running words in each student's composition, as shown in Figure 13:

# Method

N	Overall	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
total file		102.txt	202.txt	302.txt	402.txt	502.txt	602.txt	702.txt	802.txt	902.txt	102.txt	202.txt	302.txt	402.txt	502.txt	602.txt	702.txt	802.txt	902.txt	102.txt	
file size	70 704	1 445	2 092	1 150	1 706	1 779	1 946	2 341	1 455	2 297	1 345	1 366	1 851	1 742	1 757	1 849	2 364	1 616	1 771	1 461	
tokens (running words) in text	6.676	231	370	194	314	265	318	421	265	399	221	254	353	206	282	328	421	276	299	235	
tokens used for word list	6.673	231	370	194	314	265	318	421	265	399	221	254	353	206	282	328	421	276	299	235	
types (distinct words)	916	105	154	103	153	131	145	195	144	140	106	113	133	154	144	137	185	122	135	108	
types/token ratio (TTR)	14	46	42	53	49	49	46	44	54	35	48	48	38	52	51	40	44	44	45	46	
standardised TTR																					
standardised TTR std.dev.																					
standardised TTR mean	1 000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00
mean word length (n characters)	5	5	5	5	5	5	5	4	5	5	5	5	4	5	5	4	5	4	5	5	5
word length std.dev.	2.63	2.89	2.64	2.67	2.62	2.84	2.72	2.50	2.88	2.66	2.71	2.78	2.65	2.60	2.80	2.34	2.49	2.56	2.82	2.67	
sentences	202.00	14.00	17.00	12.00	11.00	16.00	14.00	13.00	12.00	17.00	13.00	9.00	13.00	18.00	11.00	15.00	15.00	14.00	13.00	10.00	
mean (in words)	22	17	22	16	29	17	23	32	22	23	17	26	27	16	26	22	22	20	23	24	
std.dev.	10.68	7.36	10.62	8.05	16.00	6.52	7.46	10.90	11.48	10.75	7.00	10.50	11.11	6.90	9.20	6.07	6.76	7.96	6.09	15.52	
paragraphs	22.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
mean (in words)	303	231	370	194	314	265	318	421	265	399	221	254	353	206	282	328	421	276	299	235	
std.dev.	62.98																				
headings																					
mean (in words)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
std.dev.																					
acronyms	22.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
mean (in words)	303	231	370	194	314	265	318	421	265	399	221	254	353	206	282	328	421	276	299	235	
std.dev.	62.98																				
numbers removed	2.00																1.00			1.00	
stoplist tokens removed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
stoplist types removed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-letter words	277	4	21	10	14	11	7	19	13	19	11	10	15	14	6	12	27	3	12	4	
2-letter words	1,305	45	78	34	73	65	47	74	53	71	40	50	84	57	50	59	83	56	65	41	
3-letter words	1,194	44	66	32	52	42	63	95	43	67	25	45	61	50	53	62	62	53	61	46	
4-letter words	1,216	25	70	34	51	43	67	97	51	89	40	40	65	45	40	75	85	56	43	34	
5-letter words	611	23	36	21	23	15	24	31	21	30	20	18	37	27	23	30	50	28	27	10	

Figure 13. Output of WordSmith 4.0 software

# Method

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*Accuracy* was measured by means of the percentage of error-free clauses (A-EFC Perc) and the percentage of error-free sentences (A-EFS Perc). Error free clauses (EFC) and sentences (EFS) were defined as clauses and sentences in which no error was seen with regard to syntax, morphology and native-like lexical choice or word order. Each clause could be made of modal verbs or lexical verbs and consequently we computed the number of correct and incorrect lexical and modal verbs. For the calculation of the ratio of error free clauses/sentences per essay, the total number of error-free clauses/sentences was divided by the total number of clauses/sentences respectively. Then, the ratio of EFC and EFS was multiplied by 100 so as to obtain their corresponding percentages.

As for complexity, we followed Norris and Ortega's (2009) claim that it should be measured from a multidimensionality perspective. They proposed among other subcontracts of complexity: (i) complexity through subordination, for which we calculated the rate of subordination per clause (Sub/Cl) and per sentence (Sub/Sent), and (ii) subclausal complexity as measured by the words per clause (W/C) or mean length of clause.

Regarding complexity via subordination, we divided the rate of subordination in each essay by the total number of clauses/sentences. With respect to subclausal complexity, it is a specific measure of complexity that taps complexification at the level of the phrase, that is, subclausally. W/C or the mean length of clause was computed by dividing the total number of tokens in each student's essay by the total number of clauses in each composition. This measure is considered to be indicative of an advanced writing level in highly proficient L2 learners, who tend to write in a a synoptic style rather than via lots of subordination, which is rather characteristic of intermediate language learners (Norris & Ortega, 2009). In other words, subordination can be considered an index of complexity at intermediate L2 language levels, whereas in advanced language learners the index of subordination may decrease in favour of an increase of phrasal-level complexification. As pointed out by Norris and Ortega (2009), this pattern has been empirically shown in mature L1 English writers when composing academic texts (Biber, 2006).

In addition, we also considered as a measure of complexity the sophistication of language, which as noticed by Norris and Ortega (2009), has not been widely used in SLA.

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For the computation of the diversity of vocabulary used in each essay, we used the “D” index, which is a measure proposed by Malvern and Richards (1997, 2002) as an alternative to type-token ratio (TTR) since the “D” index is independent of the sample size and it allows the comparisons of various linguistic samples (Malvern & Richards, 2002; Malvern, Richards, Chipere & Durán, 2004). In contrast, the TTR decreases as the tokens increase since its calculation depends on the sample size. Therefore, the longer the text is, the higher the probability that it includes tokens that have already been mentioned in the text.

Drawing on the assumption that texts of different lengths will result in distinct TTR values, Malvern and Richards (1997, 2002) contend that the lexical diversity of a text is described by a set of TTRs taken from text samples of different sizes. These values are represented by a curve that can be summarised by a parameter, D. This parameter is considered to be superior to other measures by avoiding the flaw in raw TTR with different sample sizes (Richards & Malvern, 1998) using the software programme *vocd*. As described by McKee, Malvern & Richards (2000), the *vocd* programme analyses the probability of new vocabulary being introduced into long samples of speech or writing, which results in a mathematical model of TTR variation with token size. The comparison between the mathematical model and the empirical data of a transcript results in the D measure of vocabulary diversity. The model is derived from Sichel’s (1986) type-token curve as shown in the following equation in which the N is the number of tokens and D is a parameter:

$$TTR = \frac{D}{N} \left[ \left( 1 + 2 \frac{N}{D} \right)^{\frac{1}{2}} - 1 \right]$$

This equation results in a number of curves, as shown in Figure 14 (taken from McKee et al, 2000), with different values for D:

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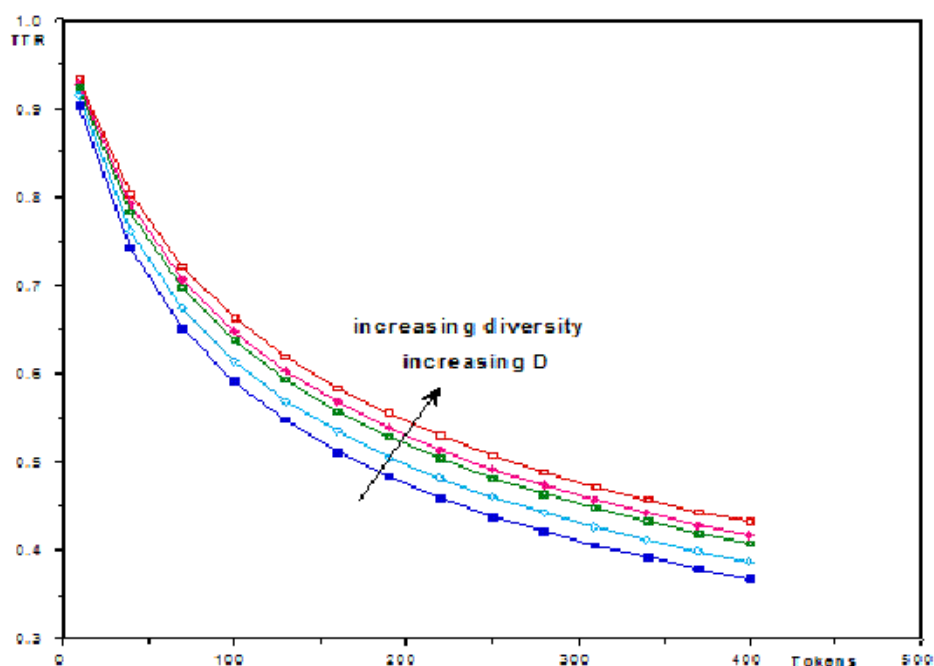


Figure 14. Family of curves indicating high diversity with high D values.  
Figure taken from McKee, Malvern & Richards (2000).

The vocd programme calculates the D from a sample plotting the TTR versus tokens curve. Each point in the curve is the outcome of an average of 100 trials on subsamples of words from the empirical sample. Those subsamples are randomly chosen by the programme from the words in the sample. High lexical diversity results in high values of D, while low values of D show a low level of lexical diversity. Following Malvern and Richards' work (1997, 2002), Meara and Miralpeix (2004) developed the D tools programme that computes the same statistic as the vocd programme. However, the latter requires that the data is formatted following the Child Language Data Exchange System (CHILDES) transcription conventions<sup>1</sup>

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<sup>1</sup> CHILDES was a tool originally designed for first language acquisition data, although it has also been used in second language acquisition studies. According to the CHILDES transcription conventions, each utterance is transcribed in separate lines and begins with \* followed by the speaker code. Lines starting with an asterisk show what actually was said by the speaker in contrast to those lines starting with a % sign that contain linguistic conventions. The CHAT manual

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(MacWhinney, 2000a, 2000b), while the D tools software allows the use of the raw text, which is the reason why we use this programme for the analyses of all the student-writers' essays composed at Time1 and at Time 2.

In the D tools, the computation of the D value follows this process: 100 random samples of 35 words from each writer's text are generated and the mean TTR for the 35 words is computed. After that, 100 samples of 36 words at random are generated and again the mean TTR for those words is calculated. This procedure is followed up to the calculation of 100 samples of 50 words resulting in a set of 16 mean TTR values as shown in the following Table 7:

Table 7. Example of mean segmental TTR for one of our participants' compositions

WORDS	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
MEAN SEGMENTAL TTR	.821	.822	.824	.815	.820	.809	.809	.796	.797	.796	.787	.780	.785	.777	.777	.771

These data are plot on a graph as shown in the figure that follows, in which the resulting D value for the 16 TTR of the abovementioned Table is 65.9 with an estimate error of .0003:

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(MacWhinney, 2000a, 2000b) describes the codes that have been developed by scholars to address distinct linguistic research agendas.

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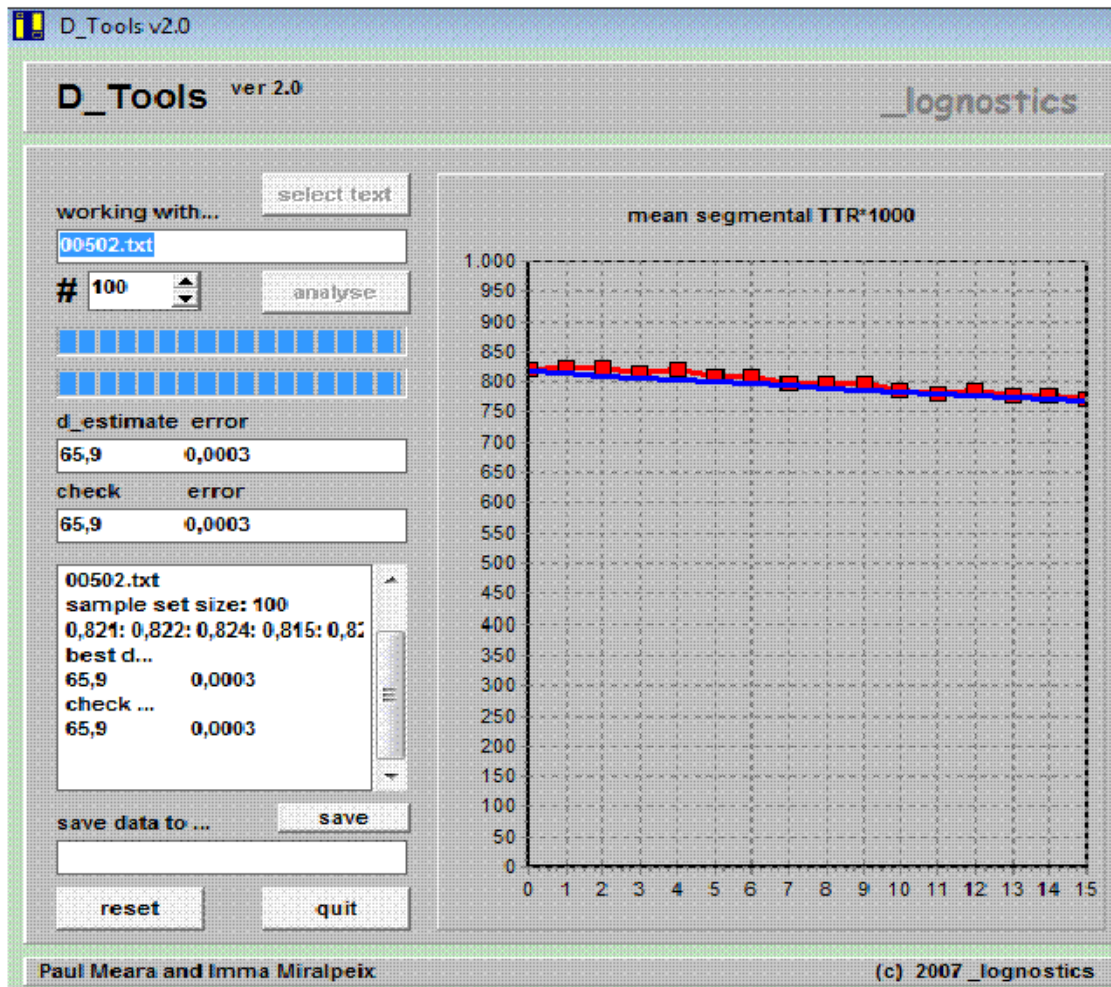


Figure 15. Output of D tools programme showing the mean segmental TTR of one participant's composition

The figures of Table 7 appear displayed in a red line on the previous chart and the best theoretical curve for the actual data is shown in the blue line. In this example, the raw data and the fitting curve closely match. The box labelled *d estimate* shows the *d* value of the best match that the curve can get from the data extracted from our chosen student's composition. The error figure for this calculation is very small (.0003), which indicates that the theoretical curve found by the programme is a good match for the data. If the error figure was larger than 0.1, it would be an indication of a bad theoretical curve for the data.

## V.4.2. Coding of reflective journals

In what follows, we report the coding scheme that was developed for each data source. All the coding schemes were theoretically informed but they were also data driven as we shall explain in the following sections.

For the coding of the journals, they were typed in Word using exactly the same words and we even copied the grammar mistakes that the participants made. Afterwards, through recursive rereading of each individual journal, the present researcher divided the information included in the journals into thematic units that were operationally defined as “a set of statements conveying one identifiable coherent idea” (Luk, 2008: 628). When we had a clear division of the thematic units from all the participants, an Excel file was created with three columns. The first column contained the identification number of the participants. The second column showed the time of data collection (Time 1 or Time 2) and the third column contained the thematic units obtained from the journals. Then, the data were randomised in Excel. Afterwards, the columns that contained the identification number of the participants as well as the column of the time of data collection were hidden. This was done to avoid the recognition of any of the journals as belonging to a particular participant and/or to the time of data collection, which could bias the coding process.

Following conventions in qualitative data analysis, thematic units were coded in Excel by two coders (the present researcher and another coder) using the constant comparative method (Miles & Huberman, 1994). This method involves reading through all the thematic units several times to become familiarised with them and looking for recurrent patterns of analysis in relation to the research questions. The coding process was empirically based on iterative reviews of the data following grounded theory (Strauss, 1987), although it was also theoretically based on our knowledge of theories and research about student-writers’ task representation, goals and MMs of writing as reported in chapters II and III. The combination of bottom-up and top-down processes lasted for one year. During this period of time, the present researcher held meetings with two other PhD students interested in applied linguistics to describe and discuss the coding of the data and finally establish a common understanding

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for the inter-coder agreement. One of the coders was a PhD student from the University of Macerata, who helped the present researcher to code the journals on (i) task representation; (ii) goals at Time 1; and (iii) perceptions of the writing instruction in the EAP course. The other coder was a PhD student from the University of Amsterdam, who agreed to code the journals on goals at Time 2.

Through these discussions with the second coders, the present researcher developed the coding scheme for each different journal and began to code the data individually. Then, 30% of the thematic units were coded by the coders and Cohen's Kappa was calculated to ensure consistent agreement. When the Kappa was low, a meeting between the present researcher and the second coders was held to find the reasons for the inconsistencies in the coding. After discussing the problems, the coders and the present researcher coded the data again until reaching an inter-coder agreement that was considered to be satisfactory (see Cohen's Kappa in the following subsections). In this way, the coding scheme for the data of each journal was also refined.

## **V.4.2.1. Coding scheme of journals on task representation**

The coding scheme for the participants' journals on task representation was based on our theoretical understanding of academic writing, as reviewed in chapter II. More specifically, we considered the definition of task representation provided by Flower, (1990: 35) as:

“an interpretive process that translates the rhetorical situation-as the writer reads it-into the act of composing. As such it is the major bridge linking the public context of writing with the private process of an individual writer”.

In this view, the interpretative process of the rhetorical situation is dynamic and contextually dependent. Along these lines, our coding scheme was also informed by recent research on students' task representation (Manchón & Roca de Larios, 2011) that showed that EFL learners taking an EAP course reported changes after the instruction in the conceptualisation

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of academic writing regarding both writing processes and written products and they also developed a multidimensional mental model of writing, which resulted in their attention to different dimensions in academic writing (ideational, textual and linguistic). On account of these theoretical and empirical insights and our own data, we developed a coding scheme that included three dimensions of analysis: (i) learners' orientation towards writing; (ii) dimensions of writing; and (iii) degree of textuality. Every thematic unit was coded for each of these dimensions. Regarding the inter-coder reliability, the *orientation* towards writing resulted in a Kappa of .859; for the *dimensions of writing* the Kappa was .858, while for the *degree of textuality* the Kappa was .922. Table 8 shows the three dimensions of task representation, the main categories included within those dimensions and some examples for each category obtained from learners' journals.

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Table 8. Taxonomy of task representation

DIMENSIONS OF TASK REPRESENTATION	MAIN CATEGORIES	EXAMPLES FROM STUDENTS' JOURNALS
Orientation	Process	Finally, and after a space of time, you should read the second draft looking into the grammar so that you can correct some mistakes or simply improve the quality of the text using a more complex structures to say the same thing.
	Product	When I think about academic writing, I think about a professional text, very well organized, in which specific vocabulary related to the topic is used.
Dimensions of writing	Ideational	It is also important to investigate and collect as many information as we can about the topic that we are going to write, and to have different materials that support our ideas in order to achieve a text with a convincing content.
	Textual	Secondly, it is essential to know what the different types of texts are and how to express yourself according to it. In fact, a different register must be used depending on the kind of text we are dealing with. There is a great variety of them; thus, distinguishing between one and another is important in order to create a good text.
	Linguistic	Next, as it has been above mentioned academic style involves precise and objective language. This should mean that the language is clear and simple.
Textuality	Intratextuality	I am not really good in academic writing. I think one has to organize his ideas and know what he wants to write and how he wants to write it. I am too chaotic expressing my ideas.
	Intertextuality	Finally, a good academic writer cannot overlook resourcing. Indeed, it is a basic thing to do to find support for your ideas or when the topic of the essay requires a little bit of research

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The *orientation* towards writing distinguished between a *process* and a *product* approach to writing following Wolfersberger's (2007) description of task representation in terms of processes and products, Manchón and Roca de Larios' research (2011) as well as Flower's investigation (1990). As argued by Flower and Hayes (1981) writing is a goal-directed thinking process and a good writer is the one who can handle different demands and problems that come up during the composing process. Along these lines, Flower (1990) distinguished between different representations of a task that ranged from the simplest one (a summary) to the most complex one (synthesis interpretation with rhetorical purpose) according to the cognitive level of sophistication required to compose the text. Learners who represented the task in the most complex way (synthesis with a rhetorical purpose) tried to resolve a rhetorical problem by adapting, transforming and integrating information that came from different data sources. In contrast, students who represented the task in the simplest manner (summary) did not engage in finding connections between ideas, restructuring the text or resolving problems when composing.

We think that the different cognitive representations that were distinguished in Flower's research (1990) for particular tasks could be applied to learners' stored task representation for writing. Therefore, the most cognitively complex representation could be equated with a *problem-solving or process approach* to writing, which entails continuous assessment and reformulation of information when composing. In contrast, the least sophisticated cognitive representation could be reduced to a simplified problem that is posed by a task that needs to be written, which could be considered as a *product approach*. In this case, the task is described in terms of an overall goal that needs to be achieved (i.e. write another composition in English) and the main characteristics that this written product should have without reporting engagement in problem-solving behaviour. Following this line of reasoning, we tried to ascertain whether the participants' stored task representation for writing was related to a *process or a product approach* to composition.

Accordingly, in our coding, *process* entails the understanding of academic writing as a recursive task that can involve one or several stages of writing, such as collecting, planning,

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formulation and/or revision. In contrast, the product approach to writing involved the description of the characteristics of a text without making reference to any identifiable stage when composing. Therefore, the characteristics of the text as static elements would be prominent in this product approach.

The *dimensions of writing* were also inspired by Manchón and Roca de Larios' research (2011), which comprised *ideational*, *textual* and *linguistic* aspects. Ideational aspects made reference to the writer's generation and organisation of ideas by means of techniques such as brainstorming or outlining, and/ or the use of sources to write well-documented texts by gathering ideas. The linguistic level included grammar and vocabulary, while textual issues involved learners' concerns about macro-textual or rhetorical issues such as the register of different types of texts, objectivity, cohesion, coherence, purpose in writing or the writer's tone of voice.

Finally the degree of textuality embraced the distinction of *intratextuality* and *intertextuality*. This level of analysis was inspired by Wolfersberger's (2007) coding in which he referred to the origin of the source of task representation, but it was theoretically informed by definitions of textuality. We made the operationalisation distinction between intratextuality and intertextuality by means of de Beaugrande and Dressler's definition (1981: 10) of intertextuality as "the factors which make the utilization of one text dependent upon knowledge of one or more previously encountered texts" and the conceptualisation of its opposite term, intratextuality, which refers to the interpretation of the formal structure of one text bearing in mind how parts relate to other parts and to the whole text (see Friedrich, 2003).

The differentiation between intertextuality and intratextuality in our coding scheme made it possible to look for traces of development in the participants' conceptualisation of the writing task as a process. In our coding scheme, intratextuality referred to the conceptions of one's own text without referring to or using other sources of knowledge, whereas intertextuality entailed the use of other texts for the composition or revision of one's own piece of writing. The degree of textuality was important to examine differences in the conceptualisation of the writing task that may not be evident with a general distinction of

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dimensions of writing. In other words, participants could pay attention to ideational matters, but they could do it by just taking into account the generation of ideas for their own texts (intratextuality) or developing their ideas in relation to other texts (intertextuality), which in the latter case would involve a higher degree of complexity. By the same token, although textual concerns were supposed to involve more complex thinking or conceptualisation of writing because they were related to rhetorical issues, participants could pay attention to structural aspects from two different perspectives. On the one hand, they could consider each piece of writing in isolation (cohesion, coherence which could be applied to all written texts) or on the other, in relation to other types of texts (e.g. different ways of structuring a writing task according to the purpose of descriptive, argumentative texts or syntheses).

### **V.4.2.2. Coding scheme of journals on goals**

The operationalisation of goals was conceptually rooted in Zhou, Busch, Gentil, Eouanzoui and Cumming's research (2006: 29) in an ESL context that involves (i) "explicit statements of desire or need in regard to the learning of L2 composition or related abilities"; (ii) "direct acknowledgements of a desire, need or problem in response to a question about a goal"; (iii) "recognition of a dilemma, problem or disjunction about learning".

Although the conceptualisation of goals was the same for the two journals on goals, the coding scheme was determined by the specific writing prompt and the time of data collection. Regarding journals on goals at Time 1, participants were asked to think about the specific goals and actions that they had undertaken while they were writing their L2 argumentative essay in the first week of the EAP course. Due to the specificity of the writing prompt in this journal and the fact that the participants were thinking about specific goals restricted to a concrete task, we could only code following Zhou et al's coding scheme (2006) the object of goals, that is, the semiotic object of intention of goals as well as the actions oriented to achieve them. Four main codes (see Table 9 for examples) were distinguished: (i) content; (ii) language; (iii) rhetoric; and (iv) affective states (participants' attempt to lower their anxiety). When participants did not report goals, they tended to describe their actions for

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achieving goals. These actions were coded as belonging to a general category of composing process. A non relevant category for our research purposes was also added since there were participants who began their journal describing the task they had been asked to write and the time that they had been given to do it. The inter-coder reliability for the object of goals and actions yielded an overall Kappa of .837.

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Table 9. Examples of goal objects reported in the journals collected at Time 1

		EXAMPLES FROM STUDENTS' JOURNALS
GOALS	Content	In general I tried to write an introduction, some points developing the topic and a conclusion but I do not know if I succeeded in writing it correctly. At least that was the way in which I tried to write it.
	Language	I tried to use the appropriate vocabulary that means exactly what I want to. Sometimes I learn expressions on books that seem to me interesting because they are different of what I know, and I write them down, so that I can use them in my writings.
	Rhetoric	The other day, as I was writing, I tried to care about the structure, because I thought that it is the first thing that the reader gets from the text with the first glance. I tried to include an introductory paragraph, at the beginning, that worked as a general approach to the topic; a body where I put the information that I wanted to provide to the reader; and a final paragraph that summarised up what it has been told on the body.
	Affective states	In this sort of situations in which I am given a short space of time to write about a suggested topic, I feel panic because I think that I will not have enough time and I will make a disaster.
ACTIONS	Composing processes	First of all I wrote down in a piece of paper the two main ideas that I was supposed to develop throughout the essay, then I tried to focus on what I actually knew about that and I also wrote those ideas down. When I had written in the paper all that I knew on the topic, I tried to connect those ideas one to each other by using arrows. At first sight this may seem a waste of time. However, it is not; doing this really helps you to develop a cohesive and coherent essay.
NON-RELEVANT		One week ago, the teacher of English Language IV ordered us to write a journal in class about the agreement or disagreement of whether the educational success of a child was influenced by the education and training at home more than by the educational system or not. The time we had to do the journal was only one hour approximately.

As for the journals on goals collected at Time 2, we should remember that the prompt was different from the one at Time 1. The participants were asked to think about their goals at the end of the course as well as about the development of their goals throughout the academic year without referring to a specific task. Consequently, the coding scheme was much richer. Following the same operationalisation of goals as described above and drawing on Zhou et al.'s (2006) coding scheme as well as on our theoretical knowledge and on the empirical data sources we had, we developed a multidimensional taxonomy of goals that catered for several

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dimensions, which were *force of goals*, *directional pattern of goals* and *object of goals*. The inter-coder reliability was calculated for each of the dimensions. The Kappa for the force of goals and the directional pattern of goals was .868, while for the goal objects the Kappa was .823. We present the coding scheme in our results section because we consider it as a major outcome of our research.

### **V.4.2.3. Coding scheme of journals on perceptions of EAP lessons**

We coded participants' perceptions of the learning environment, or more specifically their views on the writing instruction in the EAP course, so as to examine their relation to the shaping of goals taking into account previous research that emphasised that (i) for an intention to be transformed into action the necessary means and resources must be available (cf. Dörnyei and Ottó, 1998; Ford, 1992); (ii) the choice of potential goals is influenced by students' perceptions of the support of the learning environment (cf. Dörnyei & Ottó, 1998; Ford, 1992); (iii) the learning environment can be perceived differently by individuals (Boekaerts, 1987; Ehrman & Dörnyei, 1998); (iv) the characteristics of the environment constrains the selection of goals (Anderman & Maehr, 1994; Bandura, 1986; Pintrich & Schunk, 2002); and (v) the evaluation process after the goal has been achieved or after the action that motivated the pursuit of goals has ended is also determined by external factors such as cues in the classroom context (Dörnyei & Ottó, 1998).

We coded our participants' perceptions of the content of the lessons as well as of the methodology of the EAP course (see Table 10 for examples). This coding process differed from other taxonomies (e.g. task representation) for which the same thematic unit could be coded for different dimensions because each of them added new information. We found that the thematic units of this journal were clearly focused on the content or on the methodology of the lessons and therefore they could not be coded for the two dimensions. The inter-coder reliability for the whole taxonomy resulted in an overall Kappa of .867.

Within the code for the content of lessons, we included the distinction of *ideational*, *textual* and *linguistic* dimensions, which were also dimensions included in our taxonomy of

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task representation. As for participants' perceptions of the method adopted in the EAP lessons, we distinguished among (i) recursive writing and feedback; (ii) writing practice; and (iii) classroom participation. The first two categories (recursive writing and feedback; writing practice) were included in our taxonomy on the basis of our own data but also because they were empirically found to be essential in Manchón and Roca de Larios' research (2011) to bring about the development of the range of goals that EFL learners pursued in an EAP course as well as the participants' multidimensional MM of writing. Finally, the category of classroom participation was added because it was reported as an external source of influence in writers' behaviour, which was also in line with Wolfersberger's (2007) writer-external factors that could affect the development of learners' task representation.

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Table 10. Taxonomy of participants' perceptions of the EAP lessons

MAIN CATEGORIES OF PERCEPTIONS OF THE EAP LESSONS AT T2	SUBCATEGORIES	EXAMPLES FROM STUDENTS' JOURNALS
Content of the lessons	Ideational	This teacher makes your work easy and throughout classes she not only shows you how to make your ideas flow.
	Textual	Moreover, the teacher will often bring some photocopies of texts from other years in order to look into them and comment on the positive and negative aspects that students can identify in them, to write conclusions, introductions or summaries about them
	Linguistic	It is important attending lessons because there is where we work with language. We revise our vocabulary, grammar, structure mistakes, etc. In class we also work with the mistakes of other students
Methodology adopted in the lessons	Recursive writing process and feedback	After handing every first draft, we do peer response among us, the students. The peer response of the second draft is done by the teacher. In previous years, we have also done peer response, but this year is when you really learn how to do it in a proper way and how to make it useful.
	Writing practice	Secondly, writing tasks abound. The five or six pieces of writing in Lengua Inglesa III are now 45, which are also a requirement in order to do the final exam. Besides, you are going to produce three assignments dealing with very different topics. Undoubtedly, in this kind of tasks is where you really learn about writing as well as writing techniques.
	Classroom participation	Lengua Inglesa IV lessons are quite practical and never bored. Students will take part in every class. Moreover, the teacher explanations are very useful because it helps you to understand and do the different assignments. Sometimes we also work in groups or by pairs and that is very interesting and make the lesson different from the rest of the classes.

### **V.4.3. Coding of semi-structured interviews**

Following the same coding process as described for journals, the information elicited from the interviews were coded in Excel. We first grouped the information from the interviews into three groups: (i) antecedents of goals; (ii) goals; and (iii) context of action. Then, different Excel data files, which contained three different columns, were created for each group. The first column identified the number that was assigned to each participant, the second column contained information about the time of data collection (Time 1 or Time 2), and the third column included the interviewer's questions and the participants' responses. Using the constant comparative method (Miles & Huberman, 1994), the participants' answers to each question were iteratively reread and coded hiding the columns with the number of the participant and time of data collection so as to ensure that the coding process was totally blind. In this way a coding scheme was developed

The coding process for the antecedents of goals was straightforward since the interview included semi-open questions about our participants' self-efficacy beliefs, past performance and outcome expectations. Regarding self-efficacy beliefs, participants responded yes or no, which involved a dichotomous coding. Likewise, the coding of questions about the mark obtained in past courses or the marks they aspired to achieve in the EAP course was also clear-cut.

As for the questions included in the groups of goals and context of actions, we developed coding schemes. The questions that were addressed to the participants referred to: (i) goals for improving their writing for their university studies; (ii) goals for improving their writing for their future career or occupation; (iii) expected types of writing during their university studies; and (iv) expected types of writing for their future career. The coding process for these questions was carried out by the present researcher drawing on iterative reading of the empirical data and bearing in mind the theoretical and empirical knowledge of goals, especially Cumming's research (2006). The combination of bottom-up and top-down processes was extended until a consistent coding scheme was developed. To ensure the researcher's consistency in the interpretation of the participants' goals and context of actions,

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the data were coded again several months after the first coding. The obtained Kappa was acceptable (Kappa=.80). In what follows, we describe the particular coding schemes that were developed.

Regarding the coding of goals for writing improvement (during the university studies and for participants' future careers), we distinguished among goals about *language, rhetoric, native-like writing, overall writing improvement* or *no reported goals*. There were also students who explained the actions they took to achieve an overall goal of writing improvement. The coding of those actions included the distinction of *literacy processes* (reading and writing) and *self-regulation*. In addition, we also coded the goals that were embedded within actions, and which referred to *overall writing improvement, language, rhetoric* and *fluency*.

As for the coding process of the expected types of writing (during university studies and for future careers), this involved the distinction of the different texts that ranged from specific to more general such as *argumentative, formal texts, literary texts, translations* or *doubtful and unclear*.

### **V.4.4. Preparation of the data in SPSS for statistical analyses**

Once our data sources were coded according to the coding schemes described above, relevant statistical analyses were performed to respond to our research questions. Before reporting the statistical tests, we shall clarify how the data were prepared in SPSS for the analyses. The coding of all the participants' journals was done from a double perspective on the basis of (i) the frequency or intensity with which each variable was mentioned in the journals; and (ii) the categorical nature of the variables. In what follows, we shall explain the two types of analyses for each journal and then we will report the statistical tests that refer to each research question.

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### **V.4.4.1. Analysis of journals based on the frequency or intensity of each variable**

The number of thematic units that were identified in each participant's journal varied as well as the frequency or intensity with which each student-writer referred to the different categories that composed the taxonomies. This situation entailed some difficulties with the statistical analysis but it also revealed participants' predominant or recurrent concerns about specific aspects of their texts to which they attended. It is important to highlight that we used a mixed method approach to analyse the data because we were interested in both quantitative and qualitative information. Consequently, we considered that it was important to preserve the frequency or intensity with which each variable was reported by each participant, although the proportions for each category were not normally distributed.

For instance, if we wanted to compare the observed frequencies of two participants across time who defined the writing task in terms of linguistic concerns, we could find that both of them had reported linguistic issues 5 times. However, the first participant mentioned linguistic concerns 5 times out of a total of 5 thematic units in his/her journal, while the other participant only mentioned linguistic concerns half of the times in his/her journal (5 occurrences of linguistic concerns out of a total of 10 thematic units). The observed frequencies per category for these two participants could not be compared across time because the total number of thematic units per participant was not the same. In other words, 5 thematic units were 100% of observed frequencies for the first participant, while for the second one 5 thematic units were 50% of his/her observed frequencies. Therefore, in Excel we multiplied the number of thematic units in each category of our coding scheme of task representation by 100 and divided it by the total number of thematic units identified in the case of each individual participant, as shown in Figure 16:

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	A	B	C	D	E	F	G	H
1	PARTICIPANTES	NOBS	ProcessT1	ProductT1	NonRelevantProcess	ProductT1	ProcessT1PERC	ProductT1PERC
2	1	05	00	04		00	00	=D2*B2/B2
3	2	15	00	15		00	00	100
4	3	03	01	02		00	33	67
5	4	04	01	01		02	25	25
6	5	08	00	07		00	00	88
7	6	04	01	03		00	25	75
8	7	06	01	05		00	17	83
9	9	07	00	07		00	00	100
10	11	02	00	02		00	00	100
11	12	05	00	05		00	00	100
12	13	06	02	03		00	33	50
13	14	06	02	03		00	33	50
14	15	12	07	05		00	58	42
15	16	05	00	05		00	00	100
16	18	06	02	04		00	33	67
17	19	05	00	05		00	00	100
18	20	10	07	03		00	70	30
19	21	10	03	07		00	30	70
20	22	04	01	03		00	25	75
21	23	12	05	07		00	42	58
22	24	06	01	05		00	17	83
23								

Figure 16. Computation of the percentage of thematic units per participant bearing in mind the total number of thematic units identified in each individual journal

In the above figure, column N shows the formula that was introduced in Excel to calculate the percentage of thematic units for each category of our coding scheme bearing in mind the total number of observations (NOBS in the figure) or thematic units identified per individual participant. For instance, in the first row, we can see that for participant number 1 (column A) 5 thematic units (column B) were identified in his/her description of the writing task. Four out of these five thematic units were coded as a product (column D). Accordingly, 80% of the total of thematic units reported by participant 1 referred to a product view of writing.

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### **V.4.4.2. Analysis of journals based on the categorical nature of the variables**

In order to find out whether participants reported a given category within each of the taxonomies of the journals, we coded each category for each main construct (goals, task conceptualisation, perceptions of the EAP lessons) in a binary way (1 versus 0). In other words, we computed the occurrence of each category or the number of participants who mentioned each category at least once. With this aim, we replaced the frequency of the variables (e.g. running from 1 to 20) by 1 or 0 depending on whether the categories were mentioned or not by each participant (see figure below). To recode the variables we used the command syntax that is shown in Figure 17:

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The screenshot shows the SPSS interface with a syntax window and a data view window. The syntax window contains the following commands:

```

RECODE
  ProcessT2
  (3=0) (1 thru 20=1) INTO ProcessT2Binary.
EXECUTE.

RECODE
  ProductT2
  (3=0) (1 thru 20=1) INTO ProductT2Binary.
EXECUTE.
  
```

The data view window shows the following data:

PARTICIPANTS	NOBS_nuTIME2	ProcessT2	ProductT2	ProcessT2Binary	ProductT2Binary
		.00	3.00	.00	1.00
		1.00	13.00	1.00	1.00
		.00	2.00	.00	1.00
		2.00	2.00	1.00	1.00
		.00	8.00	.00	1.00
		.00	9.00	.00	1.00
		.00	4.00	.00	1.00
		.00	8.00	.00	1.00
		1.00	2.00	1.00	1.00
		4.00	4.00	1.00	1.00
		2.00	7.00	1.00	1.00
		5.00	.00	1.00	.00
		3.00	6.00	1.00	1.00
		1.00	6.00	1.00	1.00
		1.00	6.00	1.00	1.00
		.00	7.00	.00	1.00
		.00	3.00	.00	1.00
		.00	6.00	.00	1.00
		.00	5.00	.00	1.00
		.00	5.00	.00	1.00
		2.00	6.00	1.00	1.00

Figure 17. Command syntax and data view in SPSS corresponding to the binary coding of variables

Although we describe here the command syntax for the journals on task representation, the same process was followed to convert the variables of the journals on goals collected at Time 2. After running the syntax commands, the data view in SPSS for the journals on task representation across time was as follows:

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	PARTICIPANTS	ProcessT1 Binary	ProductT1 Binary	IdeationalT1 Binary	TextualT1 Binary	LinguisticT1 Binary	IntratextualityT1 Binary	IntertextualityT1 Binary	ProcessT2 Binary	ProductT2 Binary	IdeationalT2 Binary	TextualT2 Binary	LinguisticT2 Binary	IntratextualityT2 Binary	IntertextualityT2 Binary
1	1	.00	1.00	.00	1.00	1.00	1.00	.00	.00	1.00	.00	1.00	.00	1.00	.00
2	2	.00	1.00	1.00	1.00	.00	1.00	.00	1.00	1.00	1.00	1.00	.00	1.00	1.00
3	3	1.00	1.00	1.00	1.00	1.00	1.00	.00	.00	1.00	.00	1.00	1.00	1.00	.00
4	4	1.00	1.00	1.00	1.00	.00	1.00	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5	5	.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	1.00	1.00	1.00
6	6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	.00	1.00	1.00
7	7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
8	9	.00	1.00	.00	1.00	1.00	1.00	.00	.00	1.00	.00	1.00	.00	1.00	.00
9	11	.00	1.00	.00	1.00	.00	1.00	.00	1.00	1.00	1.00	1.00	.00	1.00	1.00
10	12	.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	1.00	.00	1.00	1.00
11	13	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	1.00	1.00	1.00	.00
12	14	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	.00	.00	.00	1.00	1.00	.00
13	15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00
14	16	.00	1.00	.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00
16	19	.00	1.00	.00	1.00	1.00	1.00	.00	.00	1.00	1.00	1.00	.00	1.00	1.00
17	20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	.00	1.00	1.00
18	21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
19	22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00	1.00	.00	1.00	1.00
20	23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
21	24	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.00	1.00	1.00

Figure 18. Data view in SPSS of binary variables

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When we had all the data from all the journals in SPSS coded on account of the categorical nature of the variables on the one hand (binary variables), and the frequency with which those variables were reported on the other (frequency of thematic units bearing in mind the total number of thematic units reported), we ran statistical tests as we now describe.

### **V.4.4.3. Statistical analyses**

Different analyses have been done to respond to the questions mentioned in the previous chapters. The research questions were:

*RQ1: Were there changes in students' task conceptualisation after having taken the EAP course?*

*RQ2: What were the characteristics of EFL students' writing goals for the EAP course and their perceptions of changes over time?*

*RQ3: Were there actual changes observed in EFL students' writing goals for their university studies and future careers bearing in mind their self-efficacy beliefs, past performance, outcome expectations and context of action?*

*RQ4: Were students' goals, task conceptualisation and written performance related?*

For research questions 1, 2 and 3, we drew on descriptive statistics since we computed frequency counts for each category that composed the coding schemes of task representation and goals as well as the occurrence of each category (number of participants who mentioned at least once each category).

In addition, for research question 1, the participants' task representation was described in relation to the instruction in the EAP course, and therefore we also computed and reported

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the number of thematic units as well as the number of participants who mentioned the different categories described above for the journals on the lessons (see V.4.2.3). Furthermore, in order to analyse the changes in task representation throughout the academic year, we did two different kinds of tests. We conducted a Wilcoxon signed rank test to look for changes across time in the percentage of thematic units identified per participant in each of the categories of our coding scheme. For the Wilcoxon signed rank test, we also calculated the effect size following Rosenthal's (1991) explanation (reviewed here via Larson-Hall, 2009) that for any non-parametric test with a Z-score the following equation can be used to transform the Z score into a "percentage variance measure of r" (Larson-Hall, 2009: 377):

$$r = Z/\sqrt{N}$$

It should be noted that N stands for the total number of observations rather than the number of participants. For instance, in our sample we had 21 participants describing their task representation at two points in time. Therefore, N is equivalent to 42.

Apart from this analysis, we also calculated changes in our participants' task representation by focusing on the occurrence of categories. In other words, we conducted a McNemar's test, which is used with binary data (e.g either participants reported the linguistic dimension to represent the task or they did not) for test retest designs. This test helped us to distinguish whether there were changes (e.g increase or decrease) after the EAP course in the number of participants who represented the task in terms of the different categories that composed our coding scheme of task representation.

Regarding research question 4, we had two different kinds of data set about goals of writing since we collected journals about goals for writing a specific task at Time 1 as well as about participants' self-evaluation of goals at Time 2. In order to throw light on the relationship between goals and task representation, we performed two types of analyses.

For the data concerning participants' goals for a specific task at Time 1, we divided the participants into two groups: those who represented the task to themselves in terms of a process involving problem-solving behaviour versus those who just viewed the task in terms of a product. This division into two groups as if there were two independent samples was motivated by previous research on writing that highlighted that the sophistication of learners'

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task representation could lead them to pursue goals at different levels of problem-solving behaviour (Manchón & Roca de Larios, 2011). On these grounds, we compared whether there were quantitative differences in the goals that were reported by each group of participants after having performed the writing task at Time 1. With this purpose, we computed and compared the number of participants who referred to each category of our coding scheme of goals at Time 1 within each group of task representation (process versus product) as illustrated in the table that follows.

Table 11. Illustration of the analysis performed to compare the goals reported by participants holding different views on task representation

		GROUP 1. WRITING TASK AS A PROCESS	GROUP 2. WRITING TASK AS A PRODUCT
<b>GOALS</b>	Content	NUMBER OF PARTICIPANTS	NUMBER OF PARTICIPANTS
	Language		
	Rhetoric		
	Affective		
<b>ACTIONS</b>	Composing process		

In addition, qualitative differences in the description of goals were also examined between the two groups of participants who held diverse task representations.

As for the participants' self-evaluation of goals at Time 2, we compared them to their initial task representation using our binary variables. Drawing on the same distinction of participants who were divided into two groups of task representation at Time 1 (process versus product) as if there were two independent samples that were mutually exclusive, we explored whether the two groups differed in the proportions in which they fell into two different categories of self-evaluated goals (dynamic versus static). In this way, we wanted to find a pattern for the establishment of goals after reporting perceived achievement following Dörnyei and Ottó's (1998) process model of L2 motivation. With this aim, the Fisher's exact

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test was conducted to compare the binary variables of task representation (process versus product) to goals (dynamic versus static).

Finally, we examined whether there was development in participants' written performance across time and whether these potential changes could be related to their task representation and goals. We expected to uncover possible patterns of writing achievement in relation to the participants' task representation, and in relation to their self-evaluation of goals along the lines of studies of self-regulation and motivation (e.g. Dörnyei & Ottó, 1998; Heckhausen & Kuhl, 1985). With these purposes in mind, we first conducted Wilcoxon signed rank tests for the participants' written scores measured holistically and analytically (CAF measures) across time so as to find out whether there was development in written performance.

Afterwards, we conducted rank-biserial correlations between the binary variables of task representation at Time 1 (process versus product) and the holistic scores of written performance. Likewise, we conducted another rank-biserial correlation between learners' self-evaluation of goals at Time 2 (dynamic versus static) and their corresponding written performance at the end of the academic year. After performing these correlations we also visually inspected the data using boxplots. When outliers were found that could disrupt the results, they were removed from the sample using a filter in SPSS. Then, the correlations were conducted again without outliers to find out whether they continued to be significant. Boxplots were drawn again to make sure that there were no new outliers. The results of these analyses are presented in the following chapter.

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### **Chapter VI**

### **Results and discussion**

This chapter provides a description of the main results of the study in relation to our research questions as well as the discussion of the findings in light of previous studies. It should be remembered that the ultimate aim of the present study was to throw light on the longitudinal development of students' MMs of writing in an EFL context and their relation to the shaping of L2 writers' performance. On account of this general aim, we divided our research questions into three main blocks, as explained in Chapter IV. In this chapter, we will report and discuss the results related to each research question bearing in mind those structuring blocks, namely, the findings and discussion about the dynamics of task conceptualisation and its relationship to the learning environment; then, those results related to the features and evolution of writing goals in association with the learning environment; and finally, we shall report and discuss our findings related to the association between our student-writers' task conceptualisation, writing goals and performance. It should be noted that unless specifically stated in some specific questions for which only one point of data collection was required, the overall findings that we shall report refer to 21 out of 23 participants due to some difficulties in collecting data from the whole set of participants at both times.

### **VI.1. Dynamics of task representation and their relationship to the learning environment**

In this section, we shall report and discuss the results of RQ1, which aimed at exploring the possible changes in the participants' task conceptualisation or representation (stored beliefs about good academic writing as elicited in journals) after an academic year of writing instruction in an EAP course. We aimed at finding out whether our student-writers shaped their beliefs about academic writing during a long period of writing instruction and practice in an EAP course (9 months). Where there were changes, we were also interested in knowing whether they could throw light on participants' writing approaches for overall academic writing regardless of task types, since previous studies (e.g. Flower, 1990; Ruiz-Funes, 2001; Smeets & Solé, 2008; Wolfersberger, 2007) had just focused on students' interpretation of specific tasks at hand and their effects on performance, while other studies had delved into perceptions of changes in students' stored representations of the task (Manchón & Roca de Larios, 2011). The formulation of the first research question was:

*RQ1: Were there changes in students' task conceptualisation after having taken the EAP course?*

In order to answer this question we computed frequency counts for each category that composed our coding scheme of participants' task representation, calculated the occurrence of each category (number of participants who mentioned each category) and conducted both Wilcoxon and McNemar's tests to explore changes in the identified categories across time.

The overall results indicate that some aspects of the participants' task conceptualisation remained unchanged while others evolved or became more refined across time. As a whole, participants developed a more sophisticated MM of writing since they moved from conceptualizing writing on the basis of linguistic accuracy, and surface features of rhetorical aspects at Time 1 to representing the task in relation to a broad range of

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rhetorical features at Time 2. The findings are indicative of not only some quantitative and qualitative changes in the student-writers' understanding of the writing task but also of some subtle differences about what the writing process entails. Specifically, there seems to be a move from a knowledge-telling model to a knowledge-transforming one regarding the representation of ideational aspects of writing and the depth of rhetorical concerns that were considered. The results and discussion that follow will be divided into three main sections: (i) features of task representation that remained unchanged across time; (ii) overall differences in the participants' task representation across time; and (iii) differences concerning the dimensions of writing.

Before moving to those sections, we first offer one table that shows the observed frequencies of the categories of our taxonomy of task representation at two points in time (Time 1 and 2). It should be noted that each table includes information about the dimensions of task representation, which are the orientation towards writing, textuality and the dimensions of writing. We would like to emphasise that the dimensions of writing refer only to the ideational, textual and linguistic features of composing and this construct is therefore different from the overall and encompassing dimensions of task representation.

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Table 12. Dimensions of task representation: frequencies, percentages of thematic units and number of participants at both times of data collection

DIMENSIONS OF TASK REPRESENTATION	MAIN CATEGORIES	TIME 1				TIME 2			
		N°TU	%TU (out of 141TU)	TOTAL N°TU	N°P (n=21)	N°TU	%TU (out of 134 TU)	TOTAL N°TU	N°P (n=21)
ORIENTATION	Process	34	24%	141	13	22	16%	134	10
	Product	101	72%		21	112	84%		20
	Non relevant	6	4%		5	0	0%		0
TEXTUALITY	Intratextuality	108	77%	141	21	108	81%	134	21
	Intertextuality	27	19%		10	26	19%		12
	Non relevant	6	4%		5	0	0%		0
DIMENSIONS OF WRITING	Ideational	41	29%	141	16	32	24%	134	14
	Textual	69	49%		21	85	63%		20
	Linguistic	25	18%		18	16	12%		7
	Non relevant	6	4%		5	1	1%		1

NOTE. N° TU= number of thematic units; %TU= percentage of thematic units; TOTAL N° TU= total number of thematic units; N° P=number of participants.

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Table 12 contains information about the total number of thematic units (Total n° TU) identified in each journal, the number of thematic units (N° TU) per category of the taxonomy and the number of participants (N° P) who mentioned those categories. Given that participants could write as much as they wanted in their journals, the number of thematic units varied not only across time but also among participants. For comparison purposes, we calculated the percentage of thematic units (% TU) corresponding to each category of our taxonomy so that the different categories could be comparable across time. For instance, we identified 108 thematic units within the category of intratextuality at both times of data collection. However, we coded a total of 141 thematic units for the journals on task representation at Time 1, and 134 thematic units for the journals collected at Time 2. Therefore, the number of thematic units (108) reported for intratextuality was not the same at both points of data collection. For clarification purposes, we offer in the above-mentioned table the percentage of thematic units per category. In other words, we multiplied 108 per 100 and divided the result by the total number of thematic units identified for the journals of Time 1 and Time 2 respectively (141 TU in the case of Time 1 and 134 TU in the case of Time 2).

### **VI.1.1. Features of task representation that remained unchanged across time**

Table 12 shows that some features in the participants' description of the writing task remained unchanged across time, as we report now bearing in mind the different dimensions of task representation: (i) orientation, (ii) textuality and (iii) dimensions of writing.

The predominant *orientation* towards writing, which included the distinction between a process and a product approach, was at both times largely related to a product view of composition (21 participants at Time 1, T1 henceforth, and 20 participants at Time 2, T2 from now onwards). In other words, nearly all the participants described the writing task in terms of the static features that all well written texts should have, though half of the participants (13 at

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T1 and 10 at T2) perceived the act of composing in terms of a process approach that involved iterative decision making and rewriting procedures.

Along the same lines, but in relation to the *textuality* dimension, all the participants (21) focused at both times on an intratextual conceptualisation of writing. Intratextuality involved, as mentioned in the Method section, the conceptualisation of the composition task only in relation to the formal and appropriate use of language and to the organisation of ideas within the text being written without any external reference. Half of the participants at both times (10 at T1 and 12 at T2) defined the writing task in a way that could be interpreted as illustrative of an intertextuality perspective, which entailed using other sources of knowledge to write a text, as illustrated in the following excerpt:

[1] Referencing is another important point to take into account when writing an academic text. A formal text must never be written without including a complete bibliography at the end of the paper, since references allow the reader to know which your sources of information have been. (Participant 6<sup>2</sup>, Journal on Task Representation at Time 2)

More interestingly, there was a common underlying conception between the description of the writing task in terms of both a *process* and an *intertextuality* perspective. In both cases, the participants defined the task as requiring the engagement in problem-solving behaviour so as to organise and structure their written texts. However, in the case of a process approach to writing, participants' views on the problem were focused on overall constant decision making and rewriting procedures, while the intertextuality description of the text was rather oriented

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<sup>2</sup> All the extracts from the journals include the original words written in English by the students.

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towards more specific problems about an efficient use and coherent integration of different sources of knowledge when composing.

Given that half of the participants started and ended the writing course holding a process (13 at T1 and 10 at T2) or problem-solving view towards the writing task, it seems that they did not discover a new way of representing the task in the EAP course but they rather refined their already existing beliefs about it (Carey, 1991). In this respect, the results contrast with those reported by Manchón and Roca de Larios' (2011), in that in the latter case, the definition of the writing task in terms of problem-solving behaviour was developed across time. However, in that study, the researchers reported the students' perceptions of changes in their task representation instead of comparing the participants' task representation at two points in time as was the case in the present research.

As for the different *dimensions of writing* (ideational, textual and linguistic), no changes across time were found in the learners' use of overall terminology (i.e. thesis statement, purpose in writing) to describe the writing task. This lack of difference may be due to the participants' previous writing experiences that had already shaped their beliefs about the task through the three instrumental language courses and the literary ones they had previously taken before the fourth year (e.g. Elbaum, Berg, and Dodd, 1993; Chamot, 2005; Gan, 2004; Mori, 1999; Sakui and Gaies, 1999). We should bear in mind that the participants were university students who were in the fourth year of a five year degree in English. Therefore, they were mature learners who were used to writing in their L2 for their different instrumental language courses and for their written exams.

Interestingly enough, the participants' task representation was already multidimensional at the beginning of the course since they described writing in relation to textual aspects of writing (21 participants), linguistic features (18 participants), and ideational issues (16 participants). This result also differs from Manchón and Roca de Larios' research (2011), in that their learners reported having developed their multidimensional model of writing across time during the instructional and writing practice period in the same EAP course that our participants took one year later. In addition, in that study, the improvement of students'

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compositions across time also confirmed the learners' expansion of their writing concerns. Two different reasons can be offered to explain the divergent results between our study and those reported by Manchón and Roca de Larios' research. First, it is possible that the participants in both studies had different writing task conceptualisations at the beginning of the same EAP course in spite of having had similar literacy experiences in previous courses of their English degree. Second, since Manchón and Roca de Larios investigated the perceptions of changes in task representation, it might be possible that their participants could have reported an idealised view of their learning about academic writing in the EAP course in comparison with their past literacy experiences in previous courses for which there was not much writing practice.

Our results also show that the different dimensions of writing were integrative (simultaneous concerns about several dimensions like language and rhetoric) rather than conflicting (showing conflicts between dimensions), as illustrated in the following extract in which one participant describes the importance of both rhetorical features and linguistic accuracy when writing:

[2] Another thing to highlight would have to be the accuracy of the information that we are making use of, but also the amount of information that we provide to the reader, since you may have a lot of information about a certain topic but not all that quantity will be relevant to the text, so we should just focus on its relevance to the text. Besides these main features of a text, we should take into account some other points like: grammar, syntax and vocabulary. In order to write a good text we should develop an advanced level of grammar and make use of a wide range of vocabulary and different grammatical structures, in order not to make a repetitive and monotone text. (Participant 16, Journal on Task Representation at Time 1)

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This result is in contrast to those in Devine, Railey and Boshoff's research (1993). In Devine et al.'s study, L2 writers who had multidimensional models of the writing task (i.e. grammar, communication and personal voice) were prone to experience a conflict between different components of the model such as for example between grammar and communication or grammar and personal voice. Therefore, they expressed a conflict between different demands of the writing task.

Two reasons can be suggested for the discrepancy between our results and those reported by Devine et al. (1993). First, the participants in their study were ESL students coming from nine different backgrounds, while our research was restricted to a rather homogeneous group of Spanish university learners in an EFL context. The difference in the cultural backgrounds of the participants in Devine et al.'s research could account for possible conflicts in their mental models since L2 writers might have already developed a representation of academic writing in their L1 that might not necessarily correspond to the academic conventions of L2 composition (e.g. Gosden, 1996; Hyland, 2003; Kutz, Groden & Zamel, 1993; Riazi, 1997; Watanabe, 2004; Zhang, 2005). Second, the learners' writing expertise and L2 proficiency level also varied between the two studies. In the case of Devine et al.'s research, the participants were basic ESL writers with a lower intermediate level of English (B1 level, according to the Common European Framework), while our participants had an upper intermediate level of English (B2 level) and were taking an advanced writing course. Therefore, the differences in writing expertise and/or L2 language proficiency level could explain the dissimilar results in the integration of the several dimensions of the writing task.

Other features that remained unchanged across time in our study referred to specific dimensions of writing: the textual and the linguistic dimensions. As for the textual dimension, there was one rhetorical feature, *appropriacy*, which was on the borderline between textual concerns and linguistic issues. Nevertheless, it was included within the textual dimension rather than the linguistic one since the latter only focused on accuracy when composing. Therefore, within the textual dimension, half of the participants at both times (13 at T1 and 12

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at T2) described academic writing in terms of appropriacy or, in other words, in terms of the use of objective and formal language that requires an impersonal tone and voice when composing according to both the register and written conventions. Differing from other rhetorical features, we did not find qualitative changes throughout time in the participants' description of appropriacy, as can be noted in these two excerpts taken from Time 1 and Time 2 respectively:

[3] The writer should maintain an impersonal tone avoiding personal pronouns such as "I, me or we", the use of passive voice instead the active voice. Moreover, good academic writer should think cautiously the choice of the words. It implies the use suitable and succinct vocabulary in relation to a certain topic. The past tense is used in academic papers and constructions should not be used. In short, language is used in a very formal way. (Participant 2, Journal on Task Representation at Time 1)

[4] Besides, the use of language is very important; this must be grammatically correct and very formal, and an appropriate use of vocabulary is also essential (...) an impersonal tone avoiding personal pronouns such as "I" , me or "we" and substitute by the use of expressions such as "it is", "this" or "there is", there should not be ambiguity in the word. You, as a writer, should use passive voice instead the active voice. Academic papers normally keep a past tense and do not use contractions in such things as "do not" or "I have". (Participant 2, Journal on Task Representation at Time 2)

A possible reason for the lack of qualitative changes across time could be that concerns about the linguistic adequacy of the written texts seemed to be characteristic of a specific group of

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participants, who had already started the writing course with this kind of concerns when composing.

Finally, regarding the linguistic dimension, comprised only of accuracy, there were no qualitative changes throughout the course since the participants described at both times the importance of linguistic accuracy at the level of grammar and vocabulary when composing academic texts. However, as we shall describe below, there were some qualitative differences in the representation of the task regarding the ideational and the textual dimension. Given those changes, we speculate that it is possible that learners might have also upgraded their linguistic concerns about accuracy in the use of L2 language when writing, but our instrument of data collection may not have been adequate to capture it, which is acknowledged as a limitation of the study. When we refer to linguistic upgrading, we follow Roca de Larios' et al.'s definition (2006) as "an effort to upgrade the expression or meaning or to find a better match between intention and expression or both" (Roca de Larios et al. 2006:106).

In particular, we elicited our participants' stored task representation for overall composing processes, as if this representation was a general schema that could be applied to any specific task. This elicitation procedure may have prompted the participants to think about and report the most predominant dimensions of task representation that they usually bear in mind and activate in order to comply with their conceptualisation of any kind of writing task. In other words, the participants reported their stored task representation regardless of the specific problems that may emerge during the ongoing process of writing, as has been captured by other studies using think-aloud protocols (Manchón & Roca de Larios, 2007; Manchón, Roca de Larios & Murphy, 2009; Roca de Larios, Manchón & Murphy, 2006; Roca de Larios, Murphy & Manchón, 1999; Uzawa, 1996). Accordingly, the use of think-aloud protocols while composing could probably have offered a more accurate picture of our participants' development of task representation when actually engaged in specific problem-solving processes. In fact, a task is created by noticing and evoking cues from the context of writing, the writers' own memory or the task itself while it develops (Flower, 1990; Hayes & Nash, 1996).

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Finally, we should add that the use of self-reflection journals could also account for some of the similarities found across time in learners' task representation. Other instruments like questionnaires could have probably shed more light on differences in the conceptualisation of the task. However, the main drawback of questionnaires could have been the restriction of our participants' representations to a preconceived set of beliefs (e.g. Horwitz, 1987, 1988) leading them to show agreement or disagreement with ideas that may or may not form part of their belief systems and/or learning experiences (Barcelos, 2003; Benson & Lor, 1999; Bemat & Gvozdenko, 2005). In other words, the use of questionnaires could have prevented us from delving into the contextual and dynamic nature of beliefs that are relevant to learners as defined by the participants themselves (Barcelos, 2003; Sakui & Gaies, 1999).

So far, we have described the features of task representation that remained stable across time. In what follows, we shall report some qualitative and quantitative differences in the participants' task representation.

### **VI.1.2. Overall differences in the participants' task representation across time**

Participants reported some self-perceptions of changes in their task representation since in the journals at Time 2 they described what good academic writing was for them as well as the new aspects of writing they had discovered during the EAP course.

They stated having experienced a qualitative refinement of some old conceptions they held before starting the course such as how the development of ideas should be carried out in the written texts, as shown in the following excerpt:

[5] In my case, the things that I have learned are things that I should have learned in the past. Basic things that I did not know I had to do. I have learned is that for each idea developed, a new paragraph is needed. In the

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past, I used to write everything in the same paragraph, not making any distinction. (...) I think that I have learned many things that will be very useful in the future. (Participant 16, Journal on Task Representation at Time 2)

This excerpt illustrates that the development of participants' beliefs about task representation should not be considered as representative of conceptual change (Limón, 2001) because they did not radically modify or replace old beliefs about the task with totally new beliefs. It might be more accurate to say that they rather enriched their task representation by revising their old beliefs about the task (Carey, 1991; Vosniadou, 1991, 1992, 1994).

Some further quantitative changes in the representation of the task were also evident across time. Firstly, as shown in Table 12 (see above), we found a decrease in the total number of thematic units used by the participants across time (from 141 at T1 to 134 at T2) to describe the writing task. Secondly, we also noticed a reduction of non relevant or out of the topic thematic units (TU henceforth) included in the *dimensions of writing* from T1 (6 TU) to T2 (1 TU). Both aspects show that the participants appeared to have developed a more synthetic style when writing in the L2 probably as a result of the improvement of their writing abilities (Norris & Ortega, 2009), and concurrently they also developed a more defined and less generic view of their task representation. These changes are illustrated in the following quotations taken from the same participant at different points in time:

[6] Concerning the utility of writing, nobody can deny the benefits of books, magazines, journals, newspapers, and encyclopaedias. To deny the usefulness and effectiveness of writing is to reject, up to a certain state, the very essence of knowledge, since, from ancient times, human beings have used writing as a mean to preserve and develop different areas of study: history, science, philosophy, etc; thus, taking this into

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account, how can somebody still think that writing is useless, futile, and valueless? (Participant 4, Journal on Task Representation at Time 1)

[7] Academic writing is the process in writing not only with a correct use of a language, but also, I would suggest, with an almost perfect command of its syntax and grammar. Indeed, the purpose of academic writing is to write well, as the word suggests, in an academic way. (Participant 4, Journal on Task Representation at Time 2)

Therefore, the participants' conceptualisation of the task became finer-grained or more refined across time especially within one dimension of writing (textual), which also seemed to be predominant at Time 1. More precisely, in spite of the multidimensional nature of the participants' initial task representation, it was evident that at Time 1 they tended to focus more intensively on the textual dimension (69 TU) rather than on the ideational (41) or linguistic (25) ones. At Time 2, the textual dimension of writing prevailed even more (85 TU) over the ideational and linguistic dimensions (32 TU and 16 TU respectively), as we further describe in the following section.

### **VI.1.3. Differences in the participants' task representation across time: dimensions of writing**

In this section, we report the identified differences in the participants' task representation concerning the dimensions of writing from a quantitative and qualitative perspective. The changes identified across time will be explained in relation to learners' perceptions of the writing instruction they received in the EAP course, since beliefs are socially constructed (Dewey, 1938; Hosenfeld, 2003; Kalaja, 1995) and develop in context within specific learning environments (e.g. Barcelos, 1995, 2000, 2003; Benson & Lor, 1999; Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991; Goodwin & Duranti, 1992; Grigoletto, 2000). As reported in Chapter V, we collected a journal on participants' perceptions of the lessons at the end of the period of writing instruction. The writing prompt given to the student-writers was the following:

*Explain to a third year student what they should expect next year in Lengua Inglesa IV lessons. Try to give them a flavour of what the classes are like. Here we are not referring to what you have done at home outside the classroom but to the actual work in class.*

For this journal, a taxonomy was developed (see Table 13) which distinguished (i) the three dimensions of writing (ideational, textual and linguistic) previously identified in the participants' task representation, as well as (ii) three other categories about the methodology adopted in the lessons (classroom participation, recursive writing process/feedback and writing practice) that were frequently reported by the participants. For empirical reasons, these categories were assumed to be essential for the development of their task representation in general (Wolfersberger, 2007) and for the shaping of their multidimensional MM of writing in particular (Manchón & Roca de Larios, 2011).

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Table 13. Perceptions of the writing lessons: frequencies of thematic units and number of participants

MAIN CATEGORIES	SUBCATEGORIES	TIME 2		
		N° TU	TOTAL N° TU	N°P (n=21)
Content of the lessons	Ideational	7	113	5
	Textual	15		11
	Linguistic	29		20
Methodology adopted in the lessons	Recursive writing process and feedback	16		11
	Writing practice	30		14
	Classroom participation	9		7
	Non relevant	7	5	

NOTE. N° TU= number of thematic units; TOTAL N° TU= total number of thematic units; N° P=number of participants.

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As shown in the table, we computed the number of participants who mentioned each category as well as the number of thematic units globally and per category. In the sections that follow (VI.1.3.1. and VI.1.3.2.), we will refer back to Tables 12 and 13 to discuss the shaping of learners' task representation in relation to their perceptions of the instructional context in the EAP course.

### **VI.1.3.1. Quantitative differences in the participants' representation of the dimensions of writing**

As explained in Chapter V, we coded the data of student-writers' task representation from a dual perspective. On the one hand, we computed the percentage of thematic units mentioned by each participant within each category of our taxonomy of task representation bearing in mind the total number of reported units in each participant's journal. The use of percentages was considered appropriate because the number of thematic units in each journal differed from participant to participant. We also calculated the occurrence of each category of our taxonomy by coding in a binary way (1 versus 0) the participants who referred to the different categories of the taxonomy versus those who did not do it. Then, we computed the total number of participants who mentioned each category (see Table 12 above).

The percentage of thematic units for each category allowed us to examine possible significant differences across time conducting Wilcoxon signed rank tests, while the computation of the occurrence of each category (whether each individual participant mentioned one category or did not do so) enabled us to conduct McNemar's tests to examine changes in the number of participants who reported the different categories.

One Wilcoxon signed rank test was performed for each of the three dimensions of writing (see Table 14 below) bearing in mind the percentage of thematic units registered for each dimension. No significant changes were found for the ideational ( $Z=-.588, p=.556$ ) or linguistic dimensions ( $Z=-1.490, p=.136$ ) since the percentage of thematic units registered for each dimension was equal across time. However, there was a significant increase from Time 1

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to Time 2 in the percentage of thematic units within the textual dimension ( $Z=-2.166$ ,  $p=.030$ ,  $r=.33$ ), as well as a significant decrease in the percentage of non-relevant thematic units ( $Z=-2.023$ ,  $p=.043$ ,  $r=.31$ ).

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Table 14. Dimensions of writing: descriptive statistics and Wilcoxon signed rank tests

DIMENSIONS OF WRITING	DESCRIPTIVE STATISTICS						WILCOXON SIGNED RANKS TEST		
	Time 1 (n=21)			Time 2 (n=21)			Z	p	Effect size (r)
	Mean	Median	SD	Mean	Median	SD			
Ideational	25.04	25	20.27	23.83	14.29	25.56	-.588	.556	.09
Textual	49.28	40	22.11	61.14	55.56	31.16	-2.166	.030	.33
Linguistic	20.16	17	15	14.49	0	25.82	-1.490	.136	.22
Non relevant	5.52	0	12	.053	0	2.42	-2.023	.043	.31

NOTE. SD=standard deviation

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Although there were no differences across time in the representation of the task concerning the linguistic dimension, we noticed that the percentage of thematic units for linguistic accuracy was not equally reported by the same number of participants throughout time (see Table 12 above). There were more participants who described the writing task in terms of linguistic aspects at Time 1 (18 participants) than at Time 2 (7 participants), while the number of student-writers who mentioned the ideational (16 at T1 and 14 at T2) and the textual (21 at T1 and 20 at T2) dimension seemed to be more or less the same at both times. On these grounds, we conducted one McNemar's test that showed a statistically significant decrease ( $p=.003$ ) in the number of participants who represented the task in terms of linguistic features, as shown in the following crosstab:

Table 15. Results of the McNemar's test for the definitions of writing in terms of language at two points in time

		Task representation. Linguistic dimension. Time 2		
		Not reported	Reported	Total count
Task representation. Linguistic dimension. Time 1	Not reported	2	1	3
	Reported	12	6	18
Total count		14	7	21
McNemar test		$p=.003$		

The crosstab shows that there were 18 participants (second row) who described the writing task in terms of linguistic accuracy at Time 1, while only 7 participants (second column) defined it in terms of language at Time 2. Accordingly, there were 12 participants (second row and first column) who started the EAP course representing the task to themselves in terms of language but at Time 2 they did not hold this view any longer. Only 6 participants (second row and second column) started and ended the course describing the task in terms of language.

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As pointed out before, the participants were upper intermediate L2 language learners who began the course representing the task to themselves from multiple dimensions (a multidimensional model including ideational, textual and linguistic concerns). When their language level improved throughout the academic year, as shown by their scores in the Oxford Placement Test ( $Z=-3.076$ ,  $p=.002$ ,  $r=-.48$ ), there was also a tendency for them to develop more rhetorical concerns when representing the task (see results of the Wilcoxon test). The development of their task representation was more in line with a bi-dimensional model of writing (ideational and textual) than a multidimensional one including concerns about linguistic accuracy. This finding offers empirical support to previous studies (see Manchón & Roca de Larios, 2011) that also indicated that advanced L2 students (upper intermediate in our study) after a period of writing instruction and extensive writing practice tend to assign less importance to surface features of the task such as linguistic accuracy in favour of more sophisticated concerns. It is therefore possible that when learners reach a given threshold level of L2 language proficiency, their concerns about linguistic accuracy may decrease in favour of other higher-level concerns.

Nevertheless, the few participants (7) who described the task in terms of language at Time 2 (see Table 15) referred intensively to it since at the end of the EAP course they reported a similar number of thematic units about linguistic accuracy as the eighteen participants did at Time 1 (18% of the total N<sup>o</sup>TU at Time 1 and 12% of the total N<sup>o</sup>TU at Time 2 as indicated in Table 12 above). This explains why there were no differences in the percentage of thematic units within this dimension (see results of the Wilcoxon signed rank test).

This small group of participants seemed to have developed their concerns in terms of L2 accuracy when writing for two main reasons. First, they were particularly concerned about their language when writing in L2 as if it could determine the quality of their written texts. Second, they became aware that writing in English helped them improve their L2 language and that by means of writing practice they could become not only better writers but also better

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language users (c.f. Cumming, 1990; Manchón, 2010, 2011; Ortega, 2009; Swain & Lapkin, 1995; Williams, 2008). The excerpts that follow illustrate both points:

[8] As regards the first approach, academic writing is the process in writing not only with a correct use of a language, but also, I would suggest, with an almost perfect command of its syntax and grammar. Indeed, the purpose of academic writing is to write well, as the word suggests, in an academic way. (Participant 4, Journal on Task Representation at Time 2)

[9] In the light of what I know, I feel that academic writing consists of a process of writing texts of different topics that can help to improve your English by means of different aspects, such as syntax, vocabulary, punctuation, etc. (...). Firstly, it involves a constant “written agreement”. It is important here to produce pieces of writings of different topics to learn step by step, at least, in terms of vocabulary. Secondly, it entails a concern with one’s progress. I believe that it is necessary to try to improve everyday with more difficult structures (...). Thirdly, it involves that the learner must not be afraid of making mistakes. He should know that mistakes are essential in the acquisition of foreign language to improve day by day one’s skills. (Participant 14, Journal on Task Representation at Time 2)

The last excerpt is also indicative of the interface between SLA and FL writing (Manchón, 2011; Manchón & Roca de Larios, 2011; Ortega & Carson, 2010) in the sense that writing practice was perceived by the student-writers from a double perspective: learning-to-write and writing-to-learn (see Manchón, 2011). These are two dimensions of L2 writing that explore how L2 users on the one hand learn to convey their intended meaning in writing and, on the other, how the involvement in L2 writing tasks can help students to learn about content

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knowledge or language. In our study, participants were required not only to write in English as they sporadically did for other courses in the degree but also to write accurately. However, this group of participants (7), who were concerned about linguistic accuracy at Time 2 were not the only ones to be aware of the learning potential of writing. In fact, as shown in Table 13 (see above) nearly all the participants (20) described the writing lesson in the EAP course in terms of language. What seems to differentiate the 7 participants worried about language at Time 2 from the rest of the students is that the latter group seemed to be able to distinguish the learning potential of the writing activity in its double dimension (learning-to-write and writing-to-learn) from their representation of what it meant to write good academic texts. Accordingly, when student-writers were instructed about the requirements of formal academic writing and were also given the opportunity to engage in complex problem-solving tasks that required recursive rewriting, they seemed to refine their task representation by developing higher-level concerns for writing at the ideational and textual levels (Manchón et al. 2009; Roca de Larios et al. 2006). Textual concerns could also involve an interest in improving the stylistic choice of language (appropriacy) by considering the appropriate use of language for academic writing in terms of formality, objectivity, writing register and/or personal voice.

To summarise, when participants represented the task to themselves at higher-level aspects of writing (i.e ideational, textual) they seemed less prone to define the task in terms of surface features like linguistic accuracy. However, the apparent decrease of importance in the linguistic dimension on the part of the participants may not necessarily mean that their conceptualisation of writing is simple because fewer dimensions of writing are considered. We could suggest that the complexity of mental models of writing in the case of fairly advanced L2 learners (upper intermediate) may not always necessarily involve the development of multiple dimensions for composing as reported in other studies (e.g. Cumming, 1989; Devine et al. 1993; Roca de Larios et al. 1996), but rather the L2 writer's cognitive expansion and understanding of already demanding dimensions like the textual or the ideational ones. It is possible that when L2 writers are asked about their task representation, they may refer to multiple dimensions if they have been instructed about the

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importance of accurate use of language, the structure of their texts and the use of sources for composing. Nevertheless, having declarative knowledge about these dimensions of writing does not imply that their mental models are sophisticated. We rather contend that the depth with which each dimension is described by students can be a better measure of the complexity of their task representation and the depth of the cognitive processes in which they may be willing to engage. In the sections that follow we describe those qualitative changes we found in the ideational and textual dimension of writing.

### **VI.1.3.2. Qualitative differences in the participants' representation of the dimensions of writing**

In this section, we discuss the qualitative differences we found when the participants reported the characteristics of good academic texts regarding the ideational and textual dimensions of composing. No qualitative changes were registered for the linguistic dimension in terms of the description of accuracy and appropriacy as reported before. It should also be noted that student-writers' task representation involved the description of what was understood by good academic writing, although some participants also explained the processes that should be followed to come up with good academic texts.

#### ***❖ Ideational dimension of writing***

Table 16 offers specific information about the participants' description of the ideational dimension of writing across time. The table shows the different subcategories that were coded for the ideational dimension, the number of participants who mentioned each subcategory at two points in time and the main focus of those subcategories across time. It should be noted that the participants who represented the task in terms of ideational issues (16 at Time 1 and 14 at Time 2 as indicated in Table 12 above) could refer to one or several subcategories of the ideational dimension since they were not mutually exclusive.

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Table 16. Representation of the writing task: subcategories of the ideational dimension.

SUBCATEGORIES OF THE IDEATIONAL DIMENSION	TIME 1 (n=16)		TIME 2 (n=14)	
	N°P	MAIN FOCUS	N°P	MAIN FOCUS
Well-informed	3	• Well-informed	3	• Well-informed
Interesting	2	• Interesting	3	• Interesting
Organisation of ideas	9	• Writer's own point of view	5	• Strategic actions to organise writer's own ideas in relation to other sources of knowledge
Use of sources when composing	7	• Writer-based prose • No rhetorical counterarguments	4	• Arguments and counterarguments • Compare and contrast knowledge • Reader-oriented approach
Acknowledgement of sources	5	• Declarative knowledge about plagiarism	8	• Strategic actions to avoid plagiarism

NOTE. N°P= number of participants

As the table indicates, the number of participants who represented the task in terms of different ideational subcategories was almost the same across time. From a qualitative point of view, the depiction of writing in terms of *well-informed texts* and *interesting texts* was the same at both times. Nevertheless, there were qualitative changes across time in learners' views on the *organisation of ideas*, *use and acknowledgement of sources* as illustrated by the main focus of those ideational issues. More importantly, the differences showed that learners changed their task representation by moving from an understanding of writing as a question of "knowledge-telling" to a new one involving "knowledge-transforming".

According to Bereiter and Scardamalia (1987), the knowledge-telling model is associated with young or immature learners because the writing process is reduced to explaining what the writer knows about the topic using sources just to gather information

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about the content that needs to be developed. The outcome of this writing process has been referred to as “writer based prose” (Flower, 1979) because writers do not bear in mind the intended audience of the text. In contrast, in the case of a knowledge-transforming model, writers develop the content of their text in response to a rhetorical problem and there is also an attempt to write the text bearing in mind the potential audience.

As indicated above, in the present study we did not use think-aloud protocols as previous studies did to find out writers’ differences when trying to solve problems within a content space (what to say) and a rhetorical space (how to say it) while composing (e.g. Bereiter & Scardamalia, 1987; Bereiter, Burtis & Scardamalia, 1988; Scardamalia, Bereiter & Steinbach, 1984). We merely focused on the changes in the participants’ stored representation of the writing task. In spite of the differences in the process of data collection, our results also seem to be in line with the distinction of knowledge-telling and knowledge-transforming models regarding learners’ stored beliefs about the use and integration of different sources when composing. First of all, at Time 1 participants did not seem to move beyond their own point of views to *organise their ideas* (9 participants, see Table 16) in spite of viewing the task as a process of problem-solving activity that involved search processes for idea generation. Secondly and along the same lines, although student-writers defined the task at Time 1 as a process of getting *informed* about the writing topic (3 participants) and composing *interesting* texts (2 participants), the understanding of the *use of sources* (7) was based on *writer-based prose* (Flower, 1979) (Table 16). This means that participants may not have attempted to include rhetorical counterarguments beyond their own ideas when using different sources of knowledge. Thirdly, the *acknowledgement of sources* (5 students, Table 16) at Time 1 was based on the participants’ understanding of good academic writing that involved the use of different sources without plagiarising them, as they had probably been instructed in previous writing courses. However, they reported having difficulties in integrating the information from different sources without plagiarising. The excerpts that follow illustrate these three main points:

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[10] I am not really good in academic writing. I think one has to organise his ideas and know what he wants to write and how he wants to write it. I am too chaotic expressing my ideas. (Participant 3, Journal on Task Representation at Time 1).

[11] It is also important to investigate and collect as many information as we can about the topic that we are going to write, and to have different materials that support our ideas in order to achieve a text with a convincing content. (Participant 20, Journal on Task Representation at Time 1)

[12] Plagiarism, for instance, is one of the biggest problems that students have to face. For us, it is very difficult to take information from other sources and use them with our own words in order to do it in a legal way. (Participant 22, Journal on Task Representation at Time 1).

At the end of the academic year, our participants appeared to define the task from a rather reader-based perspective, which helped them engage in ideational searches from a more cognitively demanding perspective so as to come up with arguments and counterarguments related to the main rhetorical problem posed by the writing task. Accordingly, some participants (4) showed a more critical understanding of the *use of sources* when describing academic writing (Table 16) at Time 2. They referred to the importance of selecting adequate information by comparing and contrasting knowledge derived from different sources so as to draw inferences about them and develop a sense of gist and objective arguments. This use of sources was in line with a knowledge-transforming model and reader-oriented approach, which involves engaging in problem-solving behaviour, as shown in this fragment obtained from the journal data:

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[13] As far as the content is concerned, once the writer has researched information about the topic, he has to select the relevant facts that could interest the reader. Usually a single topic can be seen from many points of view, and people position about it is not always the same. For this reason in order to make a good academic text, the writer should explore all the possible views or thoughts about it, so the reader could reach its personal conclusion about it knowing all the possible views. In this sense, it is important to use real facts as examples or quotes about experts when writing the text. (Participant 15, Journal on Task Representation at Time 2)

The inclusion of the readers' perspective for the representation of the task can be taken as evidence of complex reflective thinking (Bereiter & Scardamalia, 1987; Scardamalia et al. 1984), and of the continuous transformations of writers' texts in relation to sources (Spivey, 1990, 1995, 1997). In this respect, our participants reported that they wrote their texts drawing on the continuous interplay between reading and writing and on the selection of information coming from different sources to come up with a comprehensive text. This concern about the audience could be related to the challenge posed by the writing assignments in the EAP course that required constant rewriting processes. It should be reminded that participants wrote three extended assignments during the academic year and that each had to be rewritten three times in response to peer and teacher feedback, which resulted in constant reflection in writing for problem-solving (Bereiter & Scardamalia, 1987).

Along these lines, the student-writers' views on the *organisation of ideas* (5) also seemed to become refined throughout the course (Table 16) since they also mentioned how academic writing should be planned by implementing strategic actions to organise their ideas bearing in mind not only their own ideas but also other sources of knowledge, as illustrated in this excerpt:

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[14] Regarding to what academic writing involves, I have learnt two main ideas that I did not know on previous years. On the one hand, Lengua Inglesa IV helped me to easily flow my ideas. (...). On the second hand, I have also learnt how to synthesise ideas. Before start with the study of Lengua Inglesa IV I do not know how to summarise the ideas from more than one people. However, now I can do it without difficulty. (Participant 11, Journal on Task Representation at Time 2)

On account of this external use of sources when writing, some participants (8) described the writing task at Time 2 as a constructive process that involved the *acknowledgement of sources* (Table 16). Differing from Time 1, they tended to report several strategic actions that could be taken to avoid plagiarism. These strategies also helped them to transform their knowledge when composing by means of quotations or by paraphrasing ideas as they had been instructed and had also put into practice in their assignments throughout the EAP course. Accordingly, participants appeared to have developed their knowledge about actions they could take to engage in knowledge-transformation when writing, which could be applied not only to the acknowledgement of sources but also to the use and integration of information from different sources. Such a move, which seems to be the result of the participants' self-reported development of their conceptions of writing through instruction and extensive practice in the course, is similar to what other researchers have referred to as the difference between "knowing what" versus "knowing how" (Ryle, 1949) or "declarative knowledge" versus "procedural knowledge" (Anderson, 1983).

The expansion of participants' beliefs about the ideational dimension could be explained by the instruction in the EAP lessons (see excerpt below). As reported by some participants (5), the ideational focus of some lessons (see Table 13 above) helped them to learn how to synthesise information from different sources and acknowledge it. In addition, they also explained that the instruction (see Table 13) about the importance of rhetorical aspects of compositions (11 learners) as well as the writing practice (14) and recursive writing

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and feedback (11) concerning those issues helped them to develop their critical thinking about the development of arguments using different sources, as illustrated in this excerpt:

[15] Furthermore, she teaches both theoretical and practical aims. Concerning theoretical aims, (...), they provide students knowledge about structured texts. Students learn new techniques, strategies and means. Regarding practical aims, students apply their knowledge to writing tasks; students learn to synthesise information from different source. Students learn to revise classmates' work. Both theoretical and practical aim teaches students new reading and writing techniques which further students' critical thinking. They will be able to argue, to critique, to persuade. (Participant 1, Journal on the lessons at Time 2)

To recap, the changes in some of the participants' task representation regarding the ideational dimension seem to show a qualitative transformation, although given the small number of participants and the method of data collection based on stored task representation, the results should be taken with caution. It is possible that the use of think-aloud protocols could have unveiled a more complex representation of the task during the ongoing process of writing at both points of data collection. Nevertheless, the use of journals to delve into learners' stored task representations revealed their general task schema to deal with writing tasks at two points in time.

The results illustrate how student-writers with a good command of L2 language may start adopting a knowledge-telling approach concerning the use and search for ideas when composing, which may be later modified through a period of writing instruction and practice into a more knowledge-transforming model of composition. This latter approach is characterised by an attempt on the part of the participants to integrate ideas into their texts from different sources, which is in line with Smeets and Solé's (2008) contention that the intertextual integration of ideas is characteristic of knowledge-transforming models.

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We could suggest that adult L2 users with some knowledge of writing and experience may not always adopt a knowledge-transforming model when composing, but this model can be shaped through a period of writing instruction and intensive as well as extensive practice through continuous revision and rewriting procedures. This finding could indicate that the knowledge-telling model may not only be characteristic of novices and/or immature writers as claimed in other studies (Bereiter & Scardamalia, 1987). In fact, previous research has also shown the way in which mature writers may resort to a knowledge-telling approach when they face time limits or deadlines (Bryson, Bereiter, Scardamalia & Joram, 1991). We may speculate that advanced L2 students may move from knowledge-telling to knowledge-transforming when they are trained, challenged and given the opportunity to transform their knowledge through multiple drafts and revision processes.

### ❖ *Textual dimension of writing*

Regarding the dynamics of the participants' task representation in relation to the textual dimension, we also found qualitative changes that indicated an increase in sophistication and complexity across time.

At Time 1 the participants' conceptualisation of *rhetorical features* for composing (21 participants; see Table 12 above) referred predominantly and recurrently to the overall organisation of the text and to coherence and clarity in the expression of ideas. In addition, the participants' description of the task at Time 1 appeared to be very abstract and rather general as it seemed to come from their common sense and/or from procedural knowledge acquired through writing experience in previous instrumental language courses, as illustrated in the following excerpt:

[16] First of all, I should start saying that I don't know what good academic writing is and what it involves, since this is the first time that I'm having this course. But since I'm already in the fifth year of this degree, I think that I can have a vague notion of what it involves. In any

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kind of piece of writing two aspects should be the most important thing: coherence and cohesion, that is, a text has to have logic, must be clear and must be understandable for the reader, that is, has to make sense. (Participant 16, Journal on Task Representation at Time 1)

At Time 2, most participants (20, see Table 12 above) claimed they had qualitatively expanded the range of rhetorical concerns they now addressed in their writing, which were considered more in depth, such as thesis statement, purpose in writing, style, register, audience or rhetorical moves. In this case, the origin of the participants' self-reported stored task representation seemed to lie in the writing instruction and practice in the EAP course. In what follows, we offer three examples of participants' description of the writing task that seem to be instances of repetition of teacher's discourse. The examples are respectively related to (i) the purpose of the introduction in an essay; (ii) the organisation and development of a text in relation to an overall rhetorical goal; and (iii) the structure and purpose of the conclusion in a text:

[17] In addition to this, I have learnt deeply about these three main parts in an academic writing. First of all the introduction which achieves three functions: a) to hook the reader or getting the attention in order to the text is read; b) to give background of the topic, then writer and the reader can reach an understanding, c) to state the information, that is, establishing the writer's viewpoint and informing the reader what and how the writer is going to do it, this is commonly known as thesis statement. (Participant 2, Journal on Task Representation at Time 2)

[18] The main problem for me was to develop the thesis statement, which had to be debatable, arguable and what tells the reader what the purpose of your writing is. (...)I think I already know the function of it and how to

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elaborate and place it. “It must be just one sentence that controls and structures the whole argument” remembering the words of my teacher. (Participant 7, Journal on Task Representation at Time 2)

[19] As far as the conclusion is concerned, you should be able to produce a shocking conclusion because this part of the text is the one the reader will remember. In the conclusion you should do the inverted process of the one you did in the introduction. Remember the funnel, and this time go from your specific information or the results to a broad image of what you have been talking about. Your conclusion should be able to answer the question “so what” and give reasons why the rest of your essay have had any importance (Participant 23, Journal on Task Representation at Time 2)

Apart from the writing instruction they had received, the participants also reported (see Table 13 above) that the methodology adopted in the EAP course involved iterative writing processes of one’s own assignment (14 participants), recursive writing based on feedback practices (11) and collaborative participation in the lessons (7) to improve their written texts. We suggest that the joint effects of writer-internal (i.e. dealing with problems when involved in recursive rewriting) and external factors of the learning environment (i.e. teacher instruction; teacher and peer feedback) could have fostered the qualitative development of the rhetorical representation of the task (Manchón & Roca de Larios, 2011; Wolfersberger, 2007). This, in turn, could potentially lead to higher levels of knowledge-transformation and problem-solving behaviour when composing. This issue will be explored later in our last research question.

## VI.1.4. Summary of the main findings and implications

Our first research question aimed to find out the shaping of our participants' stored task representation over 9 months of writing instruction and practice. The main findings can be summarised as follows:

- Some features of task representation remained unchanged:
  - Half of the participants at both times described the task in ways that could be interpreted as problem-solving (process approach and intertextuality).
  - No changes were registered in the use of the overall terminology (e.g. thesis statement; purpose in writing) to describe the writing task.
  - The different dimensions of writing (ideational, textual and linguistic) were not in conflict at any time of data collection. Accordingly, the conjunction of the three dimensions was integrative for our group of upper intermediate L2 language learners across time.
  - Half of the participants represented the task to themselves in terms of higher-level concerns such as paying attention to appropriacy when writing at both times of data collection.
  
- Overall differences in the participants' task representation were found:
  - There was a qualitative refinement or enrichment of some old conceptions of writing rather than a radical conceptual change (e.g. the *organisation of ideas, use and acknowledgement of sources*).
  - The participants developed a more specific view of their task representation and a more synthetic style when composing. This was shown by a more detailed and direct description of the writing task.

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- Quantitative differences in the representation of the task (dimensions of writing) were found:

- The L2 writers moved from a multidimensional mental model of writing (ideational, textual and linguistic) to a bi-dimensional one (mainly ideational and textual) across time.

- The participants' description of rhetorical features increased quantitatively during the course, while the number of participants who represented the task to themselves in terms of linguistic aspects decreased.

- The decrease in importance of the linguistic dimension does not mean that the participants' mental models became simpler since other higher rhetorical concerns, such as writing from a reader-based perspective, emerged.

- Qualitative differences in the representation of the task (dimensions of writing) were found:

- In spite of moving from a multidimensional model to a bi-dimensional one, the sophistication of the models was greater at Time 2 than at Time 1 due to the breadth and depth with which participants represented each of the features mentioned within each dimension.
- Changes in the representation of the ideational dimension seem to show a move from a knowledge-telling approach (writer-based prose) to a knowledge-transforming one (reader-based prose).
- Changes in the representation of the textual dimension appear to indicate an increase in both quantitative and qualitative concerns about the description of rhetorical features for composing. This development is also in line with a knowledge-transforming approach to composition.

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As a whole, these findings shed light on the shaping of participants' task representation during a long period of writing instruction within a natural learning context. Some empirical, pedagogical and methodological implications can be drawn.

At an empirical level, the number of dimensions that was reported was not indicative of a sophisticated task representation. The number of similarities that were found in the participants' task representation across time could be related to the difficulty involved and the length of time required to shape learners' beliefs (Bemat & Gvozdenko, 2005; Mori, 1999), as well as to the multidimensional representation of the task that they already had at the beginning of the course. This latter aspect could explain why our participants could refine some beliefs about the writing task, while radical conceptual changes were not found. Along the same lines, we believe that it may be possible to find bigger changes in the representation of the task when participants are less skilled language learners who have mono-dimensional models of writing focusing on linguistic concerns (e.g. Kasper, 1997; Victori, 1999) than when they are advanced L2 learners who already have multidimensional models.

The results also show that learners at an upper intermediate level of L2 do not necessarily adopt a knowledge-transforming approach to composition, but that they can be adept at it when they are given the necessary writing practice and instruction. In the present study, this practice and instruction was oriented towards constant rewriting so as to engage learners in problem-solving behaviour in response to peer and teacher feedback. The pedagogical implication that can be drawn from this result is that the use of multiple drafts that foster problem-solving behaviour and constant challenging through rewriting processes and feedback may be useful for the development of students' task representation and their approach to writing.

From a methodological point of view, future research may need to draw on think-aloud protocols to compare L2 writers' stored beliefs about the task with the actual shaping of task representation during the online process of writing. In this respect, as mentioned before, we speculate that there may have been qualitative changes in the linguistic representation of the text (linguistic upgrading) that our journals may not have been able to capture.

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Nonetheless, the use of journals did detect stored knowledge about how students represent the task from different perspectives (orientation towards writing; dimensions of writing; textuality) so as to confront the writing process. We consider that the most encompassing representation refers to the description of writing as a problem-solving process, which in turn can affect performance. This issue will be explored in our last research question.

### **VI.2. Writing goals: their features and development in response to the learning environment**

This section is devoted to the description of the results and discussion of EFL students' goals during a period of writing instruction as a function of *socio-cognitive and affective influences* as well as the *context of action* where goals develop (from RQ2 to RQ3) following the line of research initiated by Cumming (2006) in an ESL context. More specifically, we report (i) participants' intra-individual perceptions of their goals and development within the learning context (RQ2); (ii) the shaping of goals and actions bearing in mind participants' literacy experiences (previous and present) and several socio-cognitive and affective factors within the learning environment (RQ3).

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### **VI.2.1. Participants' intra-individual perceptions of their goals and development within the learning context**

Previous studies in ESL contexts (Cumming, 2006) have put forward a framework to track learners' goals for writing improvement and have underlined the multidimensional and multiple realisations of goals. However, there is a need to investigate student-writers' goals in other contexts systematically and longitudinally and to respond to some questions about the development of goals, such as their cyclical shaping (i.e. from dilemmas to intentions). In addition, the examination of students' self-reported goals for writing could also help us to understand the features of goals and learners' perceptions of the shaping of goals across time within their learning environment. With these purposes in mind, we formulated our second research question:

*RQ2: What were the characteristics of EFL students' writing goals for the EAP course and their perceptions of changes over time?*

Data for this question came from the analysis of 23 students' self-reflective journals about their goals for writing at the end of the period of writing instruction in the EAP course. We should remind the reader that the writing prompt of the journal was:

*Can you tell us if your goals for academic writing (both in Lengua Inglesa IV and in all your other courses) have changed since you've been doing this course? If you think they have changed, can you tell us how? e.g. Are you more/less ambitious now than before? Are you aiming to do something more simple/more complex/longer/shorter or whatever?*

In addition, we also drew on participants' semi-structured interviews at two points in time. As explained in the Method chapter, we made use of both Zhou et al's (2006) coding scheme and

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relevant empirical literature, as reported in Chapter III, to develop a multidimensional taxonomy for our data. In what follows, we shall first explain the characteristics of goals and then the participants' perceptions of changes in goals over time.

### **VI.2.1.1. Characteristics of EFL student-writers' goals**

Following Cumming's longitudinal research project (2006), goals involve (i) a certain force; (ii) a semiotic object; (iii) a certain origin; (iv) perceptions of the responsibility for achieving goals; (v) the pursuit of actions to accomplish goals; (vi) a context of action; and (vii) a relation to long-term aspirations. On these grounds, we coded our journal and interview data looking for these patterns.

Given the complexity of the results, we shall first describe the first four features of goals (force, object, origin and responsibility) and the remaining characteristics will be examined separately and in depth when reporting the data regarding RQ3. It should also be clarified that the prompt of the journal asked students to reflect on their goals at the end of the instructional period in the EAP course. Therefore, the journal offered rich information on the cyclical development of goals (force of goals), and the goal objects. Data on the origin of goals and perceptions of the responsibility for achieving goals had to be gathered through specific questions in the interviews.

#### **❖ *Force of goals***

In line with Zhou et al.'s results (2006), we also found that our student-writers' goals could be formulated as *dilemmas, intentions or outcomes* (see Table 17). Dilemmas applied to those instances in which participants recognised a problem, conflict or disjunction about their learning as a result of a self-reflection process, as shown in the following example taken from the participants' journals:

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[20] However, I'm aware writing is not my forte and even when I think I'm more ambitious, I'm not confident about my writing skills. When I finish a writing I am not sure if it is good or wrong. I have tried to do more complex writings using complex structures, but I'm never happy with my work. I think it's a confidence problem, not a writing one. (Participant 5, Journal on goals at Time 2)

As shown in [20], the participants normally referred to dilemmas from the perspective of their affective states related to writing. *Intentions* were formulations in which learners expressed their desire to achieve a specific goal, as shown in this excerpt:

[21] I try to avoid some structures that in spite of being grammatically correct, they are not likely to be used by a native person or to appear in an English text. (Participant 15, Journal on Goals at Time 2)

There were some cases in which the formulation of *intentions* could also involve the actions implemented to achieve the desired outcomes, although this type of behaviour was less frequent in the data. Lastly, student-writers reported having accomplished a goal, in which case goals were formulated as *outcomes*. This is illustrated in the following excerpt:

[22] To sum up, these lacks that I had in language and text structure have changed and they are now skills learnt of strengths in my English language use. This course has been very profitable for me. (Participant 2, Journal on Goals at Time 2).

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All the *outcomes* involved a high degree of satisfaction that arose from an assessment of their self-imposed goals rather than an evaluation in relation to a standard level of attainment imposed by an external agent (Weiner, 1992). This issue uncovers the emotional factors that are linked to the rational status of goals (Cumming, Busch & Zhou, 2002). In addition, the emotional assessment of goals is also in line with self-regulation theories according to which self-reactions to learning can entail positive feelings and self-satisfaction when learners are able to achieve what they value (Bandura, 1986; Locke, Cartledge & Knerr, 1970).

Table 17. Force of goals: frequencies of thematic units and number of participants

FORCE OF GOALS	N°TU	TOTAL N°TU	N°P (n=23)
Dilemmas	5	110	4
Intentions	27		12
Outcomes	78		23

**NOTE.** N° TU= number of thematic units; TOTAL N° TU= total number of thematic units; N° P= number of participants.

As shown in Table 17, the most frequent category of the force of goals was *outcomes* since all the participants (23) reported more than one thematic unit in the form of achieved results of the learning process. Half of the participants (12) reported their goals as intentions and only four student-writers formulated their goals as dilemmas at the end of the writing instruction period.

These results show some similarities and differences with respect to previous research in ESL contexts. As for similarities, *dilemmas* were found to represent a small proportion of the formulated goals, as in Zhou et al.'s study (2006) in which the low frequency of goals expressed as dilemmas remained constant over the two phases of the research (from

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preparatory ESL courses for university entrance to university settings). Since the present data about goals in our study were restricted to one point of data collection at the end of the academic year, the participants could have reported their learning conflicts, uncertainties about learning or their abandonment of goals in the form of dilemmas. Participants could have formulated goals in the form of dilemmas if they had been dissatisfied with their learning process or with the goals they had aimed to achieve but did not attain. As this was not the case, we could therefore postulate that dilemmas were not a representative form of goals among our participants.

*Outcomes* were a rather recurrent state of formulation of goals in both Zhou et al.'s (2006) study and our present research, although they were more frequent in our investigation. We believe that the different instruments of data collection (journals in our study versus interviews in theirs) could explain the divergences between both studies. Specifically, in Zhou et al.'s research, goals formulated in the form of *outcomes* prevailed over *dilemmas*, but *intentions* were the most predominant state of formulation of goals. In that study, the exploration of goals was carried out using semi-structured interviews, which included questions formulated in the present continuous form (i.e. "are you trying to improve?"), or alternatively, in the present simple tense followed up by questions about improvement also formulated in the present continuous tense or in the conditional form (i.e. "what would you like to improve about this?"). These forms could have prompted students to report their goals mostly in the form of intentions at the beginning and at the end of the two phases of the research (ESL and University courses).

We attempted to overcome these problems about the possible limitation in the formulation of goals by giving our participants a writing prompt which allowed them to reflect on their goals in all their possible cycles of development without restricting their views or answers. In other words, we expected that our participants could formulate their goals as having been achieved (*outcomes*), as goals to be pursued in the present/future (*intentions*), or as conflicts or problems in learning (*dilemmas*). Nevertheless, we found a prevalence of goals formulated as *outcomes* (78 thematic units: TU onwards) over *intentions* (27 TU), which also

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makes us think that the point of data collection (Time 2) could have led the participants to concentrate on the self-assessment of goals (their achievement or lack of success in attaining them) instead of formulating goals in the form of intentions. Therefore, it could be concluded that the formulation of goals as *dilemmas*, *intentions* or *outcomes* seems to be malleable and highly dependent on the time and instruments of data collection. However, there might also be a second explanation for our participants' reporting of goals as *outcomes* rather than as intentions, which is related to the context of instruction. As suggested by Anderman and Maehr (1994), the characteristics of the learning environment may determine the goals that individuals will establish since they evaluate the "potency" of their goals on account of the perceptions of the opportunities that the learning environment will offer them for the accomplishment of their goals (Heckhausen & Kuhl, 1985). Intimately related to the learning environment is the proximity of goals, as students can establish goals that are proximal or distant depending on how far they are projected into the future. This temporal distance of goals, together with other goal properties (specificity and difficulty), will also affect individuals' behaviour and their self-regulation, with short-term goals usually resulting in higher motivation and self-regulation than distant goals (Bandura, 1997; Bandura & Simon, 1977; Boekaerts, Pintrich, & Zeidner, 2000; Jeffrey, 1977; Locke & Latham, 1990).

In our case, the participants had finished the writing lessons and lacked the prospects of an immediate learning environment in which to set new writing goals in other courses of their degree. Therefore, their perceptions of learning seemed to be limited to positive self-evaluations of their accomplishment (goals formulated as *outcomes*) and, as a result, did not mobilise immediate goals for the present or future (goals as *intentions*). This may be indicative of the situational condition for the shaping of goals (Cumming, 2012; Cumming et al. 2002; 2006). These findings are also consistent with Zhou et al's results about the formulation of goals in relation to the context of instruction (ESL or university courses), as their participants were found to experience an increase in aspirations to write for university courses when they were in the university context as well as a decrease of interest in university admission tests once they had passed them.

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### ❖ *Goal objects*

Goal objects comprised the semiotic content of goals because, as Searle (1983: 1) noted (reviewed here through Cumming, 2006), intentions are always “about” something. Table 18 shows the category of goal objects drawn on the students’ journals, some examples of goal objects, the frequencies of thematic units and the number of participants who reported them.

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Table 18. Frequencies of thematic units about goal objects and participants who reported them

GOAL OBJECTS	EXAMPLES FROM STUDENTS' JOURNALS	N°TU	TOTAL N°TU	N°P (n=23)
Content	Throughout the year I have learnt to pay more attention to what I am writing.	7	110	5
Language	First of all, I wanted to improve my grammar, phrase order and spelling. Secondly, I was interested in acquire a more specific vocabulary.	34		14
Rhetoric	I want to write better and better, develop a good thesis statement about any topic and provide all the ideas that I can in order to justify the aims of my writing.	24		12
Writing skill	Now I see how important academic writing is for my future, and my intention is to keep improving my skill in writing.	22		13
Complexity	My aim is always to do something more complex every time I have to produce a piece of writing. If not, it would be as if I had not learned anything from Lengua Inglesa IV this year.	16		13
Course	I have never thought about my goals for academic writing. As I have already mentioned in the interviews for the research group my only goal was passing the subject.	6		4
Teachers and other people	Well, to be honest when this course started, I didn't have any goal but I guess that with the passing of time, that has changed. I think that as the time went by, I realized that I had to do a lot of works, and, although at first I did not care about it very much that soon changed. I realized that I had to elaborate extended essays, which would be later analyzed by my classmates and teachers, so I think that made me wanted to do it better.	1		1

NOTE. N° TU= number of thematic units; TOTAL N° TU= total number of thematic units; N° P=number of participants.

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As shown in Table 18, the goal objects most frequently mentioned were language (14 participants), followed by writing skill (13), complexity (13), and rhetoric (12), which are commonly assessed features in ESL compositions and are therefore taken as standards of writing achievement in second language curricula (cf. Skehan, 1998). The remaining goal objects (content, course, teachers and other people) were mentioned by so few students (5, 4 and 1 respectively) that they were considered irrelevant. It is also interesting to note that the most frequent goal object (*language*) in our study was also one of the most frequently reported goals in other studies in ESL contexts (e.g. Cumming, Kim & Eouanzoui, 2007; Zhou et al, 2006). This result seems to be indicative of some predominant goals for writing on the part of language learners regardless of the learning context (ESL or EFL).

In contrast with *language* objects, which were clearly related to linguistic accuracy, *complexity* objects involved our learners' attempt to achieve a higher degree of difficulty in their written texts. They reported aiming to upgrade their linguistic expression as shown below:

[23] Now I am more ambitious than before. I try to reflect in my texts what I have learnt in class. This ambition helps me to make my texts more complex using strategies, vocabulary and grammar that I did not use to use before because I tried to avoid mistakes. (Participant 22, Journal on Goals at Time 2)

Along the same lines, *writing skill* was also a rather abstract concept and learners tended to refer to this goal object as if it entailed a higher level of difficulty than *rhetorical* issues on their own.

As a whole, the most frequent goals reported by the participants could be grouped into two main dimensions: goals for learning-to-write (rhetoric and writing skill) and goals for writing-to-learn (language, complexity). In both cases, these goals objects could be formulated as intentions or as outcomes, although there were more participants who reported

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them as fulfilled goals (outcomes) than as aspirations for the future (intentions) (see Table 19).

Table 19. Goal objects and their force

GOAL OBJECTS	FORCE OF GOALS AT TIME 2								
	DILEMMAS			INTENTIONS			OUTCOMES		
	N°TU	TOTAL N°TU	N°P (n=23)	N°TU	TOTAL N°TU	N°P (n=23)	N°TU	TOTAL N°TU	N°P (n=23)
Language	4	5	3	7	27	5	23	78	14
Rhetoric	0		0	5		1	19		11
Complexity	0		0	7		7	9		7
Writing skill	1		1	2		2	19		12
Content	0		0	2		1	5		4
Course	0		0	4		3	2		2
Teacher and other people	0		0	0		0	1		1

NOTE. N° TU= number of thematic units; TOTAL N° TU= total number of thematic units; N°P= number of participants.

Participants' intentions for the future focused mainly on linguistic accuracy and complexity, but there were so few students that formulated those goal objects that they can be regarded as incidental. As reported above, the predominance of goal objects formulated as outcomes rather than as intentions could be the result of the time of data collection and/or the student-writers' limited prospects of writing in their future learning environment. The participants' self-reported achievement of goals referred basically to language (14 participants), which illustrates the student-writers' perception of the language-learning potential of L2 composition (Manchón, 2011; Manchón & Roca de Larios, 2011). Other goals reported as outcomes or as learning achievement comprised overall writing skill (12) and rhetoric (11),

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which is consistent with their perceptions of the learning context, that is, the lessons in the EAP course. As previously explained in RQ1, participants affirmed that the writing lessons revolved around linguistic and textual issues and offered them the opportunity of learning-to-write but also of learning the L2 through writing (writing-to-learn). We could take this result as evidence of the shaping of individuals' goals as a function of their literacy experiences and immediate context of action in which individuals are immersed and where their goals originate (Lantolf, 2000; Lantolf & Poehner, 2008; Wells, 1999).

### ❖ *Origin of goals*

Participants' responses to some questions in the semi-structured interviews showed that their goals for writing had their roots in the EAP course rather than in other courses of their degree studies. The formulation of these questions on the interviews was:

- How do teachers help you to improve your writing?
- Is there any difference with respect to the way other teachers helped you to write in other courses?

Most of the participants (20) reported at both times that their EAP teacher was the only instructor in their degree who helped them improve their writing in English by providing them with feedback on their essays. Only three student-writers stated at both times that there were other teachers in charge of mainstream courses who were also currently helping them improve their writing since they asked students to hand in assignments. Nevertheless, participants explained that mainstream teachers were concerned about the content of the assignments rather than about the L2 language. As for the participants' previous literacy experiences in other language courses, they also stated that they had written occasional essays that did not involve a rewriting process. Therefore, their literacy experience in the EAP course was reported as being different from other mainstream and language courses (both previous and present), as shown in the next excerpts:

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[21] Interviewer: How do teachers help you to improve your writing?

Student: She (the writing teacher) gives me feedback...she tells me how to correct my errors and things like that. Her lessons are different.

Interviewer: In what sense?

Student: The focus of the lessons is the written text. In other courses you have to show your knowledge about the subject and it isn't so important how you write. It's true that they tell you to be careful about the language mistakes in the exam and all that stuff...but her lessons (the writing teacher's lessons) are focused on writing, they are very specific in that respect. (Participant 8 at Time 2).

[22] Interviewer: How do teachers help you to improve your writing?

Student: There is one thing that she (the writing teacher) does that helps me a lot: instead of correcting my mistakes, she highlights them and then I have to look for the correct form of expressing what I mean. I think that helps me because I remember it and I also learn.

Interviewer: Are there other teachers who help you to write?

Student: No, there aren't other teachers.

Interviewer: Is there any difference with respect to the way other teachers helped you to write in other courses?

Student: Yes, she (the writing teacher) helps you more because she wants us to learn and do it right. She corrects everything and she always has time for you. She is more concerned about it than other teachers. Other teachers just told you what you had to do and that was all and then you were on your own. (Participant 3 at Time 2)

[23] Interviewer: How do teachers help you to improve your writing?

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Student: She (the writing teacher) gives me feedback.

Interviewer: Is there any difference with respect to the way other teachers helped you to write in other courses?

Student: Yes, I prefer the way she does it. In other courses like “Lengua Inglesa I, II and III” [they are previous language courses] they told you how you had to write and that was all. They marked your assignments but they didn’t help you much. There wasn’t feedback or error correction. There was nothing (Participant 7 at Time 1).

In contrast to ESL studies in which learners appeared to be the main originators of their goals in pre-university programmes and university courses (Cumming, Busch & Zhou, 2002; Zhou et al. 2006), our EFL participants’ goals appeared to be constrained to the EAP lessons in which they were pushed to write and rewrite their texts, which in turn made them focus on their language and rhetorical problems. This issue also illustrates that in the current EFL context of investigation there are limited L2 learning opportunities for writing development beyond the confines of EAP classrooms since writing in other mainstream courses seems to be basically devoted to the transmission of knowledge.

The differences in the origin of goals between our participants and those in ESL settings should be interpreted with respect to the literacy experiences offered in both contexts. Zhou et al.’s (2006) longitudinal investigation of the shaping of students’ goals was complemented with a parallel study conducted by Cumming et al. (2006), in which they explored the participants’ learning of academic writing in their university studies in Canada. In this ESL context, there were also courses, like in our EFL setting, in which students were expected to respond critically to ideas when composing (EAP lessons), and other mainstream courses in which the critical response revolved around the content of the disciplines (Cumming et al. 2006). However, differing from our EFL setting, in the ESL context studied by Cumming (2006) there was a gradual progression from learners’ pre-university studies to freshman composition courses and then to mainstream university studies. This was done

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through bridging and foundation courses that helped these students to engage in critical thinking as well as in composing according to academic writing conventions while limiting the use of content knowledge. Given this gradual progression of writing throughout the studies and the writing practices in different courses (although learners also viewed them as limited), it was not surprising that students could consider themselves to be the main originators of their goals during the two years of the research.

Although the origin of our participants' goals seemed to be dependent on the instruction and practice in the EAP course, they also considered themselves responsible for the achievement of their own goals.

### ❖ *Responsibility for goal achievement*

Our 23 participants tended to see themselves as responsible for their written performance at both times of data collection. In the semi-structured interviews, they were asked the following questions about the help received for their writing:

- Are there any other people who help you to write?
- Do you ask anybody for help when writing?

The participants' responses were consistent across time since around half of them (11 at T1 and 13 at T2) reported doing their assignments on their own. Therefore, there were no other people who helped them to write and they did not ask for external help either since they used their own tools for composing (like dictionaries, Internet, grammar books). The remaining participants, while considering themselves the main agents of their goals for writing, explained that there were other people who helped them with their writing and they also asked their peers for feedback (6 at T1 and 7 at T2), or resorted to English native-speaker friends or Spanish friends with a good command of English who could help them to improve their journals and writing assignments (6 at T1 and 3 at T2). Accordingly, although the origin of goals seemed to be restricted to the EAP course, the participants adopted an intentional

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orientation to learning (Bereiter & Scardamalia, 1989; Cumming et al. 2002; Cumming et al. 2007; Zhou et al. 2006). This means that the student-writers in this study were actively engaged in their writing process by engaging in self-initiated actions for improvement or asking for help, if they considered it necessary.

Closely related to intentional orientation is learners' involvement in self-regulation processes to assess their writing achievement and possibly reformulate their goals for the future on account of their level of attainment (Bandura, 1991; Cervone, Jiwani, & Wood, 1991; Pintrich, 2000d; Prussia & Kinicki, 1996; Zimmerman, 1998, 2000). We turn to this issue in the next section about learners' perceptions of changes in their goals.

### **VI.2.1.2. Participants' self-reported shaping of goals**

Our taxonomy of goals included a category referred to as "directional pattern of goals", which involved participants' critical evaluation of the goals that they considered to have achieved (*outcomes*) as well as those goals that were acknowledged as conflict or challenges in writing (*dilemmas*). Dynamic goals were those instances in which student-writers formulated new desires or wishes for the future after the accomplishment of a goal (*outcomes*) or after the acknowledgement of a problem or conflict in learning (*dilemma*). In contrast, goals were considered to be *static* when participants explained their perceived achievement or dilemmas without formulating new goals for the future.

It should be reminded that *dilemmas* were not considered a very representative category in our taxonomy due to the small number of participants who reported them and their low observed frequency. However, the aggregation of outcomes and dilemmas made it possible to explore their joint directional pattern, which was considered important for both theoretical and empirical reasons. From a theoretical viewpoint, the distinction between *dynamic* and *static* is grounded in self-regulation theories in cognitive psychology (Bandura, 1986; Bandura & Cervone, 1986; Zimmerman & Bandura, 1994) and in Dörnyei and Ottó's process model of L2 motivation (1998) in SLA.

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According to these models, there is a cyclical process by means of which after achievement, learners engage in self-reflection with the result that the realisation of an accomplished goal may result in the establishment of a new goal to be pursued. Along these lines, Cumming et al. (2002) suggested that we could expect learners to formulate first dilemmas that could be subsequently transformed into goals, although the scholars could not show this cyclical process in their own data and therefore their claim remained empirically unverified. Therefore, we examined the possible transformation of both *dilemmas* and *outcomes* into new goals.

As shown in Table 20, we only coded 83 out of a total of 110 thematic units about goals for their directional pattern since the distinction between dynamic and static only applied to goals formulated as *dilemmas* (5) and *outcomes* (78). There were 27 thematic units on *intentions* that were not coded as dynamic because these goals, in the form of desires or wishes to be pursued, were considered to imply a dynamic directional pattern per se (e.g. “I want my texts to be grammatically correct”). However, it was not clear whether those intentions were the same ones they had at the beginning of the course, whether they were based on their perceived achievement, as was the case of *outcomes*, or whether they were drawn on students’ attempt to overcome problems, as in the case of *dilemmas*.

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Table 20. Directional pattern of goals: frequencies of thematic units and participants who reported them

DIRECTIONAL PATTERN OF GOALS	N°TU	TOTAL N°TU	N°P (n=23)
Dynamic	19	83	15
Static	64		20

NOTE. N° TU= number of thematic units; TOTAL N° TU= total number of thematic units; N° P= number of participants.

Most participants (20 out of 23) referred to their goals as *static* (64 TU out of a total of 83). Given that the few dilemmas (5) in our data were always reported as *static*, the results do not appear to support Cumming et al's (2002) suggestion about the transformation of dilemmas into goals. The results should be taken with caution, however, due to the few dilemmas reported. In addition, we did not examine the possible development of those initial dilemmas students had at the beginning of the academic year, which could have been solved during the course through the potential transformation of dilemmas into goals. Therefore, the dilemmas reported at Time 2 might not have corresponded to the ones they had at Time 1.

The predominance of static over dynamic ones, as shown by the number of participants who mentioned them (20 participants versus 15) and the number of thematic units identified (64 TU versus 19 TU), seems to suggest that our participants tended to focus more intensively on their feelings of self-satisfaction about their achievement than on possible new goals after having reached a given self-standard. Nonetheless, it should be highlighted that only 5 participants in our study held a completely static view of their writing achievement in the EAP course since there were 15 student-writers, who formulated a few dynamic goals (19).

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Consequently, the results concerning those 5 participants could be indicative of atypical reactions with regard to learners' responses to achievement in writing since they did not seem to increase their aspirations for writing (formulation of new goals) after perceiving success. According to some researchers (Atkinson, 1964; Festinger, 1942; Lewin, Dembo, Festinger & Sears, 1944; Rotter, 1966), students' aspiration level is dependent on the subjective expectation of achievement. In skill-related tasks like writing, the aspiration level tends to increase after perceived goal achievement (success), while it decreases in the face of failure. We interpret these results in light of their learning context for writing improvement and the distance with which goals for the future were formulated. As described before, the origin of students' goals was based on the EAP lessons and they did not have clear ideas about their writing needs in other courses of their degree. Therefore, the results are also indicative of the ebb and flow of writing goals.

Perceived success on its own may not automatically result in an increase in aspirations because achievement must be contextualised in a given situation in which further stimulus can be offered to maintain students' level of motivation and formulate goals accordingly. As pointed out by Pintrich (2000d), goals can only be understood in relation to individuals' regulation of their cognition, motivation, affective states and context. Along the same lines, Ford (1992) posited that the engagement in behaviour is determined by both learners' capability beliefs (self-efficacy beliefs) and context beliefs. Students' context beliefs refer to the responsiveness of the environment, which must be challenging and supportive so that individuals can be motivated to establish goals and pursue them. A similar notion was highlighted by Heckhausen and Kuhl (1985), who referred to the feasibility of individuals' forethought processes to pursue goals and "cross the Rubicon" so as to commit to their goals and engage in actions. Such feasibility concerned people's opinions about the possibility of obtaining the expected outcomes and the positive or negative influence of the context in that respect.

Our participants did not perceive that their future learning context after the EAP course could offer them the opportunity to develop their writing skills, which could explain

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the absence of new formulated goals for the future. Similar results were also reported by Cumming et al. (2002), who explained that their participants formulated goals in relation to their present learning situations and although their learners seemed to be motivated to improve their writing for the future and formulate goals accordingly, they found it difficult to speculate about their writing needs even when they were asked to do so because that prospective learning situation was not part of their current context.

As for dynamic goals, there were 15 learners in our study who evaluated their writing process positively during the academic year, considered it to be a successful outcome of their learning and formulated new goals to pursue in the future. Accordingly, it seemed that the aspiration level of these 15 participants (aspiration for the future) was readjusted in relation to the previous level of attainment (Weiner, 1992). It should, however, be noticed that the formulation of dynamic goals was very abstract and general, probably because of the reasons adduced above regarding the unknown writing demands in future mainstream courses and the temporal distance with which those goals were formulated. The formulation of these dynamic goals could therefore be considered as initial wishes or desires (Gollwitzer, 1993; Heckhausen, 1987; Heckhausen, 1991; Heckhausen & Kuhl, 1985), which might not necessarily transform into actions since there was no evidence of clear goal objects or commitment to them (Locke & Latham, 1990), as shown in this extract:

[24] It was this year that I realised that this kind of writing is useful for the real life, for instance, to write a personal statement in order to apply for a post grade. It was at the beginning of this year that my goals changed again. I became more ambitious than before and I am more ambitious every day. Apart from what I wanted before, I want to write better and better every day and I do not want to find any topic or assignment or whatever kind of writing very difficult (Participant 9, Journal on Goals at Time 2)

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To summarise, we could suggest that our results do not seem to support Cumming et al's (2002) contention that students formulate dilemmas in the form of negative affective states or dissatisfaction that can be later transformed into goals. All of the few *dilemmas* that were reported were static because the participants who reported them expressed dissatisfaction with their learning process and/or conflict or problem in learning and they did not try to solve it. Only the participants' perceptions of their accomplishment of goals (*outcomes*) seemed to be conducive to the enhancement of motivation and self-satisfaction, which in some cases (15 out of 23 participants), resulted in the formulation of new intentions. Therefore, in the case of our participants, the formulation of new intentions was related to positive affective states (*outcomes*) rather than negative ones (*dilemmas*). Accordingly, the cyclical reformulation of goals in terms of the phase of forethought, monitoring, control and reflection only applied to goals formulated as *outcomes*.

### **VI.2.2. Summary of the main findings and implications**

Our research question number 2 delved into the characteristics of the participants' writing goals for the EAP course and their perceptions of changes in goals throughout time. The main findings can be summarised as follows:

- In line with ESL studies, goals were found to involve a certain force, a semiotic object, an origin and certain responsibilities.
- The force of goals, their objects and origin were related to the current context of instruction in the EAP course and the writing demands it involved, while the responsibility for the achievement of goals was always based on the student-writers themselves.
- The cyclical reformulation of goals after achievement seemed to arise from participants' perceptions of self-satisfaction and attainment rather than from the acknowledgement of learning problems or conflicts.

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The present results confirm Cumming's (2012) claim that goals depend on the social context in which students are engaged and these goals also follow students' development since the new intentions for the future were constructed on the basis of their perceived level of attainment.

From a pedagogical point of view, the results also illustrate the handicap that EFL learners face for the development of their motivation and writing improvement as a result of perceiving the EAP lessons as the only place where they can both struggle to enhance their L2 language and writing abilities and be helped to do so. Although participants needed to write for other mainstream courses, the focus of their writing tasks did not seem to motivate them to establish goals or improve their performance even though they regarded themselves as responsible for their own writing process. As reported by the participants, the purpose of writing essays in mainstream courses was to display their knowledge (knowledge-telling) about the content of the courses rather than to engage in knowledge transformation through multiple drafts that could lead them to learn about the L2, the content of the disciplines and the rhetorical process of writing. Given this situation, it is understandable that our participants reported their achievement in the EAP course more intensively as static outcomes rather than as a point of departure for new learning achievement in other courses of their degree that they might take in the following academic years.

Along these lines, Sasaki (2009) reported changes in Japanese EFL learners' representation of the task and in their pursuit of higher-level goals during a period of three and a half years as a result of their literacy experiences abroad. She contended that those EFL learners who had spent between four and eight months abroad in English-speaking countries formed "L2-related imagined communities" or in other words, imagined communities where they could use English for real communicative purposes like when composing for the ESL classes and other overseas courses they had taken abroad. More interestingly, these participants explained that they paid attention to the content as well as to the rhetorical refinement of their essays when they came back home, as they had been doing during their experience abroad. Given that none of the participants who stayed at home reported such

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changes during the period of data collection, Sasaki contended that L2 writing had become a different activity for learners who had been abroad for long periods of time and for those who had not. We suggest that Sasaki's description of "L2-imagined communities" also seems to be in line with a knowledge-transforming approach to composition, which students appeared to learn abroad in several courses (not just English courses) and tried to keep in mind when they returned to their home country and the L2 classes diminished. Nevertheless, Sasaki (2009) did not explain whether learners kept on improving their written performance and imagining L2 communities when they returned home because they also needed to write in their L2 for other mainstream courses. In fact, it should be recalled that her participants were majoring in British and American studies.

On these grounds, we could propose that our participants also got used to writing following a knowledge-transforming approach in the EAP course, but that their negative prospects about the use of writing in other courses of the degree made them appear more interested in acknowledging their positive learning outcomes than in pursuing new challenging goals for the future. We would tentatively suggest that if our participants had perceived future mainstream courses as more supportive and more likely to foster knowledge-transforming through multiple drafts, they could have formulated new goals for the future more frequently so as to keep up their writing motivation and level of written performance reached in the EAP course. Therefore, the promotion of knowledge-transforming tasks in mainstream courses could be a way of overcoming some of the problems attributed to FL settings, which are considered less motivational than SL contexts since in the former environment students' interest in writing in English is normally just restricted to English classes (Sasaki, 2009).

### **VI.2.3. Student-writers' shaping of goals and actions in relation to socio-cognitive and affective factors within their learning context**

Cumming (2006) contended that students' goals for writing varied in relation to their long-term aspirations for university studies or career plans. However, the shaping of students' goals in Cumming's longitudinal project could have been conditioned by the adaptation of goals to different learning contexts during two distinct academic years since learners moved from preparatory ESL courses for university entrance exams to university studies.

In the present study, we track EFL learners' goals for writing eight months apart during the same academic year so as to shed light on the development of goals and avoid possible problems like the adaptation of goals to different learning situations. Accordingly, we describe the shaping of goals and possible pursuit of actions at different points in one academic year for both their university degrees and their long-term career plans bearing in mind some relevant antecedents of goals (self-efficacy beliefs, past performance and outcome expectations) and the context of action for writing development (i.e. relation to long-term aspirations). On these grounds, we formulated our third research question (see below), which is also visually represented in Figure 19:

*RQ3: Were there actual changes observed in EFL students' writing goals for their university studies and future careers bearing in mind their self-efficacy beliefs, past performance, outcome expectations and context of action?*

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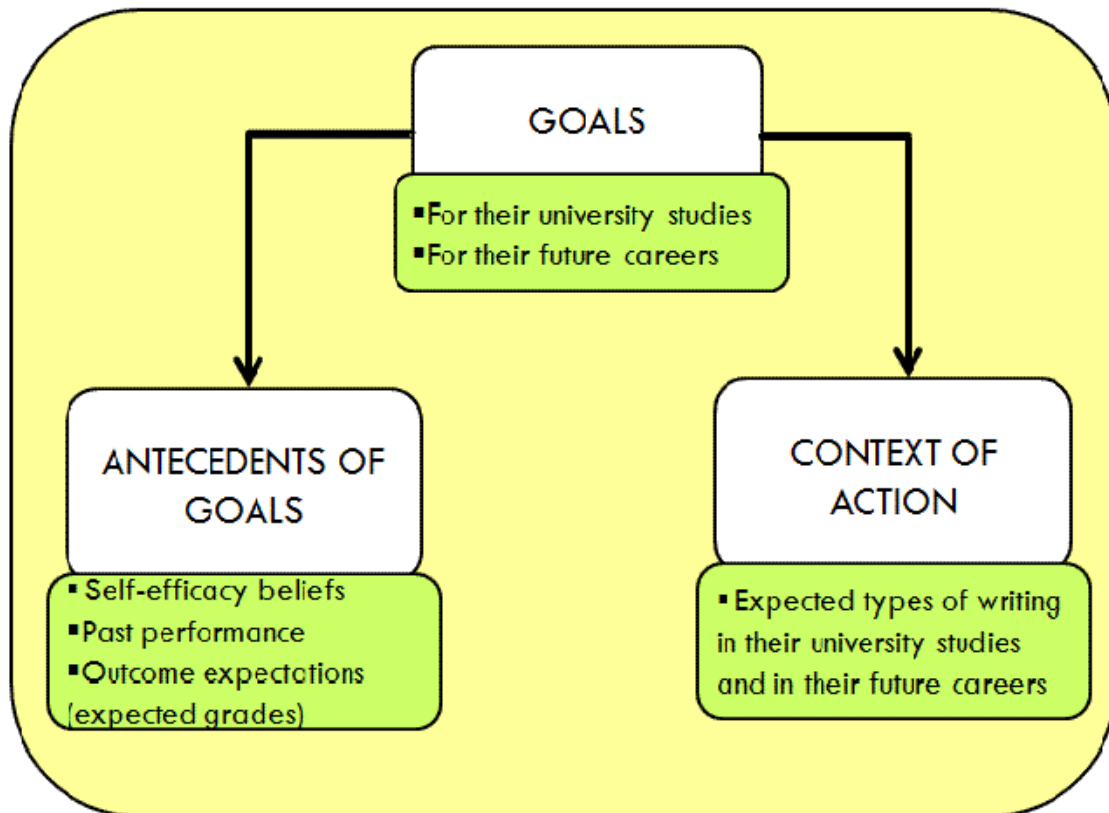


Figure 19. Examination of the shaping of participants' goals bearing in mind the antecedents of goals and the context of action

Data for this research question came from semi-structured interviews based on Cumming's (2006) research and conducted in October and June of the same academic year. The specific questions that were formulated are shown in Figure 20:

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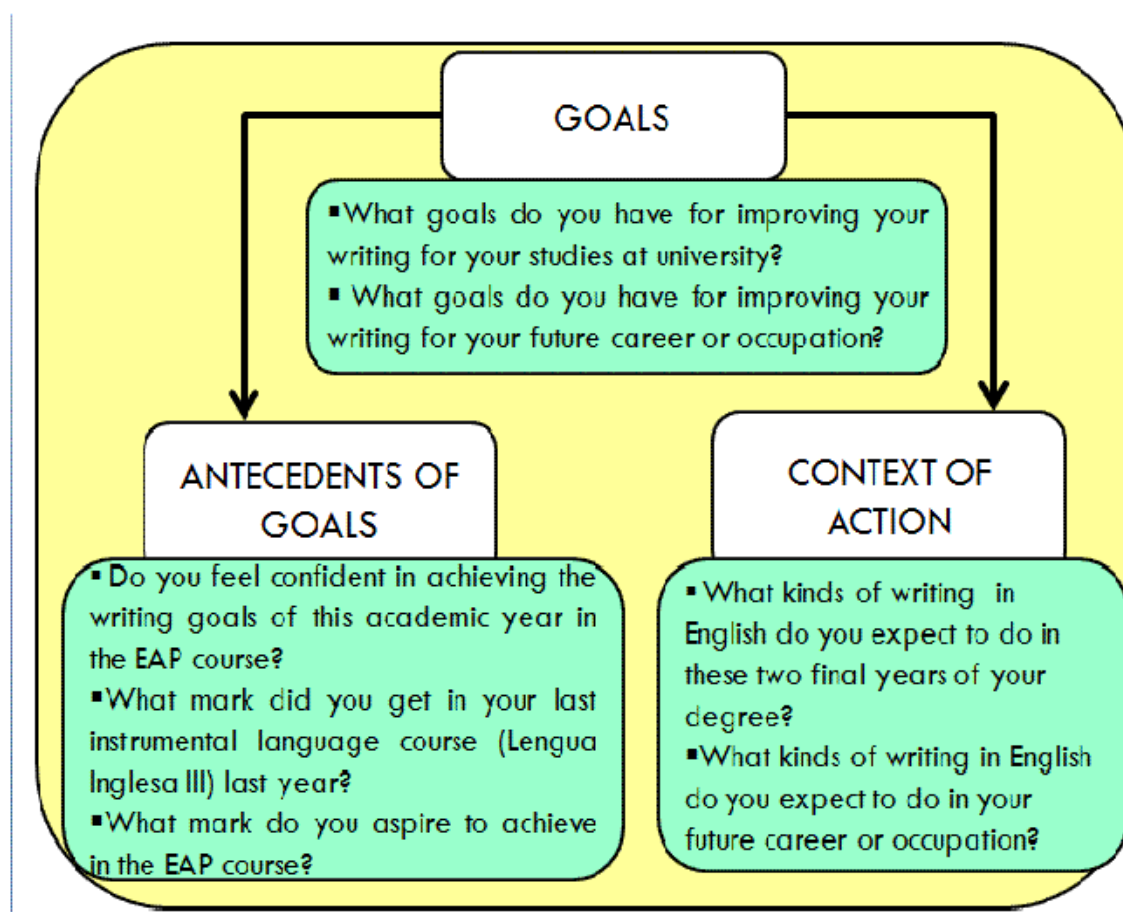


Figure 20. Questions formulated in the semi-structured interviews at two points in time (October and June)

As explained in Chapter V, the participants' responses to each question in the interview were divided into different categories. In order to report and discuss the results of each section, we shall offer tables and figures that depict the occurrence of each category of the interview, or in other words, the number of participants who mentioned each category at two points of data collection.

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### **VI.2.3.1. Participants' goals for writing improvement for their degree studies and their future careers**

Regarding goals for writing improvement in university studies in the case of our participants, they tended to remain unchanged across time, although some idiosyncratic differences were also found in the description of the quality of goals. The findings also indicate the intimate connection between goals and actions.

Although the question for eliciting data in the semi-structured interviews was directly addressed to the participants' goals, only half of the participants (see Table 21) at both times (10 at T1 and 9 at T2) reported specific goal objects for their studies (i.e. language, rhetoric) or no goals. The goal objects were broad in their formulation, stable across time and rather characteristic of language learners. Specifically, goals along the writing-to-learn dimension (language goals) seemed to be the most frequently reported, although in a very moderate way (4 participants at T1 and 5 students at T2). The remaining participants explained at both times of data collection (13 at T1 and 14 at T2) the actions that they would take to improve a global goal such as overall writing in their university studies (i.e. literacy processes) rather than formulating goals explicitly.

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Table 21. Goals and actions for writing improvement for university studies at two points in time

		TIME 1 (n=23)	TIME 2 (n=23)
GOALS	Language	4	5
	Rhetoric	1	0
	Native-like	2	1
	Overall writing improvement	3	1
	None	0	2
ACTIONS	Literacy processes	12	13
	Self-regulation	1	1
<b>Total number of participants</b>		<b>23</b>	<b>23</b>

In addition, there were more participants who tended to mention actions rather than specific goals, which is understandable because participants were asked to think about distant goals for their future studies. For this reason, student-writers may have found it easier to think about an abstract and higher-level order goal, such as overall writing improvement, for which general actions, like literacy processes (reading and writing), could be mentioned, rather than specific goal objects to be pursued for detailed writing needs that did not form part of their current learning context. Furthermore, it is also understandable that the participants reported general goals since goals are not normally specific when they are first formulated and they are rather refined when working on specific tasks (Bandura, 2001).

Higher-level order goals like the desire to improve one's writing ability can be composed of different subgoals. We found that some participants who reported actions also described specific goals, while others just kept on having in mind the overall goal of writing improvement. Table 22 shows the goal objects that were embedded within actions and the number of participants who referred to those goals across time.

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Table 22. Goals embedded within actions for writing improvement for university studies

ACTIONS	EMBEDDED GOALS	TIME 1 (n=23)	TIME 2 (n=23)
Literacy processes	Overall writing improvement	4	5
	Language	6	3
	Rhetoric	2	1
	Fluency	0	4
<b>Total number of participants</b>		<b>12</b>	<b>13</b>

As a whole, the overlap between goals and actions seems to be indicative of their intimate interrelationship since actions are the cognitive operations that are enacted during a problem-solving process to achieve a goal and solve a problem (Anderson, 1980; Cumming, 1989). Our results could also be taken as evidence of what other researchers have referred to as the distinction between learners' product or cognitive goals versus process or metacognitive goals (Schunk & Rice, 1989; Schunk & Swartz, 1993a, 1993b). Product goals are aimed at developing specific cognitive or linguistic objects (what we refer to as goals in this study), while process goals are oriented towards the implementation of strategies (what we understand as actions). In other words, our results are indicative of the interrelationship between goals and actions for achievement, which is consistent with the theoretical definition of goals as embedded in the construct of strategies, according to cognitive psychologists (Baron & Sternberg, 1988; Hayes, 1989; Newell, 1980; Newell & Simon, 1972; Segal, Chipman & Glaser, 1985). As explained in Chapter III, strategies are "deliberate actions or sets of procedures that learners select, implement and control to achieve desired goals and objectives in the completion of learning or performance tasks" (Manchón, 2001: 48).

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Regarding the quality of student-writers' goals, we observed some idiosyncratic differences in their reporting among a few participants. For instance, one participant described at both times of data collection that her actions for improvement involved literacy processes such as writing practice. At Time 1 her action was oriented towards the achievement of linguistic goals involving spelling and accuracy, while at Time 2 she explained that she had become aware of the importance of engaging in complex cognitive processes to achieve a broad rhetorical goal, such as adopting a more synthetic style in English in comparison with Spanish. This difference is shown in the extracts below:

[25] Interviewer: What goals do you have for improving your writing for your studies at university?

Student: To practise and to learn from my mistakes, to pay attention to the spelling and that's all. I think that I need a lot of practice and I also need to know about the topic about which I write so as to use appropriate vocabulary. (Participant 13 at Time 1).

[26] Interviewer: What goals do you have for improving your writing for your studies at university?

Student: I'm learning now, I mean, now at the end of the course is when I have noticed that my way of thinking in English and writing has changed because I have realised that I cannot write in English in the same way I do it in Spanish, and that's the problem that I have because Spanish influences me. (...) I need to think in English when I write but I find it very difficult because I think that native speakers can do it but I don't know if an English language learner can achieve that. (Participant 13 at Time 2).

These excerpts exemplify that, although participants' goals can be defined according to general trends, idiosyncratic differences in the development of goals are also likely to be

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found, which brings to light the personal nature of goals for improvement (Cumming, 2006). Nevertheless, there was a general tendency for participants to report goals that remained stable across time since their formulation was in essence the same, as illustrated in the following extracts. The excerpts were taken from different students eight months apart and show the actions they reported that they would take (reading or writing) to improve their L2 language for their future writing in other university courses:

[27] Interviewer: What goals do you have for improving your writing for your studies at university?

Student: The only way I think you can improve is by practising. If you don't practise, you aren't going to improve anything. This applies not only to the writing skill, but to any other one. You need to practise, to write every day or weekly. If you don't write, you forget the language. (Participant 11 at Time 1)

[28] Interviewer: What goals do you have for improving your writing for your studies at university?

Student: To read more because I think that you learn vocabulary by reading and I don't know...you need to know what you are going to talk about (Participant 23 at Time 1)

[29] Interviewer: What goals do you have for improving your writing for your studies at university?

Student: To practise because I think the only way you can learn is by means of practising and noticing your language mistakes so as to correct them. (Participant 11 at Time 2)

[30] Interviewer: What goals do you have for improving your writing for your studies at university?

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Student: To read more academic texts because this is always good to...I don't know. You become aware of things and then you learn. (Participant 23 at Time 2)

Similarly, participants' goals for their future career were also maintained more or less stable across time. The question that aimed at eliciting data on their goals for their future career was formulated as follows (see Figure 20 above):

*What goals do you have for improving your writing for your future career or occupation?*

As was the case with the report of participants' goals for their degree studies, some student-writers mentioned only goals while others merely explained the actions they would take. Table 23 shows the number of participants who mentioned each goal object and action.

Table 23. Goals and actions for writing improvement for future careers

		TIME 1 (n=23)	TIME 2 (n=23)
GOALS	Language	6	0
	Rhetoric	2	2
	None	12	9
ACTIONS	Writing practice	3	12
<b>Total number of participants</b>		<b>23</b>	<b>23</b>

It is interesting to note that half of the participants (12) explained that they had no goals for their future careers when they started the writing course because they had not thought about it

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owing to the fact that their future career seemed to be still far away from their current concerns. Likewise, at Time 2 a considerable number of participants (9) kept on reporting not having goals for their future careers. Regarding actions for improvement, half of the participants (12) explained at the end of the academic year that they were well aware of the need for engaging in writing practice because that was the way in which they had improved their writing ability during the EAP course. Writing practice was therefore considered to be an action for the overall and higher-level goal of writing improvement.

Different explanations can be advanced for the apparent lack of changes over time in the participants' reporting of goals for university studies and for future careers. First, the collection of data on occasions eight months apart may not have been long enough time to register changes in their goals. Second, student-writers' views on the context of action and writer-internal factors (self-efficacy beliefs and outcome expectations) may have also favoured the stability of goals across time, as we explain respectively in the following sections.

### **VI.2.3.2. Context of action for the accomplishment of goals**

Given that self-reported goals and actions should be understood within a given context of action (Zhou et al. 2006), we examined the participants' expectations of writing for both their university studies and for their future careers. Concerning the former, we asked the following question to the participants at two points in time (see Figure 20 above):

*What kinds of writing in English do you expect to do in these two final years of your degree?*

The results are shown in Table 24 in which we detail the number of participants who referred to each type of expected text across time.

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Table 24. Participants' expected types of writing for their university studies at different points in time in the EAP course

<b>TYPES OF EXPECTED TEXTS IN UNIVERSITY STUDIES</b>	<b>TIME 1 (n=23)</b>	<b>TIME 2 (n=23)</b>
Argumentative	2	5
Formal and academic texts	14	3
Literary	0	3
Literary and academic texts	6	1
Doubtful	1	3
None	0	8
<b>Total number of participants</b>	<b>23</b>	<b>23</b>

The participants' expectations for writing were related to the immediate context of action in which they were currently engaged for the development of their writing ability, that is, the EAP course. Consequently, at the beginning of the academic year most of the participants explained that they expected to write the same type of texts they were currently doing in the EAP course (formal and academic texts) or in other literature courses for which they also needed to hand in optional assignments. For this reason, at Time 1 the participants tended to think that in their future studies at university (the next semester or the following year), they would need to write formal and academic texts (14 participants at T1) or literary and academic texts (6 participants at T1). Their perceptions of their future writing in their degree studies changed at Time 2, when they were about to take the final exams of their fourth year courses. Some student-writers (8) reported at Time 2 that they did not expect to write in any other courses at university, which was in sharp contrast with the information gathered at Time 1 since no participants mentioned this. As they explained at the end of the year, they did not know the courses that they would take in the fifth year or the content of those courses, but

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they all tended to think that they would not need to write as much or as intensively as they had done in the EAP course.

The lack of clear writing prospects for the future calls into question whether the goals and actions reported for the university studies at Time 2 were real intentions to be pursued with commitment in the future or were just mentioned as desirable orientations to learning. In fact, the formulation of questions in the interviews may have led the participants to believe that they should have goals for their future writing. Therefore, they may have been prompted to report goals, although they may not have previously thought about their future writing needs. It should be noticed that the participants were not questioned whether they had goals for their future studies (i.e. “do you have goals for improving your writing for your future studies at university?”) but they were rather asked about what goals they had (“what goals do you have for improving your writing for your future studies at university?”).

As a whole, the participants always equated their context of action with their direct learning situation in the EAP course or in other courses for which they also needed to write (literature courses) occasionally at the time of data collection. These results are in line with previous studies carried out in ESL contexts in which goals have been described in relation to the participants’ immediate learning context (Cumming et al. 2002; 2007; Donato & McCormick’s, 1994; Haneda, 2000; Hoffman, 1998; Zhou et al. 2006). Similar results were also found for participants’ expected types of writing for their future careers. As mentioned earlier, the question that was formulated in the interview was the following (see Figure 20 above):

*What kinds of writing in English do you expect to do in your future career or occupation?*

Most student-writers reported at both times (14 participants at T1, and 16 participants at T2) that they had unclear ideas about their expected types of writing in their future careers, as shown in Table 25.

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Table 25. Participants' expected types of writing for their future career at different points in time in the EAP course

<b>TYPES OF EXPECTED TEXTS IN THE LEARNERS' FUTURE CAREER</b>	<b>TIME 1 (n=23)</b>	<b>TIME 2 (n=23)</b>
Unclear	14	16
Translations	3	1
Formal and academic	3	5
EFL lessons	3	1
<b>Total number of participants</b>	<b>23</b>	<b>23</b>

Our participants did not seem to have clear ideas about the types of writing they would have to do in their future careers since they were prone to believe that as teachers or even as English translators, they would not need to write in the L2, as shown in the following excerpts from two points in time:

[31] Interviewer: What kinds of writing in English do you expect to do in your future career?

Student: I want to be a teacher. So, the kinds of writing...I don't know.

Right now I don't know if teachers write any texts or they just give lessons and mark and that's all. (Participant 12 at Time 1)

[32] Interviewer: What kinds of writing in English do you expect to do in your future career?

Student: .... (Long pause)

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Interviewer: Have you ever thought that you may need to write in English for your future career?

Student: No, but I wouldn't mind. Now, we are writing a lot and when you stop practising, you notice it. But...I had never thought about it.

(Participant 13 at Time 1)

[33] Interviewer: What kinds of writing in English do you expect to do in your future career?

Student: Well, if I end up teaching, I won't need to write texts. I mean, I'll write on the blackboard and then students will sit exams...but I don't think I'll need to write an academic text and all that...

(Participant 12 at Time 2).

[34] Interviewer: What kinds of writing in English do you expect to do in your future career?

Student: I would like to have a job that had to do with languages.

Interviewer: Do you think that you would need to write in English for that job?

Student: No. Well, I've been told that when you translate you normally do it to your mother tongue. That's the normal thing.

(Participant 13 at Time 2)

The few participants who reported expecting types of writing for their future careers did it in a broad way without defining specific genres or text characteristics that could enable them to establish specific goals to be pursued. The conditions (writing practice, explicit writing instruction and authentic audience) that were highlighted as motivating for writing improvement in an EFL context in other studies (Manchón & Roca de Larios, 2011) only seemed to be relevant for our participants' immediate learning context while practising

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writing and receiving instruction in the EAP course. Such results challenge Cumming's (2006) contention that goals for writing improvement are associated with long-term career aspirations.

To summarise, differing from some studies in ESL (Cumming et al. 2007; Zhou et al. 2006), our student-writers' aspirations for writing in their future courses of the degree and in their future careers did not appear to shape their goals and actions for writing improvement. Our participants seemed to find it difficult to speculate about a learning context that did not form part of their present literacy experiences. The divergence between these results and those reported in previous studies could be based on both the motivation of the learners as well as the learning context, which changed across the phases of data collection in the case of Zhou et al.'s investigation.

It should be noted that the research reported in those studies was carried out in an ESL context with highly motivated students, considered as "the new global elite" (Vandrick, 2011) of international students, with clear goals and autonomous behaviour in a rich language context, whereas our investigation was conducted in an EFL setting. In an ESL environment there are always potentially more opportunities for the use of language in the written form, be it formally in an academic context or informally in social situations, both of which may facilitate the shaping of new goals on account of long-term aspirations. Consequently, our results are illustrative of foreign language learners who lack clear writing prospects and aspirations for writing beyond the immediate writing needs in the EAP course, even though they may be prospective teachers of English or translators.

Another important issue refers to the difference in the process of data collection between our study and the investigation carried out by Zhou et al. (2006). In the latter, data were collected in two different phases corresponding first to the ESL courses and then to the university studies rather than in the same university context at two points in time, as was the case with our study. In this respect, the increase in aspirations for writing coincided with learners' change from phase I to phase II of the investigation. In our opinion, this situation could raise doubts about the development of goals in relation to long-term aspirations since

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those supposed aspirations for university studies in phase II were in fact part of their current literacy context and immediate needs in which they were immersed. It could therefore be argued that rather than an increase in aspirations for writing, learners could have reported more goals for the university studies in phase II because of the alteration of their goals in relation to a new learning situation.

Differences in the social setting for the shaping of goals do not necessarily need to be restricted to the bipolar distinction between second and foreign language learning. In this respect, divergences have also been reported among ESL students' goals depending on their socio-economic status as either highly motivated international students (Cumming, 2006), or as secondary school students with limited literacy development that had problems in completing their secondary school studies (Cumming, 2012). This issue also brings into question the importance of writer-internal factors that precede the shaping of goals like self-efficacy beliefs and expectations of success, which may impact on learners' agency for writing and development. The exploration of these variables and their possible changes across time are important to understand the shaping of student-writers' goals during the EAP course, as we explain next.

### **VI.2.3.3. Antecedents of goals: Self-efficacy beliefs, previous literacy experiences and outcome expectations**

The overall findings about the antecedents of goals, as we shall report below, indicate that our participants' self-efficacy beliefs remained constant over time. They were also found to be proactive individuals (Bandura, 1991; Zimmerman, 1998, 2000) and to set their level of aspirations at the same or an even higher level than the previous grades obtained in their last language course. However, the expectations of success or outcome expectations about what grades they could obtain in the EAP course remained stable from the beginning of the course.

Regarding self-efficacy beliefs, nearly all the participants (20 out of 23) reported being confident about their abilities to achieve the goals of the EAP course. Only three participants,

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two of whom were the same at both times, affirmed that they did not feel confident to achieve the goals of the EAP course due to personal insecurity about their language skills as foreign language students. Therefore, for the whole group of participants, self-efficacy did not seem to be a constraining factor that could hamper their development of goals for writing improvement during the course. However, confidence also seemed to vary among participants according to the outcome expectations that were reported.

Outcome expectations are closely related to self-efficacy beliefs since individuals engage in tasks they expect to achieve and for which they deem themselves to be self-efficacious in order to establish goals and engage in actions (Bandura, 1986; Lent, Larkin & Brown, 1989). Those expectations can be defined as beliefs about the anticipated social or cognitive outcomes of one's own behaviour, like for example expected grades for performing a task (Bandura, 1986) or, in more general terms, expectation of success. They are therefore described as the rewards people expect to achieve for their engagement in tasks (Bandura, 1977, 1986) and can be understood in terms of if-then statements (i.e. if I do this, then, I can expect a particular positive outcome). In this respect, outcome expectations are the precursors of goals.

Our participants' initial outcome expectations for the EAP course were examined in relation to their past achievement in the previous language course they had taken before starting their current writing instruction. Table 26 shows that the participants did not tend to obtain high grades. In fact, there were six participants who had failed their last language course and were studying during the academic year to take the exam again. It should also be noted that three participants did not report the grades they had obtained in that course.

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Table 26. Participants' self-reported grades in the last language course

GRADES	NUMBER OF PARTICIPANTS (n=23)
D	6
C	5
B	8
A	1
Not reported	3
<b>Total number of participants</b>	<b>23</b>

These previous grades seemed to work as points of reference or anchors for their expected outcomes in the EAP course since at both times they reported aspiring to achieve the same grades obtained in their last language course or even higher grades, as illustrated in Figure 21. Only two participants expected to get lower grades than their previous level of attainment in the language course. In general, at both times students appeared to long to accomplish the writing demands in the EAP course and to achieve the same grades or higher grades than their past level of attainment. Therefore, the demands of the writing course were perceived as attainable.

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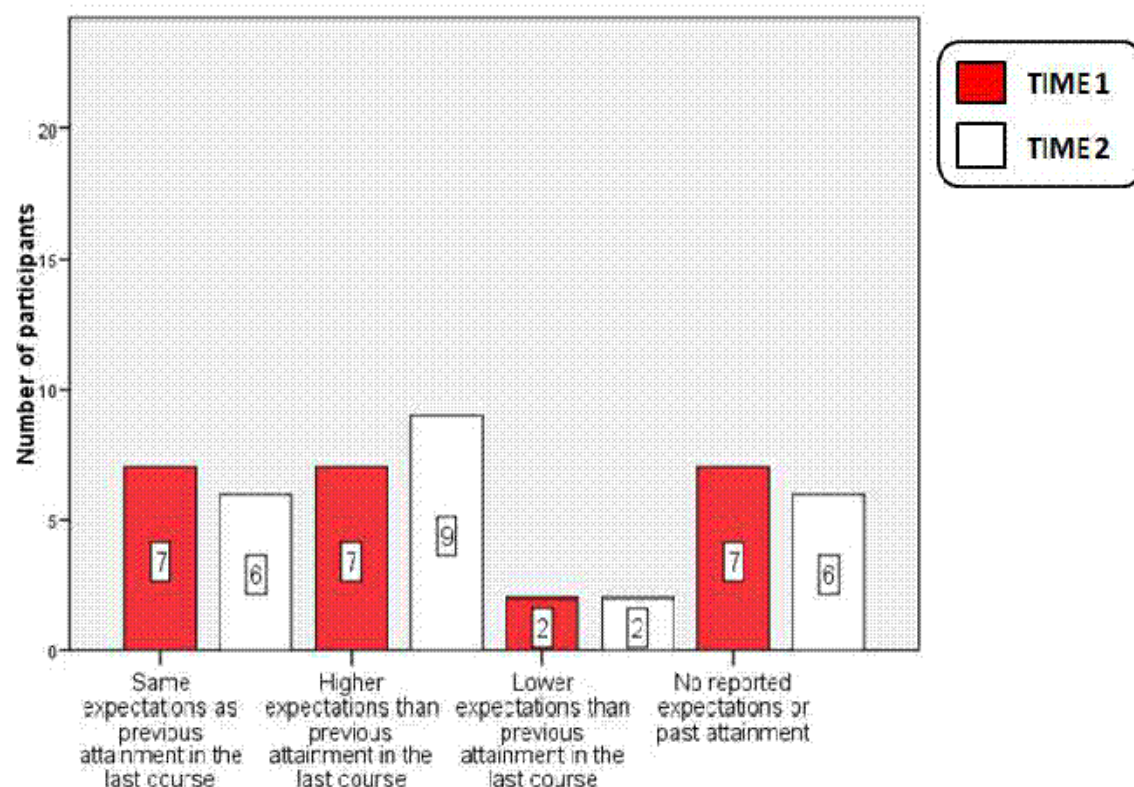


Figure 21. Participants' outcome expectations in the EAP course in relation to their past attainment in the last language course

These results show that our participants' current level of aspiration in a supportive and challenging environment for writing was related to their prior successful experiences as indicated in other studies about aspirations (e.g. Cummings, Schwab & Rosen, 1971; Hertzman & Festinger, 1940; Lopes, 1976; Sibley & MacFarland, 1974; Simon, Shaw & Gilchrist, 1954; Weiner, 1992; Wilsted & Hand, 1974). In addition, the findings also indicated that our student-writers' current expectations of achievement, for which goals could be formulated, must be understood in relation to their immediate past performance as well as to their self-efficacy beliefs as suggested by Bandura (1997). Our findings are consistent with previous research on learners' beliefs that highlight that students' conceptions of their learning process influence their goals. For instance, Boekaerts (1992) stated that students' beliefs about their skills and competence determined their choice of goals. On these grounds,

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if learners believe that they possess the necessary skills and competence to perform a given task, they will choose learning-oriented goals (goals that will enable them to expand their knowledge or gain new skills). In contrast, if students' appraisal of their own potential for learning is negative, they will choose coping-oriented goals (goals aiming at minimising their discomfort when performing a task) or they might even try to avoid having to engage in the task. In our study, learning-oriented goals will correspond to our participants' increase in expectations of writing achievement in relation to past performance, while coping-oriented goals could be represented in our study by our participants' lower expectations of attainment than the grades already obtained in previous courses.

We believe that the present findings bring to light a different perspective for the investigation and understanding of the shaping of goals for writing in which not only are long-term future studies or career plans important but also previous learning experiences. Such prior experiences were unreported in previous research on goals for writing (e.g. Cumming, 2006), where it was emphasised that aspirations were essentially future-oriented and therefore that tests already passed were not relevant for students' current aspirations and goal setting. We would rather suggest that goals already fulfilled, such as passing a given test, may not be relevant in the present, but such goal fulfilment may establish a level of aspiration that has already been attained, which may in turn raise the aspiration for the future (Bandura, 1989). In other words, past attainment may be pertinent for the shaping of learners' present and future motivational goals or outcome expectations. In this respect, our results suggest that provided that learners hold self-efficacy beliefs about their abilities, they may establish their outcome expectations for writing in relation to their past level of attainment in previous courses, as indicated in the following figure:

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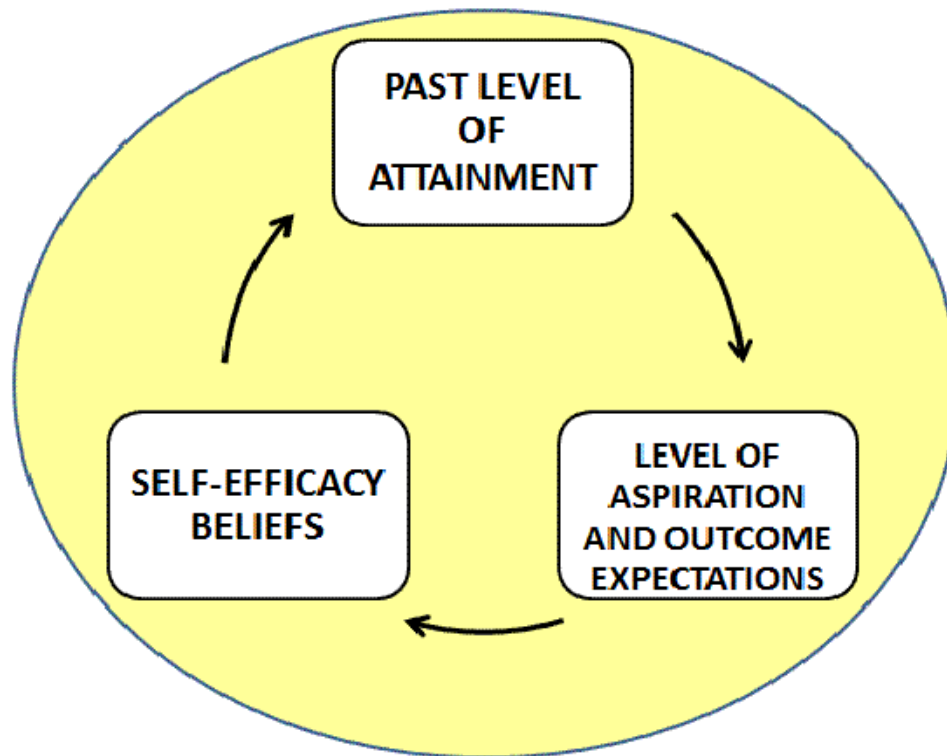


Figure 22. Representation of the cyclical relationship between individuals' self-efficacy beliefs, past level of attainment and level of aspirations

These results offer empirical evidence of the possible existence of a cyclical relationship between self-efficacy beliefs, outcome expectations, and goal systems, as postulated in social cognitive theory (Bandura, 1986). The interrelationship between the variables is also in line with self-regulation theories that postulate a dual control system between motivation and action (Bandura, 1991) according to which individuals self-evaluate their previous attainment to improve their future performance by setting their aspiration levels beyond their immediate performance (Bandura, 2001).

However, once our participants reported at Time 1 the expectantions of success in the EAP course, these expectations tended to remain unchanged, as shown in Figure 23.

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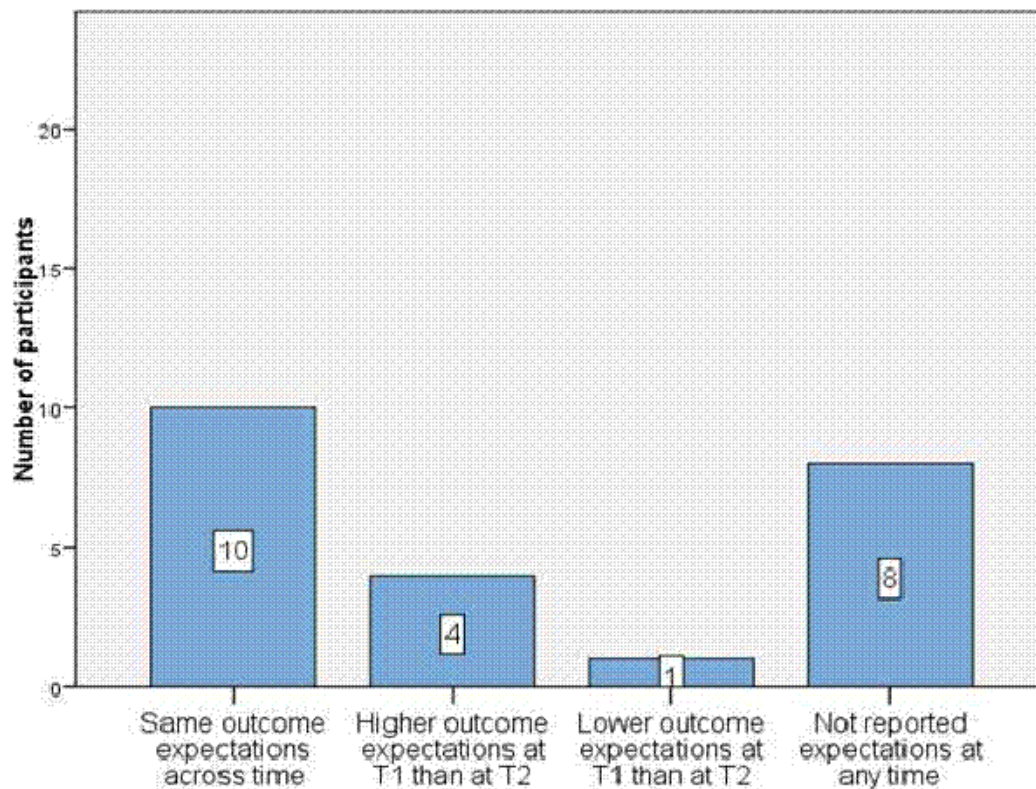


Figure 23. Comparison of outcome expectations for the EAP course across time

Out of the 23 participants, only 15 reported their expected outcomes or grades<sup>3</sup> at both times, and 10 of them continued to display the same expectations across time (B or C basically). There were only 4 student-writers whose outcome expectations for the EAP course were higher at Time 1 than at Time 2.

At both times of data collection the participants reported (see Figure 24) hoping to obtain a B or a C in the writing course. Although these outcome expectations did not seem to be very ambitious, they were consistent with their modest achievement in previous courses.

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<sup>3</sup> The participants' marks (A+, A, B, C and D) should be understood as follows: A+=10; A=9; B=7-8; C=5-6; D=0-4.

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Only three participants at each time of data collection reported that they aimed to achieve the highest possible grades in the EAP course (A or A+).

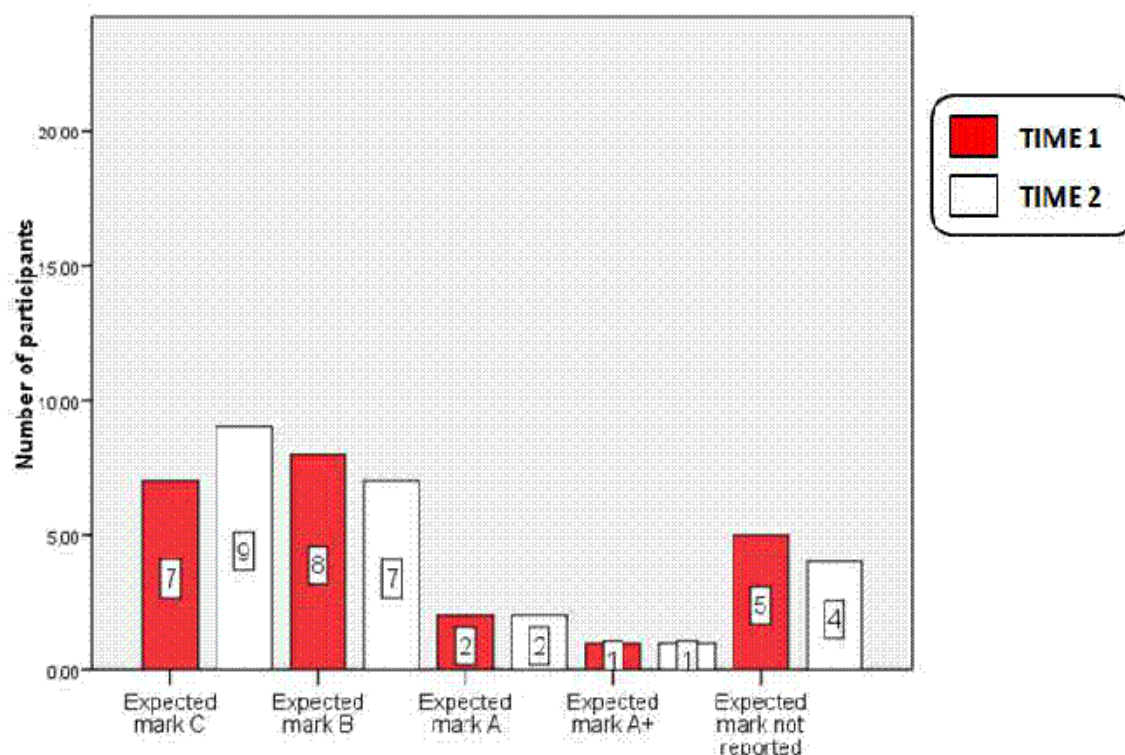


Figure 24. Participants' expected grades in the EAP course across time

In light of these results, we could conclude that even though writers hold self-efficacy beliefs to pursue goals for writing improvement, if they hold moderate outcome expectations for their writing that do not increase over time, the possible development of their goals may also be affected, not only for their present writing needs but also for future writing endeavours. It should be remembered that learners' self-reported goals and actions for their future studies and careers were basically the same at both times of data collection.

### **VI.2.4. Summary of the main findings and implications**

Our research question number 3 explored the participants' changes in their goals for their university studies and future careers bearing in mind their self-efficacy beliefs, past performance, outcome expectations and context of action. The main findings obtained can be summarised as follows:

- Goals for writing improvement for both university studies and future careers remained unchanged over time.
- Actions for overall writing improvement were more frequently reported than specific goals because students were thinking about distant goals that did not form part of their current learning context.
- Some qualitative differences were observed in the reporting of goals across time by some participants. This fact underscores the highly idiosyncratic nature of goal development.
- The stability of goals across time could be attributed to the time-span of data collection, which may not have been long enough to register changes, as well as to the context of action and writer-internal factors like outcome expectations, which were established by the students at the beginning of the course and remained unchanged throughout the year.

The results are indicative of the interplay between writer-individual (self-efficacy beliefs and outcome expectations) and environmental factors (context of action) for the possible shaping of goals. Learners' goals appeared to be restricted to their EAP course on account of the difficulty they experienced in reporting future contexts of action. The apparent lack of development of goals for different academic demands could be related to the student-writers' own doubts about the opportunity to develop their writing abilities in courses other than the EAP course. This issue brings to light the pedagogical importance of offering learners

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opportunities for the development and self-regulation of their goals by setting tasks in different mainstream courses that could allow for the maintenance of their writing skills. Even more worrying was the finding that students lacked clear writing prospects for their careers, which underscored the fact that they may not attach value to the development of their writing skills for professional purposes. This result could be related to the common extended belief among teachers that “FL writing is less purposeful and needs-driven enterprise than SL writing” (Ortega, 2009). Nevertheless, it is difficult to know whether our participants were unmotivated students or whether their outcome expectations and goals for writing are rather characteristic of FL learners who lack clear prospects of using their writing for professional reasons once they abandon their EAP lessons. Future research could shed light on these issues by delving into FL students’ writing aspirations for their professional careers.

We could suggest that if learners do not appreciate the value of writing for their future jobs, they may not understand the importance of developing their abilities beyond specific courses and may not expand their personal goals accordingly. This being the case, students may not be motivated to improve their skills and transfer their knowledge and goals from the university context to their professional interests. Along these lines, we also think that the stability of outcome expectations could be a reflection of the restriction of students’ aspirations to the demands of their writing course.

It would therefore be advisable that writing teachers make clear the pedagogical importance of writing for future careers so that learners can attach utility value to what they learn in the lessons (Pintrich & Schrauben, 1992) and develop mastery goals for writing not only for their particular courses but also for their professional lives. This could be done by designing tasks that allows learners to get engaged in a variety of real writing tasks for career interests, which could in turn also help them to maintain interest in writing and adopt a mastery goal orientation (Marshall & Weinstein, 1984; Nicholls, 1989; Ronsenholtz & Simpson, 1984). In this way, students could establish goals to be pursued in those tasks, monitor and evaluate their achievement, provided that they are given instructions and

feedback to do so (Cumming, 1986; Hoffmann, 1998), and improve their writing process by seeing the relevance of their task for their professional interests and demands.

### **VI.3. The relationship between student-writers' task representation, writing goals and performance**

As reported in Chapter II, the association between beliefs and goals can be considered to compose a person's mental model (MM). Flower and Hayes (1981) proposed a model of L1 writing in which goals were set in motion in relation to the writers' representation of the rhetorical problem posed by the task. Although there have been some studies that have followed this line of research and have explored L2 writers' task representation in relation to written performance (Ruiz-Funes, 2001; Wolfersberger, 2007), they have been based on reading-to-write tasks. There have also been interventionist studies that have examined the effects of instruction on the pursuit of goals and their effects on performance (Cumming, 1986). Other studies have described the longitudinal development of goals without explaining their effects on written outcomes (Cumming, 2006; Cumming et al. 2002, 2007) or have examined the association between learners' self-imposed goals and their overall writing ability restricting the analysis of goals to the participants' self-reported enactment of actions (Sasaki, 2009, 2011).

In the present study, we aim to contribute to the investigation of mental models of writing by studying the possible relationship between task representation and goals as well as their contribution to written performance, as stated in our last research question and graphically depicted in Figure 25:

*RQ4: Were students' goals, task conceptualisation and written performance related?*

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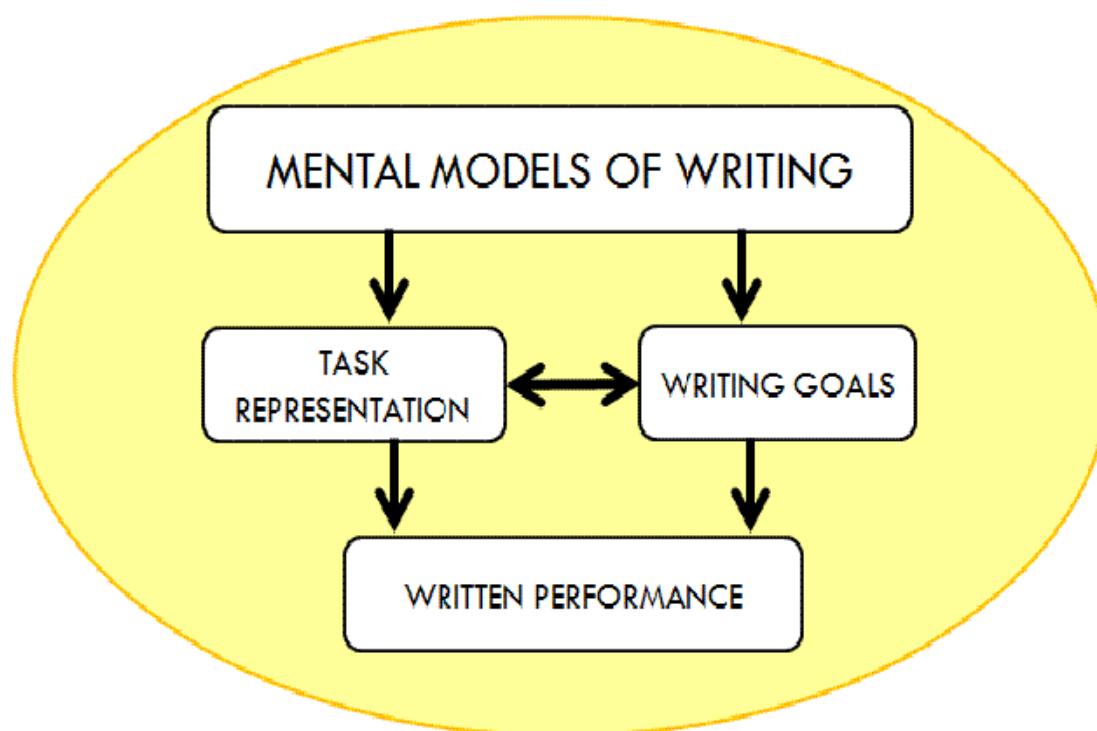


Figure 25. Exploration of variables in research question 4

Data for this research question came from our participants' L2 texts written under time constraints and journals about the writing task and goals for writing. There were two participants who did not hand in their texts at both times of data collection, so, the present results and discussion refer to 21 instead of 23 participants.

We should remind the reader that the journals on task representation were collected at two points in time as mentioned and discussed earlier in RQ1. With respect to journals on goals, they were also collected at the beginning and at the end of the EAP course, but at Time 1 we asked learners about the specific goals they had in mind for specific tasks so as to compare them with their task representation and look for possible patterns. As mentioned in Chapter V, the writing prompt of the journal about goals at Time 1 was the following:

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*Think of the essay you have just completed. Tell us about the goals and strategies you had in mind while you were writing your text.*

At Time 2 we focused on participants' self-evaluation of goals and perceptions of changes in those goals across time, as previously described and discussed in RQ2.

Regarding data analysis, the L2 texts that the participants wrote on their views on success in education at two points in time were analysed from a holistic and analytical point of view using the Hamp-Lyons' scale (1991) and the CAF measures. For the analysis of goals and task representation, we distinguished the number of participants who mentioned at least once (one occurrence) each category that composed the taxonomies.

In what follows, we shall describe the relationship between our participants' stored task representation and goals from a double perspective. First, we shall discuss this possible connection bearing in mind specific goals for tasks in hand as well as the self-reported strategic actions for the accomplishment of goals. Second, the connection between the understanding of the task and goals will be drawn on participants' self-evaluation of goals at the end of the instructional period. Finally, the possible influence of these relationships on written performance will be examined.

### **VI.3.1. Participants' stored task representation in relation to goals and actions when writing a specific task at Time 1**

The results to be presented in this section show that participants had different views on the task representation and approached their written texts from distinct perspectives of knowledge transformation that ranged from low to high. However, these differences were only evident looking into participants' specific subgoals when writing because on the surface student-writers who had different views on task representation reported pursuing similar kinds of higher-order goals in their written texts.

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We mentioned in RQ1 that all the participants (21) understood the writing task at the beginning of the EAP course in a way that could be classified as a product approach to composing. In other words, they defined writing in terms of a list of features that all good texts should have including accurate use of language or a coherent development of arguments. In addition, out of all these participants, 13 also described the task as a process that involved rewriting and constant decision making to solve problems when composing. Therefore, only 8 participants were truly shown to hold a static product view of the writing task. We took this distinction between a process (n=13) and a product (n=8) description of writing to examine the goals that these two groups of student-writers reported pursuing. We thought this classification would allow us to capture substantial differences in the participants' writing behaviour that could ultimately relate to their performance. This assumption was based on previous studies that highlighted the fact that the sophistication of learners' mental models of writing can lead them to pursue goals at different levels of depth of problem-solving behaviour, which can ultimately result in the processing and development of L2 language (Manchón & Roca de Larios, 2011).

Table 27 shows that there were no evident differences in the goals and actions reported by the two groups. The goals concerned basically rhetorical issues (structure, audience, cohesion and coherence), linguistic accuracy or the content of the text. There were even some participants who reported affective goals that aimed at lowering their anxiety about having to write an argumentative text without having much time to plan and to write.

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Table 27. Goals and actions for writing as reported by two groups of participants who held different task representations

		PARTICIPANTS WHO DEFINED THE WRITING TASK AS A PRODUCT		PARTICIPANTS WHO DEFINED THE WRITING TASK AS A PROCESS	
		N°P (n=8)	%P (n=8)	N°P (n=13)	%P (n=13)
<b>GOALS</b>	<b>Content</b>	6	75%	8	61%
	<b>Language</b>	4	50%	8	61%
	<b>Rhetoric</b>	6	75%	11	85%
	<b>Affective</b>	1	12%	3	23%
<b>ACTIONS</b>	<b>Composing process</b>	5	62%	9	69%

NOTE. N°P=number of participants; %P= percentage of participants.

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Nevertheless, when we looked more closely into the goals and actions reported by both groups of students, we noticed qualitative differences between them.

Table 28 shows the specific goals or subgoals that each group aspired to. We classified participants' goals as higher-order goals or as subgoals following Flower and Hayes' (1981) contention that goals are organised in a hierarchical manner and that there are subgoals that are activated for the achievement of general or higher-order goals. The results indicate that the participants who represented the task in a manner that could be considered a process approach to writing tended to report the pursuit of more sophisticated and encompassing subgoals when writing their task in comparison with the other group of participants. For instance, those student-writers who held a process view of writing reported aiming to explore the topic of their texts from different perspectives so as to present arguments and counterarguments. They also explained wanting to support their arguments or find relationships among different ideas. These goals were different from those reported by the participants who defined the task as a product. In the latter case, the participants just appeared to aspire to persuade the reader and be clear in the argumentation of ideas, but there was no evidence of aiming to transform their knowledge through the writing process. The different self-reported goals seemed to be roughly characteristic of Bereiter and Scardamalia's (1987) distinction between knowledge-telling and knowledge-transforming approaches to the writing task.

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Table 28. Detailed analysis of goals pursued while writing as self-reported by the participants who held different views on task representation

HIGHER-ORDER GOALS	PARTICIPANTS WHO DEFINED THE WRITING TASK AS A <b>PRODUCT</b> (n=8)	PARTICIPANTS WHO DEFINED THE WRITING TASK AS A <b>PROCESS</b> (n=13)
	SUBGOALS	
Content	<ul style="list-style-type: none"> <li>• Show the writer's point of view</li> <li>• Decide what to say</li> </ul>	<ul style="list-style-type: none"> <li>• Develop ideas in a clear and coherent manner</li> <li>• Respond to the question posed by the writing prompt</li> <li>• Defend one's point of view</li> </ul>
Language	<ul style="list-style-type: none"> <li>• Be linguistically accurate</li> <li>• Use formal language</li> </ul>	<ul style="list-style-type: none"> <li>• Be linguistically accurate</li> <li>• Use appropriate language</li> <li>• Use complex language</li> <li>• Use synonyms to avoid repetitions</li> </ul>
Rhetoric	<ul style="list-style-type: none"> <li>• Structure the text into three main parts: introduction, body and conclusion</li> <li>• Persuade the reader</li> <li>• Be clear in the argumentation of ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Present arguments and counterarguments</li> <li>• Develop clear and relevant arguments in an efficient way</li> <li>• Persuade the reader and guide him/her through the reading process</li> <li>• Offer justification for arguments</li> <li>• Include relevant information</li> <li>• Be clear and straightforward in the argumentation of ideas</li> <li>• Justify and illustrate the main ideas in the text using examples</li> <li>• Find a relationship among different ideas</li> </ul>
Affective	<ul style="list-style-type: none"> <li>• Control emotions when writing</li> </ul>	<ul style="list-style-type: none"> <li>• Control emotions when writing</li> </ul>

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In line with the array of subgoals that were self-reported for the task by the two groups who had a process and a product approach to the task, diverse strategic actions were also stated that indicated different levels of engagement in problem-solving behaviour. More specifically, some participants who equated the writing task with a product approach (5 out of 8) reported having restricted their actions to drawing an outline, while participants who represented the task in terms of a process (13) affirmed having taken different actions such as drawing an outline (9) or engaging in revision (4) and rewriting (3) at an ideational (clear ideas), linguistic (accuracy) and/or rhetorical level (coherence of the text) when writing their L2 texts. These results show that student-writers can be engaged in the same cognitively demanding task at different levels of cognitive complexity according to the task representation that they have in mind, as reported in previous research (Flower, 1990; Ruiz-Funes, 2001). Flower (1990) described cognitive complexity as the difficulty of writers' thinking process, which is "a function of the goals a writer sets within a plan" (p.63).

We found some differences and similarities between our study and the one conducted by Flower (1990) and Ruiz-Funes (2001). As for the differences, we did not distinguish task representation in reading-to-write tasks in relation to an organising plan for writing (i.e. to summarise, to respond to the topic, to review and comment, to synthesise under a controlling concept and to interpret with a rhetorical purpose). We rather elicited participants' higher-level order goals and subgoals in relation to their stored task representation for writing (i.e. process or product), which is not restricted to the interpretation of a specific task but rather related to any kind of written text.

Regarding commonalities between the studies, we also found writers' distinct levels of engagement and depth in the composition process that varied along a continuum of knowledge transformation as a result of their task representation and the corresponding goals that writers were willing to pursue. On these grounds, Flower (1990) argued that a synthesis is a more demanding task than a summary, but a summary could also be transformed into a complex task on account of the knowledge transformation that writers would assume by selecting and pursuing goals when composing their texts. Our distinction of task

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representation in terms of process or product seems to be wider-encompassing than the understanding of a specific task in terms of text types as described by Flower (1990) (i.e. synthesis, summary, free response, synthesis with a rhetorical purpose). Our participants' self-reported level of knowledge-transformation when writing their texts appeared to be higher when they described the task in terms of a process than when they viewed the task as a static product. On these grounds, we could propose that the level of knowledge transformation or the writing sophistication that our mature L2 students appeared to aspire to and to be willing to attempt when composing their texts varied along a continuum, which could ultimately help to explain the possible development of their academic writing (Leki, 2007), as shown in the figure that follows:

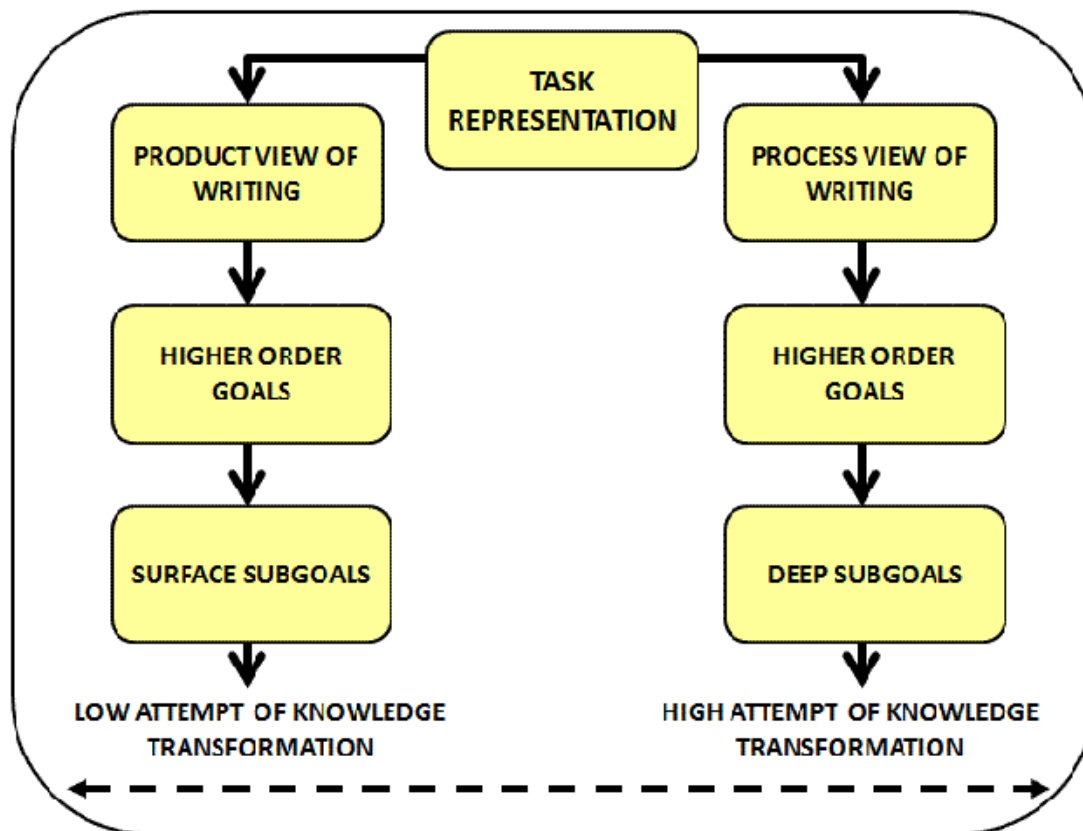


Figure 26. Participants' self-reported attempt of knowledge transformation in their texts according to their different views on task representation

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Figure 26, which is inspired by Flower's research (1990), indicates that although participants who represented the task as a product or process tended to report similar higher order goals, their subgoals were qualitatively different and ranged from surface to deep respectively. Those participants who reported pursuing deep subgoals appeared to be involved in higher levels of knowledge transformation when composing. In fact, the subgoals that they reported were in line with the knowledge-transforming model proposed by Bereiter and Scardamalia (1987) since along the lines of this model, the participants with deep subgoals aimed to (i) understand relationships among ideas (i.e. Langer, 1986b; Newell & Winograd, 1989; Schumacher & Nash, 1991; Wiley & Voss, 1996); (ii) discover new ideas (Flower & Hayes, 1980a; McLeod, 1992); or (iii) construct meaning (Spivey, 1990). Consequently, our study shows that adult writers may not necessarily engage in complex thinking processes when composing just because they have cognitively developed their reflective processes. This study indicates that their particular representation of the task could be important for their active engagement in complex thinking that involves problem-solving following their particular goals and subgoals.

Previous studies (e.g. Manchón & Roca de Larios, 2009; Roca de Larios, Manchón & Murphy, 2006) have shown that students at different levels of proficiency had different mental models of writing that led them to be concerned with higher or lower level-concerns when writing. On these grounds, we also examined whether those participants who held a process view of writing could have had a higher proficiency level in comparison with those learners who only represented the task in terms of a product. We computed a rank-biserial correlation between the continuous scores of the proficiency test and the binary variables corresponding to the learners who described the writing task as a process or a product (1 versus 0). A relationship was not found between both variables ( $\rho(21) = .203, p = .377$ ).

The absence of correlation could be explained by our participants' similar L2 proficiency level at the beginning of the writing course. All the participants belonged to the same class of EFL students who were studying the same English degree and had had similar previous learning experiences in former language courses. Most of the participants (13 out of

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21) obtained scores between 135 and 149 in the OPT, which corresponds to a B2 level of the Common European Framework. There were however some exceptions. Five learners obtained scores corresponding to the C1 level (150-169) and only 1 and 2 students were assigned to the A2 (105-119) and B1 level (120-134) respectively.

As a whole, we cannot explain why from our apparently homogeneous group of L2 participants with similar previous writing experiences, some learners started the writing course representing the task in terms of a process while others just viewed it in terms of a product. We tend to believe that with a bigger sample of learners who belonged to clear-cut groups of proficiency levels and had distinct writing experiences as in the case of Roca de Larios et al. (1996), potential differences between the groups could have been found.

To conclude, the complexity of writers' stored task representation as an ill-defined problem (process approach) or as a written product to be accomplished (product approach) could potentially be an indication of the level of knowledge transformation that they are willing to assume in their written texts by means of the establishment of an array of different subgoals when writing. In this respect, our research may also offer a different perspective for the analysis of the complexity of mental representations when composing that do not need to be constrained to the number of dimensions (e.g. ideational, textual, linguistic) that learners bear in mind when composing, as other studies previously highlighted (Devine et al. 1993; Manchón & Roca de Larios, 2011). Other definitions of complexity (process view of writing versus product view) could also be considered since it might be possible that the conceptualisation of the task in terms of process could be a necessary first step before engaging in the transformation of knowledge when composing regarding any of the writing dimensions of the task (ideational, textual and linguistic).

These results should however be taken with caution given the small number of participants included in the two approaches of task representation. Furthermore, our data collection was restricted to participants' self-reported goals and strategic actions, which may not truly correspond to the real online activation of goals and actions when composing a unique task. Different instruments to collect data such as think-aloud protocols could have

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revealed the enactment of goals and actions during the writing process that were unreported in this study. Notwithstanding, the present findings are indicative of the tendency of student-writers who had different stored task representations to initially approach the writing task under different perspectives of knowledge transformation when confronted with a specific task.

In the next section, we explore the participants' stored task representation in relation to their self-evaluation of goals, which could potentially help to explain patterns of achievement. Previous research (Cumming, 1986) has shown that students who are in an instructional program of goal setting can monitor their pursuit of goals for writing and self-evaluate their achievement, which results in better written performance and self-regulation behaviours after the instruction. In that investigation, however, students were monitored to pursue and achieve their goals and they also received feedback about their level of goal achievement. Furthermore, the duration of the instructional period was only 12 weeks, which also restricted their level of achievement since second language learning occurs over a long period of time. Consequently, there is a lack of research about student-writers' self-initiated goals as well as their self-evaluation of goal achievement in a natural learning context without interventional conditions and during a long instructional period, which could be related to their written performance. This is the area that we tackle in the next section.

### **VI.3.2. Participants' stored task representation in relation to their self-evaluation of goals at Time 2**

Dörnyei and Ottó (1998) stated in their L2 motivation process model that when goals have been achieved, they are self-evaluated and new goals can be formulated. However, although beliefs have been considered to be intimately linked to the constant formulation of goals when composing (Flower & Hayes, 1981; Flower, 1990; Manchón & Roca de Larios, 2011), there have been no previous studies to our knowledge that have examined whether the motivation

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to pursue further goals for writing in the future could be related to writers' beliefs about the task.

Regarding the shaping of goals across time (9 months), we reported in RQ2 that at Time 2 participants reflected on their goals for writing during the academic year and they also evaluated their achievement. All the participants claimed that they felt satisfied about their learning outcomes. However, only 15 out of 21 participants clarified that, as a result of their perceived writing achievement, they aimed at pursuing more goals for the future. In other words, participants evaluated their goals and their level of fulfilment with respect to the goals; then, they formulated new goals for the future that were based on their perceived attainment. The new goals that were the result of a process of self-evaluation were considered to be dynamic. There were also participants (10 out of 21) who only described goals for the future at the end of the EAP course but did not refer to the achievement of previous goals. In this case, those goals for the future were coded as intentions.

Therefore, in the case of dynamic goals, participants reported having experienced success in writing, while those student-writers who formulated intentions did not clarify whether they felt they had surpassed a standard level or continued to pursue the same goals they had at the beginning of the course. We concentrated on dynamic goals for which the origin of their motivation was based on perceived achievement.

A Fisher's exact test was performed to explore the relationship between participants' initial task conceptualisation and the self-reported dynamic goals at the end of the academic year, as shown in Table 29. It should be reminded that we coded participants' task representation in a binary way in terms of process (1 versus 0). Since all the student-writers (21) described the task as a product and 13 of them also viewed it as a process, there were only 8 participants who only represented the task to themselves in terms of a product approach.

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Table 29. Results of the Fisher's exact test: the relationship between participants' process view of writing at Time 1 and formulation of dynamic goals at Time 2

		Dynamic Goals Time 2		
		Notreported	Reported	Total count
Task representation in term of a process at Time 1	Notreported	5	3	8
	Reported	1	12	13
Total count		6	15	21
Fisher exact test		$p=.014$		

Table 29 shows that the student-writers who conceptualised the task as a process involving problem-solving behaviour at Time 1 ended up having dynamic goals (12 participants;  $p=.014$ ). Given the mutually exclusive coding of participants' task representation in terms of a process (1) or only a product view of writing (0), the results of the Fisher's exact test regarding the product conceptualisation and dynamic goals had the same significance level as the one described for the process view. However, the distribution of the participants was just the opposite of the above table, as indicated in what follows:

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Table 30. Results of the Fisher's exact test: the relationship between participants' product view of writing at Time 1 and formulation of dynamic goals at Time 2

		Dynamic Goals Time 2		
		Not reported	Reported	Total count
Task representation in terms of a product at Time 1	Not reported	1	12	13
	Reported	5	3	8
Total count		6	15	21
Fisher exact test		p=.014		

As described before, the participants who had dynamic goals did not tend to describe the task in terms of a product. Dynamic goals involved the self-evaluation of writing achievement in the areas of writing to learn (language and complexity) and learning to write (rhetoric and writing skill), which in turn also encouraged them to pursue further goals in those same areas. Nevertheless, the definition of their goal pursuit for the future was somewhat abstract and elusive, which as we argued before in RQ2, could be due to the temporal distance with which these goals were formulated, as shown in the following fragment:

[33] Indeed, I sincerely believe that academic writing has not only help me with my writing skills, but it has also foster my eagerness to study, to write, and to have a critic point of view of my own. Now I see how important academic writing is for my future, and my intention is to keep improving my skill in writing. Thus, I am looking forward to writing more complicated things in the future that will surely put my writing skills to the test. (Participant 4, Journal on Goals at Time 2).

As a whole, our data suggest that a dynamic conceptualisation of the writing task in terms of recursive rewriting and problem-solving behaviour when composing could also be related to the participants' engagement in a motivational and self-regulation cycle for further writing

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achievement. Consequently, the representation of the task in terms of process may facilitate the engagement in deep mental processes and knowledge transformation, which will, in turn, result in the confrontation and resolution of different kinds of problems when composing (Flower & Hayes, 1980). In this respect, our results are consonant with the problem-solving literature, according to which learners engage in search processes to solve a problem (Chipman, Segal & Glaser, 1985; Newell, 1980; Newell & Simon, 1972). What is interesting to note is that the engagement in problem-solving behaviours leads them not only to solve problems posed by themselves as student-writers but also to formulate new goals once they perceive that they have attained previous goals (Dömyei & Ottó 1998; Heckhausen & Kuhl, 1985), as shown in Figure 27:

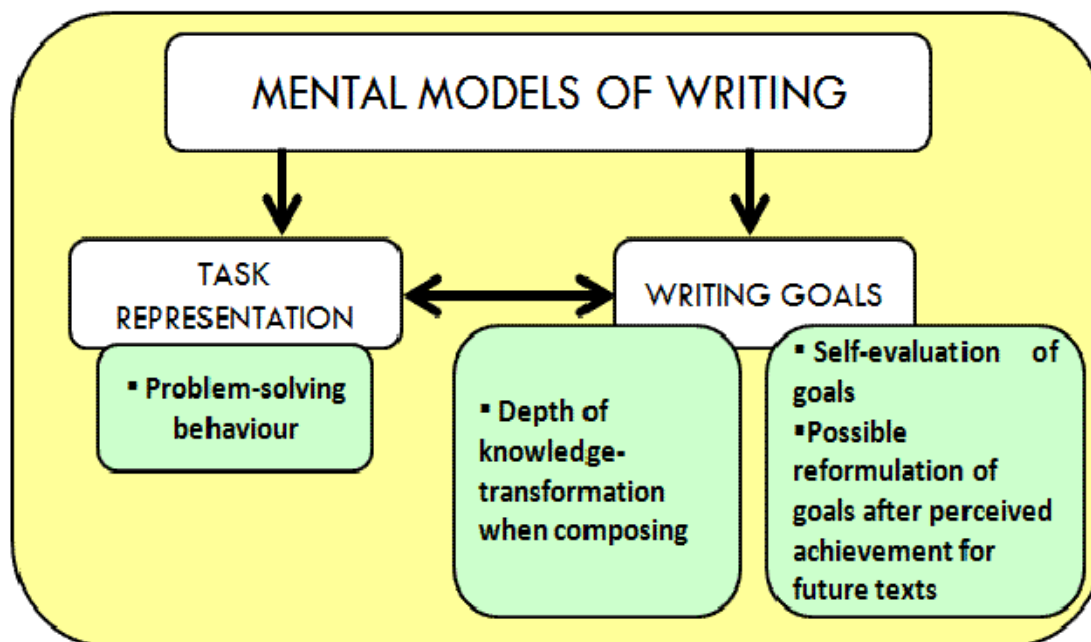


Figure 27. Functioning of mental models across time for those student-writers who represented the task in terms of a process view of writing

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The conclusion that can be drawn from this result is that learners who started the writing course with a process view of the writing task could move, in Dömyei & Ottó's terms (1998), from a preactional stage to a postactional one. Then, they started over the cycle moving from a postactional stage to a preactional stage as a result of the evaluation of their achievement of goals. Nevertheless, our results indicated that those intentions that belonged to a new preactional stage were broad and abstract. Therefore, it cannot be guaranteed that initial future intentions that are formulated within a new preactional stage can lead to the commitment to goals (actional stage) without a clear learning context in the future, as explained in RQ3.

In what follows, we explore whether participants' goals at the end of the writing instruction period in the EAP course are related to written performance. Furthermore, given that goals are enacted in relation to student-writers' particular task representation (Flower & Hayes, 1981), the participants' views on the writing task will also be examined in relation to written performance.

### **VI.3.3. Participants' goals, task representation and written performance**

In this section, we shall first discuss the possible development of written performance measured analytically and holistically regarding the whole group of participants. With this purpose in mind, we shall first report Wilcoxon signed rank tests and we shall delve into the possible changes in written outcomes in relation to the participants' particular task representation and self-evaluation of goals for writing.

#### **VI.3.3.1. Overall development of written performance**

The overall results indicate that the participants improved their written performance over time. However, this improvement was evident only in the holistic rating using the Hamp-

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Lyons' scale (1991) ( $Z=-2.539$ ,  $p=.011$ ,  $r=.40$ ), as visually represented in the figure that follows:

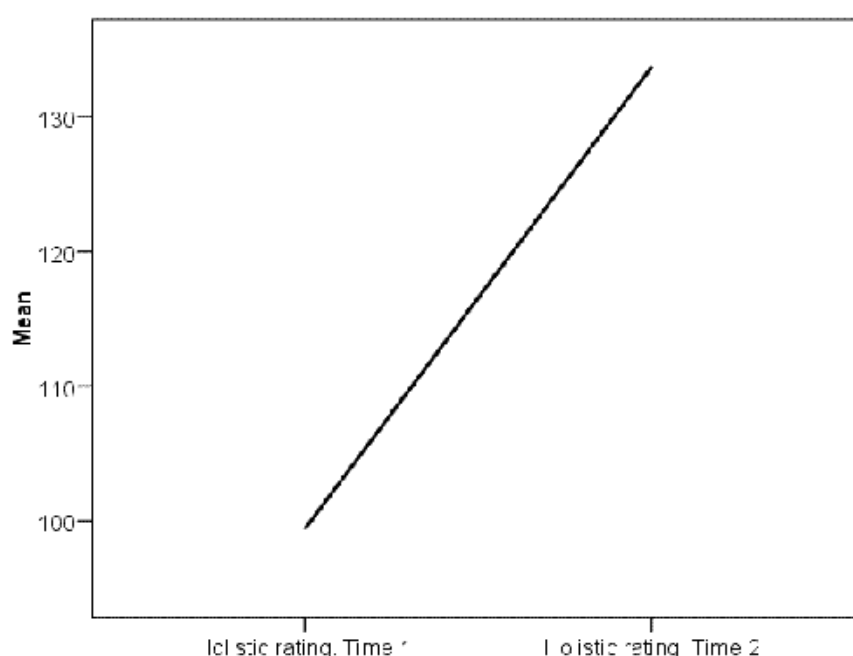


Figure 28. Difference in written performance measured holistically across time

We already explained in Chapter V that we used the Hamp-Lyons' scale (1991) that measured writing quality through a gradual approximation to 5 different traits, which included communicative quality, organisation, argumentation, linguistic accuracy and linguistic appropriacy. In other words, language proficiency and descriptors of good academic writing, such as text structure or rhetorical quality, were important to obtain high scores in the holistic rating. Accordingly, the differences in the holistic rating across time could be explained by a combination of the following possibilities: (i) overall improvement of students' writing ability (see for similar results Storch, 2009; Storch & Tapper, 2009); (ii) enhancement of written performance for the particular task on account of some practice effect in spite of the time lag

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of 9 months and/or; (iii) development of the participants' L2 proficiency level over time, as shown by a Wilcoxon signed rank test ( $Z=-3.076$ ,  $p=.002$ ,  $r=.48$ ).

Nevertheless, when we examined written outcomes from a micro perspective, the results were not illustrative of improvement. Specifically, we did not find any significant changes over time in any of the CAF measures that were analysed, that is, accuracy, fluency (essay length) or complexity. Table 31 shows the descriptive statistics of participants' written performance corresponding to the holistic rating, the proficiency tests, and the CAF measures at two points in time. Table 31 also contains the results of the Wilcoxon signed rank test.

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Table 31. L2 proficiency and written performance: descriptive statistics and Wilcoxon signed rank tests

MEASURES OF PROFICIENCY AND WRITING ABILITY		DESCRIPTIVE STATISTICS						WILCOXON SIGNED RANKS TEST			
		Time 1 (n=21)			Time 2 (n=21)			Z	p	Effect size (r)	
		Mean	Median	SD	Mean	Median	SD				
Proficiency	OPT	142	140	(12)	149	150	(9)	-3.076	.002	.48	
Writing Ability	Holistic rating, Hamp-Tyons	99	88	(52)	134	127	(52)	-2.539	.011	.40	
C	Syntactic Complexity	W/C	9	9	(1)	10	9	(1)	-.400	.689	.06
		Sub/C	.46	.45	(.13)	.45	.48	(.10)	-.365	.715	.06
		Sub/ Sent	1.29	1.10	(.75)	1.14	1.20	(.47)	-.400	.689	.06
A	Lexical Variety	D value	74	71	(17)	68	68	(9)	-1.303	.192	.20
F	Accuracy	EFC Perc	63	68	(16)	68	66	(12)	-1.303	.192	.20
		EFS Perc	34	37	(18)	39	36	(17)	-1.325	.185	.21
	Fluency	EL	288	292	(62)	307	312	(64)	-1.027	.305	.16

NOTE. SD=standard deviation; CAF= complexity, accuracy and fluency measures. W/C= words per clause; Sub/ C= subordination per clause; Sub/ Sent= subordination per sentence; EFC Perc= percentage of accuracy in error free clauses; EFS Perc= percentage of accuracy in error free sentences; EL= essay length.

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These results are similar to the ones reported in Storch's research (2009). In that study, there were 25 international students at an English medium university, who were followed during a semester of study and took a pre-test and post-test consisting of writing an argumentative essay in around one hour. Similarly to what happened in our research, the holistic analysis showed improvement across time, while no changes were found for fluency, accuracy, grammatical and lexical complexity.

Given these parallelisms between both studies, we can suggest several reasons for the lack of significant differences in the CAF measures concerning our own research. Firstly, the analytical measures might be indicative of micro-level qualities of texts that do not map perfectly on to the global changes that were captured in the holistic rating, such as communicative adequacy or efficiency of the written texts (Pallotti, 2009). Along these lines, the constructs of error-free clauses (EFC) and error-free sentences (EFS) in percentages measured their quantity of errors but not their quality or gravity in terms of how they could affect the comprehensibility and communicative effectiveness of the text (e.g. Homburg, 1984; Polio, 1997; Storch, 2009; Vann, Meyer & Lorenz, 1984). Although the percentage of EFC or EFS did not change, the gravity of errors might not have been the same, but the CAF measures in themselves did not allow us to look into these issues. Secondly, if we assume that the analytical measures are finer-grained than the holistic rating, we could also expect less change in only 9 months of writing instruction and practice. As reported by Ortega (2003), analytical measures like grammatical complexity may require 12 months of instruction to be developed. Thirdly, the existence of a ceiling effect is also possible. In other words, the analytical measures that were registered at Time 1 could have already been developed at that time to a large extent since our participants were fairly advanced L2 students and changes may have required more time to be achieved (Green, 2004; Storch, 2009). Fourthly, task conditions could have also influenced the results since participants wrote under time constraints and the resulting texts might not have been long enough to reliably capture changes (Polio, 1997; Storch, 2009) in the CAF measures for this particular group of L2 learners. Finally, one of the problems of a pre-and post-test design is that the development of individuals' writing ability may not be fully represented by one text written at the beginning

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and at the end of a course. Therefore, multiple texts produced by the participants at different points of the instructional period could have offered a more complete picture of their writing development across time.

Apart from these considerations, we used the same topic in the pre-test and post-test to avoid possible problems related to the potential effects of task topic, which could affect the development of writing (e.g. Elder & O'Loughlin, 2003; Shaw & Liu, 1998, Storch & Wigglesworth, 2007; Storch & Tapper, 2009). We also tried to control other task effects that could influence student-writers' motivation to write about the same task nine months apart using exactly the same writing prompt. As explained in the method chapter (Chapter V), we checked our participants' involvement in the writing task at Time 2 so as to make sure that there were no motivational factors, such as a decrease of interest in writing the same task. All the participants but one remembered having done the same task at the beginning of the course, and reported at Time 2 their degree of involvement (see Table 32) in the task using a Likert scale that ranged from 1 (not involved) to 5 (very involved).

Table 32. Participants' self-reported degree of involvement in the writing task at Time 2

NUMBERS OF THE LIKERT SCALE	CATEGORIES	NUMBER OF PARTICIPANTS (n=21)
1	Not involved	0
2	Not very involved	2
3	Somewhat involved	6
4	Involved	11
5	Very involved	2
<b>Total number of participants</b>		<b>21</b>

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Table 32 shows that participants tended to be engaged at different levels (from somewhat involved to very involved) and none of them stated that they had not been involved in the task. Accordingly, motivational factors did not seem to be responsible for the lack of significant changes in CAF measures across time.

As a whole, the EAP course appeared to have allowed our participants to improve both their L2 language and their writing skills from an overall communicative point of view (holistic rating), although no changes were found for the micro-level quality of the texts. In what follows, we shall report the written outcomes in relation to the participants' particular representation of the task and self-evaluation of goals.

### **VI.3.3.2. Changes in written performance in relation to participants' stored task representation and self-evaluation of goals**

We calculated rank-biserial correlations between dichotomous variables (1 versus 0) and continuous ones. The latter variables measured learners' scores on written performance both holistically and analytically (CAF measures). It should be reminded that dichotomous variables distinguished the participants who reported their task representation and goals in terms of the presence of a given factor (e.g. process and dynamic goals respectively) (1) or absence of it (0). For example, there were participants who represented the task to themselves in terms of process (1), and others who did not (0). In the latter case, their conceptualisation was restricted to a product view of the writing task. Given that the dichotomous variables differentiated two groups of participants as if they were independent groups, the results of the correlations with continuous variables should be interpreted as follows. Positive correlations indicate that the participants who mentioned a dichotomous variable, like task representation in terms of process, (1) scored high in the continuous variable, whereas a negative correlation indicates that those participants who did not mention the dichotomous variable of process (0) because they just viewed the task as a product, scored high in the continuous one.

Our results indicate that (see Table 33) the student-writers who defined the task as a process did not get high holistic scores in their written performance at Time 1 ( $\rho(21) = .228$ ,

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$p=.321$ ). This was a surprising result given that these participants tended to explain that they aspired to pursue sophisticated subgoals when composing as we saw before, which apparently led them to be engaged in greater knowledge transformation than the participants who only defined the task in terms of product. Such a finding may be indicative of L2 writers' difficulty in accomplishing the goals they pursue. This is in line with previous research on reading-to-write tasks that indicated that writers may find it difficult to accomplish the task in the same complex way as it is mentally represented (Ruiz-Funes, 2001; Wolfersberger, 2007).

However, it seems that through writing practice those difficulties may be overcome. In this respect, we found that over time the participants who started the writing course defining the writing task in a way that could be equated with a problem-solving approach (process view) tended to obtain better holistic scores in their essays at Time 2 ( $\rho(21) = .681$ ,  $p=.001$ ) in comparison with those student-writers who began the course representing the task to themselves in terms of product.

Table 33. Rank biserial correlations between participants' task representation and writing ability measured holistically

Rank-biserial correlations between participants' task representation and writing ability measured holistically		
Task representation (n=21)	Holistic scores at T1 (n=21)	Holistic scores at T2 (n=21)
Process T1	.228	.681**

NOTE. \*\* Correlation is significant at the .01 level (2 tailed).

It could therefore be suggested that the dynamic conceptualisation of the writing task that involved iterative writing processes and engagement in problem-solving behaviour could have helped them to achieve well-written texts. Visual inspection of the data showed the presence of one outlier that could have influenced the results of the correlations (see Figure 29).

## Results and discussion

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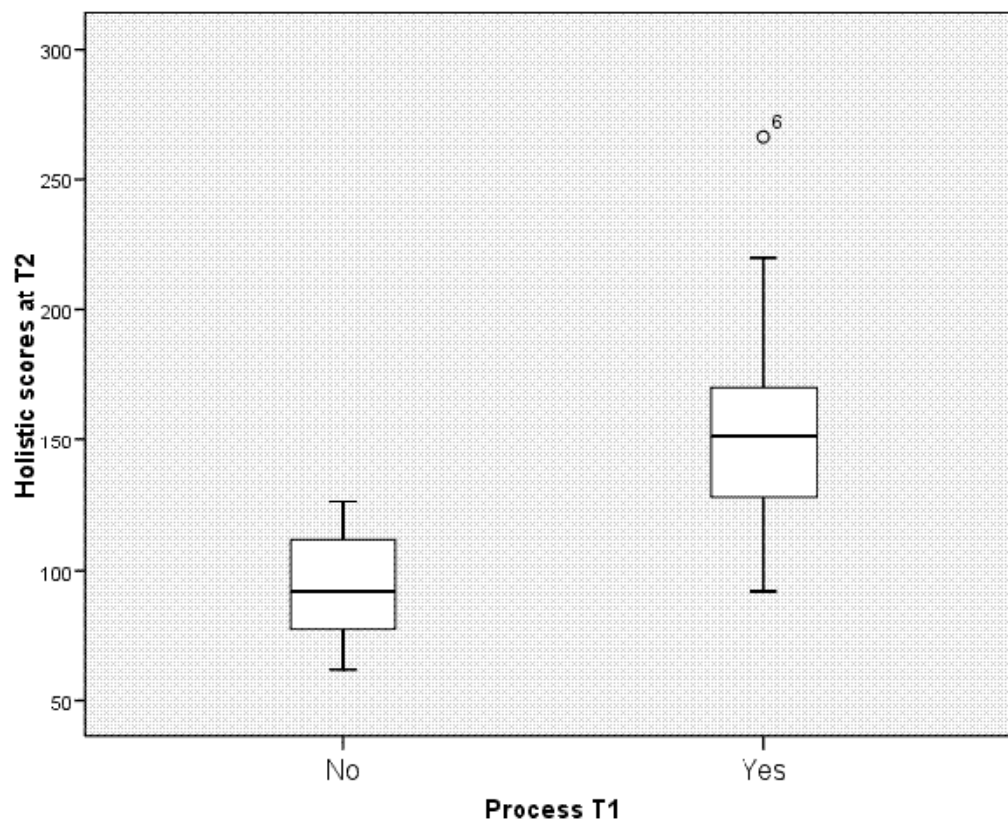


Figure 29. Boxplot of the relationship between a process view of writing at Time 1 and holistic scores obtained at Time 2

Accordingly, we removed the outlier from the correlation and conducted it again. The result of the correlation between the process view of writing and the scores obtained in the holistic rating at T2 continued to be significant ( $\rho(20) = .673, p = .001$ ) without us finding new outliers, as shown in the boxplot that follows:

## Results and discussion

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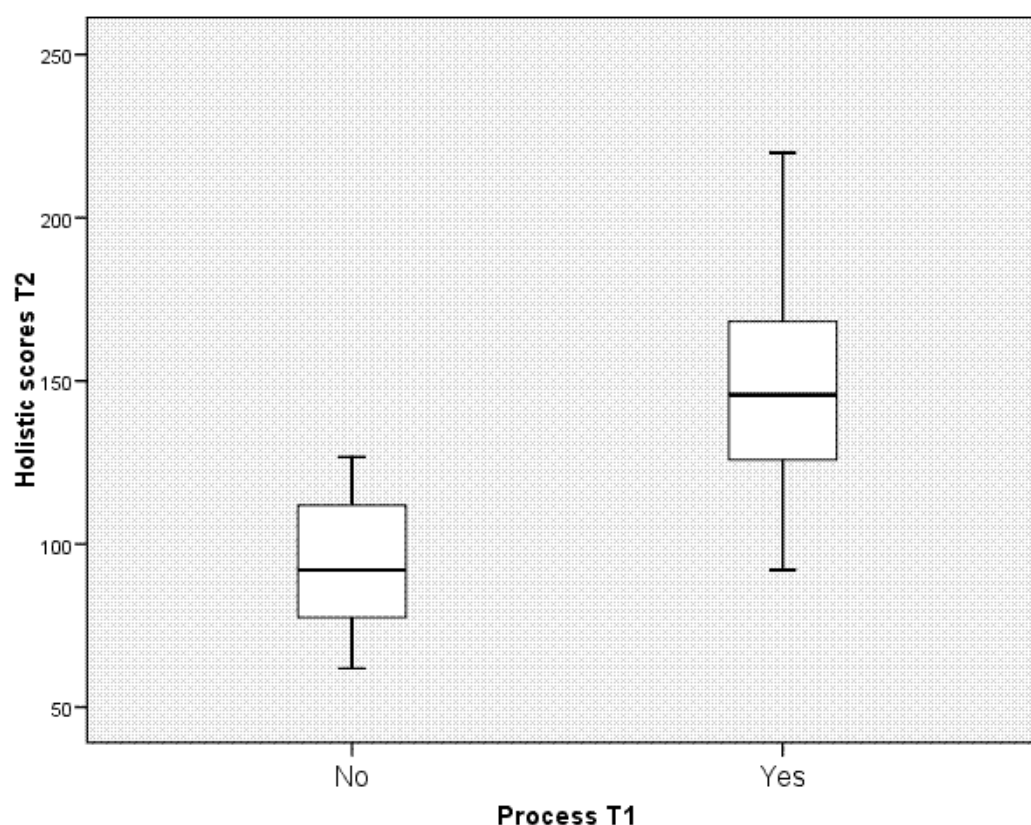


Figure 30. Boxplot of the relationship between a process view of writing at Time 1 and holistic scores obtained at Time 2 without outliers

Given these results, we suggest that those participants who conceptualised the task in terms of problem-solving seem to have been consciously and purposefully engaged in noticing (Swain, 1985) so as to identify problems and solve them when revising and rewriting their texts, which could be related to their improvement in written outcomes. This noticing function is illustrated in the following excerpt, in which a participant who described good academic writing explained the steps that writers should follow when composing:

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[34] After writing this first draft you should make a break, so that when you revise it, the mistakes may be easier to detect. Then you should write a second draft in which all the vocabulary and spelling mistakes of the first should be corrected. Finally, and after a space of time, you should read the second draft looking into the grammar so that you can correct some mistakes or simply improve the quality of the text using a more complex structures to say the same thing. (Participant 15, Journal on Task Representation at Time 1)

In addition, due to the overlap between the number of student-writers who conceptualised the task as process and who also reported dynamic goals (12 students in common), it was also expected that having these dynamic goals also correlated with high scores in written texts at Time 2 ( $\rho(21)=.435, p=.048$ ), as visually illustrated in the following boxplot:

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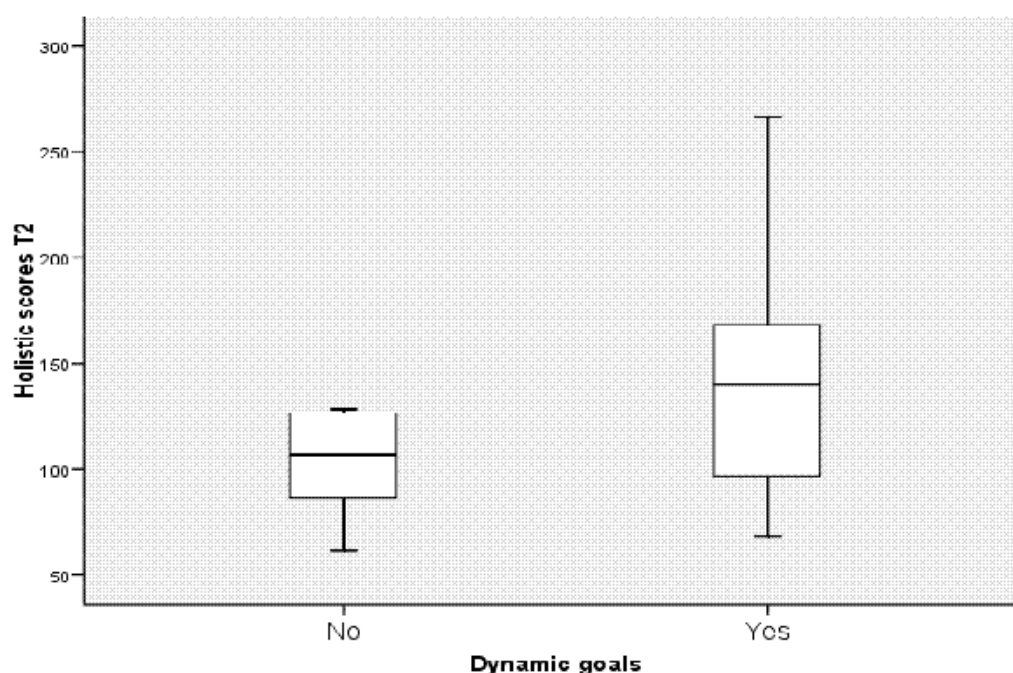


Figure 31. Boxplot of the relationship between dynamic goals and holistic scores at Time 2

These results are in line with Manchón and Roca de Larios' (2011) contention that mental models of writing are characterised by a set of beliefs about the task that guide L2 writers in the pursuit of goals and depth of the problem-solving behaviour in which they engage when composing. Along these lines, we also add empirical evidence about high written performance on the part of students who define the task in terms of problem-solving, self-evaluate their writing achievement and formulate new goals for writing as shown in Figure 32:

## Results and discussion

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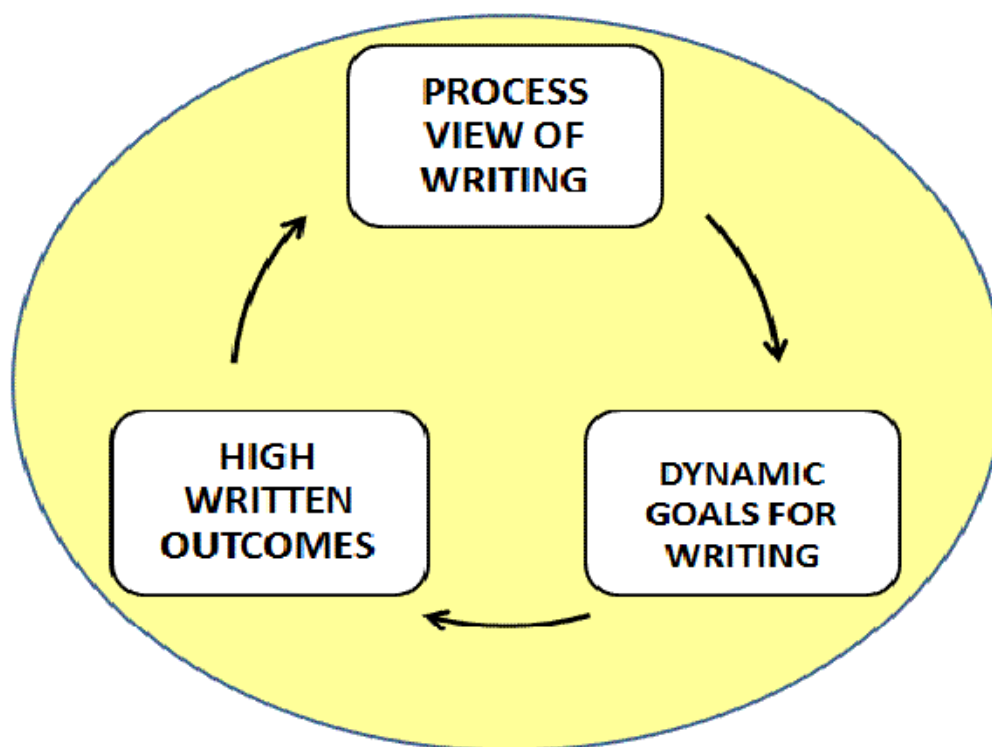


Figure 32. Relationship between task representation, goals and written outcomes

The figure also illustrates that “goals follow but also determine development” (Cumming, 2012: 153) like in a cyclical relationship since not only students did students pursue goals because of their problem-solving approach to the task but they also achieved high written scores. In addition, as a result of their perceived achievement in the EAP course, they also aimed to achieve more goals to further improve their writing. Consequently, in the case of the participants in our sample who had dynamic goals and described the task as a process, there was correspondence between perceived improvement in writing and real achievement. This result is in line with interventionist studies (e.g. Cumming, 1989) in which learners were tutored to pursue goals and evaluate their attainment. As a result of this intervention, the participants improved their written performance.

We could speculate that the participants who thought about the writing task as a problem to be solved could be more motivated than other participants who just viewed the task as a product. On these grounds, the two groups of participants could differ in their

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striving processes for goal achievement. Following Ford and Nicholls' (1991) distinction of individuals' styles when pursuing a goal, we could suggest that those participants who represented the task to themselves as a process could have a self-improvement orientation to writing, whereas those who conceptualised the task as product could be rather characterised by a maintenance style of their level of attainment.

### **VI.3.4. Summary of the main findings and implications**

Our fourth research question aimed at delving into the possible relationship between participants' goals, task conceptualisation and written performance. We now summarise the main findings:

- L2 writers can be engaged in the same cognitively demanding task under different levels of depth that can vary within a continuum of knowledge transformation according to their stored task representation in terms of process or product.
- Student-writers can report pursuing similar goals for writing but the quality of knowledge transformation when composing seems to be better reflected in the subgoals (surface or deep) that they have in mind.
- It seems possible that the complexity of student-writers' task representation (process versus product) could be a necessary step to engage in knowledge transformation
- The representation of the writing task as a problem-solving process could be related to L2 writers' involvement in a motivation and self-regulation cycle to improve their writing and pursue further challenges for writing after their attainment.
- There was improvement in the participants' overall writing ability measured holistically but not analytically.
- The participants who represented the task to themselves in terms of process tended to achieve better holistic scores across time than other participants who just viewed the task as a product.

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- The dynamic representation of the task in terms of process could be related to a noticing function in writing, which could explain high written outcomes.
- The cyclical reformulation of goals after achievement could be linked to different views on task representation (process versus product) and to distinct styles for pursuing goals (self-improvement orientation versus maintenance style).
- There seemed to be a cyclical relationship between dynamic goals, a problem-solving conceptualisation of the task and high written performance which illustrates that goals both “follow but also determine development” (Cumming, 2012: 153).

From a theoretical point of view, second language acquisition research should consider the importance of both task representation and writing goals for the development of writing ability. Future research may shed further light on the potential continuum of knowledge-transformation when writing by assessing the depth of goals that are pursued in multiple tasks across time bearing in mind learners’ task conceptualisation.

Pedagogical interventions should therefore focus on how learners represent the writing task to themselves and which goals they are willing to pursue so as to better understand their performance and decide in what way learners can be helped to improve their abilities by assessing their goals and their corresponding written performance. Teachers should foster in their lessons the description of writing in terms of problem-solving behaviour through instruction and recursive writing practices so as to get learners used to setting goals, striving for them and evaluating their goal achievement and corresponding written outcomes.

We also believe that the use of authentic tasks in the classroom adapted to writers’ professional interests and career goals that go beyond their immediate learning needs for university courses could also lead to the development of personal goals for writing and to self-regulation for improvement. We base this assumption on both our participants’ lack of interest in writing given the absence of clear writing prospects in their career and on the previous research that indicates that authentic tasks are motivational because they allow learners to discover and refine their own personal voice when writing (Elbow, 1994; Oldfather, 1993; Oldfather & Dahl, 1994; Schiwy, 1996).

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We therefore suggest that learners should be encouraged to write challenging tasks that engage them in a recursive writing process with multiple drafts. These drafts could be rewritten with the help of teachers and peers that could give feedback bearing in mind each writer's self-reported goals for the tasks. This proposal is in line with research on intentional cognition that postulates that effective learning is the result of the struggle for writers' self-imposed goals (Bereiter & Scardamalia, 1985; Cumming, 1986). The promotion of this pedagogical approach could be important not only to perform specific tasks for writing courses but also to help students self-regulate their composing process for life-long learning. Ideally, writing practice and guided instruction tailored to writers' goals could result in mastery goals (goals for learning), which writing teachers could encourage students to pursue in any other tasks and courses that offer the opportunity to write during their university studies.

# Conclusion

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## Chapter VII

### Conclusion

The present thesis aimed to shed light on the development of EFL learners' mental models of writing (stored beliefs about the task and their network of goals) and their relationship to changes in L2 writing ability. With that purpose, we conducted a longitudinal study within a period of 9 months and collected data from our participants' goals for writing, task representation and written performance at two points in time while they were taking an English writing course for academic purposes. In what follows, we shall summarise the main findings of the study. Theoretical and pedagogical implications will be discussed next. Finally, the limitations of the study will be assessed and some open issues for further research will be suggested.

#### VII.1. Summary of the main findings

We aimed to contribute to the investigation of the development of MMs of writing and written performance by exploring: (i) the conditions for the development of MMs; (ii) some factors that were assumed to be related to goals and actions for writing improvement; and (iii) the influence of task representation and goals on performance bearing in mind different conditions from the ones explored in previous research. Before reporting the main results of the study, we shall show the graph that summarises the aim of the investigation, our expected contribution to the field and the factors we examined.

# Conclusion

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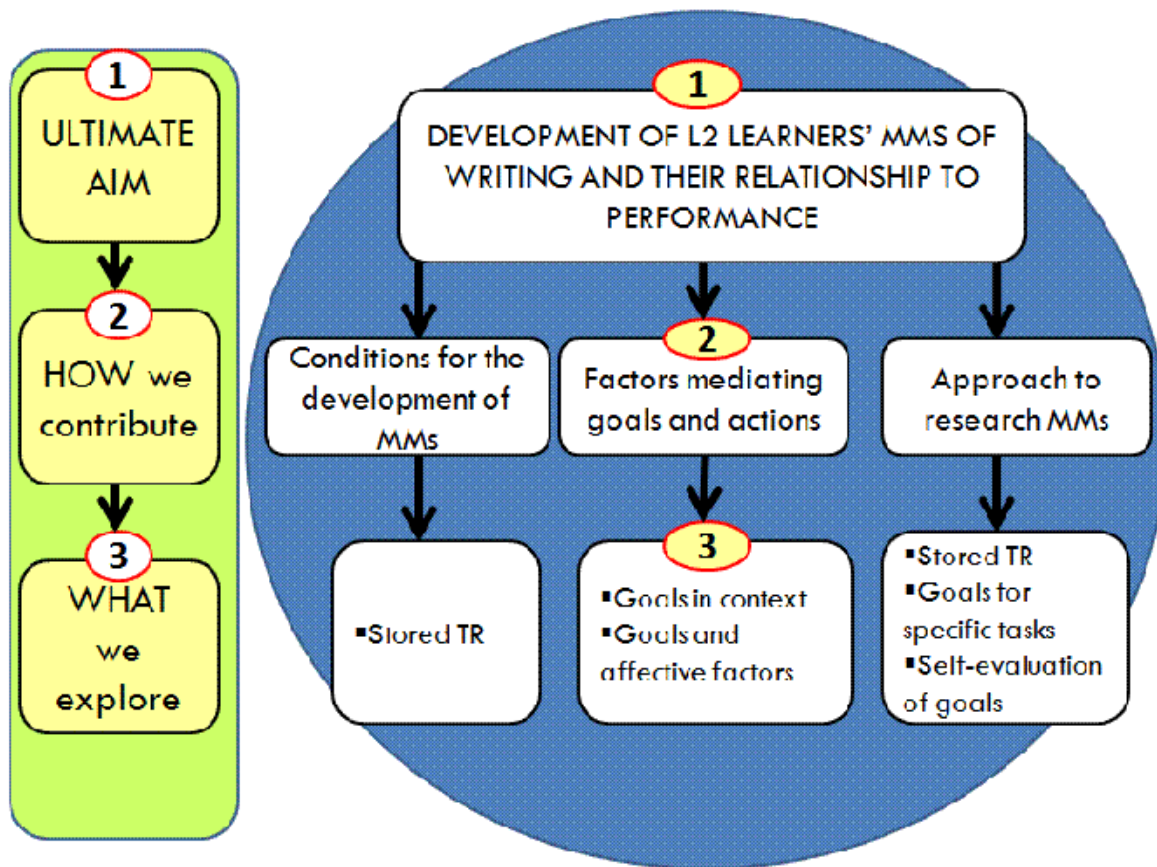


Figure 33. Overview of research aims, expected contribution and factors explored in the present study

## VII.1.1. Conditions for the development of MMs

The analysis of our participants' MMs was based on their stored task representation and those MMs were related to the learning environment in the EAP course due to the importance of contextual factors in the shaping of beliefs (e.g. Barcelos, 1995, 2000, 2003). In this respect, our study was different from previous research on task representation given that the latter focused on writing specific tasks from sources.

Our data showed that some aspects of the participants' stored representation of the task remained the same across time. In particular, the predominant orientation towards writing

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over time was a product one. The student-writers also defined the task throughout the EAP course from an intratextual conception and no apparent changes were found in the use of terminology to describe the writing task. Nevertheless, there seemed to be some idiosyncratic differences in the understanding of the task since half of the participants across time viewed it in terms of problem-solving and intertextuality. The participants started the course with an already multidimensional mental model of writing (ideational, textual and linguistic). This result was in contrast to Manchón and Roca de Larios' study (2011) in which a group of EFL students taking the same EAP course as our participants developed a multidimensional model of writing over time. Methodological differences between both studies could explain such differences given that their research focused on learners' perceptions of changes in the description of the task rather than on the comparison of actual self-reported representation of the task over time as was the case of our study. In addition, in our investigation the different dimensions of composition (ideational, textual and linguistic) were integrative at both times of data collection, which differs from the results reported by Devine et al. (1993) in which L2 writers had conflicting multidimensional models.

There were also overall differences in the description of task conceptualisation over the academic year, which we have interpreted as the outcome of the participants' refinement of old beliefs about the task rather than the result of real conceptual change (Carey, 1991). The specific differences concerning the various dimensions of writing were both quantitative and qualitative. The former comprised an increase from Time 1 to Time 2 in textual concerns while there was a concomitant decrease in the description of the task in terms of linguistic issues. As a result, the student-writers moved from a multidimensional model of writing to a bidimensional one in which ideational and textual issues prevailed over linguistic factors related to accuracy.

The qualitative divergences across time were related to ideational and textual issues. In particular, we observed a change in the ideational dimension since the participants moved from a knowledge-telling model (writer-based prose) at the beginning of the EAP course to a knowledge-transforming one (reader-based) at the end of the course. For the textual

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dimension, the data showed a refinement in the range of rhetorical aspects attended to. Rhetorical issues were described at Time 2 from a more in-depth perspective and along the lines of a knowledge-transforming approach. Those rhetorical changes in the conceptualisation of the task were attributed to writer-internal and external factors, i.e. to the participants' engagement in writing as recursive process, and to the teacher and peer feedback on their compositions.

## **VII.1.2. Factors mediating goals and actions for writing improvement**

We investigated the features of student-writers' self-reported goals as well as their self-perceptions of changes in relation to the context of action, as well as to socio-cognitive and affective influences. The joint effects of all these variables had not been longitudinally and systematically studied in previous research on EFL students' writing goals.

As for the characteristics of goals, they could be formulated as intentions, dilemmas or outcomes (Cumming et al. 2002; Cumming, 2006), but most of the goals were referred to as outcomes at the end of the EAP course. This result was interpreted as indicating that participants regarded their goals as accomplished during the academic year and they were satisfied with their perceived learning results. Furthermore, the prevalence of outcomes over intentions also reflected the participants' beliefs about the scant opportunities offered by their future learning context, which did not prompt them to formulate new goals.

Regarding the participants' perceptions of changes in their goals, we did not find the cyclical transformation of goals formulated as dilemmas (acknowledgement of problems or conflicts in learning) into new goals, which Cumming et al. (2002) suggested could exist but which were not revealed in their research either. However, we found that goals in the form of outcomes and the ensuing satisfaction derived from the self-evaluation of goal accomplishment resulted in new and distant goals for the future, which were broad and vague in scope. Accordingly, in our study the cyclical reformulation of goals involved positive

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affects and perceptions of positive results of learning (outcomes) rather than dissatisfaction and the acknowledgment of conflicts (dilemmas), as Cumming et al. (2002) had postulated.

With respect to socio-cognitive and affective factors for the shaping of goals, we were also unable to confirm Cumming's (2006) finding in an ESL context in which learners' goals for writing were shaped as a function of their long-term aspirations for university studies and careers. In our EFL setting, the participants' goal objects for their degree studies were broad, stable across time, and rather typical of foreign language learners (i.e. language goals). We also found that the participants tended to report actions to achieve an overall goal of writing improvement since they found it difficult to think about specific goals for their future writing needs in their degree studies beyond their immediate learning context in the EAP course. Along the same lines, the EFL writers in our study did not report having goals for their future careers across the two points in time of data collection since those needs were even further away from their immediate literacy context. The few participants who stated that they wanted to improve their writing for their future careers tended to describe general actions (such as engaging in writing practice) rather than specific goal objects, which were more difficult to imagine and report.

The lack of change over time in the reporting of student-writers' goals for university studies and for their careers was attributed to several factors. Firstly, the duration of data collection (9 months) may not have been long enough to shape their goals. Secondly, the participants' lack of writing prospects in their imagined context of action for the future could have restricted the development of goals. In this respect, it should be remembered that our participants explained that they expected to compose in future courses in their degree the same kinds of texts they were currently asked to write in the EAP course. At the end of the writing course, they tended to report that they would not need to write in other courses in their degree studies. Likewise, they did not hold expectations for writing in their future careers, even though many of them asserted that they wanted to become English teachers or even translators.

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Thirdly, writer-internal factors-such as self-efficacy beliefs, previous literacy experiences and outcome expectations-could have also been influential in the stability of goals across time. In fact, the participants' self-efficacy beliefs were maintained constant from Time 1 to Time 2. Our participants stated that they felt confident about their ability to achieve the goals of the EAP course at both times of data collection. Therefore, self-efficacy beliefs were assumed not to affect the pursuit of goals negatively. Likewise, outcome expectations were shaped at the beginning of the academic year in relation to the participants' immediate past achievement in their previous language course. Once outcome expectations were established, they remained unchanged throughout the year. These findings confirmed that prior learning experiences are important for the establishment of outcome expectations (expected grades), as claimed in self-regulation theories. In addition, these results also revealed that, apart from the aspirations for writing, which were postulated by Cumming (2006) as necessary for the shaping of goals, writer-internal variables could also be influential.

## **VII.1.3. The influence of task representation and goals on performance**

We explored EFL learners' mental models and their effects on performance drawing on Flower and Hayes' (1981) study in which goals and beliefs about the task were assumed to be interrelated. In this way, we departed from those studies that had either focused on task representation or on goals for writing in isolation.

The interrelationship between task representation and goals was explored from a dual perspective. On the one hand, we delved into the participants' stored task representation in relation to goals and actions when writing a specific task at Time 1. On the other hand, we examined whether their stored task representation could be associated with their own evaluation of goals at the end of the academic year.

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Regarding the former relationship, we found that the participants who held different views on the task approached it from different perspectives of knowledge transformation that ranged from low to high, as shown by the specific subgoals that were reported when composing their task. In particular, those student-writers who understood the task in terms of a process approach or problem-solving behaviour explained that they engaged in more sophisticated and encompassing goals in comparison with those participants who understood the task as a static written product. The differences in the goals reported by both groups of participants who held distinct views on the writing task seem to exemplify the models proposed by Bereiter and Scardamalia (1987), that is, knowledge-telling and knowledge-transforming models. The result was illustrative of the interrelationship between L2 writers' representation of the task and their potential engagement in problem-solving behaviour.

With respect to the interconnection between the participants' stored task representation and their own evaluation with regard to goals, we found that those writers who understood the task in terms of problem-solving behaviour also reported having dynamic goals at the end of the academic year. As a result, these participants evaluated their learning achievement at the end of the course and formulated new goals for the future as postulated in self-regulation models. Accordingly, it seemed that the representation of writing as involving a given process could be associated with L2 writers' motivation and self-regulation processes to achieve further improvement in writing, as when moving from a postactional stage of writing to a preactional one in models of motivational behaviour (e.g. Dörnyei & Ottó, 1998). However, it is important to stress that the formulation of new intentions may not lead to the commitment to goals in the absence of a challenging and responsive learning environment (Ford, 1992).

As for written performance, there were differences in the holistic rating across time, while no changes were registered for the analytical measures (complexity, accuracy and fluency). Those results were attributed, among other reasons, to the finer-grained level of analysis provided by the CAF measures that may not perfectly map onto global changes (e.g. communicative quality) that were captured by the holistic rating.

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As far as the relationship between the changes in written performance and the participants' mental models of writing are concerned, we found interesting patterns that showed the student-writers' difficulty in accomplishing the task in the same way as they mentally represented it. More specifically, those participants who understood the task as involving problem-solving behaviour did not tend to achieve high performance in their written texts at Time 1. It is possible that when composing they found it difficult to accomplish the various subgoals that they reported pursuing. Nevertheless, those same participants achieved the highest scores in their written performance at Time 2 in comparison with the student-writers who represented the task in terms of a static product. Therefore, it is possible that through writing practice the difficulties encountered for the achievement of several subgoals may have been overcome, as evidenced in the data from those participants who conceptualised the task as a process or problem-solving activity. They tended to report engaging in constant noticing processes when composing, as suggested in the Output Hypothesis (Swain, 1985). Furthermore, it should be recalled that the description of the task as a problem or recursive process was also associated with the reporting of dynamic goals. These findings revealed that not only could a process conceptualisation of the task be linked to high written performance, but also that a problem-solving view of the task is related to positive self-evaluation of achievement and the possibility of the formulation of new goals for the future although they may be vague and broad in scope. In this respect, we speculated on the possibility that the depth of the subgoals formulated by the participants with a problem-solving view of the task may have helped them in their written performance. In turn, the new formulated goals were the result of their previous perceived achievement. On these grounds, we could suggest that, as postulated by Cumming (2012:153), in the case of learners with a process view of the task, their goals seemed to both follow and determine their writing development.

We could even suggest that the description of the task as a process or product could be indicative of their individual styles for composing (Ford & Nicholls, 1991) and setting goals accordingly, since those students who had a process approach were oriented towards self-

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improvement in writing. In contrast, those student-writers who described the task in terms of a product were more oriented towards a maintenance style of their level of attainment and did not formulate new goals after reporting their perceived achievement.

## **VII.2. Theoretical implications**

This section describes the theoretical insights that the results of the present study add to the study of foreign language writing, although they must be taken with caution given the small sample size of our study. The ultimate aim of the present study was to explore longitudinally the development of the MMs of writing (understood as a set of beliefs and goals) of a group of EFL learners and the relationship of these MMs to their written performance. The main insights of our study can be summarised in four main areas: (i) the development of mental models; (ii) writers' mental models and success in writing; (iii) the importance of a challenging context for the maintenance of student-writers' motivation to write; and (iv) the shaping of goals in relation to writer-internal factors.

### **VII.2.1. Development of mental models**

Previous L2 writing studies have accounted for the relationship between students' L2 proficiency level and the development of MMs (e.g. Manchón, Roca de Larios & Murphy, 2009). The findings indicated that learners with a preintermediate level of the foreign language were guided by a monodimensional model, while more advanced students had multidimensional ones. However, the researchers were reluctant to make any strong claims about the shaping of multidimensional models of writing as the only result of L2 proficiency level given that those learners with high L2 proficiency also had more L2 writing experience in comparison with the preintermediate language students. From a different perspective, Devine, Railey and Boshoff (1993) also emphasised the importance of the mastery of the language for the development of mental models of writing. In their research, L1 and L2 writers' mental models were compared and it was concluded that although both groups of

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writers could have multidimensional models, L2 students were likely to have conflicting models, whereas L1 writers tended to have integrative ones. According to the researchers, those results highlighted the disadvantage of L2 students compared to L1 composers.

All the studies described above share the assumption that the sophistication of mental models is equated with learners' attention to multiple dimensions when composing. Our study shows that students with an upper intermediate level of English can have a multidimensional model of writing, which is not necessarily refined, before starting a period of extensive and intensive writing practice and instruction. In particular, learners reported being able to pay attention to several dimensions of writing (ideational, textual and linguistic) while doing it from a basic knowledge-telling approach.

After the instructional period of 9 months, their mental model developed. However, the sophistication of their model was not reflected by their attention to multiple dimensions (in fact our participants moved from a multidimensional model to a bidimensional one) but rather by the breadth and depth with which the features of each dimension were described as well as by the qualitative move from a knowledge-telling approach to a knowledge-transforming one. Therefore, what our data show is that when investigating the shaping of mental models on the part of advanced language learners, changes may be better captured by engaging in qualitative analyses regarding the description of each dimension rather than quantitatively in terms of the dimensions they pay attention to. It is still an empirical question whether the number of dimensions of writing attended to when representing the task may be an indication of the sophistication of mental models in the case of learners with low or intermediate L2 proficiency level.

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## **VII.2.2. Student-writers' mental models and success in writing**

Research on task representation has emphasised that the way individuals understand the task influences their performance, but there have been no conclusive findings about the sophistication of task representation and success in composing. It has been reported that the complexity of students' task representation does not always relate to the final quality of the text. The mismatch may be due to the existence of a gap between the cognitive understanding of the task and the ability to write the text as it is mentally represented due to L2 language problems (Wolfersberger, 2007) or to different interpretations of the type of writing required to carry out the task successfully (Flower, 1990; Ruiz-Funes, 2001).

Drawing on the assumption that writing involves a task representation to solve particular problems that come up when composing (Bereiter & Scardamalia, 1987; Graham & Harris, 1994; Hayes, 1996), the present study offers empirical evidence of student-writers' general schema of task representation to do any writing task. The study shows that writers who describe the task as a process involving problem-solving behaviour seem to be likely to strive for more sophisticated subgoals when composing. This might be the result of their constant representation of the problem posed by the writing task when composing. In fact, an essential requirement in the solution of a problem is to understand it or in other words, as cognitive psychologists would explain, to engage in the problem (Cummins, Kintsch, Reusser, & Weimer, 1988; Duncker, 1945; Greeno, 1977). Afterwards, if the initial representation fails to solve the problem, it is important for the individual to be able to transform that representation into a new correct one to succeed in the task (Kaplan & Simon, 1990; Simon & Hayes, 1976). Our data seem to indicate that holding a process view may have helped writers to consciously engage in noticing processes so as to solve problems that emerged while composing for which they formulated several complex subgoals oriented towards the achievement of an overall goal of writing quality. It is also possible that during the writing process the participants with a process view of writing transformed and adapted their initial task representation when they found difficulties in achieving the various subgoals

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they had formulated. However, further insights from think-aloud protocols would have been needed for us to confirm this inference. What is certain is that understanding the task in terms of a process led writers to solve the writing problem posed by the writing task since they ended up composing texts that were the most highly rated from a holistic point of view. This result is consonant with the the tenets of human problem-solving in cognitive psychology, according to which finding a solution to a problem, like the one posed by a writing task at hand, depends on the quality of the representation constructed (Simon & Hayes, 1976).

## **VII.2.3. The importance of a challenging context for the maintenance of students' motivation to write**

In our study we were interested in students' shaping of goals for writing in natural learning contexts rather than in controlled experimental conditions so as to shed light on students' real needs for writing as well as why they write and how they do it (Cumming et al. 2002). In line with Cumming's longitudinal study (2006) in an ESL context, our student-writers' goals were fairly stable across time and directly related to the context of instruction. In addition, our results revealed that learners were motivated to write during the period of writing instruction in the EAP course. Therefore, they formulated goals for those writing needs within an instructional context that offered learning opportunities. Some participants even moved from a knowledge-telling approach (regarding their self-reported rhetorical concerns for writing and their use of sources when composing) to a knowledge-transforming one. They also seemed to be oriented towards a mastery approach so as to learn to write and write to learn. However, their motivation and formulation of goals seemed to be restricted to their current learning context, given the lack of clear writing prospects in other courses of the degree or their future professions. In the long run, we could expect that their mastery goals could become just performance goals in other courses, given the absence of stimulating conditions for the maintenance of their developed writing abilities. These results revealed the disadvantage of EFL contexts in comparison with ESL situations, which could be a potential

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explanation of why foreign learning contexts are considered to be less purposefully driven (Ortega, 2009).

## **VII.2.4. The shaping of goals in relation to writer-internal factors**

Following previous studies on goals that highlighted the influence of learners' aspiration for the shaping of goals (Cumming, 2006), we explored our students' aspirations for their university studies and for their careers as well as other writer-internal factors that precede the formulation of goals. Contrary to Cumming's (2006) findings, our participants appeared to lack aspirations for writing beyond their immediate literacy context, so aspirations for the future did not seem to shape their goals. The formulation of our EFL writers' goals was more related to their past learning experiences and level of achievement, their self-efficacy beliefs and outcome expectations for their current literacy context. The results open up a new research avenue for the exploration of EFL learners' writing goals with limited writing practice. In these contexts, past learning experiences and writer-internal variables related to their immediate context of action could be more important than aspirations (related to their degree studies or careers) for the development of goals for writing.

## **VII.3. Pedagogical implications**

The results of the present thesis show the need to extend academic writing to different contexts of instruction and practice apart from writing courses. EFL students face difficulties in developing their writing abilities in countries like Spain not only because learners must write in a foreign language but also because there is also an absence of training in L1 writing in both primary and secondary schools.

On these grounds, if university learners who study in countries like Spain are expected to write complex academic texts in their L2, **university departments** should revise the syllabus of foreign language degrees to make sure that students are provided with opportunities to develop their composing skills apart from the instruction and practice

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provided in some isolated writing courses. Sasaki (2009, 2011) reported that EFL students lack motivation and actions to improve their L2 writing because the need to write for real communication is lacking. She then proposed the creation of “L2-related imagined communities” where learners could be cognitively and emotionally engaged in their writing for a communicative purpose. We suggest that rather than creating imagined communities, the aim would be to create learning environments that EFL students could find motivating. Learners could be encouraged to write for real and communicative goals in their courses bearing in mind authentic audiences. With this purpose, instructors of mainstream courses at university could help learners to see the importance of good academic writing not only as a vehicle of transmission of knowledge when sitting exams but also as a means of learning about content.

It should be remembered that our participants did not think that they would need to write in the mainstream courses of the degree once they had finished their EAP course, which seemed to be detrimental to the shaping of their goals. In addition, most of the participants stated that, apart from the writing teacher and the peer feedback they got in the writing lessons, there were no other people that helped them to write their compositions. In this respect, Spanish universities could follow the example of North America and some European countries where there are **writing centres or laboratories** that organise group workshops or individual consultations with students who want to learn to assess their progress in real writing assignments. In this way, students can be helped with their individual problems and improve their writing skills. Moreover, we believe that if learners got used to writing intensively and extensively in their L2, they could also become aware of the usefulness of writing for their professional careers as teachers or translators. EAP teachers could also help in this respect by choosing tasks that are in line with learners’ career interests so that they can find them useful and motivating not only for their present literacy context but also for the future.

Furthermore, bearing in mind that in our study those student-writers who understood the task as a process involving problem-solving behaviour got the highest scores in their

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written texts and also reported pursuing more sophisticated subgoals, we could suggest the following teaching implications. **Teachers of EAP lessons** could foster (i) recursive writing processes so as to help learners refine their task representation by finding difficulties when writing and solving them; (ii) the engagement in rewriting procedures based on feedback about high-level textual concerns (e.g. rhetorical features of the text) to improve students' performance; and (iii) the pursuit of personal goals for writing that will have to be reassessed when revising and rewriting their texts so as to make learners write with a purpose and assess their own difficulties in achieving those goals. Concerning students' goals, instructors could also find out the particular goals that students pursue for each assignment so that they can provide feedback related to problems, difficulties or advancement in their achievement, as Cumming (2006) also suggested.

Apart from the instruction and practice in the EAP course, our students also reported that they did not believe mainstream teachers could and/or should help them to write in the L2 because it was not the purpose of those courses. For this reason, students regarded the absence of writing practice in mainstream courses as normal. Given that writing is a "social construction" (Cumming, 1998) based on the interaction of different agents in a social context, we believe that if mainstream teachers collaborated with EAP instructors in the promotion of a writing-to-learn approach, university students might also see the value of writing for learning so that they could move beyond the belief that writing is restricted to EAP lessons, where they can learn to write.

Several researchers have underlined the contribution of writing as a tool for content learning by promoting better understanding of the concepts and reflecting on them through analytical inquiry (e.g. Langer & Applebee, 1987; Newell, 1984; Newell, 2005; Newell, Koukis, & Boster, 2006) along the lines of knowledge-transforming models (Bereiter & Scardamalia, 1987). Therefore, we propose that in order to promote writing-to-learn approaches in a university context, **mainstream teachers** could (i) assign writing assignments for their courses and/or increase the number of written assignments that it is compulsory to hand in; (ii) establish clear evaluation criteria for those assignments so that learners can shape

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their beliefs for those tasks and pursue goals accordingly; (iii) offer students attainable models of previous assignments to shape their goals and task representation for different courses accordingly; and (iv) hold conference meetings with students about the progress in their written assignments during the courses. The emphasis should be on facilitating practice in L2 writing for learners, apart from the isolated writing experiences in EAP courses, while they pursue a degree in a foreign language like English.

## **VII.4. Limitations and suggestions for further research**

The present study offers evidence of the shaping of EFL students' beliefs and goals throughout an academic year of writing instruction and their relationship to written performance, but there are some limitations that need to be underscored so that they can be taken into account for further research on mental models of writing. In what follows, we shall discuss the limitations and make some suggestions for further research related to the scope of the present study and some methodological issues.

### **VII.4.1. Scope of the study**

The present study was based on a natural learning context in an EFL classroom and the collection of data was restricted to a single group of participants within a particular classroom. Therefore, although the findings help to begin to understand the potential development of beliefs about the task, goals and written performance as well as the relationship between those variables, the results cannot be generalised to all EFL learners' situations beyond the particular context of data collection. The study needs to be replicated in multiple classrooms with bigger sample sizes in EFL universities that offer similar writing opportunities to the ones described in the present research so as to expand the results and make more trustworthy interpretations of the shaping of students' mental models of writing and their association with performance.

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Even in EFL universities, which like our study, restrict writing instruction to EAP courses, differences in the shaping of beliefs, goals and performance could be found on account of the sociocultural context in which student-writers develop their abilities. As rightly pointed out by Ortega (2009: 250), “we should take great care to avoid the pitfall of treating teachers, writers, and writing contexts across studies as belonging to an undifferentiated, homogenous contextual class of ‘FL’ or ‘EFL’ ”. Along the same lines, if differences are expected within EFL classroom situations, discrepancy of results about learners’ shaping of the task, goals and performance will be also expected in ESL contexts on account of the diverse learning and writing opportunities offered in second language situations (e.g. amount of input and output; mainstream courses devoted to writing; the help provided by writing centers to learners, etc..) in comparison with EFL settings. For this reason, further studies should also delve into the idiosyncratic features of students’ mental models in different contexts and to find out whether there are more similarities (e.g. features of goals) and/ or differences (e.g. aspirations for writing in relation to the opportunities offered in the learning context) from the ones observed in the present study.

There were also other issues that intrigued us and on which future research could shed light. The participants who defined the task in terms of a process involving problem-solving behaviour did not seem to hold different self-efficacy beliefs, L2 language level, and/or L2 writing experiences when they started the EAP course compared to the students who just viewed the task as a product. This lack of differences could be the result of exploring a rather homogeneous group of participants for which those possible divergences may have been more difficult to capture. However, learners who viewed the task as a process appeared to pursue more sophisticated goals when writing and they also wrote texts that were better rated. Future research could investigate whether learners at different levels of writing experience and/or L2 language proficiency level could be oriented towards different conceptualisations of their writing tasks in terms of processes or static products that would lead them to produce their texts differently.

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As for the pedagogical implications we described above, we mentioned before that mainstream lecturers in EFL settings could promote the use of the writing-to-learn approach in their lessons. We formulate some hypotheses about what could happen in this case, which further research could explore. We suggest that the continuous writing practice for different mainstream courses of the degree could help students to develop not only their writing skills but also their beliefs about the task and their goals, which could be adapted to the specific demands of each course.

Furthermore, we believe that the beneficial effects of teaching practices oriented towards writing-to-learn could also apply to other educational levels. As explained above, Spain lacks a tradition of teaching writing in primary schools and high schools and what concerns us most is that EFL students are not motivated to improve their writing and do not formulate goals accordingly because they do not seem to see the usefulness of it for their professional careers as English teachers or translators. For this reason, we propose that if university students in Spain, who may become prospective teachers in schools and high-schools, get used to both learning-to-write and writing in order to learn the L2 language on a regular basis, they might also foster those same writing practices in their future lessons. Therefore, a change in teaching orientation at universities could be beneficial to the whole educational system and could potentially lead in the long run to the creation of a writing tradition in primary schools and high schools that up to now is missing in countries like Spain.

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## VII.4.2. Methodological issues

The present study was designed to follow the line of research initiated by Cumming (2006) on the descriptive exploration of the shaping of goals as they develop over a long period of instruction and practice in normal classroom contexts. It also aimed to account for the longitudinal development of written performance. Furthermore, the shaping of learners' beliefs about the task or task representation was also longitudinally examined since to our knowledge previous research had only been based on one-shot data collection or on short time spans. Nevertheless, some methodological limitations were also evident in our research.

The use of journals to collect data on stored task representation preserved our participants' self-reported views on the task without guiding or constraining them to a preconceived set of beliefs about which they may not have even really thought before. Nevertheless, the use of additional instruments like questionnaires could have helped to shed more light on the development of their task representation. In addition, think-aloud protocols could have also revealed students' online task representation, which may have resulted in a more complete picture of their understanding of the task.

Regarding goals for writing, we gathered data through interviews and journals. With regard to the interviews, they allowed us to explore student-writers' goals for writing in task-independent activities. These data could have been complemented with interviews on specific writing assignments across time, as Cumming (2006) had previously done. Such interviews could have offered a more accurate view of the development of goals in task-independent and task-dependent activities as well as the difficulties that writers encounter in the achievement of goals. Future research could investigate the longitudinal shaping of writers' goals conducting interviews on specific students' writing assignments and making sure that the topics of the assignments and task types are similar in terms of difficulty over time. Under these conditions, researchers could better capture the development of student-writers' goals rather than the adaptation of goals to different tasks. Furthermore, our participants' self-reported goals for specific tasks could have been triangulated with the use of think-aloud

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protocols about the pursuit of goals while composing. This procedure could have offered more insights into the goals and subgoals pursued by writers who hold different views on their task representation.

With respect to written performance, multiple writing assignments of the same level of difficulty and task type could have been collected throughout time to explore more accurately the development of our participants' writing skills. In addition, other measures of complexity could have been used. For instance, we could have explored the types of subordination clauses that our upper intermediate learners used or the type of nominalisation (Norris & Ortega, 2009) in clauses and sentences resulting in a synoptic style since it is possible that the CAF measures we explored could have already reached their ceiling at the beginning of the academic year. For this reason, we may not have found changes in those measures over the academic year.

## **VII.4.3. Concluding comments**

In spite of the above-mentioned limitations, we consider that our study was worthwhile attempt to begin to uncover (i) learners' mental models of writing by exploring the interrelationship between beliefs about the task and goals, which up to now had been separately investigated; and (ii) the relationship between both variables and written performance. The present investigation offers empirical evidence of the intricacies of mental models and it also raises some theoretical and pedagogical implications. We hope the present study can help to open up new avenues of research for the improvement of EFL students' written performance.

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# Appendix

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## Appendix

### HAMP-LYONS' RATING SCALE (1991)

#### Appendix 7.1. Question 2 Global Scale

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##### BAND DESCRIPTOR

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- 9 The writing displays an ability to communicate in a way which gives the reader full satisfaction. It displays a completely logical organisational structure which enables the message to be followed effortlessly. Relevant arguments are presented in an interesting way, with main ideas prominently and clearly stated, with completely effective supporting material; arguments are effectively related to the writer's experience or views. There are no errors of vocabulary, spelling, punctuation or grammar and the writing shows an ability to manipulate the linguistic systems with complete appropriacy.
- 
- 8 The writing displays an ability to communicate without causing the reader any difficulties. It displays a logical organisational structure which enables the message to be followed easily. Relevant arguments are presented in an interesting way, with main ideas highlighted, effective supporting material and they are well related to the writer's own experience or views. There are no significant errors of vocabulary, spelling, punctuation or grammar and the writing reveals an ability to manipulate the linguistic systems appropriately.
- 
- 7 The writing displays an ability to communicate with few difficulties for the reader. It displays good organisational structure which enables the message to be followed without much effort. Arguments are well presented with relevant supporting material and an attempt to relate them to the writer's experience or views. The reader is aware of but not troubled by occasional minor errors of vocabulary, spelling, punctuation or grammar, and/or some limitations to the writer's ability to manipulate the linguistic systems appropriately.
- 
- 6 The writing displays an ability to communicate although there is occasional strain for the reader. It is organised well enough for the message to be followed throughout. Arguments are presented but it may be difficult for the reader to distinguish main ideas from supporting material; main ideas may not be supported; their relevance may be dubious; arguments may not be related to the writer's experience or views. The reader is aware of errors of vocabulary, spelling, punctuation or grammar, and/or limited ability to manipulate the linguistic systems appropriately, but these intrude only occasionally.
- 
- 5 The writing displays an ability to communicate although there is often strain for the reader. It is organised well enough for the message to be followed most of the time. Arguments are presented but may lack relevance, clarity, consistency or support; they may not be related to the writer's experience or views. The reader is aware of errors of vocabulary, spelling, punctuation or grammar which intrude frequently, and of limited ability to manipulate the linguistic systems appropriately.
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# Appendix

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## Appendix 7.1. Question 2 Global Scale (continued)

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### BAND DESCRIPTOR

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- 4 The writing displays a limited ability to communicate which puts strain on the reader throughout. It lacks a clear organisational structure and the message is difficult to follow. Arguments are inadequately presented and supported; they may be irrelevant; if the writer's experience or views are presented their relevance may be difficult to see. The control of vocabulary, spelling, punctuation and grammar is inadequate, and the writer displays inability to manipulate the linguistic systems appropriately, causing severe strain for the reader.
- 
- 3 The writing does not display an ability to communicate although meaning comes through spasmodically. The reader cannot find any organisational structure and cannot follow a message. Some elements of information are present but the reader is not provided with an argument, or the argument is mainly irrelevant. The reader is primarily aware of gross inadequacies of vocabulary, spelling, punctuation and grammar; the writer seems to have no sense of linguistic appropriacy, although there is evidence of sentence structure.
- 
- 2 The writing displays no ability to communicate. No organisational structure or message is recognisable. A meaning comes through occasionally but it is not relevant. There is no evidence of control of vocabulary, spelling, punctuation or grammar, and no sense of linguistic appropriacy.
- 
- 1 A true non-writer who has not produced any assessable strings of English writing. An answer which is wholly or almost wholly copied from the input text or task is in this category.
- 
- 0 Should only be used where a candidate did not attend or attempt this part of the test in any way (ie did not submit an answer paper with his/hers name and candidate number written on).
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## Resumen

### Capítulo I. Introducción

El capítulo I sitúa el contexto de aprendizaje en el que el presente estudio se enmarca a la vez que ofrece una visión global de la importancia de la investigación que se realiza. En el capítulo también se detalla el principal foco de interés de la investigación, así como la organización de la tesis en diferentes capítulos.

La producción de textos académicos coherentes y efectivos desde un punto de vista comunicativo supone una habilidad difícil de adquirir aún cuando se escribe en lengua materna debido a que el mero conocimiento de la materia de la que se escribe así como habilidades escritoras básicas no garantizan la producción de un buen texto académico. Las dificultades aumentan cuando el estudiante escribe en una segunda lengua sobre la que todavía puede necesitar adquirir fluidez o corrección. Dicha dificultad es incluso mayor en países como España que carecen de tradición escritora en lengua materna tanto en escuelas de primaria como de secundaria.

En cuanto a la escritura en lengua extranjera, el curriculum oficial en España pretende promover el desarrollo de la habilidad escritora en L2 tanto en escuelas de primaria como de secundaria, pero las actividades que se realizan en el aula para dicho fin tienden a ser infrecuentes y basadas en la entrega de un único escrito sobre el que no hay retroalimentación para los estudiantes o un proceso de reescritura. A nivel universitario muchos departamentos de inglés en España incluyen cursos de escritura académica en lengua extranjera con el fin de desarrollar las habilidades escritoras de los alumnos en L2. La mayoría de la investigación realizada sobre dichos cursos de escritura en diferentes contextos de aprendizaje se ha centrado más frecuentemente en el análisis de los productos escritos que en factores relacionados con los procesos de los escritores para explicar el desarrollo de la habilidad escritora. Dentro de estos procesos, se encuentra la representación que el estudiante hace de la

## Spanish summary

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tarea, que según evidencia empírica puede diferir de estudiante a estudiante y afectar la calidad de la escritura (Flower, 1990; Ruiz-Funes, 2001; Wolfersberger, 2007; Zhang, 2006). Además, cuando los estudiantes intentan componer el texto según la imagen mental que cada aprendiz tiene de la tarea a realizar, se plantean diferentes objetivos de escritura (Flower, 1990).

El efecto conjunto de la representación de la tarea y los objetivos puede ser equiparado a un modelo mental de escritura que guía el comportamiento de los escritores (Devine, Railey and Boshoff, 1993). Hasta la fecha no se han realizado estudios longitudinales sobre el desarrollo de la representación de la tarea y los objetivos de composición que pueden evolucionar no sólo cuando se componen tareas de escritura en específico sino también globalmente para cualquier tipo de escrito durante un período largo de instrucción y práctica en un curso de escritura con fines académicos. La exploración de ambas variables (representación de la tarea y objetivos) y la posible relación entre ambas podría arrojar luz sobre los procesos de escritura relacionados con la composición de textos académicos con éxito, así como sobre la motivación de los aprendices y su autorregulación en la escritura. El presente estudio empírico es un intento de empezar a llenar este vacío en la investigación sobre la escritura en lenguas extranjeras.

La tesis está organizada en siete capítulos. Siguiendo el capítulo I de introducción, el capítulo II explica y discute la importancia de los modelos mentales debido a que son la base para la interrelación de creencias y objetivos de los individuos que condicionan su comportamiento. El capítulo II se centra principalmente en las creencias sobre la escritura ya que se consideran como el elemento que activa la interrelación de objetivos durante el proceso de composición. El capítulo III está dedicado a los objetivos de los aprendices desde un punto de vista motivacional y auto-regulatorio. El capítulo IV describe las preguntas de investigación del estudio así como el razonamiento que subyace en cada pregunta de investigación y la posible contribución de cada una de ellas al campo de investigación de la escritura en L2. El capítulo V presenta la metodología mixta empleada en el estudio, las fuentes de datos (diarios de clase, entrevistas, tests de dominio de la lengua extranjera, y

composiciones en L2), su codificación y análisis. El capítulo VI muestra los resultados y la discusión de los mismos en relación a las cuatro preguntas de investigación planteadas en el estudio. Finalmente, el capítulo VII resume los resultados principales de la investigación al mismo tiempo que señala las implicaciones teóricas y pedagógicas, las limitaciones del estudio y plantea futuras áreas de investigación.

### **Capítulo II. Modelos mentales**

Este capítulo está dedicado a la revisión de los orígenes, características y evolución de los componentes que constituyen los modelos mentales a través de experiencias educativas y de la instrucción. Los modelos mentales se componen de creencias que han sido investigadas desde diferentes perspectivas teóricas y metodológicas. Barcelos (2000) clasificó dichas perspectivas bajo tres enfoques principales para el aprendizaje de lenguas (normativo, metacognitivo y contextual), los cuales son importantes para la presente investigación. En este estudio nos centramos en las creencias sobre el uso de la lengua y más precisamente en las creencias sobre la escritura en lengua extranjera que han sido prácticamente inexploradas. De esta manera, esperamos ampliar la investigación hasta ahora existente focalizada en las creencias sobre el aprendizaje de lenguas (cf. Alanen, 2003; Barcelos, 2000; Coterall, 1999; Dufva, 2003; Hosenfeld, 2003; Horwitz, 1987, 1999; Kalaja, 2003; Kalaja & Barcelos, 2006; Kramsch, 2003; Mantle-Bromley, 1995; Mori, 1999; Sakui & Gaies, 1999; Wen & Johnson, 1997; White, 1999; Woods, 2003; Yang, 1999).

Las creencias de los estudiantes sobre un determinado dominio del aprendizaje se pueden considerar constituyentes de un modelo mental. Flower y Hayes (1981) analizaron el modelo mental de escritura en L1 describiendo los procesos mentales dinámicos de los escritores al componer así como la red de objetivos que eran activados. Este estudio fue seguido por investigaciones posteriores en L2 centrados en el análisis de las creencias sobre la tarea o la representación que se hacía de la misma al realizar actividades concretas de escritura. Aparte de las creencias sobre la escritura, la escritura es una actividad orientada

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hacia la consecución de objetivos (Bereiter & Scardamalia, 1987; Graham & Harris, 1994; Hayes, 1996) lo que fomenta un enfoque de resolución de problemas, pero la investigación en esta área es escasa tanto en contextos de segundas lenguas como de lenguas extranjeras (para excepciones ver Cumming, 1986; 2006; Manchón & Roca de Larios, 2011; Sasaki, 2009, 2011). Además, aunque los objetivos están íntimamente ligados con el proceso de descubrimiento en la composición (Flower & Hayes, 1981) y con la naturaleza dinámica de la representación de la tarea (Flower, 1990; Wolfersberger, 2007), estos objetivos son el componente ausente en los estudios realizados sobre modelos mentales de escritura (e.g. Devine et al. 1993) o sobre los estudios basados principalmente en la representación de la tarea (e.g. Ruiz-Funes, 2001; Smeets & Solé, 2008; Wolfersberger, 2007). Por medio de la investigación de objetivos, seguimos también la sugerencia de Barcelos (2003) quien señala que las creencias deben ser investigadas en relación a las acciones e intenciones de los aprendices.

Aparte de la función cognitiva de los objetivos en un proceso dinámico mental (Flower & Hayes, 1981), los objetivos también tiene un importante componente motivacional que puede resultar en la persecución de escritura más compleja (Manchón & Roca de Larios, 2011). Estas cuestiones enfatizan la necesidad de investigar “la dimensión interna de las tareas” (Manchón, 2009) prestando especial atención a las acciones de los estudiantes en la escritura, diferencias individuales y afectivas que facilitan el aprendizaje cuando los escritores se implican en la composición de textos académicos (Manchón & Roca de Larios, 2011). En este sentido, los objetivos son importantes para entender los esfuerzos de los estudiantes para mejorar su escritura en inglés con fines académicos (Cumming, 2006:159), así como el “cómo” y “por qué” del comportamiento de los aprendices cuando escriben (Manchón, 2009).

### **Capítulo III. Objetivos de los aprendices**

En este capítulo se describe la investigación sobre objetivos en psicología de la educación empezando con las principales teorías motivacionales y explicando después tres teorías sobre la motivación (goal setting, the motivational system theory and goal orientation) que tienen sus raíces en una perspectiva socio-cognitiva en las que los objetivos son un componente esencial. Las tres teorías se complementan mutuamente al examinar los objetivos desde diferentes puntos de vista relacionados con (i) las propiedades de los objetivos que afectan la motivación y comportamiento de los estudiantes; (ii) la estructura interna de los objetivos así como las influencias personales y medioambientales que condicionan la evolución y realización de los mismos; y (iii) la orientación de los individuos hacia los objetivos y sus estilos personales para el comportamiento motivacional. Aunque la motivación y auto-regulación son constructos íntimamente ligados y los objetivos son necesarios para el desarrollo de los dos, ambos fenómenos no son lo mismo. Por esta razón, el capítulo da cuenta del comportamiento de auto-regulación de los aprendices en base a modelos de auto-regulación así como otras teorías que enfatizan la dimensión temporal de la motivación (Heckhausen & Kuhl's, 1985).

En cuanto al área de aprendizaje en L2, se describe el modelo de Dörnyei y Ottó's (1998) que pretende sintetizar varios modelos de motivación en L2 y explicar la influencia de variables personales y contextuales en la persecución de objetivos. A continuación se discute la investigación de objetivos en el campo de la escritura en L2, que representa el área de interés en el presente estudio empírico. Por lo tanto, se analiza el desarrollo de objetivos en estudios intervencionistas y descriptivos señalando los efectos socio-culturales e intra-individuales (como el nivel de dominio de la lengua) sobre la motivación, el producto escrito y la auto-regulación. A la luz de los estudios revisados se concluye que tal y como sugirió Cumming (2006) para avanzar en las teorías sobre el aprendizaje de lenguas es necesario investigar la relación entre aspectos sociales y cognitivos de los aprendices, los cuales pueden arrojar luz sobre el funcionamiento de objetivos para el proceso de aprendizaje y su impacto

sobre el desarrollo de la escritura (Dörnyei, 2003). En este sentido, es evidente la ausencia de estudios teóricamente basados que exploren sistemática y longitudinalmente la función de los objetivos de escritura de los estudiantes desde un punto de vista cognitivo, motivación y autorregulatorio.

### **Capítulo IV. Preguntas de investigación**

El racional para el presente estudio empírico se basa en la escasa evidencia empírica sobre la influencia de la representación de la tarea sobre el producto escrito (cf. Ruiz-Funes, 2001; Wolfersberger, 2007) y a la existencia de pocos estudios sobre la evolución de objetivos de escritura (Cumming, 2006), así como la influencia de dichos objetivos sobre la escritura (Cumming, 1986; Sasaki, 2009, 2011). Por lo tanto, nuestro fin último es investigar longitudinalmente el desarrollo de modelos mentales de escritura (entendidos como creencias almacenadas sobre la tarea y su correspondiente red de asociación de objetivos) en un contexto de instrucción de enseñanza de lengua extranjera, así como la contribución de la evolución del modelo mental en el producto escrito en L2. La identificación de variables internas al escritor que podrían estar relacionadas con el desarrollo de la escritura puede ser importante para mejorar las prácticas pedagógicas en la escritura en lengua extranjera así como el avance del conocimiento teórico en el campo de adquisición de segundas lenguas.

Nuestras preguntas de investigación están orientadas hacia la exploración de (i) el desarrollo de modelos mentales; (ii) los factores potenciales que pueden mediar en los objetivos de los estudiantes y la persecución de acciones para el desarrollo de la escritura; (iii) los efectos de la representación de la tarea y los objetivos en los productos escritos bajo diferentes condiciones experimentales de las realizadas hasta la fecha siguiendo la investigación de Flower y Hayes (1981) sobre el modelo cognitivo de escritura en L1. La figura que sigue es un organigrama que ofrece una visión genérica sobre el estudio que se plantea. El organigrama está compuesto de dos partes. En el lado izquierdo se describen tres aspectos principales (objetivo de la investigación; cómo contribuimos a la investigación

empírica existente; y qué aspectos se exploran en el estudio) por medio de los cuales los datos de la derecha deben ser interpretados. Los números (1,2, y 3) indican los diferentes niveles representados en el organigrama.

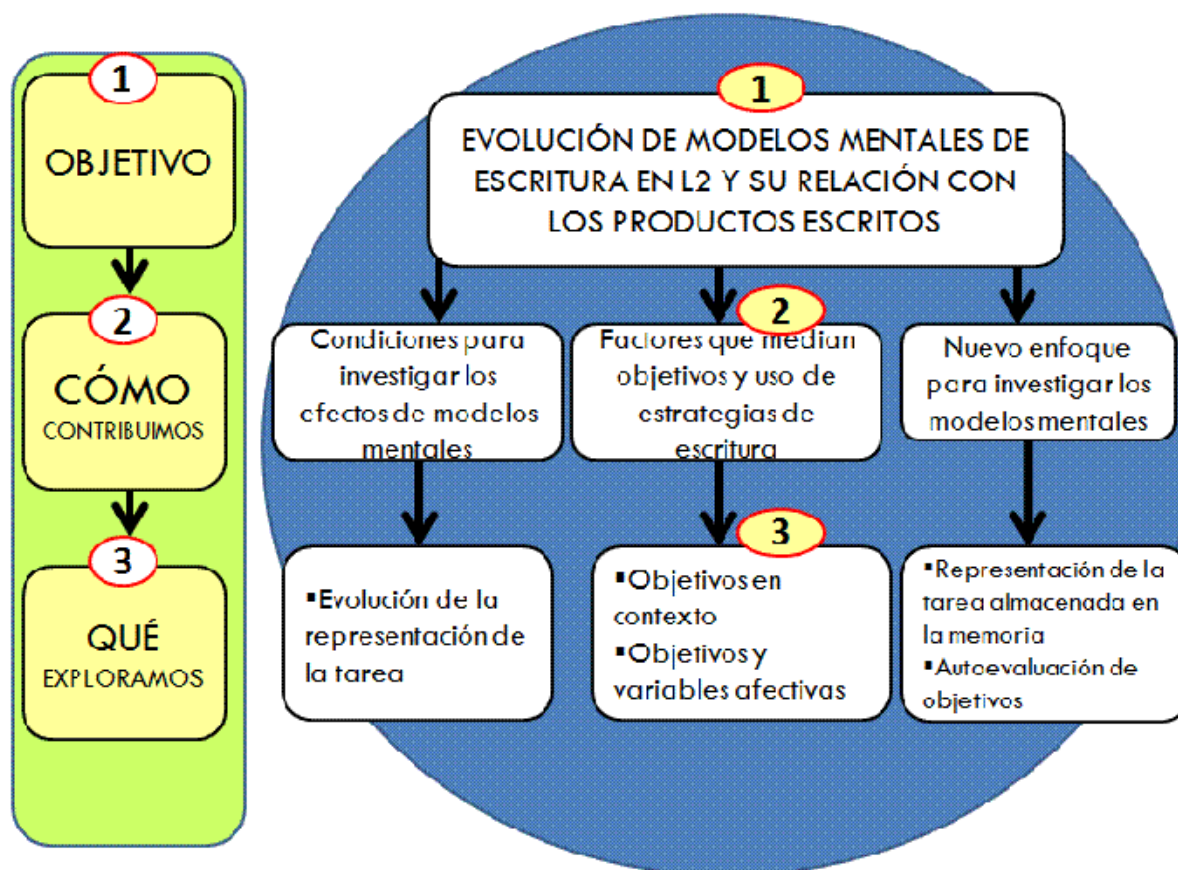


Figura 1. Resumen de la investigación empírica planteada

En concreto, las preguntas de investigación formuladas son las siguientes:

1. ¿Hubo cambios en la conceptualización de la tarea por parte de los estudiantes después de haber realizado un curso de escritura en inglés con fines académicos?

2. ¿Cuáles eran las características de los objetivos de escritura de los aprendices de inglés como lengua extranjera durante la realización del curso de escritura con fines académicos así como sus percepciones de cambios sobre los objetivos de escritura a través del tiempo?
3. ¿Se observaron cambios en los objetivos de escritura de los estudiantes en lo relativo a sus estudios universitarios y futuras carreras profesionales teniendo en cuenta sus creencias de auto-eficacia, logros previos, expectativas de éxito y contexto de acción?
4. ¿Estaban relacionados los objetivos de escritura, conceptualización de la tarea y resultados de escritura?

### Capítulo V. Método

#### Contexto de investigación y participantes

El estudio se realizó en un curso obligatorio de escritura en inglés con fines académicos que correspondía a cuarto de carrera de Filología Inglesa en la universidad. Según la programación del curso el principal objetivo del curso era ayudar a los estudiantes a desarrollar sus habilidades escritoras y lectoras en inglés. El curso duró 30 semanas durante las cuales los estudiantes tenían tres horas de clase. La primera hora estaba dedicada a teoría y las otras dos horas restantes a actividades prácticas relacionadas con el uso de la lengua y la escritura. El curso implicaba mucha práctica en escritura realizada en casa ya que los estudiantes debían escribir a lo largo del curso tres trabajos así como 45 diarios en inglés. Cada trabajo debía ser reescrito al menos tres veces siguiendo los comentarios facilitados por los compañeros de clase sobre su trabajo a nivel de contenido y retórica, así como los comentarios de la profesora de escritura que estaban orientados hacia el contenido, la retórica y problemas recurrentes de expresión lingüística en lengua extranjera.

Los participantes eran 23 estudiantes españoles que se encontraban realizando el cuarto curso de Filología Inglesa así como el curso de escritura académica. Cuando estos

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alumnos alcanzaron el cuarto curso de carrera, ya habían realizado tres asignaturas anuales obligatorias sobre lengua inglesa en la carrera dedicados a la mejorar de las cuatro habilidades lingüísticas (leer, escribir, hablar, y escuchar) y gramática. Estos cursos estaban diseñados para permitir progresar a los alumnos desde un nivel pre-intermedio de inglés a un nivel avanzado. Algunos de estos alumnos (6) suspendieron el último curso de lengua inglesa y en el momento de la recogida de datos estaban repitiendo de nuevo dicho curso.

### Instrumentos y tiempos de recogida de datos

Los instrumentos empleados para la recogida de datos así como el tiempo de recogida de los mismos se detallan en la tabla siguiente:

Tabla 1. Instrumentos y tiempo de recogida de datos

INSTRUMENTOS Y TIEMPO DE RECOGIDA DE DATOS			
INSTRUMENTOS	DATOS SOBRE VARIABLES	TIEMPO 1	TIEMPO 2
DIARIOS DE CLASE	• Creencias sobre representación de la tarea	X	X
	• Objetivos de escritura	X	X
	• Percepciones de instrucción en el curso de escritura con fines académicos		X
ENTREVISTAS CON ESTUDIANTES	• Antecedentes de los objetivos • Objetivos y acciones estratégicas • Contexto de acción para llevar a cabo los objetivos	X	X
PRODUCTOS ESCRITOS	• Redacción argumentativa en L2 bajo condiciones experimentales de control (una hora, producción escrita sin ayuda de diccionarios)	X	X
OXFORD PLACEMENT TEST	• Test de dominio de la lengua extranjera	X	X

### **Codificación y análisis de datos**

Para los datos provenientes de los diarios de clase, se identificaron y dividieron los diarios en unidades temáticas que fueron operacionalizadas como “un conjunto de oraciones con un sentido coherente e identificable” (Luk, 2008: 628). A continuación, siguiendo las convenciones de análisis de datos cualitativos, las unidades temáticas fueron codificadas en Excel por tres investigadoras usando el método comparativo constante (Miles & Huberman, 1994). Este método implica la lectura de todas las unidades temáticas varias veces para familiarizarse con ellas y buscar patrones recurrentes de análisis en relación con las preguntas de investigación planteadas. La codificación duró un año y se basó tanto en los propios datos como en nuestro conocimiento sobre teorías e investigación empírica sobre la representación de la tarea, objetivos y modelos mentales de escritura descritos en los capítulos II y III del presente trabajo. Durante el año de codificación de los datos se creó una taxonomía sobre la representación de la tarea y otra sobre objetivos, la presente doctoranda se reunió con otras dos investigadoras para describir y discutir la codificación de datos y establecer así las correspondientes taxonomías y la fiabilidad de jueces. Una vez que estuvieron creadas las taxonomías y se codificaron los datos, se procedió al análisis cuantitativo de los mismos desde una doble perspectiva: (i) la frecuencia o intensidad con la que se mencionaba cada variable; y (ii) la naturaleza categórica de las variables lo que implicaba un recuento binario de cada variable por participante.

Sobre las entrevistas, el proceso de codificación fue prácticamente el mismo que en el caso de los diarios de clase. Primero se agrupó la información en tres grupos principales: (i) antecedentes de los objetivos; (ii) objetivos; y (iii) contexto de acción. A continuación, las respuestas a cada pregunta fueron codificadas siguiendo el método de comparación constante (Miles & Huberman, 1994). Una vez finalizado el proceso de codificación y para asegurar la consistencia de la investigadora en la interpretación de los datos, estos fueron codificados de nuevo por la misma investigadora varios meses después de haber concluido la primera codificación.

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En cuanto a los productos escritos, se analizaron desde una doble perspectiva: holística y analítica. Para el análisis holístico se utilizó la escala de Hamp-Lyons (1991) así como un texto modelo que tres investigadores independientes usaron para evaluar la calidad de las composiciones de los estudiantes. Con respecto a las medidas analíticas, se analizaron las medidas de *corrección*, *complejidad* y *fluidez* usando el etiquetador morfosintáctico CLAWS C5 de la Universidad de Lancaster. Una vez realizado el etiquetado morfosintáctico dos investigadoras revisaron conjuntamente el 100% de las composiciones, evaluando tanto la precisión del etiquetado morfosintáctico automático generado por CLAWS C5 como la corrección de las cláusulas y oraciones producidas por los estudiantes.

En el caso de encontrar inconsistencias o imprecisiones en el etiquetado automático, éstas se corrigieron manualmente. La *corrección* fue medida en base al porcentaje de cláusulas libres de error (EFC Perc) y al porcentaje de oraciones libres de error (EFS Perc). Fueron consideradas como cláusulas y oraciones libres de error aquellas en las que no existía error visible sobre sintaxis, morfología, elección léxica de palabras u orden de las mismas. En cuanto a la *complejidad*, seguimos la propuesta de Norris y Ortega (2009), según la cual la complejidad debería ser medida desde una perspectiva multidimensional para lo que propusieron entre otros subconstructos de complejidad: (i) la complejidad a través de la subordinación, para lo que calculamos el ratio de subordinación por cláusulas (Sub/Cl) y por oración (Sub/Sent); y (ii) la complejidad subcláusula o lo que es lo mismo el número de palabras por cláusula (W/C) o longitud media de las cláusulas. Además, también se consideró como medida de complejidad la sofisticación del uso de la lengua, que como apuntaron Norris y Ortega (2009) no había sido ampliamente usada en el contexto de adquisición de segundas lenguas. Para el cómputo de la diversidad de vocabulario por redacción se empleó el índice D, el cual fue propuesto por Malvern y Richards (1997, 2002) como una medida alternativa al ratio de type-token ratio (TTR) debido a su naturaleza independiente del tamaño de la muestra y que además permite la comparación de varias muestras lingüísticas (Malvern & Richards, 2002; Malvern, Richards, Chipere & Durán, 2004). Por último, para la *fluidez* se calculó el número total de palabras en cada redacción siguiendo a Wolfe-Quintero, Inagaki and Kim

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(1998) quienes concluyeron que el número total de palabras es la forma más neutral de analizar la fluidez en composiciones redactadas con límite de tiempo. El software WordSimth 4.0 (Scott, 1996, 1997, 1999, 2004) fue utilizado para dicho fin.

Finalmente, debido a que el test de dominio de lengua estaba compuesto de una parte de escucha y otra de gramática y que cada una de las partes estaba compuesta de un test de 100 ítems con elección de respuesta múltiple, calculamos el número total de respuestas correctas en cada una de las partes (escucha y gramática) lo que nos dio una puntuación total del nivel de lengua.

Con respecto al análisis estadístico para las preguntas de investigación 1, 2 y 3 se realizó un recuento de frecuencias de unidades temáticas para cada categoría que componía las taxonomías de representación de la tarea y objetivos de escritura. Además, también se computó el número de participantes que mencionaron cada una de las categorías de las taxonomías. Para contestar a la pregunta sobre cambios en la representación de la tarea, hicimos dos tipos de test estadísticos diferentes. Por un lado, realizamos el test de Wilcoxon para buscar cambios en el porcentaje de unidades temáticas identificadas por participante en cada una de las categorías de nuestra taxonomía. Por otro lado, llevamos a cabo un McNemar's test usando nuestros datos binarios con el fin de distinguir si hubo cambios en el número de participantes que mencionaba cada una de las categorías de la taxonomía.

Para el análisis de la pregunta número 4, realizamos el test exacto de Fisher para examinar la posible interrelación entre la representación de la tarea y los objetivos teniendo en cuenta nuestras variables binarias. Además, se analizó la posible evolución de los productos escritos tanto de forma analítica como holística utilizando Wilcoxon-signed rank tests. A continuación, se procedió a examinar la posible relación entre productos escritos, representación de la tarea y objetivos de escritura para lo que se realizaron correlaciones biserials entre las variables dicotómicas (correspondientes a la representación de la tarea y los objetivos de escritura) y variables continuas (resultados de las medidas analíticas y holísticas). Los datos fueron también examinados por medio de diagramas de cajas con el fin de eliminar posibles valores extremos que pudieran afectar el resultado de las correlaciones.

En el caso de que fueron encontrados, éstos fueron temporalmente eliminados de la muestra por medio de un filtro en el programa estadístico SPSS y se volvió a realizar la correlación.

### **Capítulos VI y VII. Resultados, discusión y conclusión**

A continuación presentamos un breve resumen de los principales resultados del estudio detallados en el capítulo VI, así como la conclusión de la investigación (capítulo VII) en la que se especifica las implicaciones teóricas y pedagógicas, las limitaciones de la investigación y las posibles áreas de investigación para el futuro.

#### **Resumen de los resultados principales**

Con este estudio se pretendía contribuir a la investigación del desarrollo de modelos mentales de escritura y los resultados de composición por medio de la exploración de (i) las condiciones para el desarrollo de los modelos mentales; (ii) algunos factores que se consideraban que podían estar relacionados con los objetivos y acciones realizadas para la mejora de la escritura; y (iii) la influencia de la representación de la tarea y los objetivos sobre la escritura teniendo en cuenta condiciones diferentes de las investigadas en otros estudios. A continuación mencionamos los resultados principales en estas tres áreas.

#### *Condiciones para el desarrollo de los modelos mentales*

Para la exploración de los modelos mentales se analizó la representación almacenada que los estudiantes poseían sobre la tarea de la escritura y se puso en relación a la instrucción recibida en el curso de escritura dada la importancia de factores contextuales en la modificación de las creencias (e.g. Barcelos, 1995, 2000, 2003). En este sentido, el estudio es diferente de investigación previa llevada a cabo sobre la representación de la tarea, la cual se basaba en la realización de tareas específicas de escritura para las que era necesario la utilización de fuentes primarias de lecturas.

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En nuestro estudio, algunos aspectos de la representación de la tarea permanecieron sin cambios a través del tiempo. En concreto, la orientación predominante hacia la escritura era de una visión de producto. Los estudiantes también definían la tarea a lo largo del curso desde una concepción intratextual sin cambios aparentes en el uso de la terminología para describir la tarea. Sin embargo, también se encontraron diferencias individuales debido a que sólo la mitad de los participantes definieron la tarea en ambos tiempos de recogida de datos como una tarea de resolución de problemas y desde un punto de vista intertextual. Los participantes empezaron el curso con un modelo multidimensional de la escritura (ideacional, textual y lingüística), lo cual contrasta con la investigación realizada por Manchón y Roca de Larios (2011). En dicho estudio, un grupo similar de estudiantes universitarios de lengua extranjera que también realizaban el mismo curso de escritura con fines académicos que nuestros participantes desarrollaron un modelo multidimensional de la escritura a través del tiempo. Diferencias metodológicas entre los estudios podrían explicar esta divergencia de resultados debido a que su estudio estaba basado en percepciones de cambios por parte de los participantes en vez de en la comparación de los cambios realmente observados en la interpretación de la tarea a través del tiempo tal y como era el caso de nuestra investigación. Además, nuestros resultados indicaron que las diferentes dimensiones de la composición (ideacional, textual, y lingüística) eran integrativas en ambos tiempos de recogida de datos, lo que también difiere de los hallazgos encontrados por Devine et al. (1993) en el que los escritores de segundas lenguas poseían modelos multidimensionales que podían presentar tensión entre las diferentes dimensiones integrantes del mismo.

También encontramos diferencias generales en la descripción de la conceptualización de la tarea a través del curso académico, lo que parecía ser el resultado de la revisión de antiguas creencias sobre la tarea por parte de los estudiantes más que el resultado de un cambio conceptual (Carey, 1991). Las diferencias específicas relativas a las diferentes dimensiones de escritura eran tanto cuantitativas como cualitativas. Las primeras implicaban un incremento de las preocupaciones textuales a la vez que se producía un decrecimiento de problemas lingüísticos desde el Tiempo 1 al Tiempo 2. Como resultado, los estudiantes

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cambiaron su modelo multidimensional de escritura por otro bidimensional en el que las cuestiones ideacionales y textuales prevalecían sobre las lingüísticas meramente relacionadas con la corrección. En cuanto a las diferencias cualitativas que emergieron a través del tiempo estaban relacionadas de nuevo con cuestiones ideacionales y textuales. En concreto, se encontró un cambio en la dimensión ideacional desde un modelo primario de “decir lo que se sabe” (knowledge-telling) basado en un prosa escrita orientada hacia el escritor a un modelo de “transformación del conocimiento” (knowledge-transforming model) orientado hacia la audiencia del escrito (Bereiter & Scardamalia, 1987). En la dimensión textual, se notó un refinamiento en el abanico de aspectos retóricos que eran descritos a Tiempo 2 desde una perspectiva más profunda a la vez que seguían el enfoque de “transformación del conocimiento”. Estos cambios retóricos fueran atribuidos tanto a variables internas como externas al escritor o más específicamente al proceso recursivo de la escritura, a la instrucción escritora y a los comentarios tanto de la profesora como de los propios compañeros de curso sobre las composiciones escritas realizadas durante el curso académico.

### *Factores que podrían mediar en los objetivos y acciones para mejorar la escritora*

En el estudio también exploramos las características de los objetivos expresados por los estudiantes así como las percepciones de cambios de dichos objetivos en relación al contexto de acción y a influencias socio-cognitivas y afectivas. El efecto conjunto de estas variables no había sido previamente investigado ni longitudinalmente ni sistemáticamente en investigación previa en el caso de aprendices de lenguas extranjeras.

Respeto a las características de los objetivos, encontramos que podían ser formulados como *intenciones*, *dilemas* o *resultados* (Cumming et al. 2002; Cumming, 2006), pero la mayoría de los objetivos eran formulados como *resultados* al final del curso académico de escritura. Este hallazgo indica que los aprendices consideraban los objetivos como conseguidos durante el curso académico y estaban satisfechos con las percepciones de logros en el aprendizaje. Además, la preferencia en la formulación de objetivos como *resultados* en

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lugar de *intenciones* refleja también la visión de los participantes sobre las escasas oportunidades ofrecidas por el contexto de aprendizaje que no fomentaba la creación de nuevos objetivos una vez superados los objetivos iniciales.

En cuanto a las percepciones de cambios en los objetivos, no se pudo demostrar la transformación cíclica de objetivos formulados como *dilemas* (reconocimiento de problemas o conflictos en el aprendizaje) en nuevos objetivos tal y como sugirió Cumming et al. (2002). Sin embargo, encontramos que los objetivos formulados como *resultados* y la consecuente satisfacción generada del proceso de autoevaluación en la realización del objetivo conducían a la creación de nuevos aunque distantes objetivos para el futuro que eran amplios y vagos en su alcance. Por lo tanto, en nuestro estudio la reformulación de objetivos implicaba reacciones afectivas positivas y percepciones de resultados de aprendizaje más que insatisfacción y reconocimiento de conflictos tal y como apuntaron Cumming et al. (2002).

En lo concerniente a factores socio-cognitivos y afectivos para la formulación de objetivos, tampoco pudimos confirmar los resultados de Cumming (2006) en un contexto de segundas lenguas en el que los objetivos de los participantes para la mejora de la escritura estaban relacionados con las aspiraciones a largo plazo sobre sus estudios universitarios y carreras profesionales. En nuestro contexto de lenguas extranjeras, los objetivos formulados para los futuros cursos de la carrera universitaria eran bastante abstractos y estables a través del tiempo a la vez que típicamente representativos de aprendices de lenguas (e.g. objetivos relacionados con la corrección lingüística). También encontramos que los participantes tendían a manifestar acciones para conseguir un objetivo genérico de mejora en la escritura ya que encontraban difícil pensar sobre objetivos específicos para sus futuras necesidades escritoras en la carrera de Filología Inglesa. En esta misma línea, los participantes afirmaban que no se habían planteado objetivos para sus carreras profesionales en ningunos de los tiempos de recogida de datos que duró la investigación ya que aquellas posibles futuras necesidades se encontraban fuera de su inmediato contexto de aprendizaje. Los pocos participantes que manifestaron querer mejorar su escritura una vez que fueran profesionales

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del inglés solían relatar acciones genéricas, tales como la práctica de la escritura, en lugar de objetivos específicos que resultaban más difíciles de imaginar y describir.

La ausencia de cambios en los objetivos de los estudiantes para sus estudios universitarios y carreras profesionales fue atribuida a varios factores. En primer lugar, el tiempo de recogida de datos puede no haber sido lo suficientemente largo para modificar los objetivos. En segunda lugar, la falta de expectativas escritoras en el imaginado contexto de acción en el futuro podría haber limitado el desarrollo de los objetivos. En este sentido, debe ser señalado que los participantes esperaban componer en sus futuras asignaturas de filología los mismos tipos de textos que estaban realizando en el curso de escritura. Al final de dicho curso de composición, los participantes tendían a creer que no necesitarían escribir en otras asignaturas de la carrera. Del mismo modo, los participantes también carecían de expectativas de escritura en sus carreras profesionales, a pesar de que muchos de ellos afirmaron querer ser profesores de inglés o traductores. En tercer lugar, factores internos al escritor tales como las creencias de auto-eficacia, previas experiencias de aprendizaje y expectativas de éxito podrían haber influido también en la estabilidad de los objetivos. De hecho, las creencias de auto-eficacia se mantuvieron constantes a través del tiempo por lo que no parecieron afectar a la persecución de objetivos. En esta misma línea, las expectativas de éxito fueron formadas al principio del curso académico en relación a los logros pasados inmediatos en la asignatura anterior de lengua inglesa. Una vez que estas expectativas fueron establecidas permanecieron estables a lo largo del curso académico. Dichos resultados indican que las experiencias educativas previas son importantes para el establecimiento de las expectativas de éxito tal y como se señala en teorías de la auto-regulación. Los hallazgos también indicaron que aparte de las aspiraciones futuras para la escritura, que fueron postuladas por Cumming (2006) como necesarias para la evolución de objetivos, otras variables internas al escritor también pueden ser determinantes para el desarrollo de objetivos.

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### *La influencia de la representación de la tarea y los objetivos sobre los productos escritos*

En el presente estudio también analizamos los modelos mentales de estudiantes de inglés como lengua extranjera y los efectos de dichos modelos en las composiciones escritas teniendo en cuenta la investigación realizada por Flower y Hayes (1981) sobre objetivos y creencias en la tarea que se consideraban como interrelacionadas. De esta forma, nos alejamos de las investigaciones que se habían centrado exclusivamente o bien en la representación de la tarea o bien en los objetivos de escritura.

En esta investigación, exploramos la interrelación entre la tarea y los objetivos desde una doble perspectiva. Por un lado analizamos la representación de la tarea almacenada en la memoria a largo plazo y su relación con los objetivos y acciones al escribir una tarea en específica a Tiempo 1. Por otro lado, examinamos si dicha representación de la tarea podría estar asociada con la auto-evaluación de objetivos por parte de los estudiantes a final del curso académico.

En lo que respecta a la primera relación, los estudiantes que entendían la escritura desde diferentes perspectivas de conceptualización de la tarea ("knowledge-telling versus knowledge-transforming) mencionaron los mismos objetivos generales pero diferentes sub-objetivos u objetivos secundarios al componer sus tareas dentro de un continuum tal y como representa la figura número 2.

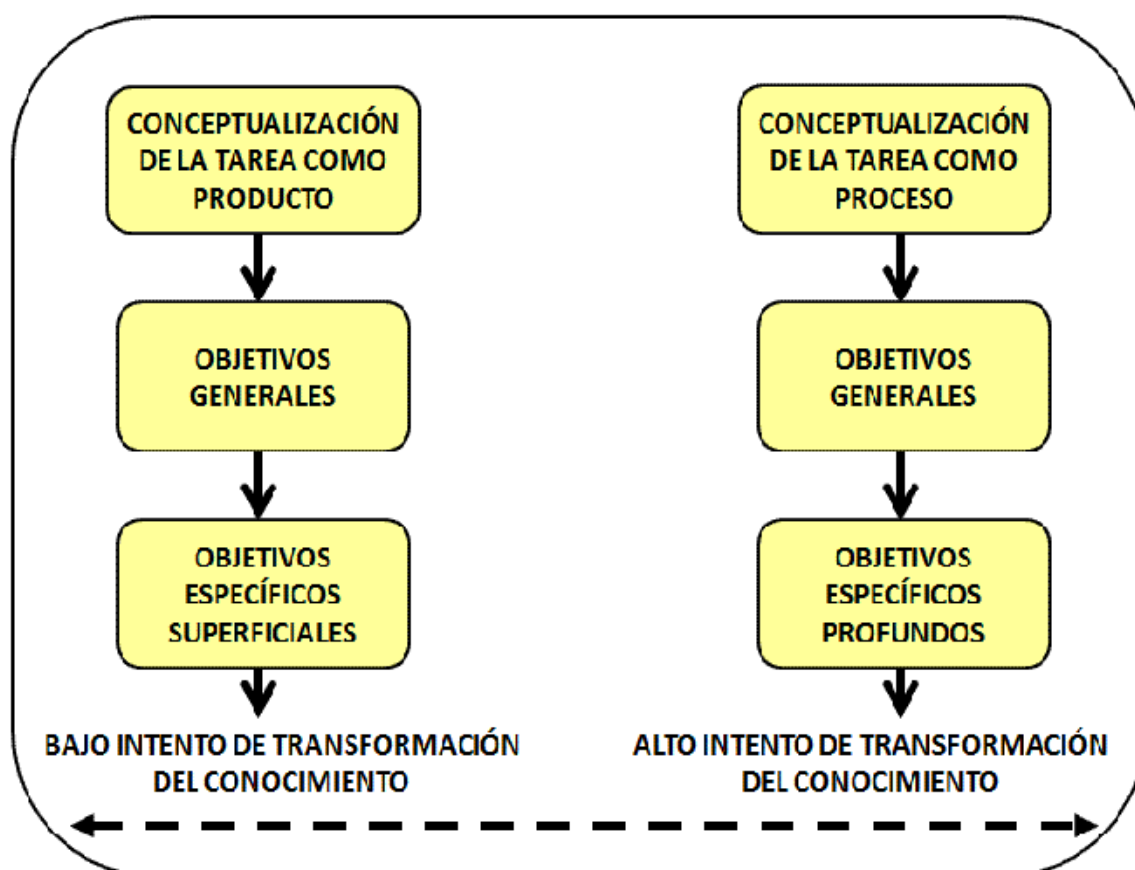


Figura 2. Conceptualización de la tarea e intento de transformación del conocimiento durante la escritura

En concreto, los participantes que conceptualizaban la tarea en términos de un enfoque de “proceso”, o en otras palabras de “resolución de problemas”, explicaron perseguir objetivos más sofisticados y ambiciosos en comparación con los aprendices que entendían la tarea como un simple “producto estático”, los cuales tenían en mente objetivos más superficiales. Las diferencias en los objetivos mencionados por ambos grupos de participantes que mantenían diferentes concepciones de la escritura parecían ser ilustrativas de un continuum que se aproximaba en mayor o menor medida a los modelos propuestos por Bereiter y Scardamalia

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(1987), esto es, de un modelo de “decir lo que se sabe” (knowledge-telling) y a otro de “transformación del conocimiento” (knowledge-transforming).

Sobre la interconexión entre la representación almacenada sobre la tarea y la auto-evaluación de los objetivos, encontramos que aquellos participantes que conceptualizaron la tarea en términos de “solución de problemas” también manifestaron perseguir “objetivos dinámicos” en la escritura al final del curso académico. En otras palabras, los estudiantes evaluaron la consecución de logros en su aprendizaje al final del curso y formularon nuevos objetivos para el futuro tal y como se postula en teorías de auto-regulación. Por lo tanto, se podría sugerir que la representación de la tarea en términos de procesos podría estar asociado con la motivación de los aprendices y los procesos de auto-regulación para conseguir mejoras futuras en la escritura. Este resultado es similar al movimiento que se produce según teorías de auto-regulación de un estadio posterior que sigue una acción a una nueva fase previa a la formación de otra acción (Dörnyei & Ottó, 1998). Sin embargo, la formulación de nuevas intenciones puede no siempre resultar en la persecución decidida de objetivos en ausencia de un contexto de aprendizaje motivacional (Ford, 1992).

En cuanto a la producción escrita, se encontraron diferencias en el análisis holístico a través del tiempo, mientras que no se registraron cambios en las medidas analíticas (complejidad, corrección y fluidez). Estos resultados fueron atribuidos, entre otras razones, al análisis pormenorizado que ofrecen las medidas analíticas las cuales parecen no relacionarse con cambios globales holísticos (e.g. calidad comunicativa).

En lo concerniente a la relación entre los cambios en el producto escrito y los modelos mentales de escritura, encontramos patrones interesantes que demostraban la dificultad a la que se enfrentaban los estudiantes para llevar a cabo la tarea tal y como la representaban mentalmente. Más específicamente, aquellos participantes que conceptualizaban la tarea como “resolución de problemas” no solían conseguir composiciones altamente valoradas por nuestros jueces a Tiempo 1. Es posible que encontraran difícil llevar a cabo los diferentes sub-objetivos que manifestaban perseguir, los cuales eran bastante sofisticados. Sin embargo, esos mismos participantes produjeron las composiciones con una evaluación positiva más alta

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a Tiempo 2 en comparación con los aprendices que consideraban la tarea como un “producto estático”. Por consiguiente, es posible que a través de la práctica de la escritura, las dificultades encontradas para la consecución de varios sub-objetivos pudieran haber sido superadas. En este sentido, los estudiantes que conceptualizaban la tarea como un proceso o una actividad de “solución de problemas” explicaban involucrarse en constantes procesos de “noticing” al componer sus escritos (Swain, 1985). Además, debe ser señalado que la representación de la tarea en términos de proceso estaba asociada con objetivos dinámicos. En resumidas cuentas, los hallazgos indicaron que no solo una conceptualización de la tarea en términos de proceso podría estar vinculada a un alto nivel de escritura sino también que dicha visión de la escritura estaba también ligada a una positiva auto-evaluación de logro y a una nueva formulación de objetivos para el futuro tal y como se detalla en la figure que sigue.

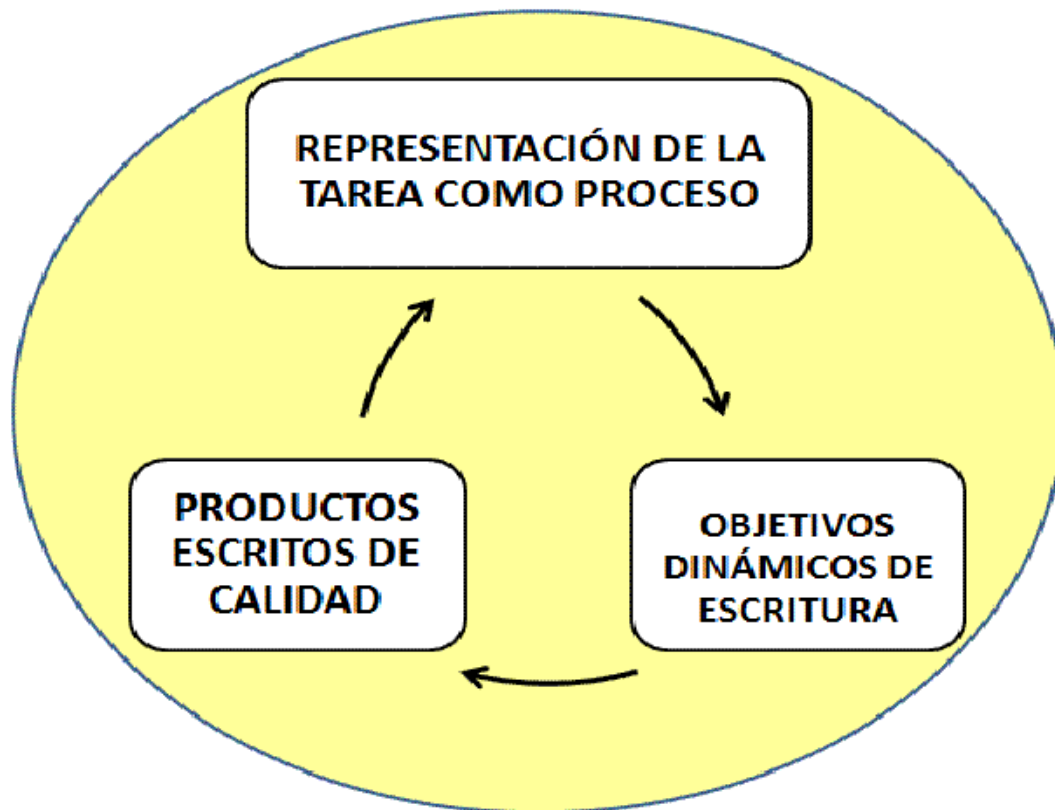


Figura 3. Interrelación entre conceptualización de la escritura como proceso, objetivos y calidad de los productos escritos

No obstante, también debe señalarse que los objetivos dinámicos expresados podían ser formulados de forma abstracta y vaga. La formulación de estos objetivos parecía ayudar a los estudiantes que conceptualizaban la tarea como un proceso a conseguir textos de calidad y a su vez la persecución de objetivos estaba también en parte basada en percepciones previas de éxito. Por lo tanto, se puede concluir que tal y como señaló Cumming (2012) nuestros resultados muestran que los objetivos de los estudiantes al componer son la consecuencia del desarrollo de su habilidad escritora, al mismo tiempo que también la determinan.

Podríamos también sugerir que la descripción de la tarea en términos de proceso o producto podría ser indicativa de estilos individuales en la composición (Ford & Nicholls,

1991) para los que en consecuencia se establecen objetivos debido a que los estudiantes con un enfoque de proceso tendían a estar orientados hacia la auto-mejora de sus escritos. En contraste, aquellos estudiantes que conceptualizaban la tarea de escritura como producto solían tener un estilo de mantenimiento de su nivel de éxito y no formulaban objetivos después de explicar su percepción de logros previos.

### **Implicaciones teóricas**

Esta sección describe los hallazgos teóricos que la presente investigación añade a la investigación sobre la escritura en lengua extranjera, aunque los resultados deben ser interpretados con precaución debido a la muestra reducida del estudio. Las principales implicaciones teóricas se refieren a: (i) el desarrollo de modelos mentales de escritura; (ii) la relación entre modelos y éxito en la escritura; (iii) la importancia de un contexto de aprendizaje motivador para el mantenimiento de los logros en producción escrita; (iv) la evolución de los objetivos en función de variables internas al escritor.

### *El desarrollo de modelos mentales de escritura*

Estudios previos sobre escritura han relatado los efectos de la instrucción en estrategias de composición o la influencia de los procesos de composición en general sobre el desarrollo de modelos multidimensionales de la escritura (Manchón & Roca de Larios, 2011; Sengupta, 2000). Otros estudios han dado cuenta del potencial de la relación entre el nivel de dominio de la lengua extranjera y los modelos mentales (Manchón, Roca de Larios & Murphy, 2009). En este último sentido, los estudios indican que los aprendices con un nivel pre-intermedio de lengua son guiados por un modelo monodimensional de la escritura, mientras que los estudiantes con un nivel avanzado de lengua parecen tener modelos multidimensionales de escritura. Sin embargo, los investigadores de estos estudios no hicieron ninguna afirmación categórica sobre la evolución de los modelos como único resultado del nivel de la lengua en L2 debido a que los estudiantes con más nivel también poseían mayor experiencia escritora en

comparación con los estudiantes de nivel pre-intermedio. Desde un punto de vista diferente, Devine et al. (1993) también enfatizaron la importancia del dominio de la lengua sobre el desarrollo de los modelos mentales. En la investigación de Devine et al. (1993) los modelos de escritores en L1 y L2 fueron comparados y se concluyó que a pesar de que ambos grupos mantenían un modelo multidimensional, en el caso de los escritores en lengua extranjera eran más proclives a tener modelos con dimensiones en conflicto, mientras que los escritores en L1 tendían a tener modelos integradores. De acuerdo con los investigadores, estos resultados señalaban la desventaja de los escritores en L2 en comparación con los de L1.

Todos los estudios arriba indicados comparten la opinión que la sofisticación del modelo mental es equivalente a la atención que prestan los estudiantes a múltiples aspectos de la escritura para componer. Nuestro estudio señala que los aprendices con un nivel avanzado de la lengua extranjera inglés pueden tener un modelo multidimensional, sin necesariamente ser refinado, antes incluso de empezar un período extensivo e intensivo de práctica escrita e instrucción sobre la composición de textos académicos complejos. En concreto, los estudiantes podían afirmar presentar atención a varias dimensiones de la escritura (ideacional, textual y lingüística) haciéndolo desde un enfoque de “decir lo que se sabe” (knowledge-telling model). Después de un período de instrucción de 9 meses, sus modelos mentales se desarrollaron. Sin embargo, la sofisticación de los modelos no se veía reflejado en la atención a múltiples dimensiones sino en la amplitud y profundidad de las características de cada una de las dimensiones que eran descritas, así como al cambio que se produjo desde un modelo de “decir lo que se sabe” (knowledge-telling) a otro de “transformación del conocimiento” (knowledge-transforming).

Estos resultados pueden ser tomados como evidencia empírica de la formación de modelos mentales por parte de un grupo de aprendices de nivel avanzado de lengua extranjera, cuyos cambios eran más cualitativos que cuantitativos. Por lo tanto, todavía queda por elucidar si el número de dimensiones que se tienen en cuenta en la escritura al representar la tarea podría ser indicativo de la formación de modelos mentales en el caso de aprendices con un nivel bajo de la L2.

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### *Los modelos mentales y el éxito en la escritura*

La investigación sobre la representación de la tarea ha señalado que la forma en la que los individuos conceptualizan la escritura influye en los resultados escritos, pero no ha habido resultados concluyentes sobre la sofisticación de la tarea representada y el éxito conseguido en los productos escritos. Previos estudios indican que la complejidad de la representación no se relaciona con la calidad final de la escritura. Esta discrepancia puede ser debida a la existencia de (i) una disyunción entre el entendimiento cognitivo de la tarea y la habilidad para escribir el texto tal y como es mentalmente representado por el estudiante debido a problemas lingüísticos en la L2 (Wolfersberger, 2007); o (ii) diferentes interpretaciones por parte de los estudiantes del tipo de escrito que se espera para llevar a cabo la tarea con éxito (Flower, 1990; Ruiz-Funes, 2001).

Basándonos en la afirmación de que la escritura implica una representación cognitiva para resolver los problemas que emergen durante el proceso de composición (Bereiter & Scardamalia, 1987; Graham & Harris, 1994; Hayes, 1996), el presente estudio ofrece evidencia empírica de un esquema general para afrontar las tareas de composición. Siguiendo la línea de investigación de la psicología cognitiva, el estudio demuestra que los estudiantes que describen la tarea como un proceso de solución que implican un comportamiento de resolución de problemas son más propensos a perseguir objetivos sofisticados, lo cual podría ser el resultado de su constante representación del problema propuesto por la tarea mientras que se compone. De hecho, un elemento esencial para la resolución de problemas consiste en entenderlo para poder solucionarlo (Cummins, Kintsch, Reusser, & Weimer, 1988; Duncker, 1945; Greeno, 1977). Si la representación inicial no resulta en la solución del problema, es importante que el individuo pueda transformar esa representación en una nueva y correcta para tener éxito (Kaplan & Simon, 1990; Simon & Hayes, 1976). Nuestros datos parecen indicar que conceptualizar la tarea en términos de procesos podría ayudar a los aprendices a involucrarse de forma consciente en procesos de atención para resolver problemas que emergen durante la composición y para los que se formulan sub-objetivos complejos

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orientados hacia la consecución de un objetivo global de habilidad escritora. También es posible que los estudiantes que poseían una visión del proceso de escritura pudieran haber transformado y adaptado durante la escritura su representación inicial de la tarea cuando encontraron dificultades para conseguir diversos sub-objetivos. Sin embargo, para confirmar esta inferencia habríamos necesitado utilizar protocolos de pensamiento en voz alta. Lo que es cierto es que el entendimiento de la tarea como un proceso llevaba a los escritores a solucionar los problemas planteados durante la composición ya que consiguieron producir los textos que fueron altamente valorados desde un punto de vista holístico por nuestros jueces. Dicho resultado se encuentra en concordancia con los postulados de la psicología cognitiva sobre la resolución de problemas, según los cuales encontrar soluciones a problemas, como el que supone escribir un texto de calidad, depende de la calidad de la representación construida (Simon & Hayes, 1976).

### *La importancia de un contexto de aprendizaje motivador para el mantenimiento de los logros en producción escrita*

En nuestro estudio estábamos interesados en la evolución de objetivos de escritura en un contexto natural de aprendizaje en lugar de un contexto de condiciones experimentales bajo control con el fin de arrojar luz sobre las necesidades reales de los estudiantes sobre la escritura, la razón por la que escriben y cómo lo hacen (Cumming et al. 2002). Siguiendo el estudio longitudinal de Cumming (2006) en contexto de segundas lenguas, los objetivos de nuestros aprendices eran bastante estables a través del tiempo y directamente relacionados con el contexto de instrucción. Además, nuestros resultados revelaron que los estudiantes estaban motivados para escribir durante el período de instrucción en el curso académico de escritura. En consecuencia, se formularon objetivos para esas necesidades escritoras dentro de un contexto de instrucción que ofrecía a los estudiantes oportunidades de aprendizaje. Algunos de los participantes incluso cambiaron su modelo de "decir lo que se sabe" (knowledge-telling) por otro de transformación del conocimiento (knowledge-transforming) a lo largo del

curso académico. Por lo tanto, parecían aspirar hacia un enfoque de maestría con el fin de *aprender-a-escribir* y *escribir-para-aprender*. No obstante, su motivación y la consecuente formulación de objetivos parecía estar restringido al contexto de aprendizaje actual debido a la falta de expectativas sobre necesidades de escritura en el futuro ya sea en otros cursos de la carrera o en sus futuras profesiones. A largo plazo, es de esperar que sus objetivos orientados hacia la maestría (mastery goals) puedan convertirse en objetivos de ejecución o rendimiento (performance goals) en otros cursos debido a la ausencia de condiciones estimulantes para el mantenimiento de las habilidades escritoras desarrolladas. Dichos resultados ponen de manifiesto la desventaja de los contextos de lenguas extranjeras en comparación con las situaciones planteadas en contextos de segundas lenguas, lo cual podría ser una razón potencial para explicar por qué los contextos de lenguas extranjeras se consideran menos guiados por intenciones y motivaciones (Ortega, 2009).

### *La evolución de los objetivos en función de variables internas al escritor*

Siguiendo estudios previos que subrayaban la influencia de las aspiraciones de los estudiantes para la formación de objetivos (Cumming, 2006), exploramos las aspiraciones de nuestros aprendices con respecto a sus estudios universitarios y sus carreras así como factores internos al escritor que precedían a la formulación de objetivos. En contraste con los resultados de Cumming (2006), nuestros participantes parecían carecer de aspiraciones de escritura más allá de su actual contexto de aprendizaje por lo que sus aspiraciones futuras no determinaban la evolución de sus objetivos. La formulación de objetivos por parte de nuestros estudiantes de inglés como lengua extranjera estaba relacionada con experiencias educativas previas y su nivel previo de éxito, sus creencias de auto-eficacia para componer textos académicos complejos y cumplir con los requisitos del curso de escritura y sus expectativas de logro para dicho curso. Estos hallazgos abren una nueva vía de investigación para la exploración de objetivos de estudiantes de lenguas extranjeras con oportunidades de escritura en L2 limitadas a cursos puntuales de composición. En estos contextos, es posible que las pasadas

experiencias educativas y variables internas al escritor dentro de su contexto actual de acción podrían ser más importantes que las aspiraciones (ya estén relacionadas con sus estudios universitarios o sus carreras) para el desarrollo de los objetivos de escritura.

### **Implicaciones pedagógicas**

Los resultados del estudio indican la necesidad de ampliar el desarrollo de la habilidad escritora de los aprendices en diversos contextos de instrucción y práctica aparte de los ofrecidos en los cursos de composición. Los estudiantes de lenguas extranjeras se enfrentan a dificultades para desarrollar sus habilidades escritoras en países como España no solo porque los aprendices deben escribir en una lengua extranjera sino también por la ausencia de entrenamiento en la escritura en L1 tanto en escuelas de primaria como de secundaria. Por este motivo, si se espera que los estudiantes universitarios que cursan sus estudios en países como España escriban textos académicos complejos en L2, los departamentos en la universidad deberían revisar la programación de las carreras de filología en lenguas extranjeras para garantizar que los estudiantes tengan oportunidades de desarrollar sus habilidades escritoras además de hacerlo en esporádicos cursos de escritura. Sasaki (2009, 2011) señaló que los aprendices de lenguas extranjeras carecen de motivación y acciones para mejorar su escritura en L2 como consecuencia de la ausencia de necesidad de la escritura para situaciones comunicativas reales. Por este motivo, Sasaki propuso la creación de “comunidades imaginarias en L2” donde los estudiantes pudieran involucrarse cognitivamente y emocionalmente en la escritura por un objetivo comunicativo. Nosotros sugerimos que más que la creación de comunidades imaginarias, los estudiantes deberían encontrar motivador su contexto de aprendizaje. Por lo tanto, los estudiantes deberían ser animados a escribir en los cursos que realizan persiguiendo objetivos reales de comunicación así como teniendo en cuenta una audiencia auténtica. Con este propósito, los profesores de asignaturas obligatorias, troncales y optativas en la universidad podrían ayudar a los aprendices a darse cuenta de la importancia de la escritura académica no sólo como un vehículo de transmisión de

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conocimiento a la hora de realizar exámenes sino también como un instrumento de aprendizaje sobre el contenido que se enseña.

Debe ser recordado que nuestros participantes no pensaban que sería necesario escribir en otras asignaturas de la carrera una vez que hubieran terminado el curso de escritura, lo que a su vez parecía afectar negativamente a la evolución de objetivos. Además, la mayoría de los estudiantes también explicaron que aparte de la profesora de escritura y los comentarios sobre sus escritos recibidos por parte de los compañeros de clase, no había otras personas que les ayudaban a escribir sus textos. En este sentido, las universidades españolas podrían seguir el ejemplo de América del norte y algunos países europeos en los que existen centros de escritura o laboratorios que organizan talleres grupales o reuniones individuales con estudiantes que desean asistir a ellos con el fin de fomentar el progreso de los estudiantes en trabajos escritos reales de aula y ayudarles de este modo a mejorar sus habilidades escritoras o a mejorar los problemas que puedan tener en la escritura. Asimismo, creemos que si los estudiantes se acostumbran a escribir intensiva y extensivamente en la L2 además de la práctica aislada y obligatoria en cursos ocasionales de escritura, podrían también darse cuenta de la utilidad de la escritura para sus carreras profesionales como profesores o traductores. Los profesores de los cursos de escritura podrían también ayudar en este sentido eligiendo tareas que estuvieran en consonancia con los intereses profesionales de los estudiantes con el fin de que dichas actividades resulten útiles y motivadoras no sólo en el contexto de aprendizaje actual sino también para el futuro.

Adicionalmente, teniendo en cuenta que en nuestra investigación, los estudiantes que representaban la tarea de escritura como un proceso que implica una puesta en marcha de solución de problemas obtuvieron textos académicos de alta calidad y manifestaron perseguir sub-objetivos de escritura complejos, podemos sugerir las siguiente prácticas pedagógicas. Los profesores del curso de escritura podrían fomentar (i) procesos recursivos de escritura con el fin de ayudar a los aprendices en el refinamiento de la representación de la tarea por medio del enfrentamiento y resolución de dificultades al componer sus textos; (ii) la involucración en actividades de reescritura basadas en procesos de retroalimentación sobre preocupaciones

textuales de alto nivel (e.g. características retóricas de los textos) con el fin de mejorar los productos escritos; (iii) la persecución de objetivos personales de la escritura que deberían ser reanalizados al revisar y reescribir sus textos con el fin de hacer a los estudiantes componer textos con un propósito y evaluar en consecuencia las dificultades encontradas para la consecución del mismo. En relación a los objetivos de los estudiantes, los profesores también podrían averiguar cuáles son los objetivos en específico de los estudiantes en cada escrito para focalizar sus comentarios en los problemas, dificultades o avance de los objetivos anhelados tal y como Cumming (2006) también sugirió.

Aparte de la instrucción y práctica en el curso de escritura, nuestros participantes también manifestaron que no creían que los profesores de otras asignaturas pudieran o debieran ayudarles a escribir en L2 debido a que no era el propósito de dichas cursos por lo que consideraban normal la ausencia de práctica escritoras. Teniendo en cuenta que la escritura es una construcción social (Cumming, 1989) basada en la interacción de diferentes agentes en un contexto social, consideramos que si los profesores de asignaturas no relacionadas con la escritura colaboraran con los instructores de los cursos de composición académica en la promoción de un enfoque de *escribir para aprender*, los estudiantes universitarios podrían ver la utilidad de la escritura para el aprendizaje y dejar de este modo de equiparar la escritura a la práctica aislada en cursos de composición donde pueden *aprender a escribir*.

Varios investigadores han enfatizado la contribución de la escritura como herramienta para aprender y promover un mejor entendimiento de los conceptos así como una reflexión sobre los mismos a través de un enfoque analítico (e.g. Langer & Applebee, 1987; Newell, 1984; Newell, 2005; Newell, Koukis, & Boster, 2006), lo cual se encuentra también en consonancia con los modelos de transformación del conocimiento (Bereiter & Scardamalia, 1987). Por lo tanto, proponemos que para promover un enfoque de *escribir para aprender* en un contexto universitario, los profesores de asignaturas troncales, obligatorias u optativas en la universidad podrían (i) asignar tareas de composición en sus cursos y/o aumentar el número de trabajos escritos que deben ser obligatoriamente presentados; (ii) establecer claros criterios

de evaluación para dichos trabajos escritos con el fin de que los estudiantes pueden formar una representación de la tarea a realizar y establecer objetivos en consecuencia; (iii) ofrecer a los aprendices modelos de trabajos escritos por compañeros en cursos académicos anteriores; (iv) mantener reuniones con los estudiantes sobre el progreso en sus trabajos. De este modo, se podría facilitar a los aprendices la práctica de la escritura en L2 aparte de la que se ofrece en los cursos de escritura cuando realizan una carrera en lengua extranjera como Filología Inglesa.

### **Limitaciones y sugerencias para investigaciones futuras**

El estudio ofrece evidencia de la formulación de creencias y objetivos por parte de estudiantes de lenguas extranjeras a lo largo de un curso académico de instrucción así como su relación con los productos escritos. No obstante, hay varias limitaciones que necesitan ser mencionadas para que puedan ser tenidas en cuenta en futuras investigaciones sobre modelos mentales de escritura. A continuación discutiremos las limitaciones del estudio y haremos algunas sugerencias para futuras investigaciones relacionadas con el alcance del estudio y con cuestiones metodológicas.

#### *Alcance del estudio*

El presente estudio está basado en un contexto de aprendizaje natural en una clase de lenguas extranjera y la recogida de datos estuvo restringida a un único grupo de participantes dentro de una sola aula. Por lo tanto, aunque los resultados ayudan a empezar a entender el potencial desarrollo de las creencias sobre la tarea, los objetivos de escritura y los productos escritos así como la relación entre las diferentes variables, no pueden ser generalizados a todas las situaciones de aprendizaje de lengua extranjera más allá del contexto de instrucción en el que los datos fueron recopilados. El estudio necesita ser replicado en múltiples aulas con muestras más grandes en universidades que ofrezcan similares oportunidades de escritura como las

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descritas en esta investigación con el fin de expandir los resultados y hacer interpretaciones sobre la formación de modelos mentales de escrituras y su relación con la calidad de la escritura.

Incluso en universidades en contextos de lenguas extranjeras, que al igual que nuestro estudio restringen la instrucción escritora a cursos de escritura académica, se puede esperar diferencias en la evolución de creencias, objetivos y habilidad escritora debido al contexto socio-cultural en el que los estudiantes desarrollan sus capacidades. Asimismo si podemos esperar diferencias dentro de un contexto de lenguas extranjeras, también es posible la discrepancia en los resultados en contextos de segundas lenguas debido a las diferencias en el aprendizaje y oportunidades de escritura ofrecidas en diferentes contextos (e.g. cantidad de input y output). Por este motivo, futuros estudios deberían profundizar en diferencias individuales en los modelos mentales de los estudiantes según su contexto de aprendizaje en segundas lenguas o lenguas extranjeras y encontrar de este modo si existen más similitudes (e.g. características de los objetivos) y/o diferencias (e.g. aspiraciones sobre la escritura en relación a las oportunidades que ofrecen el contexto de acción) además de las observadas en el presente estudio.

Hubo otros asuntos que nos intrigaron y sobre los que futuros estudios podrían arrojar luz. Los participantes que definieron la tarea en términos de proceso o resolución de problemas no parecían tener diferentes creencias de auto-eficacia, nivel de dominio de la L2 y/o experiencias escritoras en lengua extranjera cuando comenzaron el curso de escritura en comparación con el resto de los participantes que describieron la tarea en términos de producto. Esta ausencia de diferencias podría ser el resultado de explorar un grupo homogéneo de participantes para los que las posibles divergencias puede haber sido más difícil de capturar. Sin embargo, los estudiantes que conceptualizaban la tarea desde un enfoque de proceso aparentaban perseguir objetivos más sofisticados al escribir y también produjeron textos de mayor calidad global. Investigaciones en el futuro podrían examinar si los aprendices con diferentes niveles de experiencia escritora y/o nivel de dominio de la L2

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podrían estar orientados a diferentes conceptualizaciones de la tarea (como procesos o productos) que pudieran conducirles a realizar los textos desde perspectivas diversas.

En lo que se refiere a las implicaciones pedagógicas arriba mencionadas, propusimos que los profesores universitarios de asignaturas no relacionadas con la escritura en un contexto de lengua extranjera podrían promover un enfoque de *escribir para aprender* en sus clases. En este sentido, planteamos algunas hipótesis sobre lo que podría ocurrir en este caso, que futuros estudios podrían explorar. Sugerimos que la práctica continua de la escritura en asignaturas obligatorias de la universidad aparte de los cursos de escritura podría ayudar a los estudiantes no sólo a desarrollar sus habilidades escritoras sino también sus creencias sobre la tarea y sus objetivos que podrían estar adaptados a las exigencias específicas de cada asignatura. Además, creemos que los posibles beneficios derivados de las prácticas pedagógicas orientadas hacia un enfoque de *escribir para aprender* podrían extenderse a otros niveles educativos además del contexto universitario. Tal y como se explicó anteriormente, España carece de una tradición de escritura en L1 tanto en escuelas de primaria como en secundaria y lo que nos preocupa más es que los estudiantes de lenguas extranjeras no están motivados para mejorar su escritura y formular objetivos porque no encuentran la utilidad de dichas prácticas para sus carreras profesionales como profesores o traductores. En consecuencia, sugerimos que si los estudiantes universitarios en España, quienes se convertirán en futuros profesores en escuelas de primaria y secundaria, se acostumbran a *aprender a escribir* y a *escribir para aprender* de forma regular, podrían fomentar estas mismas prácticas de escritura en sus futuras clases. Por lo tanto, un cambio en la orientación pedagógica en las universidades podría ser beneficioso para el sistema educativo en su conjunto y podría resultar a largo plazo en la creación de una tradición de escritura en escuelas primarias que ahora mismo carecen países como España.

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### *Cuestiones metodológicas*

El estudio presentado fue diseñado siguiendo la línea de investigación iniciada por Cumming (2006) sobre la exploración descriptiva de la formación de objetivos tal y como se desarrollan durante un largo período de instrucción y práctica en contextos naturales de aula. La investigación también pretendía examinar el desarrollo longitudinal de los escritos. Además, la formación de creencias sobre la tarea también fue explorada longitudinalmente debido a que según nuestro conocimiento, los estudios previos se habían basado en un solo tiempo de recogida de datos o en un período corto de tiempo. Sin embargo, algunas limitaciones metodológicas fueron también evidentes en nuestra investigación.

La utilización de diarios de clase para recoger datos sobre la representación de la tarea almacenada en la memoria a largo plazo de los aprendices ayudó a preservar la percepción de los estudiantes sobre la composición sin guiarla o constreñirla a un conjunto de creencias sobre las que posiblemente no habrían pensado anteriormente en el caso de no habérselo planteado en nuestra investigación. Aún así, el uso de instrumentos adicionales como los cuestionarios podría haber ayudado a arrojar luz sobre la evolución de la representación de la tarea. Además, los protocolos de pensamiento en voz alta podría haber revelado la conceptualización de tareas escritas durante el proceso de composición, lo que habría resultado en un análisis más exhaustivo.

En cuanto a los objetivos de escritura, recogimos información a través de entrevistas semi-estructuradas y diarios de clase. Las entrevistas nos permitieron investigar el desarrollo de los objetivos en tareas independientes al proceso de escritura. Estos datos podrían haber sido completados con entrevistas sobre trabajos escritos realizados en diferentes momentos del curso académico tal y como hizo Cumming (2006) previamente. Dichas entrevistas podrían haber ofrecido una visión más completa del desarrollo de objetivos en tareas independientes y dependientes del proceso de escritura así como las dificultades encontradas para el logro de objetivos. Futuros estudios podrían investigar la evolución longitudinal de objetivos por medio de entrevistas sobre trabajos escritos asegurándose de que los temas de

las composiciones y el tipo de tareas a realizar son similares en términos de dificultad a través del tiempo para que sean comparables. En estas circunstancias, los investigadores podrían captar mejor el desarrollo de objetivos en lugar de la adaptación de los mismos a diferentes tareas de complejidad diversa. Además, las percepciones de auto-evaluación de objetivos expresados por nuestros participantes para tareas específicas podrían haber sido triangulados con el uso de protocolos de pensamiento en voz alta sobre la persecución de objetivos al escribir. Este procedimiento podría haber arrojado más luz en los objetivos y sub-objetivos perseguidos por los participantes que tienen diferentes visiones sobre la representación de la tarea.

En lo que respecta a los resultados escritos, múltiples tareas escritas del mismo nivel de dificultad y tipo de tarea podrían haber sido recogidos a lo largo del tiempo para examinar más profundamente el desarrollo de las habilidades escritoras. Además, otras medidas de complejidad podrían haberse utilizado. Por ejemplo, podríamos haber examinado el tipo de cláusulas subordinadas que nuestros aprendices con un nivel avanzado de L2 empleaban o el nivel de nominalización (Norris & Ortega, 2009) en cláusulas y oraciones que podría resultar en un estilo sinóptico de la escritura ya que es posible que las medidas analíticas que elegimos hubieran estado en su nivel más elevado de desarrollo al principio del curso académico por lo que podría no haber quedado lugar para una evolución mayor. Por este mismo motivo es también posible que no encontráramos diferencias en las medidas analíticas de complejidad, corrección y fluidez a lo largo del tiempo.

### **Conclusiones finales**

A pesar de las limitaciones arriba mencionadas, consideramos que nuestro estudio representa un valioso intento de empezar a desentrañar (i) los modelos mentales de escritura al explorar la interrelación entre variables como las creencias sobre la tarea y objetivos que hasta la fecha habían sido investigadas por separado; y (ii) la relación entre las dos variables y los productos escritos. La investigación presentada ofrece evidencia empírica de las peculiaridades de los

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modelos mentales y subraya algunas implicaciones teóricas y pedagógicas. Esperamos que este estudio pueda ayudar a abrir nuevas vías de investigación sobre la mejora de la escritura en el caso de los estudiantes de lenguas extranjeras.

