

Lancaster University

**LINGUISTIC AND COGNITIVE
DEVELOPMENT OF L2 WRITING DURING AN
INTENSIVE ENGLISH FOR ACADEMIC
PURPOSES (EAP) PROGRAMME**

This thesis is submitted in partial fulfilment of

the requirements for the degree of

Doctor of Philosophy

in Applied Linguistics

by

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ABSTRACT

The present study investigates how the linguistic and cognitive characteristics of second language learners' writing change over the course of a one-month intensive English for Academic Purposes (EAP) summer programme at a British university. A mixed methods approach was used in the study in order to obtain a more nuanced picture of the students' writing skills development over time. Data for this study was collected using the relatively new research tool, keystroke logging. The participants (25 postgraduate and 14 undergraduate students) were asked to produce two argumentative essays, at the beginning and at the end of the EAP course. The essays were analysed using measures theoretically motivated by previous research in corpus linguistics, systemic functional linguistics and developmental child language acquisition. All students participated in pre-course and post-course interviews and completed three learning journal entries during the course. MANOVAs, ANOVAs and non-parametric Wilcoxon signed-ranks tests were used to analyse the quantitative data, while the interviews and learning journals were transcribed and coded manually.

The quantitative results suggest that despite no explicit focus on lexis and syntax in the EAP programme, by the end of the course the undergraduate and postgraduate students' writing exhibited a developmentally more advanced repertoire of lexical and syntactic choices that are characteristic of expository texts in academic contexts. With regard to writing fluency, controversial results were obtained, the undergraduate students having advanced in terms of their writing speed, whereas the postgraduate students, whose writing speed has decreased, made significantly more content-oriented revisions at the end of their study on the EAP programme. The qualitative results revealed a number of interesting findings. Specifically, the goals that the students set became more focused on academic writing rather than on language improvement. The results of the analyses have also shown that the majority

of undergraduate students gained in terms of confidence in their writing skills and their self-efficacy beliefs increased substantially during four weeks. Finally, regarding the writers' difficulties, in contrast with the beginning of the EAP programme, when most students believed that vocabulary constituted the biggest challenge for them, at the end of the course, vocabulary was scarcely mentioned. These findings coupled with the quantitative results indicate that the students showed notable improvement on the EAP programme.

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CHAPTER 1. Introduction

Studying in an English medium university as a non-native English speaker can potentially present a great number of challenges. These challenges include adapting to new cultural norms and values, dealing with bureaucracy in a foreign language, establishing a new circle of friends or coping with prolonged separation from relatives, potentially for the first time. However, in terms of academic success, one of the primary challenges is learning how to produce high quality written work of an academic standard. Oftentimes, students may have had little experience of the composition of academic writing which conforms to the critical and analytical style required for success in academia in Anglophone and arguably Western cultures in general.

This thesis addresses the writing development of a group of non-native English speaking students over the duration of an intensive pre-session English for Academic Purposes (EAP)/Study Skills course at a leading university in the UK. It uses both qualitative and quantitative data sources to analyse and then theorise about the short-term intensive development of academic writing in the abovementioned non-native English speakers. In the thesis I also draw conclusions relevant to the pedagogy of academic writing which could potentially ease the burden, at least with regards to academic writing, non-native English speaking students face in their transition into English medium universities and also inform the practice of teaching academic writing more generally.

1.1. Motivation and Background of the Study

My interest in second language writing began when I started teaching English as a Foreign Language (EFL) to a group of undergraduate students at the university in Uzbekistan. In order to fulfil course requirements, students at my university had to be able to compose different kinds of academic writing assignments including argumentative essays, critical reviews, research reports and many others. I realised that unfortunately many students seem to underestimate the significance of writing. I noticed that students tended to experience major difficulties with various aspects of writing and struggle with developing their academic writing skills during their university studies. As a teacher of writing, I felt that I had to try and identify the main sources of my learners' difficulties and help them to develop confidence in their own ability as academic writers by equipping them with relevant skills and strategies to overcome them.

Writing helps students to acquire content knowledge, and in the course of analysing, synthesising and evaluating sources and making inferences, student-writers also develop their cognitive skills. Furthermore, writing requires the ability to find solutions to linguistic problems, which assists students in the advancement of their second language proficiency (Manchón & Roca de Larios, 2007). Students, therefore, need to be made aware of the necessity to improve their writing and of the benefits that come with this improvement. It may seem easy to adapt suitable strategies to produce efficient writing; however, the actual process of writing is challenging, especially for second language (L2) learners who may face problems in selecting appropriate writing strategies. Apparently, writing as such is often difficult for learners as it requires a lot of concentration if it is to be done successfully. To illustrate, Flower (1990) described writing as a complex process which is influenced

by a number of factors such as cognition, context, goals and strategies. Moreover, low levels of linguistic competence in the second language as well as insufficient writing experience might result in numerous difficulties for L2 learners. Student-writers appear to experience problems with writing because it is not easy for them to express themselves clearly and construct coherent and logical arguments.

Argumentation has been identified as one of the most challenging types of academic writing, and there are some strong reasons to claim so. The main challenge students tend to experience with argumentation lies in its nature, which constitutes a rather complex and cognitively demanding activity. Importantly, in the university curriculum, argumentation is highly valued by teachers since it constitutes an efficient way for students to advance their writing skill and also for teachers to assess the 'higher-order thinking' abilities of their students. Furthermore, argumentation has broad relevance to the future writing that students might be expected to produce in real-life contexts upon completion of their university study.

Having taught EFL university students for a number of years, I moved into a different teaching context, in which I delivered English and academic writing classes to English as a Second Language (ESL) students at the university in the UK. Interestingly, I realised that not only EFL but also ESL students experience difficulties with academic writing. In the last few years, there has been a notable increase in the number of international students studying in British universities, reflecting a common trend observed in many English-speaking countries. Teaching professionals have thus become better aware of the nature of difficulties that ESL and EFL students tend to face when arriving at universities in the UK. In order to help their students overcome these difficulties, British universities have established a number of EAP programmes for undergraduate (UG) and postgraduate (PG) students in recognition of the

difference in skills and tasks required of both groups of students. These EAP programmes can be either pre-sessional, i.e., taken before the main academic courses begin, or in-sessional, i.e., taken at the same time as the students' main academic course. The pre-sessional EAP programmes in the UK normally vary in length from two weeks to one year. The main aim of these programmes is to develop learners' academic skills, and they specifically focus on academic reading and writing skills development.

1.2. Focus of the Study

One of the main goals of carrying out this research project is to find the best ways to facilitate students' language learning with the help of academic writing tasks. This study also aims to contribute to academic writing research by examining the factors that might assist in terms of students' linguistic and cognitive development of writing skills on a highly intensive pre-sessional EAP programme.

Previous studies carried out on EAP programmes, which aimed to examine the development of students' writing ability over time, have brought mixed results. Some of these studies demonstrated no significant gains at all (e.g., Read & Hays, 2003; cited in Storch & Tapper, 2009), while others reported improvements in academic register (e.g., Shaw & Liu, 1998), lexical sophistication (Storch & Tapper, 2009), syntactic complexity (e.g., Bulté & Housen, 2014; Crossley & McNamara, 2014), or overall written performance (e.g., Manchón & Roca de Larios, 2011). The heterogeneous results obtained in these studies could be attributed to different factors, for example, the duration of the course (e.g., two months versus the whole semester) or the type of feedback given to learner (e.g., direct versus indirect). The current study

investigates the impact of a pre-sessional EAP summer programme on the development of EFL students' writing skills. Until now, there have been no studies that aimed to explore learners' writing skills development on such an intensive EAP course. Unlike other longitudinal studies that aimed to trace writers' development over an extended period, i.e., at least during one semester, this study attempts to examine student-writers' linguistic and cognitive changes over the short period of four weeks.

Another interesting aspect of the present study is that it attempted to investigate the longitudinal changes both in writing products and writing processes of less experienced undergraduate and more experienced postgraduate student-writers. Data on the participants' linguistic performance were collected by means of the argumentative essays written at the beginning and at the end of the four-week EAP programme. As regards the data on the participants' composing and revision behaviours, writing goals, self-efficacy beliefs and writing strategies, these were gathered with the aid of semi-structured interviews, conducted at two points in time four weeks apart, while reflective learning journals were completed by the students throughout the EAP course. The participants' scores gained on the International English Language Testing System (IELTS) exam taken prior to the start of the EAP programme were used as an estimate of their English language proficiency level.

An important contribution of the present study lies in its triangulation of multiple research tools and use of a mixed method approach, which involves both quantitative and qualitative data analyses in order to be able to draw reliable and valid conclusions regarding the EFL students' linguistic and cognitive development on an intensive programme over time. This study also attempted to contribute to L2 writing and EAP research by applying the relatively new 'keystroke logging' methodology to elicit and analyse the data on writers' cognitive processes.

The research questions guiding the current study were as follows:

Research Question 1: How do the lexical features of argumentative writing change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 2: How do the syntactic features of argumentative writing change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 3: How does writing fluency change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 4: How do writers' revision behaviours change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 5: How do the UG students' difficulties and writing strategies change over the course of four weeks of studying on an intensive EAP programme?

Research Question 6: How do the UG students' goals and self-efficacy beliefs change over the course of four weeks of studying on an intensive EAP programme?

1.3. Thesis Overview

This thesis is organised into nine chapters. Chapter 2, which follows the Introduction, gives an overview of the relevant scholarly literature on second language writing development, with a special focus on argumentative writing research. It also critically reviews a number of empirical studies in EAP context. Chapter 3 of the thesis offers a literature review on cognitive and psychological aspects of L2 writing. This chapter examines cognitive processes and revision behaviours of student-writers. Previous studies on the difficulties the writers encounter, the writing strategies they use, the goals they pursue and their self-efficacy beliefs are also discussed in this chapter. Chapter 4 outlines the theoretical constructs relevant to my study and describes the operationalisations of lexical diversity and sophistication, syntactic complexity, writing fluency and revision. Chapter 5 presents the research methodology used to collect and analyse the data. It describes the research aims, the participants, the instruments and statistical analyses employed in the study. Chapter 6 presents the quantitative results of the study, followed by Chapter 7 which focuses on the qualitative findings obtained with the aid of the semi-structured interviews and the weekly learning journals. Chapter 8 interprets the quantitative and qualitative findings of the research in the light of the literature, and finally, Chapter 9 provides a summary of the findings and highlights the contributions of the study to the field. This final chapter also discusses theoretical and pedagogical implications of the findings for SLA, second language writing and EAP, reviews the limitations of the study and addresses areas for future research.

CHAPTER 2. Second Language Writing Development

2.1. Introduction

This chapter is dedicated to a review of the relevant literature on L2 writing development. I begin the chapter by presenting various views on how second language learners acquire writing skills and how L2 writing skills can contribute to processes of language learning. I then move on to a discussion of the challenges that L2 learners might encounter with writing in general and academic writing in particular once they start their tertiary education. Within the same section of the chapter, I stress the positive value of EAP programmes in British universities. The subsequent section introduces argumentation as a specific type of academic writing. I begin the section by stating the main aims of argumentative writing in teaching and research. I then concentrate on learners' difficulties with argumentation in English writing. Finally, I synthesise a number of empirical studies and demonstrate their relationship to my research.

2.2. Learning-to-Write and Writing-to-Learn in the Second Language

In the current piece of research, second language writing is investigated from both *learning-to-write* and *writing-to-learn* perspectives. An overview of both perspectives is given in this chapter. Learning to write effectively in an academic context is very important, not only because it is often the only means by which students' content knowledge is assessed in a large number of academic disciplines, but also because producing academic texts helps students to become members of a

discourse community as well as to gain new knowledge through writing (Hirvela, 2011; Hyland, 2011). One of the approaches for the understanding of writing from the learning-to-write perspective, introduced by Hyland (2011), views writing as a *textual* product. This approach treats writing as an outcome of composing activity rather than an activity in itself. When looking at writing from the textual perspective, written texts are seen as 'autonomous'. In other words, they can be analysed on their own, independently of the writing environment, writer or audience. Two specific theories focusing on texts, i.e., perceiving texts as *objects* and perceiving texts as *discourse* are described by Hyland (2011). As regards the first theory, a piece of writing is examined as an *object*, when its specific features, such as the academic register, mitigation or hedging, grammatical accuracy, lexical richness, density and some other aspects of written performance are being analysed. Turning to the second theory, i.e., text as *discourse*, it implies perceiving writing as a kind of social action "assisting students to link language forms to social purposes and contexts" (Hyland, 2011, p. 23).

Another approach by Hyland (2011), which is largely reflected in the current study, is the writer-oriented approach. It focuses on the *writers* and their cognitive processes, which enable them to create texts. Writing and all processes and sub-processes associated with it, constitute a complex cognitively demanding problem-solving and decision-making activity. Regarding L2 writing in academic contexts, students might find formulating new ideas challenging since generating content requires transforming, processing and reworking information. As indicated by Bereiter and Scardamalia (1987), while composing texts, writers tend to engage in "a two-way interaction between continuously developing knowledge and continuously developing text" (p. 12). L2 writers, especially less proficient ones, may not yet possess the automatic access to linguistic resources of the target language; hence, they are more

likely to experience certain challenges when it comes to conceptualising the intended meaning and identifying the best ways that meaning could be conveyed to the target audience.

Texts are rarely produced following a pre-established linear sequence of planning, composing and revising (Hyland, 2011). The process of writing is recursive in its nature, meaning that all the sub-processes involved occur and reoccur in a cyclical manner. In other words, the writer continuously moves backwards and forwards between the text that has already been produced and that is about to be generated. Likewise, the writer might engage with some of the following activities during the actual process of writing: doing additional reading and, ultimately, bringing new points gained from the reading material into their writing, modifying their own plans to match new ideas, or making some revisions to the text already written as a result of the feedback received from their peers and tutors. The writer-focused approach puts a strong emphasis on how to learn to write by writing. The teacher's aim is to facilitate their learners' awareness of the writing process by encouraging them to reflect on the strategies they use when generating and revising their ideas, as well as when attending to tutor's feedback on their writing. Nevertheless, reservations have been voiced about the writer-oriented approach. One such reservation is the fact that this approach is primarily focused on individuals' thinking and fails to offer a "clear perspective on social nature of writing" (Hyland, 2011, p. 20).

Some researchers (e.g., Harklau, 2002; Manchón, 2009a, 2011) see writing as a particularly valuable tool for learning and examine it from the writing-to-learn perspective. According to Manchón (2009a), there are two main pedagogical purposes of L2 writing: writing to learn across content areas and writing to learn the language. Writing can be seen not only as a way of displaying what has been learned, but also as

a tool for acquiring content knowledge, developing understanding and improving students' critical thinking ability (Çavdar & Doe, 2012; Wade, 1995). Thus, from the writing-to-learn perspective, writing is not perceived as a way to record what one already knows; instead, it is viewed a powerful way to discover new knowledge and construct new ideas by uncovering new concepts, recognising patterns and drawing conclusions. In other words, writing-to-learn activities help to activate what is already known, assist learners in seeing connections and reflecting on concepts and processes and help them develop their metacognitive skills.

Cumming (1990) was one of the first to identify a direct link between writing and language learning, claiming that problem-solving tasks create a challenge for learners at both content and language levels. It can be inferred that there exists a close connection between the problem solving nature of writing and its language learning potential. The former acts like a linguistic exercise that can benefit students in at least two ways: allowing them to learn and know more about the language, i.e., gain in terms of declarative knowledge, and making them more adept at actually using the language, i.e., proceduralise that knowledge (Manchón & Roca de Larios, 2007). Learners' involvement in meaningful communication in a second language helps them to proceduralise and automatise knowledge since "reflection on language may deepen the learner's awareness of forms, rules, and form-function relationship if the context of production is communicative in nature" (Izumi, 2003, p. 170).

During actual writing, it is claimed that learners *notice the gap* between what they already know and what they still need to master. According to Williams (2012), this opportunity to *notice the gap* constitutes one of the undeniable values of writing. In an attempt to solve problems with their writing, learners tend to reread what they have written and attend to reformulations in their writing. Research shows that

reformulations are useful for learners in that they positively influence noticing and shape their language intake by helping them to perceive the gap that exists between their own production and the target language (Williams, 2012). Learners are ultimately motivated to search for some possible means, either in their existing knowledge or among the relevant expert sources, of expressing their communicative intention. This is likely to result in the expansion of their own linguistic resources, stretching their declarative knowledge and might help bring about a development of their procedural knowledge.

Another noteworthy benefit of writing lies in its knowledge creation potential. As indicated by Williams (2012), learners tend to "co-construct knowledge" by taking part in collaborative activities that involve writing (pp. 324-5). Collaboration has been found to be efficient in terms of linguistic development, in particular, it helps with linguistic accuracy (Kuiken & Vedder, 2005; Storch & Wigglesworth, 2007). Besides collaboration opportunities, there are other important advantages of writing, one of which is the multiple opportunities to focus on form. Composing is a relatively slow process, in which writers have the opportunity to stop at any point and perform additional planning before continuing with the actual writing. According to Williams (2012), this seems to "free up attentional resources" for the writer, which, in turn, allows them to focus on certain aspects of written production such as accurate use of newly acquired grammatical or lexical forms.

Manchón and Roca de Larios (2011) hypothesised that the language learning potential of writing is associated with problem solving behaviours in which L2 learners exhibit while composing their writing. They also hypothesised that the depth of problem-solving depends on the mental models of writing which constitute various beliefs, feelings and thoughts of the writer that guide their performance. In order to

investigate these hypotheses, they conducted a study with L1 Spanish speakers of English (advanced language proficiency level) who took a nine month-long EAP course at a UK university. Upon completion of the course, the students reported on the changes which took place in their conceptualisation of the writing process and writing product. Regarding the process of writing, they stated that they realised that the composition of writing is based on problem solving which, in its turn, consisted of decision making and rewriting. Interestingly, in the process of text production, the learners appeared to have focussed on ideational, linguistic and textual dimensions; thus, they developed more multidimensional mental models of writing. The results of Manchón and Roca de Larios' (2011) study clearly demonstrate that over the course of nine months of studying on an EAP programme, learners were able to make major progress in their communicative abilities, the organisation of their texts and their ability to write appropriately in the target language. Holistic analysis of the academic essays produced at Time 1 and Time 2 also showed statistically significant improvement on nearly all measures targeted in the study, i.e., holistic rating ($p < 0.000$), argumentation ($p = 0.001$), appropriacy ($p = 0.002$), essay organisation ($p = 0.002$) and communicative ability ($p = 0.004$). The only measure that had not quite reached, but approached significance was the measure of accuracy ($p = 0.056$). Thus, having reviewed a number of descriptive and interventionist studies, Manchón (2011) concluded that writing fosters "linguistic processing with potential learning effects" (p. 70). As indicated by Manchón (2011), these processes might include noticing and attentional focus on form; formulation of hypotheses about language forms and functions; testing these hypotheses via getting corrective feedback from peers on one's own language; generating and assessing language through the use of explicit and implicit knowledge and by means of cross-linguistic comparisons.

2.3. Second Language Writing and EAP

Writing constitutes one of the core language skills at university since students' grades are often determined by their performance in written assignments, tests and examinations (Leki & Carson, 1994). Importantly, for students entering tertiary education, academic success is highly dependent on successful writing performance. Over the last three decades, there has been a rapid growth in research on second language writing, in general, and academic writing in English as a Second Language (ESL) and English as a Foreign Language (EFL) in particular. Writing in a second language has been found to be a common source of difficulty for both undergraduate and postgraduate students and a 'hot topic' for the large number of studies that have focussed on these difficulties. Underdeveloped and weak writing skills are often mentioned as a key factor in the failure of ESL and EFL students in meeting institutional literacy expectations (Zhu, 2004).

Most students, especially L2 learners who choose to pursue higher education upon completion of their secondary education are not well-prepared for this major change in their academic life. In fact, making the transition to university tends to be quite a challenging experience for them. A key aspect of this challenge is learning to write in an academic style. One of the possible reasons for this could be linked to low requirements for writing at secondary and high school (Leedham, 2014). Writing a first university assignment is complex process since student-writers are expected to manifest thorough understanding of the subject matter, to present their ideas logically and to communicate efficiently using appropriate academic tone and language (Krause, 2001). The ESL and EFL students of Asian background in particular, tend to experience major difficulties with aspects of academic writing when producing their assignments at university. One of the most likely causes for this is the fact that largely,

general essay writing, rather than academic writing, is taught to Asian students at secondary and high school. As a result, when pursuing higher education abroad, these students have little knowledge of academic writing skills and appear to face major challenges.

The importance of writing, and students' difficulty with it, are reflected in the emphasis given to academic skills on pre-sessional EAP programmes at British universities. EAP has, in fact, rapidly flourished as a new field for second language learning, teaching and research. Students who do not attain the minimal acceptable IELTS score needed for direct entry into university, sometimes still receive an offer of study on the condition of completing a pre-sessional EAP programme. The undeniable value of EAP instruction in academic writing has been clearly demonstrated in the SLA and writing research (Evans & Green, 2007; Hyland, 2002; Reid, 2001; Storch & Tapper, 2009; Zhu, 2004). Academic writing skills are, indeed, indispensable for second language learners at the university level, in particular, for postgraduate students (Pecorari, 2006). Although EAP courses tend to focus on improving learners' level of English language proficiency (Hyland & Hamp-Lyons, 2002), their ultimate aim lies in equipping learners with relevant academic and study skills as well as familiarising them with common academic writing genres in their chosen discipline. On the whole, while studying on an EAP course, students not only improve their writing skills, but also tend to become more critical readers of their own writing and of the work of other writers.

2.4. Argumentative Writing in Academic Context

Argumentative writing, as a mode of academic writing, indisputably represents an important component of second language learners' academic experience at university. One's ability to formulate and produce convincing arguments, both orally and on paper, clearly constitutes an essential academic skill. Argumentation skills need to be taught "alongside reading, writing, and arithmetic (as the 4th 'R') because learning in many subject matter domains requires students to be adept at comprehending and evaluating arguments" (Britt & Larson, 2003, p. 794). As pointed out by Kuhn and Udell (2003), there is a large body of theoretical literature which explores argumentative writing. However, only a small amount of empirical research has been conducted on the specific skills L2 students need to develop in order to be able to produce well-written argumentative texts (Clark & Sampson, 2007; Stapleton & Wu, 2015; Wolfe, Britt, & Butler, 2009).

Argumentative essays serve as powerful instruments for developing and evaluating learners' ability to produce logical and convincing ideas in writing. Students in higher education are often assumed to already possess some skill in the construction of well-developed persuasive arguments. A large volume of research conducted in the past as well as more recent studies have shown that although the structure of an argumentative essay seems to be generally straightforward, many students struggle with producing this type of academic writing (AI-Abed-AI-Haq & Ahmed, 1994; Choi, 1986; Ferris, 1994; Zhu, 2001). Recent studies have been able to identify some common problems that the students at both undergraduate and postgraduate levels tend to experience with argumentation (Clark & Sampson, 2007; Wolfe, 2012; Wolfe & Britt, 2008). Apparently, many of these challenges appear to be either linguistic or cultural in their nature. In terms of linguistic difficulties, L2

students might not possess the necessary English language skills in order to be able to cope with their argumentative writing assignments. They might find it difficult to understand and keep up with the challenging reading materials on which the assignments are based. Additionally, they may struggle with complex vocabulary, grammar and syntax in the academic texts.

It has also been argued that one of the main reasons for L2 learners' difficulty with producing well-constructed arguments lies in the influence of their native culture on their writing in a foreign language. In other words, learners of diverse cultural backgrounds tend to transfer their L1 writing conventions to argumentative academic writing in English (Cai, 1993; Connor, 1996; Hinkel, 2002; Hirose, 2003). For example, EFL learners of a Chinese background are often thought of as being less able to formulate their ideas into convincing arguments in the western mode. To illustrate, disagreement and critical analysis is valued highly in Western societies as a way of uncovering alternative courses of action. Conversely, East-Asian cultures generally strive to attain harmony and promote social cohesion. Confucian philosophy encompasses a range of indirect means of expressing one's claim, supporting one's ideas with appeals to tradition and authority rather than one's own individual opinions, and avoiding any contentious forms of argument. As pointed out by Connor (1996), the impact of traditional Confucian cultural value of social harmony results in students' avoidance to express their own views and feelings in their writing. It has been assumed that learners who come from East-Asian cultures do not particularly value argumentation and might experience major challenges when it comes to understanding certain concepts related to it such as "premise", "thesis", "claim", "counterargument" and others. However, more recent research on Chinese rhetoric has identified some flaws in the understanding of the influence of Oriental culture on

students' writing in English. To illustrate, having analysed a Chinese rhetoric book, Liu (1996) was able to detect some evidence of Western values such as originality of ideas and directness of discourse in students' writing. A similar observation was made by You (2005), who claimed that Western rhetorical style has long been integrated into Chinese writing composition. As argued by the critics of contrastive rhetoric, student-writers need to be treated as individuals, "free from the burden of their native culture's tradition and history" once they find themselves outside of their own culture (Li, 2014, p. 107).

The aim of argumentation in English is to convince the reader. There often exists a conflict between the attitude of the writer and that of the reader. In order to achieve the target of argumentation or, as it is often referred to, persuasive communication, it is important for the writer to consider the point of contention in an issue to decide on the most effective manner in which to frame a particular argument for a particular audience at a particular time. Though students might recognise the importance of argumentation in writing, they often tend to have difficulty in understanding what the argument actually consists of. One of the defining characteristics of an argument, as wrongly believed by many students, is presenting their own thoughts and expressing *original* views on various topics. Importantly, the students who believe that the above-mentioned characteristics constitute the core traits of argumentation tend to achieve low scores for their written performance. As pointed out by Andrews (1995), argumentation needs to be sensitive to and engage with other people's points of view. In other words, student-writers are expected not merely to present their own frame of reference, but to engage with the reading material by being critical, i.e., evaluating academic sources they read and incorporating the authors' claims into their own writing.

Wingate (2012) suggested that L2 learners often appear to struggle with argumentative writing either because of their not being at all aware of the need to develop an argument or because of their having gained only a partial understanding of the concept of *argumentation* while studying at a school or college. Student-writers do not receive much help with argumentation since it is not taught explicitly at most UK universities. It might be useful to illustrate this point with the findings of Wolfe *et al.* (2009). The researchers instructed their participants to read 15 short arguments on a controversial topic, such as whether cell phone usage should be banned while driving. Afterwards, the participants were asked to produce convincing argumentative texts on the issue. When the essays were collected and analysed, it was found that only 50% of the students were able to take a clear position on the assigned controversial theme. Therefore, as suggested by Butler and Britt (2011), a serious problem with learners' argumentative writing seems to be their difficulty with directly and precisely responding to the demands of the writing prompt (p. 77).

One of the essential components of argumentation is, undoubtedly, writer's ability to recognise alternative views. It has been rightly noted by Stapleton and Wu (2015) that the argument that includes two-sided views, i.e., integrates in itself both counterargument and refutation, is considerably more persuasive than the one that neglects counterarguments. It is worth pointing out that many L2 writers tend to struggle with bringing alternative views into their writing and backing up or elaborating on the reasons they provide when attempting to support the main claims they make in their essay. Butler and Britt (2011) indicated the problem with so called 'my-side' bias, when the writer focuses only or largely on the reasons and back-up claims to support their own position, completely excluding any possible counterarguments or other-side views. As documented in academic writing literature

(Cai, 1993; Liu, 2005; Wolfe, 2012; Wolfe & Britt, 2008; Wu & Rubin, 2000), second language learners find it challenging to produce justifications for the claims they make, generating counterarguments and rebutting those counterarguments.

In general, empirical studies on second language writing suggest that, without explicit instruction, only a small number of students succeed at mentioning the opposing views in their written compositions (e.g., Knudson, 1992, 1994; Perkins, 1985; Wolfe & Britt, 2008). Because of the prevalence of argumentation in the academic curriculum at British universities, and because of all challenges associated with its development in L2 learners, a common component of academic writing classes is assisting learners with the enhancement of their argumentative writing abilities. Butler and Brit (2011) provide some useful insight into the problem of argumentative writing pointing out that "in order for students to revise an argument globally, they need to have a functional understanding of the structure of an argument" (p. 77). Learners' weak performance on argumentative writing tasks could be explained by the lack of a well-developed schema for this type of discourse (Reznitskaya, Anderson, McNurlen, Nguyen Jahiel, Archodidou, & Kim, 2001). Specifically, writers might support their claim with only one reason while fail to introduce backing and rebuttal of the other-side information. Despite the fact that students might get some practice writing argumentative essays prior to commencing their university studies, this practice on its own does not always appear to be sufficient to improve their skill of writing. In fact, most academic writing textbooks used at universities do not contain argumentative writing as a genre on its own and do not offer sufficient tasks and exercises for students to practice and ultimately, to develop the skill of argumentation.

2.5. Empirical Research in L2 Writing Development in EAP Context

There have been a number of studies which have focused on the impact of EAP courses on the development of ESL and EFL learners' writing skills. Interestingly, some studies were able to detect significant improvement in one or several aspects of students' writing such as lexical variation and sophistication, syntactic complexity, accuracy and fluency. However, there have also been studies that reported no major development in any of the abovementioned areas. This section aims at providing a comprehensive review of the relevant research on second language writing development by critically examining the studies in the context of EAP.

The development of L2 learners' academic writing ability has mostly been investigated in terms of improvements in various assessment criteria, such as cohesion, coherence and organisation, as well as overall grades (see e.g., Green & Weir, 2002). It is only recently that writing research and studies in the field of EAP have started to focus on linguistic features of student writing and how they improve along with developments in proficiency in various instructional contexts (see e.g., the collection of studies introduced in a recent special issue of *the Journal of Second Language Writing* guest edited by Connor-Linton and Polio, 2014). The development of the syntactic complexity of students' writing has been at the centre of a number of studies in recent years (e.g., Byrnes, 2009; Byrnes & Sinicrope, 2008; Crossley & McNamara, 2014; Shaw & Liu, 1998; Vyatkina, 2013), but only relatively few studies have considered lexical development in conjunction with syntactic changes in students' written production (for exceptions see Bulté & Housen, 2014; Storch & Tapper, 2009; Verspoor, Lowie, & van Dijk, 2008; Vyatkina, 2012).

Some recent longitudinal studies of L2 writing have examined the development of syntactic complexity, but these were mostly conducted with university learners of German at beginning (Vyatkina, 2012, 2013) and advanced levels of language proficiency (Byrnes, 2009; Byrnes & Sinicrope, 2008). The studies of Byrnes (2009) and Byrnes and Sinicrope (2008) reveal that, parallel with developments in proficiency, increases in nominalisation, the use of relative clauses and grammatical metaphor can be observed. Another longitudinal case study is that of Verspoor *et al.* (2008), who looked into the development of the lexical and syntactic features of academic writing in English. Their participant, a Dutch university student, demonstrated development in terms of word and sentence length in his writing, but the growth in these features oscillated; when one of them increased, the other decreased. It should be noted that it is difficult to generalise from a sample size of one, as was used in this study. Unlike Verspoor *et al.* (2008), Vyatkina (2012), who examined the development of lexical and syntactic complexity in the L2 beginner learners' writing in German, found a different pattern of learners' writing skills improvement, i.e., lexical and syntactic features developed in parallel. Students' writing became lexically more varied and was characterised by longer sentences and finite verb-units and more frequent subordination as they progressed in their language.

The findings concerning linguistic development in EAP programmes have been mixed. Most of these courses are relatively short and are not, or are only indirectly, focused on the syntactic and lexical aspects of writing; hence, it is understandable that limited development in these areas might be observed (see e.g., Ortega, 2003). In a study conducted in a UK university context, Shaw and Liu (1998) examined L2 students' written performance prior to and after completing the intensive EAP course. They carried out a longitudinal investigation of the changes in the written

performance of a group of postgraduate EFL students after three months of studying on the pre-session programme. The participants were asked to write two 200-word essays, one as part of initial placement test and the other as part of a final achievement test upon completion of the EAP course. The measures of accuracy, syntactic complexity, lexical cohesion and academic register were analysed in the study. Shaw and Liu (1998), who mainly focused on the linguistic features, found that linguistic accuracy in terms of the frequency of errors and complexity with regards to nominalization and subordination did not change. Nevertheless, their research revealed that in a number of other areas, such as the level of formality and impersonality, students' writing exhibited increased use of the characteristic features of academic genre at the end of the programme. They observed that the writing style of the students became more academic by the end of the course. In other words, the writers' language became strongly associated with written rather than spoken register. Despite being exposed to spoken English while studying in the English speaking country, the students started to use more academic expressions in their writing. One of the likely explanations for such a significant improvement in the use of academic register and vocabulary is that, on the intensive pre-session programme, the students were expected to read a large number of journal articles and books written in academic language. The findings of Shaw and Liu (1998) suggest that on the EAP course, the students learned to use an academic register but did not demonstrate noticeable linguistic development. Their written language became more academic and their ideas were found to be more logically arranged; however, the vocabulary used by the writers was not richer or more varied, and the texts did not become significantly longer by the end of the programme.

In another study, Storch and Tapper (2009) aimed to identify the aspects of students' writing that developed upon the completion of one semester of studying on an intensive EAP course specifically designed for postgraduate students at Melbourne University. Storch and Tapper examined academic texts produced by 69 students at two time points, at the beginning and at the end of the course. All texts were subjected to analysis for language, structure, and rhetorical quality. The results showed that no major improvements were made with regard to writing fluency (measured as total number of words and number of words per T-unit) over time. However, significant improvements in the grammatical accuracy of students' writing were observed. The findings also revealed that the students used significantly more academic expressions in their essays at the end of the EAP course. As argued by Storch and Tapper (2009), one of the core factors leading to students' improvement in multiple areas of writing was the regular feedback given to them by their tutors on the pre-session course (Bitchener, Young, & Cameron, 2005; Storch & Tapper, 2000). Also, explicit language improvement lessons with the focus on grammar and vocabulary as well as students' exposure to academic texts might have contributed to their advancement as academic writers over the course of ten weeks.

In a recent series of analyses of writing development in the Michigan State University (MSU) corpus of descriptive essays (for a description of the corpus see Connor-Linton and Polio, 2014), Bulté and Housen (2014) investigated the extent of L2 learners' writing development on an intensive four-month-long EAP course. In this study, which focussed on changes in structural and lexical complexity, 45 randomly chosen students completed two writing tasks, one at the beginning and the other at the end of the academic writing programme. The participants were found to have made significant improvements on several measures of syntax including phrasal and clausal

complexity. Finite clauses, sentences and T-units also became significantly longer in students' descriptive essays. No major differences however were observed with regard to three sentence complexity measures, i.e., complex sentence ratio, compound complex sentence ratio and sub-clause ratio. In contrast with Storch and Tapper's (2009) study, no differences over time were detected for any of the lexical complexity measures. Bulté and Housen (2014) concluded that a large number of measures need to be selected by the researchers when analysing lexico-syntactic development of L2 writing, since, as their results have clearly shown, L2 learners' lexis and syntax tend to develop at a different pace. In Crossley and McNamara's (2014) computational analysis of the same dataset, "longer noun phrases, less syntactic similarity between sentences, fewer verb phrases, more words before the main verb, and more negation" (p. 73) were the differentiating features of students' writing at the beginning and at the end of the academic writing course. A multidimensional analysis of the linguistic characteristics of the same texts carried out by Friginal and Weigle (2014) also showed that the learners' essays were increasingly characterised by a nominal writing style and elaborated description by the end of the programme. However, Polio and Shea (2014) observed no parallel improvement in accuracy.

2.6. Summary

In summary, this chapter aimed to review the most relevant literature on second language writing development, in particular focusing on studies conducted in the EAP setting. Research on L2 writers' difficulty with argumentation and the importance of addressing this particular aspect of academic writing at higher education level was also discussed in this chapter.

Although previous studies offer useful insights into lexical and syntactic development in L2 writing, their findings might not apply to expository and argumentative academic texts, which have specific genre and linguistic characteristics. Most longitudinal writing research has used a variety of task types, prompts and genres for data elicitation at different time points, which makes it difficult to separate the effect of linguistic development on students' output from potential task and genre effects. In addition, previous empirical studies on L2 writing development in the EAP context were conducted over a relatively extended time period, i.e., at least one semester. No studies have been conducted in the context of the highly intensive pre-session courses which are frequently offered to students in the UK who fall short of the language requirements for university by a small margin. Furthermore, no previous research has investigated the impact of EAP courses on students' development when the participants show differences in the level of proficiency when they enrol in these courses. Therefore, little is known about the effectiveness of these courses and to what extent they contribute to the development of students' linguistic expression in writing.

In the present study, I aim to investigate how linguistic characteristics of learners' writing change during an intensive EAP programme which aims to prepare international students for university studies at undergraduate and postgraduate levels in the UK. This research specifically addresses linguistic features that have been shown to be typical of academic writing among L1 writers and that exemplify advanced and experienced writers' texts (Biber & Gray, 2010; Byrnes, 2009; Byrnes & Sinicrope, 2008; Halliday & Martin, 1993/1996). My study might help researchers to understand how key linguistic features of academic writing develop and thereby contribute to supporting the more effective and efficient expression of L2 writers' thoughts and arguments.

CHAPTER 3. Psychological Aspects of Second Language Writing

3.1. Introduction

In this chapter, I review the literature on psychological aspects of second language writing specifically focusing on cognitive and affective factors. I will first describe several models of writing, i.e., the earliest cognitive model of Hayes and Flower (1980), knowledge-telling and knowledge-transforming models by Bereiter and Scardamalia (1987), Hayes' (1996) model of writing and the latest cognitive model by Hayes (2012). I will then review and discuss a number of studies on L1 and L2 writing processes. Next, this chapter will offer a brief overview of the concepts of fluency and revision before reviewing some empirical studies on writers' fluency and revision behaviours. The section that follows will discuss second language writers' difficulties and the writing strategies they can use to overcome these difficulties. I will conclude the chapter with a presentation of affective factors in writing, including writers' goals and perceived self-efficacy beliefs.

3.2. Cognitive Models of Second Language Writing

It should be acknowledged that writing takes place in a social environment and the skills that writers deploy when planning and composing their texts are socially situated. The present study is, however, largely aimed at examining writing from a cognitive-psychological rather than a social perspective, i.e., focusing on what happens in the writer's mind and what activities they perform as they engage in the process of composing. Therefore, the relevant research literature on writing and

cognition, with a particular emphasis on the cognitive skills that underlie successful writing in an academic L2 setting, will only be reviewed in this subsection of this chapter.

Researchers' interest in the processes of second language writing has been sparked by studies of L1 writers' behaviours and cognitive thought processes. As Zamel (1982) pointed out, "writers go back in order to move forward" (p. 197). Writing is never a linear process, rather it is characterised as having a recursive nature. Since the early eighties, two major themes have dominated psychological theories of the cognitive processes involved in writing. Research on second language writing was inspired by various cognitive models of writing, which were introduced as early as in 1980s. Among those, the most prominent are Hayes and Flower's (1980), Bereiter and Scardamalia's (1987), Hayes' (1996), Chenoweth and Hayes' (2001) and Hayes' (2012). These models share certain distinctive traits; however, they also have a broad swath of characteristics in common.

Two major themes have dominated psychological theories of the cognitive processes involved in writing since the early eighties. The first one is the basic insight that writing is not just a matter of translating preconceived ideas into text, but also involves creating content and tailoring the way this is presented to the needs of the potential reader. Writing is as much a matter of discovering or inventing the thought to be expressed in the text as it is a matter of conveying it in an appropriate and convincing way (Hayes & Flower, 1980). The second theme revolves around the fact that, as writing involves complex interaction between a range of processes, it places high demands on the limited capacity of an individual's working memory. In order to avoid cognitive overload, writers have to develop effective strategies for managing the writing process (Hayes & Flower, 1980).

In this part of my thesis, I will describe the influential cognitive models and discuss their implications for research on writing in the second language. In the course of the review, I will indicate some implications of different models for research on writing in the second language. Early research on writing was inspired by psychological research on problem solving. This provided a framework for categorising the mental processes and involved a set of methods (verbal protocol analysis in particular) for examining these processes, and it resulted in a body of empirical findings which could be applied to understanding writing. My aim is not to provide a detailed review of L2 research informed by cognitive models of writing, but rather to foreground how the different assumptions of these models have influenced the questions and goals of research on second language writing.

3.2.1. Hayes and Flower's (1980) Cognitive Process Model of Writing

In 1980, Linda Flower and John Hayes were the first to propose a shift from a traditional linear approach to a process-based approach in order to describe different steps taken during the process of writing. In their study, designed to reveal the cognitive and motivational processes of writing, Hayes and Flower (1980) asked the participants to verbalise their thoughts while writing. In fact, they were the first scholars to investigate writing processes with help of the think aloud method, which were originally devised by cognitive psychologists with the aim of identifying psychological processes (Newell & Simon, 1972). Hayes and Flower's writing model was developed through a protocol analysis of the reports which the students provided as they composed their text aloud. The findings of Hayes and Flower's (1980) research were used to construct a comprehensive cognitive model of the writing process, which

included three core components: 1) the task environment, 2) the writer's long term memory, and 3) the writing process, as illustrated in Figure 3.1.

As regards *the task environment*, this constitutes the context in which the writing model operates. The task environment encompasses "everything outside the writer's skin that influences the performance of the task" (Gregg & Steinberg, 1980, p. 12). This includes the writing assignment, i.e., the description of the topic and intended audience. Additionally, any kind of information that might affect writer's motivation while on task can be regarded as the component of the task environment. Importantly, once the writing process has commenced, the task environment might also include the written text produced so far. This text is an important constituent of the task environment since it is continuously referred to by the writer throughout the process of task completion.

Another important component of the model is writers' *long-term memory*. According to Hayes and Flower (1980), writers' knowledge stored in the long-term memory includes the knowledge of the *topic*, *audience* and *writing plans*. In fact, "[s]ometimes a single cue in an assignment, such as "write a persuasive," can let a writer tap a stored representation of a problem and bring a whole raft of writing plans into play" (Flower & Hayes, 1981, p. 371). In contrast to the short-term memory, the long-term memory is largely stable and might be characterised as having its own internal organisation of information (p. 371). However, there are several constraints on long-term memory. First of all, it could be quite challenging to find the relevant cue in order to retrieve the appropriate knowledge from memory. The second problem with long-term memory, as suggested by Flower and Hayes (1981), appears to be the need to restructure the knowledge retrieved so that it can be adapted to the writing task and that it satisfies the needs of the reader.

When it comes to the third component of the cognitive model, *the writing processes*, three major sub-processes can be distinguished, *planning*, which includes generating ideas, organisation and goal setting; *translating* writer' s plans into text; and *reviewing*, which involves reading and editing. The main function of *planning* is to "take the information from the task environment and from long-term memory and to use it to set goals and to establish a writing plan to guide the production of a text that will meet those goals" (Gregg & Steinberg, 1980, p. 12). The *generating* sub-process serves to retrieve the required relevant information from the writer's long-term memory. The subsequent *organizing* sub-process, in its turn, is responsible for selecting the most useful information and transforming it into a writing plan. When having the intended audience in mind, the writer might, for example, say something like "I need to keep it simple" or "I need to supply a transition here." Finally, in *goal setting*, writers aim to convey their ideas "in a meaningful way to the intended audiences" (Benton, Kiewra, Whitfil, & Dennison, 1993, p. 267).

The *translating* or composing process is responsible for converting ideas into visible language. In other words, this process could be defined as an activity through which the writer puts their plan into sentences (Flower & Hayes, 1981). The main task of a writer is to translate the meaning, which could be expressed in key words and organised in a complex network of relationships into a linear cohesive piece of writing. Knowledge of vocabulary as well as of regularities of written English is required for the translating process to take place efficiently.

The third process of *reviewing*, which consists of the two strategies, i.e., reading and editing, used while reviewing, constitutes the act of evaluating what has been planned or written. Making use of these strategies, the writer checks the written text content and corrects or revises anything that might contradict the intended

objectives. This might involve correcting different kinds of linguistic errors as well as changing the content of writing produced. As Hayes and Flower (1980) pointed out, whenever the text evaluation does not satisfy the writer, reviewing results in revision. Reviewing tends to happen when the writer, while translating, realises that an error has been made. Reviewing is not an impulsive activity, but one in which the writer deliberately intends to devote their time to verifying the written text systematically.

An important distinctive feature of Hayes and Flower's (1980) cognitive model is the recursive nature of the writing process. All three processes, i.e., planning, translating and revising, can occur at any moment during writing; therefore, these can be considered cognitive processes rather than stages in the writing process. The coordination of these processes is the responsibility of the *monitor*, which plays a vital role in controlling the writing process. In fact, monitoring the writing process is a metacognitive process, and involves sustaining and shifting the focus of attention among different strategies to ensure the efficiency of the writing progress and the quality of the product produced. The monitor function allows the writer to move between processes of planning, translating and reviewing when responding to the task needs. Importantly, to progress as a writer, one must set, regulate and monitor their progress towards the cognitive goals associated with writing.

Three major groups of constraints on composing were identified by Hayes and Flower (1980). Although knowledge in the long-term memory is generally the resource writers tend to draw on for composition, it could become a major constraint on the process when it is not well suited to a specific task. In fact, disorganised perceptions have to be transformed into related knowledge. The second constraint is related to expressing thoughts in writing in accordance with syntactic and grammatical

conventions. Finally, the writer could be constrained by the text purpose and the intended audience.

Figure 3.1. Cognitive Model of Writing (Hayes & Flower, 1980, p.11)

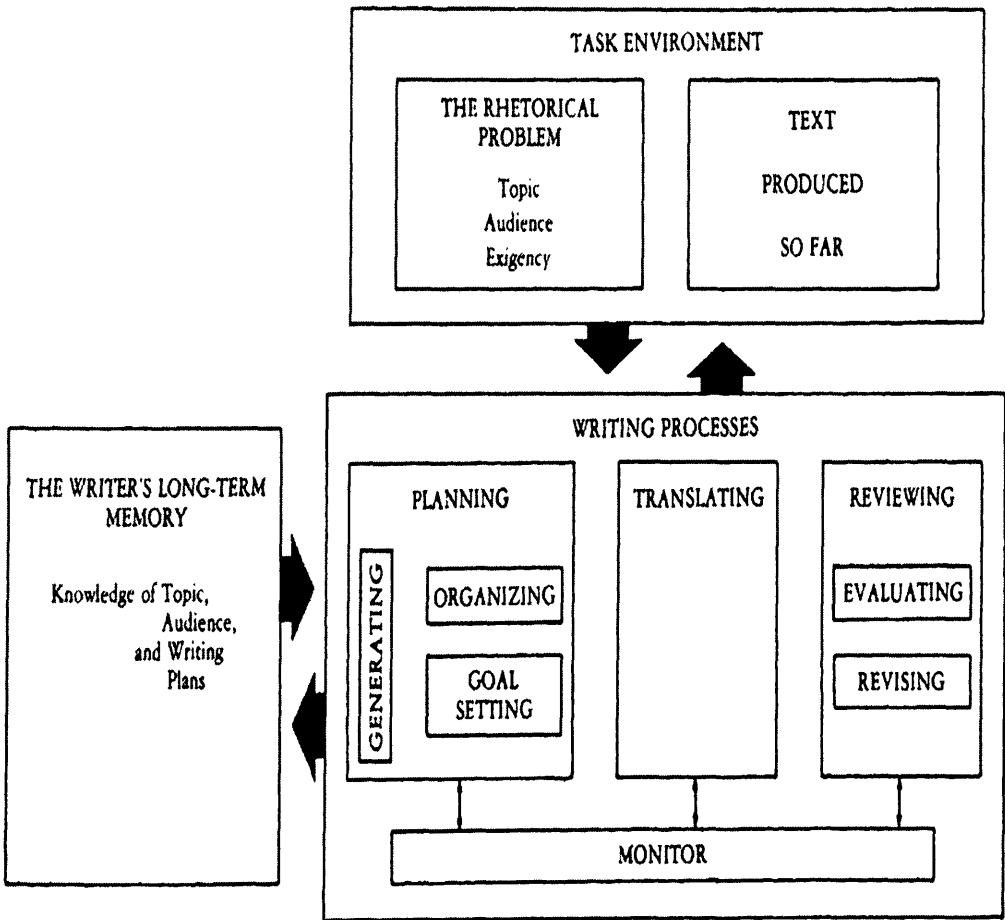


Figure 1. Structure of the writing model. (For an explanation of how to read a process model, please see Footnote 11, pages 386-387.)

To summarise, through their cognitive model of writing, Hayes and Flower (1980) provide convincing evidence that several different processes are interwoven in the actual process of writing. They make the point that not only the process of writing but also the goals of writing are organised hierarchically. Their research seems to suggest that the writer might read what they have written, detect how they have gone astray from one of the intended goals and then either revise what has just been written or alter their plans for the next section. Overall, writing can be characterised as a process that involves the act of composing, which is hierarchical, demands complex problem solving and decision-making skills as well as goal-oriented thinking; has a clear sense of purpose; and considers the intended audience carefully (Flower & Hayes, 1981, p. 366).

3.2.2. Bereiter and Scardamalia's (1987) Models of Writing

In their classic work, *the Psychology of Written Composition*, Bereiter and Scardamalia (1987) proposed two models of text production— *the knowledge-telling model*, a relatively simple approach to composition, characteristic of the writing processes of novice writers (Alamargot & Fayol, 2009; Kellogg, 2008; McCutchen, 2006), and *the knowledge-transforming model*, a more sophisticated model typical of so called 'expert' writers. The two models are contrasted so as to differentiate how knowledge could be brought into the writing process and what happens to it in this process. It is important to note that quite often the same writer might approach a writing task differently. For example, simple or well-researched tasks may be a matter of mere 'knowledge telling' and can thus be executed in a more or less linear fashion;

other tasks may require 'knowledge transforming', which often leads to more recursion (Bereiter & Scardamalia, 1987).

Bereiter and Scardamalia's approach to modelling the writing process is different from that of Hayes and Flower (1980) in two respects. First and foremost, unlike Hayes and Flower (1980), Bereiter and Scardamalia proposed a more detailed analysis of cognitive processes in their two models of writing. Specifically, the knowledge-telling and knowledge-transforming models appear to focus more on how writers develop their writing sub-goals and link them to make their written product more consistent. Second, Bereiter and Scardamalia's model is based on the comparative-contrastive approach by investigating the major differences between experienced and inexperienced writers, corresponding to the models of knowledge-transforming and knowledge-telling respectively.

Figure 3.2. illustrates *the knowledge-telling model* of writing. As shown in the figure, the composing process begins with the writer constructing a mental representation of the task followed by "locating topic and genre identifiers" (Scardamalia & Bereiter, 1987, p. 144). After deciding on what to write about, the writer resolves whether to write an expository text, a narration, an argumentative text, or produce a text in some other genre. The topic identifiers "serve as cues for memory search" and "these cues automatically prime associated concepts" (Scardamalia & Bereiter, 1987, p. 144). Then the writer gets involved in content generation, which, in fact, constitutes one of the essential elements of written production. This aspect of the model is in line with the 'generating' component of Hayes and Flower's (1980) model of composing. The writer constructs memory probes and subsequently retrieves content from their memory, which they then test for appropriateness. When the content passes the test, the writer proceeds to produce drafts before finally updating

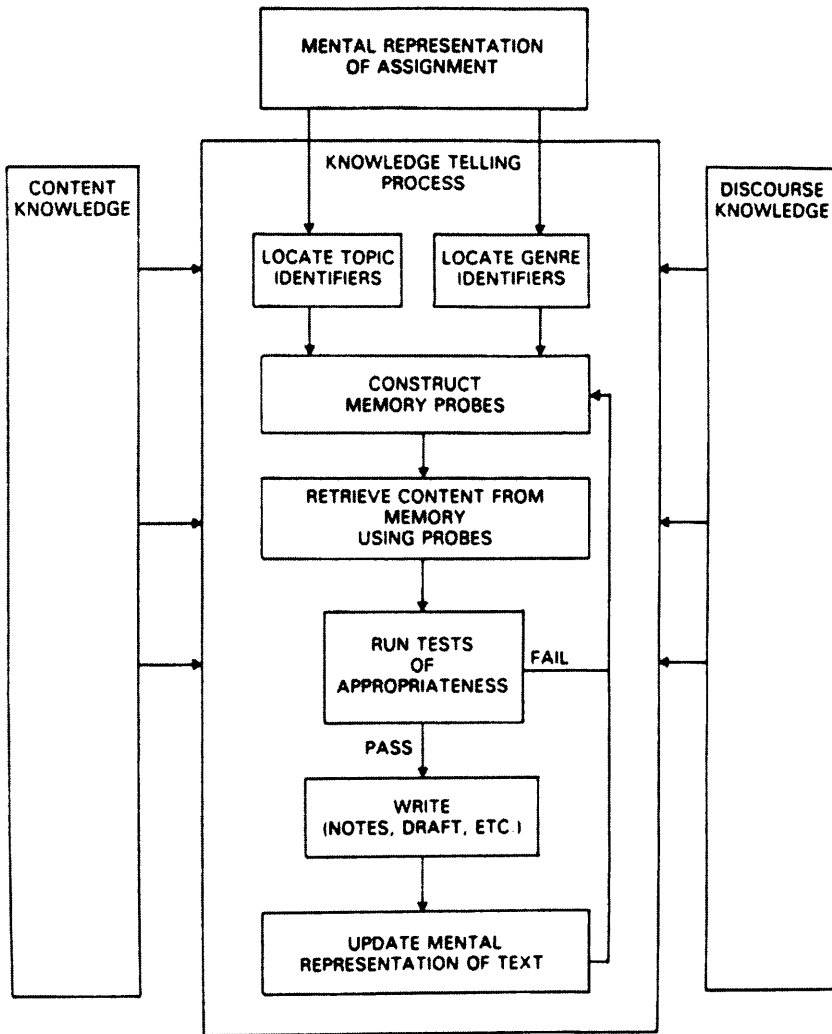
the memory representation. The various stages outlined above are done in consultation with content and discourse knowledge. If the content fails the test, the writer consults with the memory again until the proper content is ultimately generated and retrieved.

When the knowledge-telling strategy is used, written composition takes the form of a straightforward transcription of knowledge. The text is composed by formulating ideas as they are retrieved from long-term memory, without any reorganisation of the conceptual content of the written text. As its name suggests, the knowledge-telling model is largely focused on presenting the writer's knowledge about the topic and not on adjusting that knowledge to the readers' or writer's needs. Thus, the writer might either be assigned a topic or chooses one and then probes their memory by creating a series of statements about that particular topic (Hayes, 2011).

According to Bereiter, Burtis, and Scardamalia (1988), novice writers, who tend to be less skilled and thus, able to do only "relatively little transformation of knowledge when processing it" into writing, appear to employ a knowledge-telling strategy (p. 261). When this strategy is used, text production is guided by the direct retrieval of content from the long-term memory and is organised by the associative relationships between content as it is stored in the long-term memory. In accordance with *the knowledge-telling model*, the written text "is generated by probing memory with topical cues, extracted from the task assignment or from text already generated, and with structural cues drawn from knowledge of the intended text genre" (p. 262). From Bereiter *et al.*'s (1988) perspective, the organisation, textual coherence and appropriateness of the text produced depend on the way one's memory is organised. Being exposed to a familiar topic and a well-practiced genre, such as a narrative, descriptive or argumentative, the writer might be able to construct a well-formed text.

There are, however, limitations of the *knowledge-telling* model described above. One such is the fact that, when writers are guided by the knowledge-telling framework, their major focus is on producing an adequately written piece, and little consideration is given to the target audience. This can lead to what Flower (1979) calls *writer-based-prose*, which means that the text produced could become incomprehensible because the ideas are in the writer's head rather than expressed clearly in the text itself. Hence, the knowledge-telling model of writing is unlikely lead to the integration of information or to the elaboration of new knowledge. In addition, the main focus of the knowledge-telling approach is on local surface problems rather than multiple constrains, which leads to, as Bereiter and Scardamalia (1987) call it, 'what to say next' strategy. This means that when writers compose their texts, they tend to look at the problems out of context, i.e., without taking into account the whole text. The written text might, as a result, be cohesive and coherent only at the sentence-level, but not at a more global discourse level. Finally, the writers who follow a knowledge-telling model of writing do not seem to have the ability to become engaged in reflective processes. According to Bereiter and Scardamalia (1987), these writers often do not possess the cognitive resources that are needed for the integration of their goals into the writing process. While the knowledge-telling approach is usually applied by less experienced writers, more experienced student-writers might as well decide to use it because of some external constraints, e.g., deadlines or time limits.

Figure 3.2. Knowledge-Telling Model of Writing (Bereiter & Scardamalia, 1987, p. 8)

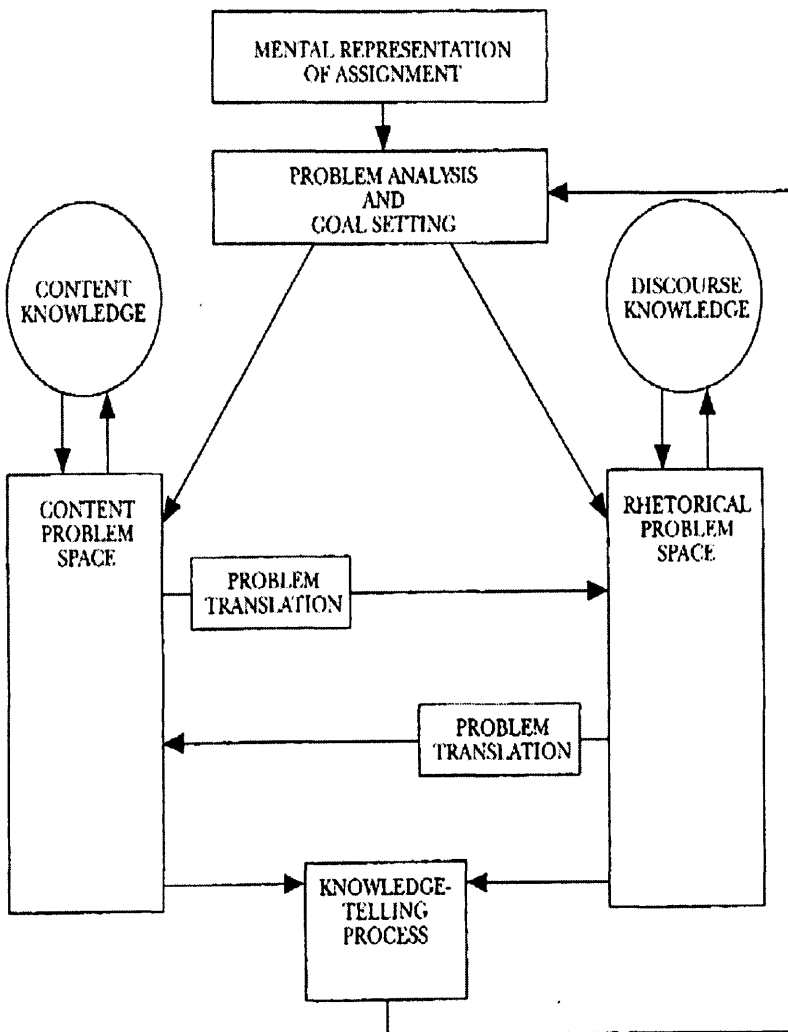


The *knowledge-transforming model* of writing depicted in Figure 3.3. considers writing as a learning task. This representation can capture how the writer may rethink or re-evaluate the topic of their writing. In terms of the knowledge-transforming model, the actual process of writing can help one generate thoughts. Thus, writing can become a tool for learning. In order for this kind of learning to take place, the writing process is seen as an excellent opportunity to expand the writer's knowledge and competence, rather than a mere test of their existing knowledge. In fact, the knowledge-transforming model retains the knowledge-telling process as a

sub-process within its model. However, prior to activating the knowledge-telling processes, the processes of problem analysis and goal setting come into play.

The knowledge-transforming model of composing reflects the writing characteristics of experienced and skilled L2 writers. The model describes a complex problem-solving process involving higher-order reasoning skills and the composition of a logical coherent piece of writing. Bereiter and Scardamalia (1987) propose that expert writers might often "problematise" a writing task employing knowledge-transforming strategies. In other words, the knowledge-transforming model represents the purposeful achievement of specific writing goals. Skilled writers develop elaborate goals, particularly those related to content and rhetoric, which require sophisticated problem-solving abilities. Furthermore, expert writers tend to demonstrate evidence of reflective thinking during the process of writing. They often tend to develop elaborate plans before writing, modify them radically while writing, and revise initial drafts extensively. The end result is that expert writers' texts are tailored to the needs of the reader, and that such writers can develop profound understanding of what they are writing about.

Figure 3.3. Knowledge-Transforming Model of Writing (Bereiter & Scardamalia, 1987, p. 12)



Bereiter and Scardamalia (1987) criticise formal schooling that encourages a more passive kind of cognition by "continually telling students what to do," rather than encouraging them "to follow their spontaneous interests and impulses...and assume responsibility for what becomes of their minds" (p. 361). They also argue that the writer's ability to resolve content-related and rhetorical problems calls upon a dialectical process for reflection. If students rarely practice the kinds of writing that develop knowledge-transforming skills, they are not likely to be able to acquire these

skills easily. Thus, the knowledge-transforming model suggests that the cognitive processes that writers generate in the development of a written text involve the mind moving from mere telling, as in knowledge-telling model, into knowledge transforming. Therefore, the knowledge-transforming model integrates in itself problem identification, the search for a suitable solution and the problem-solving process. Indeed, good writing skills entail one's ability to identify and solve the problem, formulate goals, generate relevant content, plan and reprocess, use framing or structure and express their ideas in appropriate linguistic form.

Writing should be perceived as a problem-solving process that is goal-oriented. Importantly, writers have to consider whether the text they are writing expresses what they want it to say and whether it appears to be convincing enough for the target audience. In other words, the writer should consider the needs of their intended audience while writing. In this process, the writer is likely to introduce some changes not only to the written text but also to the message they are trying to get across. Writing can consequently assist them to develop their knowledge. In the knowledge-transforming model, the writer not only focuses on generating content but also aims to achieve the goals of a specific writing task. The interaction between the problem of generating content and achieving the goals of the assignment is the basis for reflective thought.

3.2.3. Hayes' (1996) Model of Writing

The earlier cognitive models of writing, i.e., Hayes and Flower (1980), Bereiter and Scardamalia (1987), seem to focus largely on the goal-directed nature of the writing processes. They, however, treat the translation of thought into writing as a

relatively passive component of this process. More recent research studies have begun focusing more on the processes involved in translation, and in some cases, have even emphasised a more active role of translation in the generation of written content. In a revised model of writing, Hayes (1996) makes much less clear cut distinctions between the components of the writing process than in Hayes and Flower's (1980) model.

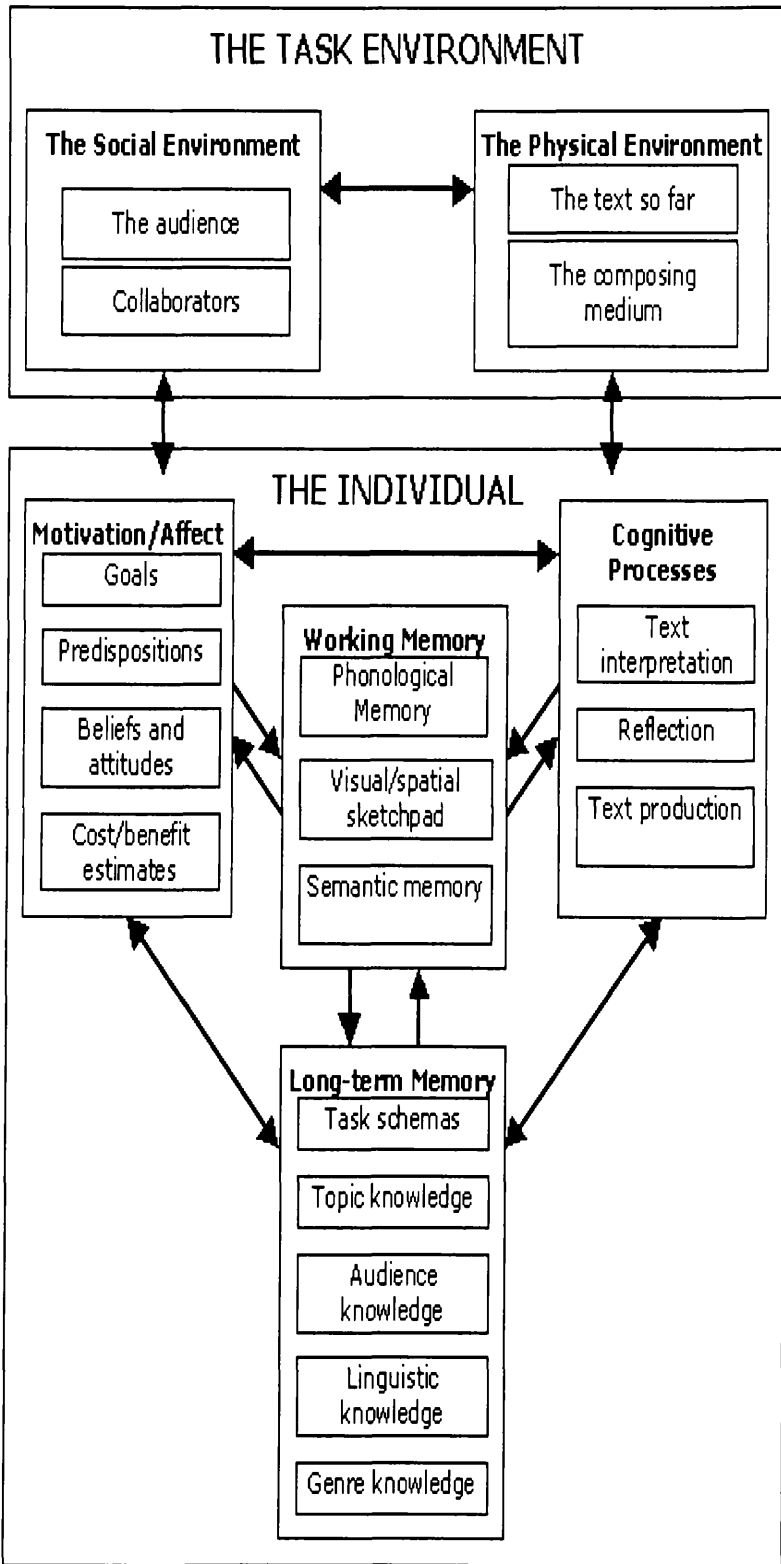
The cognitive model, as depicted in Figure 3.4., visualises writing in terms of two core dimensions, i.e., the one as related to the task, and the other as related to the individual. As claimed by Hayes (1996), the task dimension comprises a range of external factors that might have an impact on the writer. Each of these factors can be represented as part of either the *social environment* or the *physical environment*. The former includes either the audience of the text or the rest of the writers when writing is done collaboratively. The latter includes the text produced and the specific characteristics of the writing environment itself. Regarding the second dimension, i.e., the individual, Hayes (1996) describes the affective and cognitive aspects, as well as the working memory and the long-term memory.

Hayes' (1996) framework integrates basic cognitive processes, such as text interpretation, reflection, and text production. Thus, different from Hayes and Flower's (1980) model, *planning* has become a component of a more general 'reflection' module. Regarding the *translation* component, as referred to in Hayes and Flower (1980), in Hayes' (1996) model, this has been renamed as text production, which would imply that this component was no longer perceived as passive in content generation. Revision, in its turn, is no longer treated as a separate process, but more as a combination of the basic processes of text interpretation, reflection and text production. Hayes (1996) aimed to investigate how different aspects of one's cognitive

capacity interact with cognitive processes, focussing on the roles of long-term memory, short-term memory, and motivation. The model is specific about the contents of long-term memory, distinguishing among task schemas, topic knowledge, audience knowledge, linguistic knowledge, and genre knowledge. Furthermore, working memory has been explicitly integrated into the model of writing. With this model, Hayes illustrated how different aspects of working memory, such as phonological and visuo-spatial memory, affect the cognitive processes of writing.

Hayes' (1996) model ignores the distinction at the task level as it largely focuses on cognitive dimensions. However, writing tasks differ in the types of problems they present to the writer, involving varying amounts of planning, translating, reviewing or editing; therefore, each task can require a different combination of cognitive strategies.

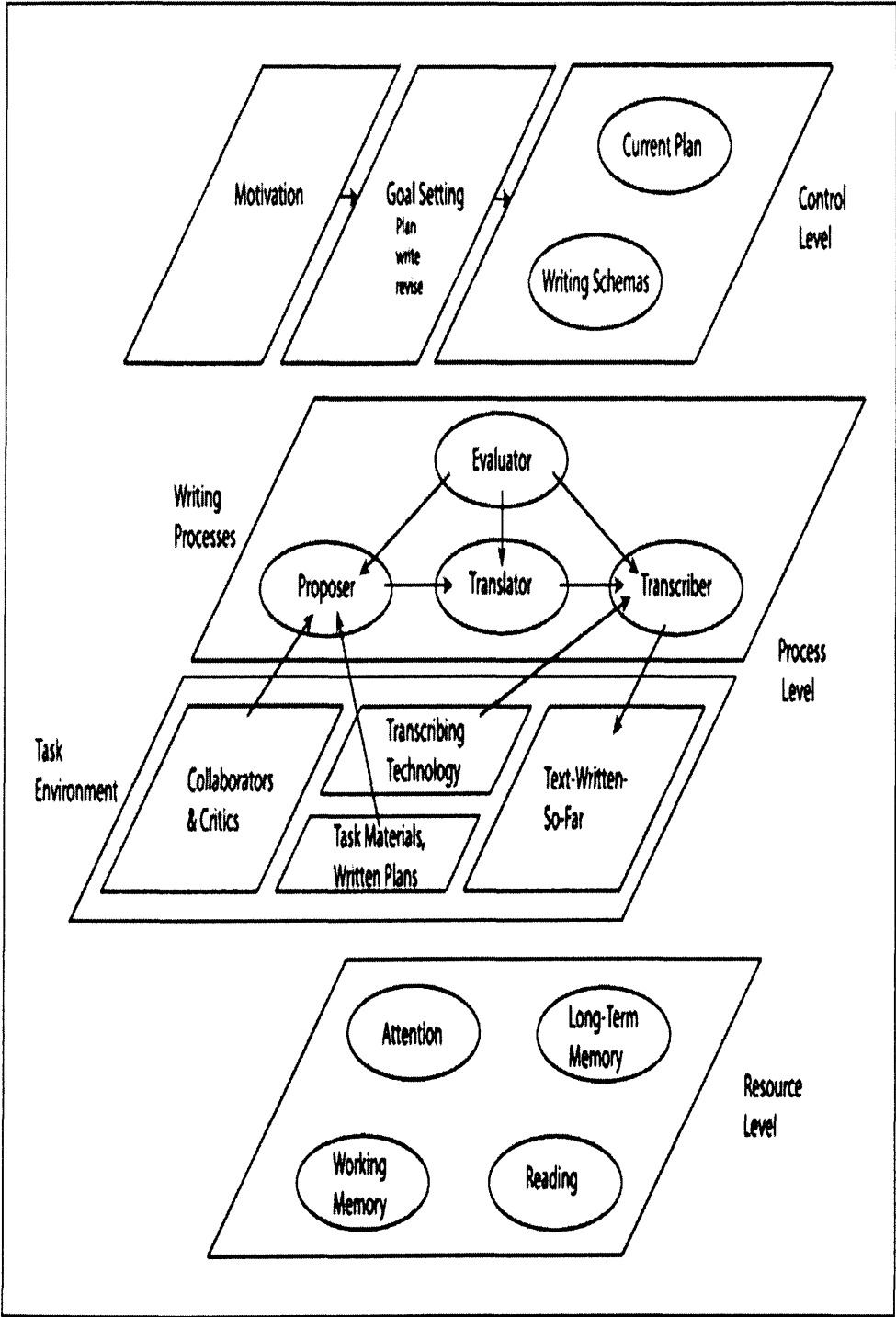
Figure 3.4. Cognitive Model of Writing (Hayes, 1996)



3.2.4. Hayes' (2012) Model of Writing

The influential cognitive model of writing, put forward by Flower and Hayes, has guided writing research since the 1980s. From the time the model was first proposed, it has undergone a number of developments. The latest modifications can be observed in Hayes' (2012) model of writing. The model is made up of four core writing processes: the *proposer*, the *translator*, the *transcriber* and the *evaluator*, each of which is briefly defined below. The *proposer* is responsible for generating ideas, referring to the materials in the task environment. This might involve rereading some sections of a book or referring to additional online resources. Next, the *translator* converts these ideas into linguistic units or sentences. Then, the *transcriber* monitors one's actual writing with a pen or typing on the keyboard. Finally, the *evaluator* monitors for various errors and initiates revision. Importantly, not only the transcribed text can undergo revision, but also the proposed ideas and translated strings of language can be scanned by the evaluator. All writing processes interact with the task environment, which consists of the text-written-so-far, collaborators, source materials and transcribing technology. Hayes' (2012) model is also based on three core cognitive processes: 1) the *processing level*, which integrates in itself the writing processes and task environment; 2) the *control level*, which includes motivation, goals, plans and writing schemas that maintain top-down control over the writing process; and 3) the *resource level*, which acts to support the writing process and consists of the long term memory, the working memory, attention and reading. The process of reading is particularly important when it comes to accessing the resource materials and revising the text produced. Writers also tend to reread the text written so far in order to generate new ideas.

Figure 3.5. Cognitive Model of Writing (Hayes, 2012, p. 371)



The original model by Flower and Hayes (1980) was mainly developed to account for how skilled writers produce their texts. However, it had some limitations when used as a model for describing less skilled writers' composing processes. To illustrate, the process of transcribing, which was not included in the Flower and Hayes (1980) model, was introduced in the recent cognitive model of Hayes (2012). The rationale for integrating the transcriber into the model was that unlike experienced adult writers, less capable unskilled writers might be faced with obstacles when converting their ideas into handwritten or typed words. In fact, as observed by Hayes (2012), skilled writers might also experience some cognitive burden and encounter challenges when typing up their texts. In contrast with Flower and Hayes' (1980), Hayes' (1996) and Hayes' (2012) cognitive models include another component, *motivation*. As claimed by Hayes (2012), though a small number of learners are intrinsically motivated to write, the majority appear to struggle with the writing process because of lack of motivation, which is undoubtedly reflected on the quality of their writing. Another new component added to Hayes' (2012) model of writing is *writing schemas*. Unlike experienced writers, those who are less experienced use only a limited number of writing and revising strategies. Less able writers, instead of attending to more significant issues with writing, i.e., content and organisation tend to focus on surface errors like grammatical accuracy, spelling and punctuation and largely ignore global problems with their writing (Hayes, 2012). Therefore, writing schemas are expected to assist student-writers by guiding them to concentrate on more global writing concerns.

To summarise, in this section, I presented a theoretical review of the writing process from the perspective of the prominent cognitive models of Flower and Hayes (1980), Bereiter and Scardamalia (1987), Hayes (1996) and Hayes (2012). There are

both common and distinctive features among these five models of writing. Hayes and Flower's (1980) model is comprised of three main components: task environment, writer's long-term memory and writing processes, which in itself consists of three sub-processes of planning, translating and reviewing. The two models proposed by Bereiter and Scardamalia (1987) analyse the writer's cognitive processes in more detail and concentrate on the analysis of the differences between expert and novice writers. The knowledge-telling model presents writer's knowledge with little or no focus on the needs of the writer's target audience. Conversely, the knowledge-transferring model tailors writing to the needs of its target audience. Moving on to the model of Hayes (1996), it conceptualises writing in two dimensions, i.e., as a part of the social and physical environment. In contrast to Flower and Hayes (1980), Hayes (1996) views planning as a part of 'reflection' module. In addition, revision is not seen as separate writing process, but as a combination of text interpretation, reflection and text production. Hayes (1996) also included *motivation* and *working memory*, and made the contents of the long-term memory more precise by specifying the topic knowledge, genre knowledge and linguistic knowledge sub-components. Finally, the model of Hayes (2012) differs from all other cognitive models in that it integrates the process of transcribing, which can be used to account for how less skilled writers produce texts. Likewise, the model of Hayes (1996) includes motivation component, and, differently to other models, the new writing schemas component, which could assist less competent writers by directing their attention to global aspects of writing rather than mere surface aspects, e.g., spelling or mechanics.

3.3. Cognitive Processes and Revision Behaviours of L2 Writers

The previous section reviewed the most prominent cognitive models of writing, specifically examining an array of processes involved in text production. This section will now report in more detail the empirical research on more and less experienced L2 writers' cognitive processes and revision behaviours. A number of studies (e.g., Manchón, Roca de Larios & Murphy, 2009; Roca de Larios, Manchón, Murphy & Marin, 2008; Roca de Larios, Marin & Murphy, 2001; Wolfersberger, 2003; Zamel, 1983) that investigated the writing processes of more and less experienced L2 student-writers have discovered certain similar as well as some distinct behaviours and writing strategies at the stages of planning, composing and revising of argumentative and narrative written texts. Most of these studies were conducted in the ESL and EFL contexts and involved the participation of undergraduate and/or postgraduate university students. The main focus of this section is to discuss the findings of the empirical studies that examine the cognitive processes and revision behaviours of second language writers.

A milestone study on cognitive writing processes of "skilled" foreign language writers was that conducted in the United States by Zamel (1983). The main objectives of this case study were to discover how L2 students generate ideas and compose their texts. Zamel also aimed to explore the extent to which and at what stage of the writing process ESL writers tend to address mechanical writing issues. The participants came from different linguistic backgrounds including Chinese, Hebrew, Persian, Portuguese and Spanish. Their writing ability was assessed by the two experienced teachers of writing, who characterised four students as skilled, and a further two as unskilled writers. After having completed a two-semester long freshman composition course, the students were engaged in the intermediate composition classes at the university.

Data for the study were collected by observing writers' behaviours and interviewing them at the end of the study. Unlike many other process studies, the participants in Zamel's (1983) study did not have to verbalise their thoughts as they wrote their texts since the researcher assumed this could interfere with their composing processes breaking their actual flow of ideas.

One of the notable findings in Zamel's (1983) study was that composition writing integrated within itself a range of cognitive activities. The students' involvement in pre-writing activities, such as thinking, brainstorming and taking notes, apparently assisted them considerably with their writing process. Interestingly, both skilled and unskilled writers spent a considerable amount of time preparing for writing. Some drafted lists of points to include in their essays and presented them as outlines or drew mind maps, while others simply brainstormed without putting any ideas on paper. Another interesting finding of Zamel (1983) concerned the recursiveness of the students' writing process. All six participants in the study frequently reread and redrafted what they had already written. In accordance with Bereiter and Scardamalia's (1987) knowledge-transforming model of writing, skilled writers were more flexible in their approach to writing, i.e., they sometimes reconsidered the idea of the whole paragraph by rereading bigger chunks of text, while at other times, they chose to review only one or two sentences. Unlike them, the unskilled writers largely attended to grammatical and syntactic changes in their written texts. One more major finding of the study concerned the revision behaviours of the student-writers. Interestingly, the skilled writers appeared to make surface-level language-oriented revisions closer to the end of the writing process, being initially oriented at global changes affecting meaning and organisation. On the contrary, the unskilled writers were found to be preoccupied with local revisions as soon as they

started writing. Specifically, they seemed to be focusing on substituting or adding individual words and phrases. Despite a number of notable findings, Zamel's (1983) study is not without limitations. First, the case study approach used in this study involved the participation of only six student-writers. This rather small sample size does not allow for generalisations beyond the immediate setting of the study itself. The second shortcoming of the research is linked to the use of the data collection tools. In order to understand students' thought processes and behaviours and to be able to draw conclusions on their development over time, pre-course interviews should have been used to complement the post-course interview data. In addition, a combination of qualitative and quantitative data collection tools could have contributed to a clearer understanding of learners' writing and revision processes. Finally the dichotomy of writers into skilled and unskilled left little room for nuance in the characterisation of the writing ability.

Another study that also investigated the cognitive processes of more and less skilled L2 student-writers was that conducted by Roca de Larios *et al.* (2008). In their study, Roca de Larios *et al.* examined the writing processes of more and less skilled L2 writers and analysed their behaviours at the beginning, in the middle and at the end of the composition process. The skilled writers in their study were the students who had received 12 years of academic instruction in English; the students with nine years of instruction were referred to as less skilled writers; and the group that had had only six years of exposure to the target language were characterised as unskilled writers. All three groups of participants (7 students in each group) were L1 Spanish speakers with different levels of English language proficiency: pre-intermediate, intermediate and advanced. The pre-intermediate (Level 1) group was represented by the high school students aged 16-17, the intermediate (Level 2) group consisted of university

students aged 19-20, and finally, advanced (Level 3) participants had recently graduated from the university after the completion of a 5-year degree programme in English. Concurrent protocols while completing the argumentative writing tasks were used as the main source of data collection. Roca de Larios *et al.* (2008) focused on the amount of time the students spent on seven processes including 1) reading the essay prompt, 2) conceptualising the task, 3) planning, 4) formulation, 5) evaluation, 6) revision, and 7) meta-comments. The results of the think aloud protocols analysis revealed that the predominant process for all three groups of writers was the process of *formulation*. Roca de Larios *et al.* also found some noteworthy differences in the composing processes and revision behaviours of more and less skilled L2 writers. An interesting finding that emerged from the analysis was that the more proficient the writers demonstrated a more recursive approach to writing, revising and reviewing their texts as they composed. According to Roca de Larios *et al.* (2008), the group of most experienced writers devoted more time to planning, evaluation and revision unlike the other two groups of less experienced writers. Another important observation was concerned with the differential allocation of attention to various cognitive activities at different stages of the writing process. The writing process of the students at Level 1 was dominated by formulating their texts both at the beginning and in the end of the writing process. In other words, the students were fully engaged in the actual composing, which took more than 80% of their total writing time. Interestingly, a more diverse distribution of attention was detected at Level 2. The more skilled student-writers were more focused on task conceptualisation at the beginning rather than in the middle or at the very end of the writing process. Also, the revisions students made went up along with the progression of writing; notably more revisions were made at the final stage of the writing process. Turning to the most

skilled group of students (Level 3), they allocated more time to reading and understanding the essay prompt and interpreting the writing task at the initial stage of the writing process. These students were mainly engaged revisions in the final stage of composition. The findings of Roca de Larios *et al.* (2008) show that the more skilled and proficient L2 student-writers were involved not only in formulation but also in a range of other cognitive writing processes while composing their texts. Although this study has provided some useful insights into the writing processes of L2 writers, there are some limitations that need to be acknowledged. As mentioned earlier, concurrent protocols were used as the main source of research data in the study. Although think-aloud protocols do provide real-time data on learners' writing processes on-line, for some student-writers it might be rather challenging to think-aloud and compose at the same time. Furthermore, relying mainly on think-aloud data, as rightly noted in the research, would question the validity of the findings. However, triangulating think-aloud protocols with other data, e.g., retrospective interviews, might help to expand on the participants' thought processes.

Another study that addressed the temporal and the problem-solving dimension of the writing processes was conducted by Manchón *et al.* (2009). The research participants in the study were 21 L1 Spanish learners of English. Each student belonged to one of the three groups (7 students per group), depending on their EFL proficiency level and their experience with writing in English. The first group of participants consisted of the pre-intermediate level secondary school students, the second group contained intermediate level university students and the third group was represented by university graduates with advanced level of English. The student-writers were asked to produce an argumentative and a narrative writing task both in their L1 and in English. Besides engaging writers in concurrent think-aloud protocols,

immediately after completion of the writing sessions, the researchers administered retrospective questionnaires in order to elicit the writers' views on their writing processes and behaviours. With regard to the findings on the temporal dimension of writing, the results of Manchón *et al.* (2009) are in accord with Roca de Larios *et al.* (2008) indicating that the formulation process tends to dominate over all other writing processes. Manchón *et al.* (2009), likewise Roca de Larios *et al.* (2008), concluded that with the increase of students' level of proficiency, the distribution of their attentional resources to different cognitive activities of the writing process balancing time between formulation and revision processes. Importantly, with more competence and skill, the student-writers seem to develop a "multidimensional model of writing", i.e., "a set of beliefs, goals and intentions that guide [their] writing performance" (Manchón *et al.*, 2009, p. 117). Thus, at a lower level, students tend to be mainly concerned with lower-level aspects of writing, i.e., language issues, whereas with the increase of L2 proficiency, they begin to attend to both lower and higher-level concerns. Importantly, more skilled writers are able to decide for themselves how to allocate attentional resources to during the process of writing. As regards the findings on the problem-solving nature of writing, Manchón *et al.* (2009) discovered that "problem-solving behaviour in L2 writing is mediated by proficiency" (p.116). In other words, the more proficient the writers, the more often they concentrate on the problems that involve deeper cognitive processing, e.g., meaning, organisation, writing style and discourse-level issues.

Keystroke-logging software was used by Thorson (2000) in a study conducted at the University of Arkansas that mainly focused on the online revision behaviours and strategies of the undergraduate student-writers in English (their L1) and German (their L2). Depending on their proficiency in German, the participants were enrolled

either in an intermediate or an upper-intermediate course. Each student was expected to complete four in-class written assignments (two in English and two in German), which they composed directly on the computer using *J-Edit* and *Trace-It* programmes. The writing tasks were of two genres: a letter to a pen friend and a newspaper article. Thorson classified revisions the students made in terms of their *location*, which means how far the cursor was moved to make them. She identified two types of revisions, i.e., *intermediate* (with zero distance between the cursor and the revision) and *distant* (included all other revisions made). Thorson (2000) hypothesised that the participants would make more revisions in German than in English because she assumed that if the language is less familiar to students, they would feel less confident and would need to reread and revise their texts more frequently. This hypothesis was confirmed when she found that the student-writers produced more intermediate and distant revisions in the target language than in their native language. Despite the novel methodology, a number of concerns can be raised about Thorson's (2000) study. First, since the study relies heavily on quantitative data, including some qualitative sources of data, e.g., engaging students in retrospective interviews, might have generated interesting findings. In addition, Thorson could have addressed language proficiency as a factor that might have had an impact on the quality of the composition. Finally, it would have been useful to perform a contrastive analysis of the cognitive strategies employed by more and less proficient L2 writers.

Lindgren and Sullivan (2006) also used keystroke-logging when investigating the revisions made by high school student-writers in Swedish (L1) and English (L2). The research focused on language-related and conceptual revisions made by the writers in the process of text production. The results of their analysis demonstrated that significantly more linguistic and conceptual revisions were made by the student-

writers in the L2 than in their L1. It is important to note that more thorough focus on linguistic revisions in the L2 did not prevent the writers from concentrating on the conceptual content of their written assignments. One issue that might need to be addressed in further research involves triangulation of keystroke logging data, stimulated recalls and think-aloud protocols. Using multiple methods of data collection techniques, as suggested by Lindgren and Sullivan (2006), "could potentially allow the researchers to analyse the data for new relationships and offer another perspective on revision, its causes and its effects on the developing textual discourse" (p. 188).

In another study that focused on revisions, Stevenson, Schoonen and de Glopper (2006) examined writing behaviours of 22 high school students in the Netherlands who wrote their argumentative essays in Dutch (L1) and English (L2). The researchers targeted four dimensions of revision in their study, i.e., the *orientation* dimension, which included content, language and typographic revisions; the *domain* dimension, which consisted of below-word, below-clause and clause and above revisions; the *location* dimension made of pre-text, point of inscription and previous text revisions; and finally, the *action* dimension, which contained addition, deletion, substitution and some other kinds of revisions. Stevenson *et al.* (2006) found that less proficient writers made more language-oriented revisions in English than in Dutch. They concluded that by making language and mechanics-oriented revisions the writers were aiming to improve the quality of their written texts. Stevenson *et al.* (2006) acknowledged some limitations of their study that seem to affect the generalisability of the findings. One of the points to consider is the limited number of research participants. If the sample size had been bigger, more differences between the revision behaviours in the L1 and L2 could be detected. Furthermore, the researchers could

have focused on a broader range of proficiencies, which, according to Stevenson *et al.* (2006), could have allowed them to identify major differences in writers' revision behaviours.

In her study, Choi (2007) examined the writing and revising behaviours of 12 EFL university students (L1 Korean speakers). Half of these students were freshmen (lower-level proficiency group) and seniors (higher-level proficiency group). Three argumentative writing tasks were completed by the participants: one as the pre-test and two as the main writing task. Revisions that students made were coded into several categories, i.e., process types of text production, purpose of revision, type of action, linguistic unit of revision and remoteness. Choi (2007) identified a number of similarities and differences in the writing and revision behaviours between more and less proficient L2 writers. As regards the features they had in common, she pointed out that both groups made more *external revisions* (involving changes to language representations) than *internal revisions* (made in the mind of the writer). To be precise, they made more pre-contextual and contextual revisions than pre-linguistic and pre-textual ones. *Pre-contextual* revisions (Lindgren & Sullivan, 2006) or as they are also referred to, *point of inscription* revisions (Stevenson *et al.*, 2006), normally occur at the end of the ongoing text and can be used to shape form as well as concepts in the process of text production. Another similarity between the two groups of writers was that language-oriented revisions prevailed over the content-oriented ones. Another interesting but not statistically significant finding that emerged from the data analysis was that the higher level students made more revisions than the lower level group. Choi (2007) also found that the higher level students made more distant revisions, i.e., in the preceding and following sentences. To conclude, student-writers who made more revisions, especially, at the higher level (e.g., content changes)

improved the quality of their written text. It is worth emphasising, however, that higher-level students are often able to produce relative fluent texts without major difficulties in expressing meaning and lexical choice. Therefore, they often tended to revise less than the lower-level student-writers. Similar to many other studies, this study is not without limitations. First, the results that come from only 12 participants are difficult to generalise to ESL/EFL population in general. Therefore, a bigger sample size can be potentially used in future research in order to verify and confirm the findings. Importantly, since writers' revision behaviours could vary depending on the writing task type and the topic they are instructed to write on, different writing genres and themes could be investigated in further research.

A number of conclusions can be drawn from the studies reviewed above in terms of composing behaviours and revision strategies used by more and less capable and proficient second language writers. First, the students with more experience and skill tend to view writing as a recursive cognitive process rather than a linear product. Second, skilled writers spend more time planning their essays, while less skilled novice writers tend to dedicate a rather limited amount of time to planning before they start the actual composing process. Finally, as stated by Barkaoui (2007), the focus of revision of skilled and unskilled writers differs considerably. More competent and experienced writers tend to revise their assignments at both global and local levels, prioritising global aspects (e.g., content, organisation, style of writing). However, less skilled writers are more inclined to revise their texts at local level (e.g., lexis, grammar, mechanics) underestimating or completely ignoring the macro-level revisions such as altering the content of the written text or solving some rhetorical and organisational issues with writing.

3.4. Writing Fluency

3.4.1. Defining Writing Fluency

The concept of fluency is an essential component of any description of a language user. However, in the field of writing research, its definition is multifarious, and methods by which fluency is measured are diverse. No doubt, the increasing usability and availability of keystroke logging software over the past number of years, which provides an almost millisecond accurate picture of the writing process, has fuelled this diversity in the measurement of fluency. The term *fluency* has received a broad range of definitions in writing research (Abdel Latif, 2009; Chenoweth & Hayes 2001; Gunnarsson, 2012; Johnson, Mercado, & Acevedo, 2012; Sasaki, 2000). Bruton (1986) describes fluency as a "complex construct affected by the dimensions of the writer such as cognition, language production ability and intuition or imagination, by dimensions of the rhetorical and situational contexts and reflected in the written text" (p.17). Another definition was proposed by Wolfe-Quintero, Inagaki and Kim (1998), who suggested that writers can be considered fluent when they are able to produce language appropriately, coherently, creatively and rapidly. This, however, is a very broad definition of writing fluency and one from which it is difficult to produce any kind of operational measure. For example, it is unclear how we might objectively assess creativity or how we might balance the appropriacy and coherence against rapidity when assessing fluency in writing performance.

A less ambiguous definition is proposed by Brown (1994) who suggests that fluency is "writing a steady flow of language for a short period of time without any self- or other correction at all" (p.113). Here, the notions of what constitutes a 'steady flow of language' and a 'short period of time' are vague, however, one useful concept

this definition does bring is that of fluency being related to action over time. Chenoweth and Hayes (2001) define writing fluency as "the rate of production of text" (p. 94). This clear definition of writing fluency provides a useful starting point from which to construct measures. However, the question remains as to over what time period we measure the rate of text production. If we measure the rate of production over the entire course of the writing episode, we confound planning time and revisions with a raw measure of text production; whereas, if we measure the rate over shorter 'bursts' of writing, we run the risk of confounding fluency with typing speed. Given the heterogeneity in the definitions of writing fluency, it may be the case that multiple carefully considered measures are required to quantify it fully due to its multifaceted nature.

3.4.2. Empirical Research on Writing Fluency

One of the influential studies in writing research that aimed to investigate changes in second language writers' fluency with the increase of their experience with the L2 was the study conducted by Chenoweth and Hayes in 2001. The students who were chosen as the participants were the undergraduate university students, L1 speakers of English, studying French or German as their L2. Each participant was instructed to write one essay in their native and the other essay in their second language. The fluency of students' writing was estimated by the measure of composing rate, i.e., number of words produced per minute. Writing fluency was found to be significantly affected by writers' experience with the language; specifically, the students wrote more words in English than in French or German. Learners also produced significantly longer bursts of text in their native language than

in their L2. The final observation made by Chenoweth and Hayes (2001) was linked with the frequency of revision episodes. As it had been hypothesised, the revisions the students made were much less frequent in English than in the L2 of the participants. Thus, the main findings in the study suggest that writers' increased experience with the language is linked with increased writing fluency and burst length, and decrease in the frequency of revision.

Another study that investigated fluency of more and less skilled writers was carried out by Sasaki (2000), who examined the writing processes of the expert writers, skilled writers and novice writers whose first language was Japanese. Writing quantity, i.e., mean total number of words, and composing rate, i.e., mean number of words produced per minute, were the measures of fluency used in the study. One more measure of writing fluency used by Sasaki (2000) was writing episodes, defined as semantically coherent chunks that consist of one or more sentences. The written texts of the participants as well as their retrospective protocols were used as the main sources of data analysis. As regards the research findings, Sasaki discovered that the more proficient group were able to produce significantly longer texts at a higher speed, which means that they were more fluent than other groups of writers. Another interesting observation made with regard to three groups of participants was that more episodes were written by the expert writers than by the other two groups. The more skilled writers produced more episodes than the less skilled writers, and finally, the less skilled writers wrote significantly more episodes at Time 2, after having studied for two semesters, than they did at Time 1. One of the limitations of Sasaki's (2000) study is that she adopted exclusively product-based measures of writing fluency, i.e., quantity and composing rate, and failed to observe students' writing processes on-line. As pointed out by Abdel Latif (2009), the product-based measures are of questionable

validity since the amount of the text student-writers might produce depends on a number of factors such as their attitude towards the task or the time they set aside for planning of their writing.

Turning to more recent research on second language writing development, Palviainen, Kalaja and Mantyla (2012) carried out a study as a part of a larger research project, in which they focused on writing fluency and its relationship to L2 proficiency. The participants were second language learners of English or Swedish studying in their first year at the university. Data was collected by means of the narrative and argumentative written texts produced by the participants. The software *Scriptlog* was used to record students' writing processes, pauses and revisions online. Both off-line and on-line fluency measures were chosen for the study. Specifically, the off-line measure, which Palviainen *et al.* (2012) refer to as fluency (product) was operationalised as the "number of characters produced per minute in final text", i.e., writing speed (p. 54). In addition, three on-line measures of fluency were used. One of these measures was fluency (linear) defined as the "number of characters produced per minute in linear text". Burst and fluency during burst were also applied as the on-line measures of fluency in writing. The former was operationalised as the average number of characters typed between pauses and/or revisions, and the latter was identified as the speed of typing. The L2 proficiency level of the participants was estimated using the Common European Framework of Reference (CEFR). The writers' proficiencies varied from B1 (intermediate) to C2 (proficient) though most were of either B2 (upper-intermediate) or C1 (advanced) levels. Turning to the findings, it was discovered that, on the whole, higher level student-writers were more fluent than lower-level ones. The difference, however, was not statistically significant at the two highest levels C1 and C2. The results of the analysis showed that more proficient

students tended to spend more time typing their essays and made more revisions than the writers at lower proficiency level. It was also found that lower-level student-writers pause more than the higher level students.

Another study that also examined writing fluency via process-based measures was conducted by Abdel Latif (2009). The main aim of the research was to identify whether composing rate, text quantity and mean length of translating episodes serve as valid indicators of writing fluency. The study involved the participation of 30 EFL student-writers, who were all L1 Arabic speakers, doing their pre-service English language teacher education at an Egyptian university. The participants' English language proficiency ranged from low-intermediate to upper-intermediate level. Abdel Latif collected the data for his study with the aid of think-aloud protocols used with students while they were composing argumentative essays and retrospective interviews conducted immediately after the think-aloud sessions. The translating episode applied in Abdel Latif's (2009) study as one of the measures of fluency was conceptualised as "a chunk of (one or more words) that has been written down...and is terminated by a pause of three or more seconds or by any composing behaviour (i.e., planning, monitoring, retrieving, reviewing, or revising)" (p. 537). When analysing the episodes, Abdel Latif excluded all titles and subtitles as well as all revising and editing chunks from the data. He justified doing so by arguing that these "text-changing behaviours" do not tend to happen during a natural flow of writing, but when the writer notices the error and attempts to improve an erroneous construction. One of the major findings of the study was that the more proficient L2 student-writers appeared to produce their written texts in longer episodes. In other words, they were more fluent writers than the student-writers at lower English language proficiency. Although the study by Abdel Latif (2009) has undoubtedly generated interesting

implications for research and teaching, it is not without shortcomings that need to be acknowledged. Several tools such as concurrent protocols and retrospective interviews were used in this study to elicit the qualitative data from the research participants. However, complementing these with the use of keystroke logging data output could have provided an even more accurate account of writers' translating episodes.

In summary, a number of studies have investigated the differences in writing fluency of more and less skilled student-writers. Although different measures of fluency were applied in different studies, a common conclusion drawn by the researchers (Abdel Latif, 2009; Chenoweth & Hayes, 2001; Palviainen *et al.*, 2012; Sasaki, 2000) is that the more competent and proficient the students become with the L2, the higher their level of writing fluency is. Specifically, it was observed that as writers got more experience with the language, they tended to produce longer bursts of text. However, a contrasting finding was made in terms of writers' revision behaviours. While some studies (Palviainen *et al.*, 2012) concluded that more proficient writers made more revisions, others (e.g., Chenoweth & Hayes, 2001) noticed that the number of revisions went down with the increase of writers' proficiency level in the second language.

3.5. Difficulties and Strategies of Second Language Writers

Writing is a difficult skill to be learnt due to the fact that it is not a simple cognitive activity; indeed, it is believed to be a complex cognitive process that requires careful thinking, discipline and concentration (Al-Badi, 2015). Learners' difficulties with second language writing have been examined from various perspectives (Bitchener & Basturkmen, 2006; Evans & Green, 2007; Leki & Carson,

1994; Silva 1993). One of the ways to uncover the reasons for these difficulties is by examining the differences that exist between the first and the second language writing processes. Though some might argue that *difference* and *difficulty* are two unrelated terms, it might be assumed that the former could trigger the latter. It is interesting to note that writing skills are often thought of as being transferable from the L1. Some researchers (e.g., Kobayashi & Rinnert, 2008; Kubota, 1998; Piper, 1989) claim that learners' first language skills influence their performance in the target language; thus, it might be right to infer that L2 writing difficulties are closely linked with difficulties in L1 writing. According to Zhu (2001), a number of rhetorical difficulties and differences that were detected via analysing argumentative written texts can be explained "in terms of the transfer of the cultural and linguistic influences from the writer's first language" (p. 35). Conversely, other researchers maintain that although the L1 and the L2 might have some strategies in common, there are more differences that exist between them (Petric & Czarl, 2003); therefore, writing difficulties in the L2 are unlikely to be directly affected by the difficulties in writing in the native language.

All aspects of academic writing are generally perceived as difficult by second language learners (Evans & Green, 2007). Some studies (e.g., Bitchener & Basturkmen, 2006) show that student-writers perceived language-related aspects of academic writing such as accuracy, clarity of ideas, cohesion, and appropriacy of writing style, to be more challenging than content and organisation-related aspects. However, other researchers' findings (e.g., Kubota, 1998; Marshall, 1991) demonstrate the opposite trend. Previous research has clearly shown that reading and writing constitute the two central areas of academic challenge for most international students. As mentioned by Mullins, Quintrell and Hancock (1995), Asian students often experience difficulties with synthesising information from various sources that they

read, which might result in academic fraud, i.e., plagiarism. Thus, it is worth emphasising that reading and writing skills are closely interrelated, and failure to perform successfully in one of them often results in failure in the other.

In their study, Phakiti and Li (2011) examined the main factors that influence learners' academic difficulties and found that L2 writers experience major challenges in terms language proficiency. The student-writers who possess higher language proficiency apparently tend to encounter fewer academic challenges than those who are less proficient in the target language. Phakiti and Li also identified some other interrelated factors that might determine students' academic difficulties, such as learner's motivation and self-efficacy beliefs, learner's former learning experience and attitude towards learning difficulties. The results of the analysis clearly showed that those students who, despite an unsuccessful performance maintained a high-level of motivation coupled with a high-level of self-efficacy beliefs, were unlikely to encounter major academic difficulties during their studies. Another factor mentioned by Phakiti and Li (2011) that might also have an effect on learners' academic difficulties, in particular, on writing, is their previous learning and writing experience. As regards students' attitude towards learning difficulties, providing they believe the problem is significant, they are more likely to respond to it and invest more effort to solve that particular problem. Finally, since *difficulty* is a rather subjective concept (Corder, 1973), students' perceptions of it might not actually match the actual problems they might encounter while studying at the university.

Prior to the discussion of previous research in this area, it might be worthwhile defining and explaining the term *learning strategies* that help learners overcome writing difficulties. A number of scholars proposed their own definitions; however, no agreement has been reached on what learning strategies actually are.

According to O'Malley and Chamot (1990), these are "the special thoughts or behaviours" used by student-writers in order to assist their comprehension, learning, or retaining of new information (p.1). Another definition was proposed by Oxford (1990), who described learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p.8). It is also important to note Cohen's (1998) definition, who established that learning strategies constitute the steps or actions consciously undertaken by students to improve the learning and use of the language.

In addition to the research into general language learning strategies, many studies have been undertaken to address the strategies specific to second language writing. Importantly, writing strategies have been considered to be instrumental in assisting L2 learners to expand their writing skills. The research on L2 writing strategies has seen considerable growth especially in the last few decades. Several studies focused on the strategies used by student-writers when accomplishing, in particular, argumentative writing tasks (e.g., Hall, 1990; Zhu, 2001). Within the process-oriented approach to writing, the major focus of research is on the strategies that L2 writers employ while composing their texts. A number of studies addressing the relationship between writing proficiency and writing strategy use have demonstrated that writing proficiency is closely linked to writing strategy use. To illustrate, according to Manchón (2001), more and less successful writers were found to differ in their use of writing strategies and she showed that successful writers tend to use a wider variety of strategies than less successful ones. Writers constantly return to the earlier stages of writing in order to carry out the later ones. It is essentially a search for meaning that is aided with the use of *writing strategies*, which Mu and Carrington (2007) defined as conscious decisions made by the writers in order to find

a solution to a particular problem or concern. As pointed out by O'Malley and Chamot (1990), writing strategies are essential because they help students monitor the processes of writing and learning as a whole.

Using a case-study approach, Mu and Carrington (2007) conducted post-writing semi-structured interviews with three L1 Chinese students (B2 English language proficiency according to Common European Framework of Reference (CEFR)) (Council of Europe, 2001), in which they asked them to reflect on their writing strategies in English. All three participants acknowledged having used various writing strategies including *rhetorical*, *meta-cognitive*, *cognitive* and *social* strategies when producing written texts in the target language. Mu and Carrington (2007) defined *rhetorical strategies* as the strategies used by the writers to organise their ideas and to make them cohesive. Next, *metacognitive strategies* in their study represented the strategies that writers use to consciously control the writing process, these included planning and evaluation. Turning to *cognitive strategies*, these involve text generation, revision and imitation. Cognitive strategies can be considered of high importance since these strategies are linked with the actual mental processes that are, for example, involved in referring to background knowledge, making assumptions and drawing inferences. Importantly, cognitive strategies "facilitate the processing of language input and prepare learners for language output" (Khaldieh, 2000, p. 523). Backtracking was described by Manchón, Murphy and Roca de Larios (2007) as one of the cognitive strategies. It involves rescanning the text that has been written in order to get access to lexical items and to decide whether those match the context of the essay well enough. According to Manchón *et al.* (2007), backtracking is used by writers not only during the formulation but also during the revision process. The second cognitive strategy discussed in Manchón *et al.*'s study refers to bilingual and

monolingual dictionaries. This strategy was found to assist writers in the solution of lexical problems by helping them to verify the meaning of the words and phrases in the use of which they are not particularly confident (p. 165). Finally, *social strategies* are normally chosen by student-writers in order to interact with other people, e.g., teacher, other students or friends, to reduce their anxiety levels and to boost their motivation and confidence (Mu & Carrington, 2007).

The results of Mu and Carrington's (2007) study revealed that while all three participants used a range of writing strategies, each of them showed a different preference. Specifically, the least proficient writer indicated that he found studying grammar and vocabulary particularly helpful for his or her writing skills development. It can thus be inferred that less proficient writers tend to focus on surface aspects of writing more than on content (Mu & Carrington, 2007). Another noteworthy observation made by the researchers was that extensive reading was the preferred strategy of all participants. While reading academic materials, the students were able to put the ideas into their own language and use them in their assignments.

A longitudinal studies that focused on the use of writing strategies by more and less proficient L2 writers was carried out by Khaldieh (2000). The students who participated in the research were 43 undergraduate and postgraduate American learners of Arabic as a foreign language (AFL). All participants had completed an intensive AFL course and were put into one of the two groups according to their Arabic language proficiency: upper-intermediate or lower advanced. Whilst taking the course, the students were involved in reading and reflection on various authentic materials in Arabic. They were then expected to produce an argumentative or persuasive essay in response to what they had read and discussed. The results of Khaldieh's study indicate that both groups of writers employed a broad range of writing strategies. However, less proficient writers

showed a notably weaker level of written performance when composing their texts in the target language than more proficient ones. This can be explained by the fact the less proficient student-writers were largely dependent on their first language, had negative attitude to writing and demonstrated increased level of anxiety and inhibition when composing their essays. Conversely, the more proficient writers were able to apply a number of strategies efficiently, took into consideration their previous performance, and attended to the feedback they had been given by their peers and tutors in the past. Thus, the analyses of the written data and the direct observation of the students have revealed that the interplay of several factors such as lack of linguistic knowledge, increased level of anxiety and frustration and, in general, students' negative attitude to writing, resulted in poor written performance of less proficient students.

3.6. Writers' Goals and Self-Efficacy Beliefs

As mentioned earlier in the chapter, the act of writing is a problem-solving process guided by student-writer's goals (Hayes & Flower, 1980). Previous research showed a direct link between goals and learners' enhanced performance in writing. Goals help the writer allocate their time and resources efficiently and, what is even more important, they can keep students motivated and increase their self-efficacy beliefs. A sizable body of research investigated the relationship between L2 writers' self-efficacy beliefs and goals they set for themselves, which has demonstrated the existence of a close link between these two concepts (Andrade, Wang, Du, & Robin, 2009; Bruning & Horn, 2000; Dewaele, Petrides, & Furnham, 2008; Garcia & de Caso, 2006); Klassen, 2002; Pajares, 2003; Pajares & Johnson, 1994, 1996; Pajares & Valiante, 1999; Rankin, Bruning, & Timme, 1994; Shell, Colvin & Bruning, 1995; Shell, Murphy & Bruning,

1989; Williams & Takaku, 2011; Zimmerman & Bandura, 1994). Pajares (2003) emphasised that a strong sense of confidence might assist students considerably when writing an essay because it "engenders greater interest in and attention to writing, stronger effort, and greater perseverance and resiliency" (p. 140). In contrast, students who have low levels of self-confidence and do not aspire for success are more likely to devote less effort and end up with failing to achieve their pre-established goals. Therefore, students' success or failure in their academic writing performance is directly linked to the degree to which they feel they 'can' successfully achieve their goals.

A number of studies have been conducted on the relationship between students' self-efficacy beliefs and their academic writing performance (e.g., McCarthy, Meier, & Rinderer, 1985; Meier, McCarthy, & Schmeck, 1984; Pajares & Johnson, 1994). On the whole, the results of this line of research demonstrate that students' self-efficacy beliefs and their written performance are closely interrelated. For example, in a recent study Prat-Sala and Redford (2012) investigated self-efficacy beliefs of student-writers and their academic writing performance. Two groups of undergraduate students studying at a UK university were involved in the study: 91 students in their first year and 54 students in their second year. Both Year 1 and Year 2 students were instructed to produce an academic essay as a part of one of the courses they undertook. Year 1 students wrote a 500-word essay, while the students in Year 2 were asked to submit a 1200-word essay. The results of the study support previous research in that students' self-efficacy beliefs were significantly related to the actual writing quality. Importantly, as discovered by Prat-Sala and Redford (2012), the relationships between self-efficacy and writing "were slightly stronger in Year 2 than in Year 1" (p. 17). It was assumed that one of the potential causes of this difference was the fact that Year 2 students studied at the university longer than Year 1 students, which means

that they encountered more situations where they were expected to compose academic essays and get feedback on their writing, in other words their self-efficacy of the Year 2 students was better linked with their actual ability. This finding is in line with those of Bandura (1997) and Andrade *et al.* (2009) who also argued that one of the primary sources of students' self-efficacy beliefs is their performance on the actual task.

Several major factors that influence writers' self-efficacy beliefs were described by Bandura (1997), i.e., mastery experience, social persuasion, vicarious experience of observing other people, and psychological/emotional states. According to Manchón (2009b), *mastery experience* constitutes the most powerful source of self-efficacy. Learners' successful performance in similar tasks in the past apparently triggers a positive evaluation of their self-efficacy, while learners' failure to perform well, on the contrary, might diminish their self-efficacy beliefs. As reported by Andrade *et al.* (2009), once students have reviewed or self-assessed their drafts, they seem to experience a certain sense of accomplishment. Importantly, students' self-efficacy beliefs are also influenced by what others say they believe the students can or cannot do, which is called *social persuasion*. For instance, tutor's words of encouragement and praise as well as verbal feedback from their peers could help to boost students' self-esteem and potentially aid them to achieve success in further academic performance (Manchón, 2009b). One more source of self-efficacy, as pointed out in Bandura (1997), is *vicarious experience*. This is influenced by students' observation of the behaviours of other people and consequences of those behaviours. In other words, seeing a peer succeed when completing a challenging writing task might help not particularly confident students believe that they can as well succeed when completing a similar task. Finally, learners' *psychological and emotional state* might also influence their self-efficacy beliefs (Bandura, 1997). Specifically, self-

efficacy is negatively associated with writing anxiety. Students with increased level of anxiety tend to receive low scores on their exams and coursework. As argued by Martinez, Kock and Cass (2011), high expectations for university students' writing might contribute to high levels of anxiety, which could negatively impact their motivation to complete written assignments.

Self-efficacy can facilitate academic achievement directly as well as indirectly by raising personal goals. Interestingly, students with low self-efficacy beliefs usually choose to completely avoid engaging with challenging academic tasks, or if it happens that they are faced with a complex activity or task, they try to apply only minimal effort and persistence to the completion of that task. However, according to Bandura (1997), the students who have a strong sense of academic self-efficacy are willing to participate in challenging tasks and tend to persevere in terms of overcoming any obstacles they might be faced with. They also seem to be more flexible with regard to the learning strategies they use. These students generally demonstrate higher academic achievement. It is therefore right to infer that self-efficacy beliefs often serve as better determinants of academic success than students' actual academic abilities. Importantly, teachers might assist students with boosting their self-efficacy beliefs by giving them constructive feedback on their writing thus influencing their emotions and thoughts.

The results of some experimental studies, such as Zimmerman, Bandura and Martinez-Pons (1992), have shown that the students who set specific goals hold higher self-efficacy beliefs than those who set more general goals. In accordance with prior research, the higher the level of writers' self-efficacy, the higher the goals they establish and the higher the probability that they will invest more effort and commit themselves to achieve those goals. As suggested by Prat-Sala and Redford (2012),

increasing students' self-efficacy beliefs in writing might often result in "raising their goal aspirations" (p.18). Apparently, those students who are more confident in their written performance and have more positive expectations about their own learning achievements are more likely to continue approaching tasks with optimism and confidence and might be less anxious about the potential difficulties they might be faced with on the way to achieving their goals.

Another study, which examined the longitudinal development of EFL students' beliefs and goals and their impact on writing performance, was carried out by Nicolas-Conesa, Roca de Larios and Coyle (2014) on an intensive EAP programme in Spain. The study involved the participation of 21 EFL students at upper-intermediate level of English language proficiency. The findings indicate a significant shift in the participants' perception of writing. Specifically, the writers no longer conceptualised written task only on "the basis of linguistic accuracy and surface features"; instead, they began to view written tasks "in relation to an in-depth analysis of ideational aspects and a broad range of rhetorical features" (p. 7). The findings of Nicolas-Conesa *et al.* (2014) show that the writers who set dynamic goals, not only managed to achieve those goals but also improved their written performance significantly. In other words, those students who were found to have the desire and motivation to improve their writing by setting new goals and who defined written tasks in terms of problem-solving processes did actually develop their academic writing skill over time.

3.7. Summary

The aim of this chapter was to give an overview of the research on cognitive aspects of second language writing including writing processes, revision behaviours

and writing fluency of the L2 learner. The previous research findings on L2 writing difficulties and strategies as well as writers' goals and self-efficacy beliefs were also discussed in this chapter. To begin with the cognitive writing processes, a number of research studies have shown that with the increase of language proficiency, learners' writing process becomes more recursive and they begin to allocate more equal attention to different cognitive processes involved in writing such as planning, formulation, revision (Manchón *et al.*, 2009; Roca de Larios *et al.*, 2008; Zamel, 1983). One of the major limitations of these studies lies in their methods of data collection and analysis. The present study attempts to fill this gap by triangulating both quantitative and qualitative methods of research. Specifically, in addition to the actual writing sessions, I will conduct the pre-course and post-course interviews and invite the students to complete several learning journal entries while doing the course.

Turning to the research on writing fluency, the studies reviewed in this chapter (Abdel Latif, 2009; Chenoweth & Hayes, 2001; Palviainen *et al.*, 2012) show that fluency is proficiency dependent, in other words, the higher the writer's level of language proficiency, the more fluent they were found to be. When arriving at these conclusions, some studies (e.g., Sasaki, 2000) used only product-oriented measures of writing fluency. In my study, however, I will use the keystroke logging software *Inputlog* to observe students' writing processes online. As regards the studies focusing on revision behaviours of the L2 writers, it was concluded in the research that the more competent writers tend to prioritise revising their texts at global level focusing on meaning and structure, whereas the less competent writers appear to put more emphasis on surface revisions, i.e., language accuracy and mechanics. To address the limitations of previous studies (e.g., Stevenson *et al.*, 2006; Thorson, 2000), which involved the participation of the students of one particular level of language

proficiency, in my study both postgraduate and undergraduate students of different proficiency levels took part.

As for the previous research on writing difficulties and strategies (e.g., Manchón, 2001; Mu & Carrington, 2007; Phakiti & Li, 2011), it was found that with experience and skill, students tend to struggle with writing less and choose to adopt a wider range of strategies including rhetoric, social, cognitive and metacognitive strategies. While some studies employed only a small number of research participants (e.g., Mu & Carrington, 2007), in my study I examined the cognitive and affective aspects of students' writing by recruiting a comparatively larger number of participants and tracing the changes in their writing behaviours throughout the EAP course by triangulating semi-structured interviews with reflective learning journals. Previous research on writing goals (e.g., Zimmerman *et al.*, 1992) and self-efficacy beliefs (e.g., Bandura, 1997; Prat-Sala & Redford, 2012) has shown that learners with high self-efficacy tend to succeed academically and aspire to achieve the goals that they set for themselves. A number of studies focused on the relationship between writers' goals and their self-efficacy beliefs; however, only some of them (e.g., Nicolas-Conesa *et al.*, 2014) were longitudinal in nature. In the present study, I aim to contribute to the existing body of literature by investigating the long-term development of student-writers' goals and self-efficacy beliefs on an intensive four-week course. On the whole, the focus of my study seems to be broader than that of many previous studies in the sense that it aims to investigate L2 writers' cognitive development by examining the changes in their goals and self-efficacy beliefs and in the difficulties they experienced and the strategies they used in order to overcome these difficulties with writing.

CHAPTER 4. Theoretical Constructs and Operationalisations

4.1. Introduction

In the previous chapter, I reviewed the relevant literature on the writing process; I will now focus on the writing product. This review of theoretical constructs is particularly important because it constitutes the foundation on which my analyses will rest. In this chapter, I examine and define a range of specific measures of writing used to analyse the lexical diversity and sophistication, syntactic complexity, fluency and revision behaviours of second language writers. The chapter begins with an overview of the relationship between the constructs of lexis and syntax in second language writing research. Then I turn to defining the specific measures of lexical variation and sophistication, followed by the description of the measures of syntactic complexity operationalised in my study. Next, I define the construct of fluency and introduce a set of writing fluency measures I used in this research. The chapter ends with the description of the two dimensions of revision targeted in the current study and defines each measure of revision separately.

4.2. Lexis and Syntax

I have taken a novel approach to analysing complexity since, in line with Biber, Gray, and Poonpon (2011), I argue that the complexity of learners' output should be considered with reference to the mode, genre and communicative demands of the particular task to be performed. This position is somewhat different from that of Bulté and Housen (2014) who describe absolute complexity as "*objective* inherent

properties of linguistic units and/or systems thereof" and relative complexity as "the cost and difficulty of processing" (p. 43). In this thesis, I propose that in addition to these two theoretically and empirically useful aspects of complexity, the operationalisation of complexity in written and spoken performance should also consider the linguistic characteristics of the given genre or task-type. In the field of corpus linguistics, Biber and Gray (2010) and Biber, Gray, and Poonpon (2011), and, in systemic linguistics, Halliday and Martin (1993/1996) have convincingly shown that different linguistic features characterise speech and writing. Academic writing relies more on phrasal embedding than speech and is typically characterised by complex nominalisation and the use of abstract and compound nouns (Fang, Schleppegrell, & Cox, 2006; Norris & Ortega, 2009). The complexity demands of writing and speech do not only differ across modes but also across genres. This is seen in the findings of Nippold (2004) and Berman and Nir-Sagiv (2007), in the field of developmental child language acquisition, which show that in expository texts one can find higher number of relative clauses and passive constructions and more complex noun phrases than in narratives. In line with these arguments, the present study uses measures of syntactic and lexical complexity that are theoretically motivated by previous research in corpus linguistics, systemic functional linguistics and developmental child language acquisition.

Complexity is seen as a valid descriptor of second language performance, an indicator of proficiency and an index of language development and progress (Bulté & Housen, 2014). It can aid with describing learners' performance and benchmarking their linguistic development. In fact, there is no agreement in literature on the best definition of complexity and on the uniform ways of operationalising this construct in second language writing research. SLA research has long been searching for valid and

reliable measures of lexical proficiency (e.g., Crossley, Salsbury, McNamara, & Jarvis, 2011; Daller, Milton, & Treffers-Daller, 2007; Harley, 1995), in particular, in the area of L2 written production. This is important because without such measures, the answers to a number of theoretical and practical questions cannot be found. As indicated by Bulté, Housen, Pierrard and van Daele (2008), these questions might include identifying the number of words acquired at a certain stage of a learner's development, the rate with which these words are learnt, the extent of ease or difficulty of words acquisition, and the relationship between the size of vocabulary and such aspects of lexical competence as automatisisation, depth and breadth of lexical knowledge. Thus, the number of L2 lexical measures tapping into different dimensions of lexical proficiency has considerably increased in the last few years. Along with the measures of lexical proficiency, the measures of syntactic complexity have also been examined extensively in second language research. Syntactic development is important in particular in writing research because, as pointed out by Ortega (2003), language development entails the growth of a learner's syntactic repertoire and their ability to use that repertoire appropriately in a variety of situations (p. 492). Some studies (e.g., Bulté & Housen, 2014; Crossley & McNamara, 2014) focused on longitudinal development in syntactic complexity of L2 writers and detected significant changes in the syntactic complexity of students' writing over a period of time. Thus, it has been argued that lexis and syntax are closely interrelated and that the more varied and sophisticated the lexis, the more complex syntactic forms tend to be (Skehan, 2009). However, some studies, including the present study, view these two constructs as separate aspects of written performance.

In my study, I take two complementary approaches to the analyses of lexical and syntactic features of students' writing. On the one hand, Bulté and Housen's

(2012) definition of system complexity was adapted, which "refers to the degree of elaboration, the size, the breadth, the width, or richness of the learners' L2 system" (p. 25). From this perspective, the focus of this study is on what Bulté and Housen call "grammatical diversity", which has been operationalised in task-based studies as syntactic complexity. At the level of lexis, "systemic lexical complexity" (Bulté & Housen, 2012, p. 28) has been considered but it has been modified to incorporate Jarvis' (2013) recent work on lexical diversity. In line with Jarvis, the terms of "density, diversity and sophistication" in Bulté and Housen's framework are all subsumed under the construct of lexical diversity, which Jarvis sees as consisting of rarity, volume, variability, evenness, disparity and dispersion. On the other hand, a developmental perspective has also been taken in this study. In fact, not all elements of systemically complex language are relevant to academic writing. Therefore, complexity can also be defined within developmental approach and with reference to the given genre which L2 learners need to master. This framework to the study of linguistic development is followed in the field of systemic linguistics (Halliday & Martin (1993/1996) and in developmental studies of L1 writing (e.g., Berman & Nir-Sagiv, 2007). In line with the two frameworks outlined above, a number of variables were selected to evaluate lexical and syntactic features of students' writing (for a summary of the variables see Tables 4.1., 4.2. and 4.3. below).

4.2.1. Measures of Lexical Diversity and Sophistication

A sizable amount of research has demonstrated the ability of ESL and/or EFL writers with higher language proficiency to produce texts with greater lexical complexity (e.g., Engber, 1995; Grant & Ginther, 2000; Jarvis, 2002; Reppen, 1994).

Lexical complexity generally refers to lexical diversity and lexical sophistication. According to McCarthy and Jarvis (2007), lexical diversity can be defined as "the range and the variety of vocabulary deployed in a text by a speaker or a writer" (p. 459).

A range of lexical diversity and sophistication measures have been proposed in the literature, and a number of developmental studies have investigated the extent to which these measures can be used as a reliable indication of L2 proficiency (Bulté & Housen, 2014; Wolfe-Quintero *et al.*, 1998). As mentioned above, recently Jarvis (2013) argued that the most important six facets of lexical variety include rarity, volume, variability, evenness, disparity and dispersion. Jarvis (2013) suggests that volume (the total number of words produced in the text), evenness ("how evenly word tokens are distributed across types", p. 23) and dispersion (variance to mean ratio, p. 30) are highly inter-correlated and are strongly dependent on text length.

The most common measure of lexical variability used both in first and SLA research is *Type-Token Ratio (TTR)* (Templin, 1957). TTR can be defined as the ratio of the number of different "lexical items", i.e., words, to the total number of words. However, there have been severe criticisms of the use of TTR. As pointed out by Engber (1995), there are two primary limitations when using this measure. Firstly, it is difficult to decide on a fine-grained definition of a lexical item. Secondly, TTR is highly dependent on the total number of words in the text, i.e., "the ratio of tokens tends to decrease as essay length increases" (Engber, 1995, p. 145). Moreover, this measure of lexical variation has been criticised for its sensitivity to the sample size of words, i.e., the ratio tends to decrease as the size of the sample increases (Arnaud, 1992; Richards, 1987).

To avoid the problems with the use of TTR, the *Measure of Textual Lexical Diversity (MTLD)*, the most recent variant of the TTR, was chosen as an index of lexical variability in this study. MTLD, developed by McCarthy (2005) and validated by McCarthy and Jarvis (2010), is considered to be the most reliable measure of lexical diversity to date. This measure is quite similar to other measures of lexical variation, such as *vocd* (Malvern, Richards, Chipere, & Durán, 2004) and TTR. However, different from other measures, MTLD has been found to be least affected by text length (Jarvis, 2012; McCarthy, 2005; McCarthy & Jarvis, 2007). This measure is based on analysing the text sequentially, i.e., the text is divided into sequences which have the same type-token ratio, and the mean length of the sequential word strings in the text which are above a certain threshold (0.72) is calculated. MTLD in the current study was computed with the aid of Coh-Metrix 3 (Graesser, McNamara, & Kulikowich, 2011; Graesser, McNamara, Louwerse, & Cai, 2004).

Analysing texts for lexical variability also involves evaluation of the distribution of various parts of speech, such as nouns, adjectives, adverbs and verbs, in the text (Vajjala & Meurers, 2013). Although lexical verbs are less frequent in academic writing than in conversation (Biber, Johansson, Leech, Conrad, & Finegan, 1999), they play an important role in "expressing personal stance, reviewing the literature, quoting, expressing cause and effect, summarising and contrasting" (Granger & Paquot, 2009, p. 193). Therefore, I applied an additional measure of lexical variability in this study, i.e., *squared verb variation*, computed by Synlex (Lu, 2010, 2011, 2012), which was previously found to be an appropriate predictor of oral language proficiency by Lu (2012).

In order to assess lexical rarity, I used the *log frequency of content words*, estimated by Coh-Metrix 2.0 (Graesser *et al.*, 2004) based on the CELEX lexical

database corpus, which contains the frequencies of words as different parts of speech (Baayen, Piepenbrock, & van Rijn, 1993). This measure can be considered to reflect the rarity of words used in the text (Jarvis, 2013) and similar counts based on the British National Corpus (BNC) have been applied in previous research as an index for lexical richness (see e.g., Edwards & Collins, 2013; Laufer & Nation, 1995). The use of the log frequency measure instead of the raw frequency value was motivated by Davis' (2005) suggestion that the log statistics can differentiate among the frequency values of rare words better than the lemmatised count.

In order to assess disparity, that is the "degree of differentiation between lexical types in a text" (Jarvis, 2013, p. 13), the measure of the *Latent Semantic Analysis (LSA)* index was calculated with the help of Coh-Metrix 2.0. This computerised tool establishes the relevance of ideas to the topic and determines the similarity of meaning between words, sentences, and paragraphs. LSA considers meaning overlap between explicit words and also words that are implicitly similar or related in meaning (McNamara & Graesser, 2012). Responses that more specifically address the prompt tend to show higher latent semantic analyses values (Crossley & McNamara, 2013). The index of LSA has recently been proposed by Jarvis (2013), as a potentially useful measure for the operationalisation of lexical disparity

From a developmental perspective, I also found it important to investigate how the lexical characteristics of students' writing reflect genre-relevant lexical choice. For this purpose, the percentage of academic words in written texts was estimated by means of the *Academic Word List (AWL)* measure using the computer program Vocabprofiler BNC (Cobb, 1994; Heatley & Nation, 1994). The academic word list constitutes a group of lower frequency words which are typically found in academic texts. It is derived from a corpus of 3,500,000 words of academic texts drawn from the

'sub-corpora' or various disciplines including arts, commerce, law and science (Coxhead, 2000; Storch & Tapper, 2009). The AWL consists of ten sub lists organised in accordance with their frequency in academic texts. Out of the 10% word coverage the list has in academic texts, 3.6% are covered by the first sub list, 5.4% by the first two combined and 8.3% by the first five combined (Coxhead, 2000, p. 227). The AWL does not include subject-specific, technical and formal words that are "not highly salient in academic texts, as they are supportive of but not central to the topics of the texts in which they occur" (Coxhead, 2000, p. 214). All the words in the AWL can be found within the 10,000 most common words of the English language (Nation & Beglar, 2007). All measures of lexical diversity and sophistication used in the present study as well as their definitions are summarised in Table 4.1.

Table 4.1. Summary of the Lexical Measures Used in the Study

Measure	Definition
Measure of textual lexical diversity (MTLD)	MTLD is a measure of lexical diversity, which is calculated as the mean length of sequential word strings in a text that maintain a given TTR value (McNamara, Graesser, Cai, & Kulikowich, 2011).
Log frequency of content words	The mean of the log frequency of all content words in the text established using the CELEX corpus (Graesser, <i>et al.</i> , 2004).
Latent semantic analyses (LSA)	LSA computes how conceptually similar each sentence is to every other sentence in the text (Graesser <i>et al.</i> , 2004). It considers meaning overlap between explicit words and also words that are implicitly similar or related in meaning (McNamara & Graesser, 2012).
Academic word list	A list of 570 frequently occurring words in an academic context (Coxhead, 2000).
Squared verb variation	An estimation of lexical diversity as the ratio of the squared number of verb types to the total number of verbs in the text (Lu, 2010).

4.2.2. Global Measures of Syntactic Complexity

The development of syntax, which constitutes one of the core components of second language acquisition, has been addressed in numerous longitudinal studies of

second language writing. The present study, which aims to examine the improvement of students' writing skills, focused on several different measures of syntax. Prior to defining each measure, it might be important to begin with the discussion of the construct *syntactic complexity*. According to Ortega (2003), it refers to "the range of forms that surface in language production and degree of sophistication of such forms" (p. 492).

There is some disagreement among SLA and writing researchers as to how to examine complexity in L2 writing (Tavakoli & Rezazadeh, 2014). The operationalisation of syntactic complexity has proved to be a highly complex enterprise (for a discussion of issues see Bulté & Housen, 2012, 2014) and multiple indices have been proposed in SLA research to assess the development of syntactic complexity in second language writing (Ellis & Yuan, 2004; Larsen-Freeman, 2006; Lu, 2011; Nelson & Van Meter, 2007; Norrby & Hakansson, 2007). According to Bulté and Housen (2012), syntactic complexity measures might address some of the following: range of syntactic structures, length of unit, degree of structural complexity of particular syntactic structures, and amount as well as type of coordination, subordination and embedding. It has also been pointed out by the researchers that most measures of syntactic complexity are *hybrid* since they often appear to "simultaneously capture not one but several different, potentially independent and unrelated behavioural or theoretical complexity constructs and sources of complexity" (ibid, p. 35).

One of the syntactic measures used in this study is the traditional measure of syntactic complexity, the *mean length of T-unit*, estimated with the aid of Synlex. The T-unit (minimal terminable unit) was initially used as a measure of writing development of L1 writers (Hunt, 1965). In the field of SLA and second language

writing, it is defined as the shortest grammatical unit consisting of the main clause and one or more subordinate clauses attached to it or embedded in it. One of the existing criticisms of the T-unit as a measure of structural complexity is that it fails to consider the complexity of embedded relative and subordinate clauses (Bardovi-Harlig, 1992). It has been argued by Ishikawa (1995) that a clause is a more accurate measure of syntax as opposed to a sentence or a T-unit. Wolfe-Quintero *et al.* (1998) stated that when analysing syntactic complexity, one should be concerned not only with the actual number of production units such as clauses or T-units, but also with the degree of sophistication of those syntactic units.

Another measure of syntax, the *mean number of dependent clauses per T-unit (DC/TU)*, was applied in the current study to investigate sentence and clausal complexity as well as to assess clausal elaboration and embedding. It was also retrieved via Synlex software. DC/TU is a frequently used T-unit based measure which considers the proportion of dependent clauses to a large syntactic unit, i.e., T-unit (Wolfe-Quintero *et al.*, 1998). A dependent clause has been defined as a finite adjective, adverbial, or nominal clause (Hunt, 1965; Kameen, 1979; cited in Lu, 2010). This definition, however, has been criticised by some scholars since it does not take into account non-finite clauses. As noted by Biber, Gray and Poonpon (2013), several types of non-finite dependent clauses can be observed *only* in academic writing, but are non-existent in other registers. Thus, it can be inferred that these grammatical structures constitute important characteristics of academic register.

At the level of phrasal complexity, academic writing is characterised by the use of complex noun phrases and nominalisation (Halliday, 1989). Thus, a further measure of syntactic complexity adopted in this study was the frequency of *modifiers per noun phrase*, computed by Coh-Metrix 2.0. In fact, noun phrases represent much

of the information represented in the written text (Weir, Vidakovic, & Galaczi, 2013). The results of previous research show that sentences that have more complex syntactic structure usually have a higher ratio of constituents per noun phrase than sentences with a simple syntactic composition (Crossley, McCarthy, & McNamara, 2007). As mentioned by Graesser *et al.* (2004), the presence of modifiers, such as adjectives and prepositional phrases, extends the length of a subject noun phrase. Noun phrase modifiers might appear either before the head noun, i.e., 'premodifiers', or after the head noun, i.e., 'postmodifiers' (Biber *et al.*, 1999).

Complex nominals (CN) can be defined as a sequence of one or more nouns or adjectives preceding a head noun. *Mean number of complex nominals*, a measure argued to reflect syntactic complexity in academic writing at phrasal level (Biber *et al.*, 2011; Lu, 2010), was also utilised in the present research. The computer program Synlex was used to obtain the mean number of complex nominals in subject position per essay in this study. Complex nominals can also occur in non-subject positions, but as I used a computerised tool that could only detect complex nominals in the subject position these were not analysed in this study.

Bulté and Housen's (2012) definition of syntactic complexity also makes reference to the variety of syntactic structures in L2 learners' knowledge repertoire. The *syntactic structure similarity* index, defined by Crossley and McNamara (2009) as a measure of the consistency of syntactic structures in the text, helps to evaluate syntactic similarity by taking into consideration different parts of speech. In order to be able to account for changes in the variety of syntactic constructions used by the research participants, this measure was applied and computed with the aid of Coh-Metrix 3.0 (see Table 4.2. for a summary of general measures of syntactic complexity).

Table 4.2. Summary of the General Measures of Syntactic Complexity

Measure	Definition
Mean length of T-unit	This measure of syntactic complexity is calculated by dividing the total number of words by the total number of T-units. A T-unit is characterised as one main clause plus any subordinate clause or non-clausal structure that it is attached to or is embedded within it (Vajjala & Meurers, 2013).
Mean number of dependent clauses per T-unit	This measure of syntactic complexity is estimated as the ratio of dependent clauses to a T-unit (Wolfe-Quintero <i>et al.</i> , 1998).
Mean number of modifiers per noun phrase	This measure of syntactic complexity is calculated as the ratio of modifiers, such as adjectives and prepositional phrases, to noun phrase (Graesser <i>et al.</i> , 2004).
Mean number of complex nominals in subject position	This measure of syntactic complexity comprises nouns plus adjective, possessive, prepositional phrase, relative clause, participle, or appositive; nominal clauses; and gerunds and infinitives in the subject position (Cooper, 1976; cited in Lu, 2010).
Syntactic structure similarity	This measure of syntactic complexity compares the syntactic tree structures of sentences and identifies the proportion of intersection tree nodes between all adjacent sentences (Graesser <i>et al.</i> , 2004).

4.2.3. Measures of Syntactic Complexity Specific to the Academic Genre

The global measures used in the study can potentially provide useful information about syntactic changes in students' writing. However, complementing these measures with the analysis of some more specific features of the academic genre was also deemed necessary. The genre-specific syntactic constructions were selected based on Biber *et al.* (1999), who provide a detailed description of clausal and phrasal level structures that are significantly more frequent in academic genres than in conversation, fiction and news, based on the analysis of the BNC. My analyses were also guided by Biber *et al.*'s (2011) recent work which compared the frequency of a number of grammatical features in conversation and academic texts in the BNC. Referring to corpus-based studies was motivated by the assumption that the development of academic writing abilities of L2 learners would move towards exhibiting the specific syntactic characteristics of the academic genre.

Based on these considerations, one of the syntactic structures I focused on in my research is the frequency of *conditional clauses*. As pointed out by Warchal (2010), conditional clauses can perform a wide range of functions, and they are especially important in academic writing tasks that require logical argumentation and problem-solving. Importantly, the longer the noun phrase, the more information it is able to hold. It has been observed that the postmodifiers that come after the head noun increase the length of the noun phrase and its ability to hold and compress information (Biber *et al.*, 1999). The most common type of noun post-modifiers in academic discourse are *prepositional phrases*, the frequency of which in students' essays was also assessed in my study. The dominant type of phrases used both in speaking and writing were found to be the *of-* prepositional phrases. A more recent study (Biber & Gray, 2011) revealed that other types of prepositional phrases also prevail in the

academic register. As indicated by Parkinson and Mursgrave (2014), the use of prepositional phrases "reflects their importance for academic writers" and "may contribute to [writers'] difficulty in using them" (p. 49).

Prepositional phrases can sometimes be replaced by *relative clauses*. Although this type of post-modification is not as common as prepositional phrases, it still occurs relatively frequently in academic writing (Byrnes & Sinicrope, 2008). As pointed out by Biber and Gray (2010), these constructions were found to be more frequent in academic writing than in conversation. Relative clauses are one of the most explicit types of noun modification, and their frequency is often used as one of the indices of syntactic complexity (Jucker, 1992). *Infinitive clauses* represent another type of post-modification that exist more often in written than conversational registers. Adverbial infinitive clauses that express purpose were found to be the most common in academic writing (Biber *et al.*, 1999).

In sum, the following specific indices of syntactic complexity were selected: the ratios of conditional clauses, relative clauses, prepositional phrases and infinitive clauses as noun postmodifiers to the total number of words, and the ratios of *simple postmodifiers*, i.e., modified by one clause or phrase of any type, and *complex postmodifiers*, i.e., modified by two or more consecutive phrases or clauses, to the total number of words. Following Biber *et al.* (2011), a normed rate of occurrence for the features of syntactic complexity in each text was counted, and each of the measures was standardised to 1,000 words.

Table 4.3. Summary of the Syntactic Measures Specific to the Academic Genre

Measure	Example from student essay
Conditional clauses	<i>If students were dismissed directly, their parents would be really disappointed.</i>
Prepositional phrases as postmodifiers	Serious punishment can be a warning <i>for all students.</i>
Relative clauses	Cheating has become a widespread problem <i>which bothers professors and even degrades school's reputation.</i>
Infinitive clauses as postmodifiers	Universities should give students more opportunities <i>to correct their mistakes.</i>
Simple postmodifiers (one postmodifier per NP)	The advantages <i>of exams</i> cannot be ignored.
Complex postmodifiers (more than one postmodifier per NP)	They have to spend a great amount of time (1) <i>to prepare for them in case of failure (2) in the exams.</i>

4.3. Writing Fluency

Section 3.4.1. of the previous chapter touched upon the diversity in the definitions of written fluency. I now proceed to discuss the diversity in the measurement of written fluency found in the literature. It may be the case that the lack of a clear delineation of what constitutes fluency in writing, alongside the recent

proliferation of keystroke-logging software which allows on-line processing data to be collected with relative ease, has led to the current profusion of written fluency measures. One dichotomy which can be clearly drawn to subdivide these measures, however, is that between those that are based on the writing product and those that are based on the writing process. Measures of writing product analyse the final text the writer produces, whereas measures of writing process analyse the moment-to-moment writing behaviour of the participant. A brief discussion of this dichotomy will allow the illustration of problems with product based measures and the justification of the measures chosen to be applied in this chapter.

Probably the most ubiquitous product based measure of written fluency is related the total number of words the participant produces in their final document, or some derivative of it which controls for time taken such as 'writing speed' (e.g., Chenoweth & Hayes, 2001; Hirose & Sasaki, 1994; Johnson, *et al.*, 2012; Kellogg, 1987; Marzban & Norouzi, 2011; Sasaki, 2000; Sasaki & Hirose, 1996; Snellings, van Gelderen, & de Glopper, 2004; Storch, 2009). Abdel Latif (2009) argues these types of measures are of questionable validity, as the length of a text writers choose to produce is based on many factors including the participant's attitude to the task and the amount of monitoring they choose to apply. We could add to this list by suggesting that time set aside for planning and structuring the writing, the participant's sense of task completion and final editing and restructuring before submission also impact on the amount of text produced. Another group of common product based measures of writing fluency revolve around the length of some stretch of delineated by a clause boundary, average length of sentences (e.g., Johnson, *et al.*, 2012, Wolfe-Quintero *et al.*, 1998), number of t-units (e.g., Storch, 2009) or length of t-units per word (e.g., Polio, 2001; Storch, 2009). These kinds of measures, as Abdel Latif (2009,

2013) suggests, are more reflective of the 'quality' of the writing than the 'flow'. The proclivity of a writer to produce longer sentences or t-units is based on more than just their ability to do so. The fact that it is more difficult to understand an overly long sentence than if it were subdivided into shorter sentences, should caution the use of sentence length as a measure of 'fluency'. It can be inferred then that an ignorance of the on-line writing process of an individual might lead to measurements of their fluency which are inaccurate.

Process based measures of fluency overcome some of the abovementioned issues with the validity of product based measures. Keystroke logged measures are particularly valuable as process based measures as they map the writing process in great detail (Abdel Latif, 2009; Leijten & Van Waes, 2013; Spelman Miller, 2006; Spelman Miller & Sullivan, 2006; Strömquist, Holmqvist, Johansson, Karlsson, & Wengelin, 2006). Rather than analysing only the text of the final draft, keystroke logged measures enable us to assess all text produced during the writing episode. Instead of looking at the total amount of time spent writing, keystroke logged measures allow us to examine the location and duration of the pauses (e.g., Baaijen, Galbraith, & de Glopper, 2012; Wengelin, 2006), thought to be indicative of moment-to-moment cognitive processing (Leijten & Van Waes, 2006; Spelman Miller, Lindgren, & Sullivan, 2008). As opposed to investigating spans of written text, keystroke logged measures let us view the production of burst of text temporally, more indicative of the cognitive processing which went into their production (e.g., Abdel Latif, 2013; Leijten & Van Waes, 2006). Accordingly, in my study I will focus on the keystroke logged process based measurement of 'pauses' and 'bursts'. A detailed discussion of these measures is given in the section that follows.

4.3.1. *Pause as a Measure of Writing Fluency*

Measures of pausing in writing can be divided into two groups, those which define a minimum pause threshold and those that are based on pause duration. Examples of measures which define a minimum threshold include pause frequency (e.g., Alamargot & Fayol, 2009; Spelman Miller, 2000) and pause location (e.g., Alamargot, Plane, Lambert, & Chesnet, 2010; Baaijen *et al.*, 2012; Sasaki, 2000; Spelman Miller, 2006). While these measures provide an indication of the fluency of the individual at the particular minimum threshold chosen, changing the minimum threshold likely impacts on the measure. Conversely, measures of the raw pause duration (e.g., Chenoweth & Hayes 2001; Spelman Miller, 2000; Van Waes & Schellens, 2003), are not subject to this problem.

Regarding the inferences about cognitive processing which can be made from analysis of pause durations, research in writing, similar to the research in spoken language (e.g., Swerts, 1998), has shown that longer pauses occur at clause boundaries, less frequently between words and almost never within words. It thus appears that discourse boundaries between larger units are more predictive of pauses than smaller units. To illustrate, longer pauses are more likely to occur between sentences rather than between sub-sentences, which in turn, are more predictive of pausing than between words and these in their turn are more predictive of pauses that within word locations. Research has also shown that longer pauses may be markers of higher-level writing processes (Alamargot *et al.*, 2010; Olive, Favart, Beauvais & Beauvais, 2009), while shorter pauses seem to be more indicative of transcription processes (Alamargot *et al.*, 2010).

Recent work by Abdel Latif (2009) has, somewhat validly, cast doubt on the usefulness of raw pauses as a measure of writing fluency. The crux of his argument is that it is difficult to know whether a specific pause represents a hindrance to a writer's fluency, such as a mid-word cessation in transcription to monitor and correct spelling, or a help to a writer's fluency, such as a between sentence pause used to formulate the upcoming burst of language. Abdel Latif (2009, p.102) states that the evaluation of whether a pause is indicative of fluency depends on its location within the text and the process underlying it.

4.3.2. *Burst as a Measure of Writing Fluency*

When people write, they produce text in short *bursts* of words separated by pauses or a revision activity. A burst, sometimes referred to as a "run" (e.g., Towell, Hawkins, & Bazergui, 1996), has been defined as a length of text composed without any pauses or interruptions (Gunnarsson, 2012). Various researchers (e.g., Chenoweth & Hayes, 2001; Hayes & Chenoweth, 2006; Spellman Miller, 2000; Palviainen *et al.*, 2012) have suggested that the length of burst either measured in time or in some other way, e.g., number of characters or words, is an important indicator of writing fluency. In fact, Abdel Latif (2009, 2013, 2014) suggests that it is the only valid measure of writing fluency, a position to which I do not subscribe for reasons discussed above.

With regards to the validity of the measure of bursts as a measure of fluency research has found (Abdel Latif, 2009) that higher proficiency writers produce longer chunks (bursts) of text. Cognitively, this can be explained by the fact that the length of a burst of language a writer can produce is thought to be related to the capacity of their translator to store and transcribe linguistic structures (Chenoweth & Hayes,

2001, p. 94) and the level of automation of lower-level writing skills (Hayes & Chenoweth, 2006, p.147) such as typing, orthographic access or concordance, which might interrupt the flow of a burst. However, the exact parameters of what constitutes a burst are not uniform in the literature.

As the beginning and end of bursts are delineated by pause or revision events, the precise definition of a 'pause' has an impact on measures of burst. Researchers have characterised what constitutes a minimum pause length in different ways: some use a two second threshold (e.g., Chenoweth & Hayes, 2001; Spelman Miller, 2000; Spelman Miller, 2006; Spelman Miller *et al.*, 2008; Sullivan & Lindgren, 2002), others a three second threshold (e.g., Abdel Latif 2009; Janssen, Van Waes & Van den Bergh, 1996). Wengelin (2006), alongside providing an excellent discussion of the factors underlying the choice a minimum pause threshold, criticises the use of a pre-determined threshold on the basis that it is insensitive to individual difference in typing speed. She suggests setting the minimum pause criterion as a function of a participant's typing speed, putting forwards a figure of 3 times the mean transition, as indicative of an "actual interruption" to the flow of writing.

L2 writing fluency in the current study was assessed by means of the following variables, retrieved from the *Inputlog* output (see a summary in Table 4.4.): total writing time, active writing time, total pause time, total number of pauses, total number of revisions, total number of typed characters. Two measures of writing fluency were thus used in this study: the *writing speed*, i.e., a general measure and *fluency during burst*. It is important to define each of the concepts operationalised in my research. First, the *total writing time* can be described as the actual writing time, which comprises pauses and revisions. As regards the *active writing time*, it includes the time students were preoccupied with *only* writing, excluding pausing and revising

their texts. The next two measures, which are based on pausing, are the *total pause time*, i.e., the overall time students spent pausing, and the *total number of pauses* students made during the writing process. Another measure of fluency, total number of revisions denoted a sum of all additions, deletions and substitutions made by the writers while composing their texts. Unlike Chenoweth and Hayes (2001), who used the total number of words produced per minute as an indicator of fluency, in my study, I analysed fluency by estimating *the total number of characters* per minute. Characters were chosen as a unit of a "word" seems to be difficult to define, in fact, when student-writers type their texts, it is quite common for them to revise a part of a word or even the whole word by deleting or editing before it has been fully spelled out. Furthermore, using words as the basis of measurement would bias against those who tended to use longer words in their text. Prior to giving a definition to the other on-line measure of writing fluency used in this study, it is vital to understand what a "burst" is. *Burst*, which is often called "run" (Towell, Hawkins, & Bazergui, 1996), was described as the written "text produced consecutively without pausing or interruption" (Gunnarsson, 2012). In my study, burst was measured as the total number of typed characters produced between pauses and revisions. Thus, *fluency during burst* was estimated with the aid of the following formula:

fluency during burst

$$= \frac{\text{total writing time} - \text{total pause time}}{\text{total number of revisions} + \text{plus the total number of pauses}}$$

Table 4.4. Summary of the Measures of Writing Fluency

Total writing time
Active writing time
Total pause time
Total number of pauses
Total number of revisions
Total number of characters
Writing speed
Burst
Fluency during burst

4.4. Revision

In this study I adopted Fitzgerald's (1987) definition of revision, i.e., "any change at any point in the writing process" (p. 484). In other words, not only the changes in the final version of the written text, but also all changes in the partly composed text, were viewed as revisions. Thus, with the aim to analyse revisions made by the students throughout the process of writing, all revisions, including deletions, additions and substitutions, were coded using ATLAS.ti computer software according to the two dimensions, i.e., (a) *orientation*, as suggested in Stevenson *et al.* (2006), and (b) *location*. As regards orientation, I examined whether revisions were aimed at changes of the 'form' or whether they could be categorised as 'conceptual' revisions. Firstly, according to Lindgren and Sullivan (2006), the changes at the level of 'form' were defined as the revisions made to the linguistic expression, where the writer modifies the wording of a text, but does not intend to change the meaning. The language-targeted revisions were subdivided into the following categories:

vocabulary, grammar, spelling, and punctuation. Revisions at the lexical level include replacing the words or phrases for their synonyms or non-existent words or word forms with existing ones. Turning to revisions for grammar, these involve grammatical changes to the text, such as tense, articles, prepositions, verb forms, word order, sentence structure and others. As for *spelling*-oriented revisions, they were defined as any orthographic changes which could not be classified as typographic errors. *Punctuation* revisions involve such revisions as adding, deleting or substituting commas, full stops, semicolons, hyphens, apostrophes, as well as capitalisation. Secondly, the alterations at a conceptual level were identified as *content* modifying revisions, which can be defined as the revisions that affect the informational content of the written text. Finally, all mechanical changes to the text were identified as *typographic revisions* and defined as the ones that are made accidentally when the writer presses the wrong key knowing how a word is spelt. Some of the following were labelled as typing revisions: incidentally typing adjacent letter on the keyboard, e.g., 's' for 'a' or 'm' for 'n', reversing letters in a word, e.g., 'form' for 'from' or 'teh' for 'the', or typing the form of the word that does not exist and does not conform to the orthographic rules, such as 'moore' for 'more'. A decision has been made to exclude typographic revisions from the analyses in the present study. These revisions concern motor activities, which are not linguistic in nature and therefore have not been analysed.

The other dimension, *location*, considered different categories of revisions, i.e., content, vocabulary, grammar, spelling and punctuation, made by the writers in the essay Introduction, Main Body and Conclusion. It was hypothesised that significant differences might be found in writers' revision behaviours depending on whether the section or paragraph was written at the beginning or at the end of the

writing process. The nature of revisions could also vary due to the pre-task and on-line planning of the L2 writers. The summary of all revisions variables used in the current study is given in Table 4.5.

Table 4.5. Summary of the Measures of Revision

Orientation dimension	Location dimension
Content	Introduction
Vocabulary	Main Part
Grammar	Conclusion
Spelling	
Punctuation	

4.5. Summary

To summarise, the complexity measures that I used are theoretically motivated by the research in corpus linguistics, systemic functional linguistics and developmental child language acquisition. I adopted a novel approach to complexity with specific reference to the mode, genre and communicative demands of the writing task. I have argued that in accordance with previous research (e.g., Biber & Gray, 2010; Biber *et al.*, 2011), which shows that writing is characterised by various linguistic features, it is important to take into account the linguistic characteristics of genre or task. In this chapter I introduced an array of measures that I used in order to analyse student-writers' lexical diversity and sophistication, syntactic complexity, writing fluency and revision behaviours. In terms of lexis, five measures including

MTLD, Log frequency of content words, Latent Semantic Analysis, Academic Word List and Squared verb variation, were used in this study. As regards syntax, the general measures were complemented by the measures specific to academic genre. Writing fluency was estimated with the aid of on-line measures generated by keystroke logging software. Finally, in the case of revision, two dimensions were targeted in my study, specifically, the orientation and location.

CHAPTER 5. Methodology

5.1. Introduction

The purpose of this chapter is to give an account of the research methods used in the present study. The chapter is divided into several sections. In the first section, the mixed methods design adopted in the current research is introduced. The second section outlines the research aims and the research questions. The next two sections examine the research context and the participants of the study. The section that follows outlines the research instruments followed by a brief overview of the recruitment and consent procedures. Then the quantitative and qualitative data collection procedures are described. The subsequent section explains the procedures of quantitative data analyses used in the current study. The chapter ends with an overview of the qualitative data analyses.

5.2. Mixed Methods Design

Mixed methods research in social sciences emerged approximately two decades ago (Creswell, Plano Clark, Gutmann, & Hanson, 2003). It combines qualitative and quantitative methods and offers a more in-depth understanding of the research problem under investigation. Importantly, mixed methods designs enable researchers to answer questions and address some complex research problems that cannot be answered with the help of a quantitative or a qualitative approach on its own. Several purposes of mixed methods research have been identified by Greene, Caracelli and Graham (1989), i.e., triangulation (to achieve convergence of results),

complementarity (to arrive at a more meaningful understanding of a certain phenomenon), development (using one method after the other in order to get a better guidance and be able to make various research related decisions), initiation (to identify new research insights), and expansion (to increase the breadth and scope of the study). One of the key characteristics of mixed methods research, as indicated by Creswell and Plano Clark (2011), is the concurrent integration of two forms of data by either combining them or by embedding one form within the other. When choosing mixed methods design, researchers need to decide which particular version applies to their own study. From among the aforementioned versions, the convergent parallel mixed methods design has been chosen to be used in the current study. Both types of data, i.e., quantitative and qualitative, were collected concurrently. As regards the analysis, two data sets were analysed independently, but the results were mixed during the overall interpretation. In doing so, I examined convergence, divergence, contradictions and relationships between the two sources of data (Creswell & Plano Clark, 2011).

More reliable interpretations of the research data can be made by triangulating various sources of data. It has been assumed that doing so would undoubtedly give deeper insights into students' cognitive processes and their language improvement goals and competencies (Norris & Manchón, 2012). The use of a mixed methods approach of research design in my study was largely determined by the need to track and analyse the composing processes of writers over a period of time on multiple occasions. As regards the quantitative data, it was collected by means of the academic essays written by the research participants at the beginning and at the end of the EAP programme, and analysed using quantitative data analysis tools. The qualitative data

was gathered by means of semi-structured interviews with the participants as well as reflective log or learning journal entries kept by the participating students.

5.3. Research Aims

The present study aims to contribute to the body of scholarly literature on SLA and second language writing by examining the development of various aspects of L2 learners' writing skills. Another motivation of this study is to fill the apparent niche in psycholinguistic research by examining the thought processes of second language writers. The research is novel in terms of its selection of participants, as it focuses on a relatively under-represented group of EFL students on the pre-sessional EAP/Study Skills summer program. Another significant aspect of this research project is its attempt to investigate the development of linguistic features in second language writing via a longitudinal approach, i.e., examining learners' written performance over time. In fact, the development of L2 learners' academic writing ability has largely been studied in terms of improvements in various assessment criteria, such as cohesion, coherence and organisation, as well as overall performance. It is only recently that writing research and studies in the field of EAP have started to focus on the linguistic features of students' writing and how they improve along with developments in proficiency in various instructional contexts.

The development of the syntactic complexity of students' writing has been at the centre of a number of studies in recent years (e.g., Byrnes, 2009; Byrnes & Sinicrope, 2008; Shaw & Liu, 1998; Vyatkina, 2013), but very few studies have considered lexical development in conjunction with syntactic changes in students' written production (for exceptions see Storch & Tapper, 2009; Vyatkina, 2012;

Verspoor *et al.*, 2008). The present study investigates how the lexical variation, syntactic complexity and fluency of L2 learners' writing changed during the course of an intensive EAP programme that aims to prepare international students for university studies at undergraduate and postgraduate levels in the UK.

This research helps us to understand how key linguistic features of academic writing develop and thereby contribute to supporting the more effective and efficient expression of L2 writers' thoughts and arguments. In light of the considerations outlined above, the specific research questions motivating the present study are as follows:

Research Question 1: How do the lexical features of argumentative writing change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 2: How do the syntactic features of argumentative writing change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Uncovering cognitive processes that a writer generates while producing texts via the keyboard and screen is an extremely difficult task to accomplish. The current study seeks to explore the writing processes of second language learners and to answer the question of what type of behaviours characterise their composing and thinking processes. Specifically, it seeks to answer the following questions:

Research Question 3: How does writing fluency change in an intensive EAP programme in the case of: a) the PG students who have already completed their

undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 4: How do writers' revision behaviours change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? Since, the qualitative data was collected only for the group of UG students, the other two research questions, which aimed to examine the psychological and motivational aspects of second language writing addressed in the present study were as follows:

Research Question 5: How do the UG students' difficulties and writing strategies change over the course of four weeks of studying on an intensive EAP programme?

Research Question 6: How do the UG students' goals and self-efficacy beliefs change over the course of four weeks of studying on an intensive EAP programme?

5.4. Research Context

The current study was carried out on a pre-sessional EAP/Study Skills programme during the summers of 2012 and 2013. The EAP programme is an intensive four-week course offered by a large university in the UK. The major aims of the programme are to develop students' use of English in an academic context, to foster the critical and analytical thinking skills they will need for academic study, and to cultivate an awareness of the learning skills and strategies they might use whilst studying in a British university environment.

The EAP programme is primarily targeted at students with IELTS scores of 5.5 to 6.5 (B1 to B2 on CEFR) and who received only a conditional offer from their university because their current level of English proficiency did not meet the minimum entry requirements. The course is also open for students with higher IELTS scores (i.e., IELTS score of 7, C1 level on the CEFR) who wish to improve their academic writing skills. During the EAP course, students are offered 15 hours of in-class teaching per week, and typically are expected to study 15 to 20 hours a week independently reading academic papers from peer reviewed journals, completing their written assignments, and preparing for pair presentations. Importantly, every student on the EAP program has the opportunity to attend one-to-one tutorials, during which their tutors would give them constructive feedback on their writing, and where they have the chance to ask questions on any aspects of the course or module that they might struggle with.

The programme adopts a task-based approach and comprises three modules, which are: (1) academic reading and writing (ARW), (2) listening, reading and discussion (LRD), and (3) oral presentations (OP). Importantly, academic reading and writing are emphasised as core elements of the EAP programme because these skills are thought to be the most difficult for students to master and yet have the greatest impact on their performance on a degree programme. The general aim of the academic reading and writing module is to develop students' use of English in an academic environment. The specific objectives of the ARW module involve helping students 1) develop their confidence as writers; 2) create accurate and coherent texts; and 3) discover a personally productive writing process.

As regards the specific content of the module, the main themes covered in Week 1 include the following: understanding the writing process, organising

information, reporting others' words and writing a good introduction to the essay. Turning to the contents of Week 2, it addresses the following topics: 1) identifying and evaluating main points in the reading; 2) taking notes for a critical argumentative essay; 3) assessing reliability of academic sources; 4) learning to paraphrase and summarise the source material; 5) sequencing the information; 6) recognising cohesive features in writing; and 7) writing a good conclusion. Week 3 of the course focuses on 1) reading and writing critically, 2) taking a position and arguing a case, and 3) integrating multiple sources into an essay. The final week of the EAP programme is built around the following themes: 1) academic writing style; 2) the use of connectives and linking words to establish better cohesion of written texts; 3) ways to avoid being sexist in writing; and 4) a review of paraphrasing and referencing activities.

There is no summative assessment on the EAP programme; therefore, students' performance is evaluated formatively by means of weekly writing assignments, which take the form of argumentative essay tasks. Students are expected to produce essays that are progressively more demanding and require a more detailed analysis and the use of more in-depth evaluation and critical thinking each week. The weekly written assignments offer substantial practice in particular aspects of academic writing, such as paraphrasing, summarising, analysing, synthesising, critically responding to other people's ideas and providing sound reasoning to back up the arguments.

The teaching staff are highly-qualified and dedicated professionals, who have previously taught EFL or EAP on pre-sessional programmes at different universities around Britain and abroad. All teachers on the EAP course are provided with a one week induction prior to the beginning of the course, which provides them with an

opportunity to familiarise themselves with the curriculum and study the teaching materials that they are expected to use on the pre-sessional programme. Importantly, during the induction week, the teaching staff are expected to participate in several sessions about the curriculum, one of which is about the assessment and giving feedback on EFL students' writing. Attending this session makes teachers aware of the requirements on the EAP course and ensures that they respond to students' writing using uniform assessment criteria established on the EAP programme.

After students complete an assignment, they receive written corrective feedback from their academic reading and writing module tutor, which focuses on both holistic aspects of their academic writing as well as language specific errors. When giving feedback teachers write open commentaries on various aspects of writing including task response, i.e. relevance of the content as well as logic and persuasiveness of argumentation; organisation, i.e., sequencing and cohesion of ideas in the essay; and proper use of source material and referencing conventions.

It must be noted that although linguistic improvement is not the primary focus of the EAP curriculum, and students do not receive any explicit language instruction, linguistic errors, such as recurring grammar, word choice and spelling errors, are generally highlighted in the feedback provided on students' essays and discussed in the one-to-one tutorials. An error correction code is used by the tutors to indicate which language areas students need to work on when revising their academic essays. After receiving written feedback, the students are invited to attend an individual tutorial where the specific strengths and weaknesses of their writing are discussed and suggestions for further improvement are made.

5.5. Participants

Two groups from two consecutive cohorts of students in the academic years of 2012 and 2013, who enrolled on the four-week intensive pre-session EAP programme, participated in the present study. Table 5.1. summarises the background data of the students of both groups. Group 1 consisted of 25 postgraduate students, whose ages ranged from 21 to 34, with a mean age of 23.2. Group 2 was represented by 14 undergraduate students, with the ages ranging from 18 to 21 (mean age of 19.4). The majority of learners in both groups were females (Group 1: 21 female and 4 male students; Group 2: 12 female and 2 male students) of Chinese L1 background. The students in both groups were planning to study one of the following disciplines upon completion of the EAP course: Business Studies, Economics, Accounting and Finance or Media and Cultural Studies.

The English language proficiency of the UG group was slightly lower than that of the PG group, in terms of both their general IELTS scores and specific writing scores in the IELTS exam. The overall IELTS scores and writing scores of the UG students ranged between 5.5 and 6.5 (mean score of 5.9), and between 5.5 and 6 (mean score of 5.8), respectively. Similar to the PG students, the UG students had all studied English at school back in their home country and had no prior experience of living in any English-speaking country at the time of the research. Thus, according to the language proficiency test results, the PG students and the UG students could be defined as 'proficient users of the language' (C1 level on the CEFR scale) and 'independent users of the language' (B2 level on the CEFR scale), accordingly.

Table 5.1. Learner Profiles

		PG students	UG students
Gender	Male	4	2
	Female	21	12
Age	Mean	23.2	19.4
	Range	21-34 years	18-21 years
L1 background	Chinese	17	14
	Japanese	3	0
	Thai	5	0
L2 learning experience	Length of learning English	11 years	10 years
	Length of staying in the UK	2 weeks	2 weeks
English language proficiency	Mean IELTS listening	6.4	6.3
	Mean IELTS reading	6.8	6.2
	Mean IELTS speaking	6.3	5.9
	Mean IELTS writing	6.3	5.8
	Mean IELTS overall	6.7	5.9

In terms of the students' EFL background, they had all studied English at secondary and high school in their home country for ten to 12 years. The mean length of students' stay in the UK was approximately one month at the time of the study. All participants acknowledged having had only limited experience of academic writing at university level. All 39 students took part in the research voluntarily and were each awarded a £10 gift voucher in return for their participation. All participants filled out a brief questionnaire, which elicited their demographic information, i.e., their age, gender, native language, number of years of learning English, length of stay in

English speaking countries, and their level of English language proficiency determined by means of the IELTS exam.

5.6. Research Instruments

5.6.1. Writing Tasks

Each participant in both groups was asked to complete two argumentative essay writing tasks as part of the study, one at the very beginning, in Week 1, and the other in the final week, Week 4, of the EAP summer programme. Both writing sessions were conducted in a computer lab, where students were required to write an essay of between 300 and 400 words using a keystroke logging software program *Inputlog 5* (Leijten & Van Waes, 2006/2013). The detailed computer-generated keystroke logging data was retrieved in order to provide valuable insights into students' on-line writing processes.

In order to control for topic difficulty, two different essay prompts were selected from the general field of education, which was expected to be relevant and familiar to all participants. It was assumed that the students might be interested in these topics and will be able to bring in a range of examples from their school life. Both Topic A and Topic B require argumentation. The genre of argumentative text was chosen for the present study because argumentative writing is the main type of writing which is required in written assignments and exams in a large number of disciplines studied at university level. Argumentative writing also constitutes the particular focus of the EAP programme; all written assignments that students are asked to produce on the course involve argumentation and critical thinking. Table 5.2. lists the task prompts used in the current research.

Table 5.2. Writing Prompts Used in the Present Study

<p>Topic A: Exams cause unnecessary stress for students. <i>How far do you agree?</i></p> <hr style="border-top: 1px dashed black;"/>
<p>Topic B: Any student caught cheating in school or college exams should be automatically dismissed. <i>How far do you agree?</i></p>

The order of tasks was counterbalanced, so that half the students completed the task on topic A in the first session, and on topic B in the second session. The other half of the participants started with topic B and wrote about topic A at the end of the study. To check for significant differences due to the effect of the topic, Multivariate Analyses of Variance (MANOVAs) were applied to the data set. No significant differences were found between the groups on any of the linguistic measures with regard to the topic they wrote about. Some examples of the essays produced by the participants of both groups are given in *Appendix A*.

5.6.2. Interviews

Interview was one of the sources of qualitative data applied in the current study, which offered insights for students' processes of writing. Specifically, semi-structured interview, considered to be the most in-depth interview form (Cohen & Manion, 1994; Nunan, 1992; Whiting, 2008), was chosen to be used. The data set included 28 semi-structured interviews, conducted at the beginning of Week 1 and at the end of Week 4 of students' studying on the EAP summer programme. The interviews were chosen to be used in this research in order to learn about the participants' writing experiences and self-efficacy beliefs, their learning and social

strategies, perceptions about their own writing difficulties as well as composition processes and revision behaviours. One-to-one interview sessions were conducted with all 14 UG students. No qualitative data, including the interviews, were collected with the PG group of students because the quantitative analyses did not generate many significant findings with regard to the linguistic and cognitive development of student-writers (see Chapter 6). During the interviews, which were conducted in English, the participants were able to explain their experiences, perceptions and feelings about academic writing. Each interview lasted approximately between 15 and 25 minutes. All sessions were recorded and fully transcribed by me.

It is important to note that the interviews were flexible. Specifically, during the interviews, I clarified and expanded on some questions, which helped me to learn more about the participants' learning experiences and perspectives. The interviews always started with themes related to participants' perception of themselves as academic writers. For example, the initial questions asked at pre-course interviews were as follows: *How do you see yourself as a writer?* and *How do you feel when you write in English?* As regards the post-course interviews, the participants were asked questions like *Do you see yourself any differently from what you were at the beginning of the EAP program?* and *Do you feel any different from what you felt at the beginning of the program?* All interview prompts at the beginning and at the end of the EAP course are included in Table 5.3. See *Appendix B* for some examples of pre-course and post-course interview transcripts.

Table 5.3. Pre-course and Post-course Interview Prompts

Pre-course interview questions	Post-course interview questions
How do you see yourself as a writer?	Do you see yourself any differently from what you were at the beginning of the EAP program?
How do you feel when you write in English?	Do you feel any different from what you felt at the beginning of the program?
How does writing help you to learn the language and to learn about the language?	
What kinds of writing do you expect to be doing on the EAP program?	Have your expectations regarding the kinds of writing done on the EAP program been met? Do you think the writing you have learned will help you on your degree program?
What is <i>good</i> academic writing? What does it involve?	How would you explain to a new student what <i>good</i> academic writing is? Is there anything in particular about academic writing that you learned on the EAP program?
What goals do you have for improving your writing for your future studies on the program and further at the university?	Have your goals for academic writing changed since you started studying on the EAP program? If so, how?
What is your usual method of writing in English? What steps do you follow when writing?	Has your method of writing in English changed in 4 weeks? What steps do you follow now when writing?
Did you ever get feedback on your writing? How did you feel about it and what did you do with the feedback you received? What kind of feedback do you find useful?	How did you feel about the feedback you got on your writing on the EAP program? What did you do with it? Did you find useful? Why/why not?
What is your own method of checking or rewriting what you have written?	Has your method of checking or rewriting what you have written changed in four weeks' time?
How are you trying to improve your writing in English?	

(Adapted from: Boshier, 1998; Cumming, 2006; Manchón & Roca de Larios, 2011)

5.6.3. Learning Journals

Learning journals or reflective logs appear to bring access to cognitive processes of L2 writers as they make decisions about the content and language of their writing. One of the undeniable advantages of using reflective logs rather than some other data collection tools, such as direct observations, think-aloud protocols or the interviews, is their comparatively non-intrusive nature. In fact, learning journals appear to be less threatening to the participants since their completion does not involve face-to-face contact with the researcher and does not set rigid time restrictions, i.e., they can be filled in at any time that is convenient for the participant. However, there are some disadvantages in terms of the use of learning journals in writing research. Specifically, they focus on writing retrospectively giving no insights into the actual composing processes. Furthermore, learning journals might vary in the detail that respondents might provide in their entries.

The interview data was complemented by learning journals or so called reflective logs. The purpose of the learning journal was explained to the participants in a set of guidelines at the beginning of Week 1 on the programme (see *Appendix C*). Every UG student participating in this study was asked to keep an accurate and detailed account of their thoughts regarding their own writing by completing one entry per week over a three week period starting from the end of Week 1 up to the end of Week 4 on the EAP programme. Some examples of learning journal entries produced by the participants are illustrated in *Appendix D*.

The questions which the participants were supposed to respond to in their learning journal entries are illustrated in Table 5.4. Each entry was expected to cover writers' description of the thinking and writing processes they engaged in while doing

the written tasks in class and at individual preparation time. There were other specific questions the students were asked to respond to, such as the problems they encountered while writing, their goals in terms of writing and their feelings about the feedback they got from their tutors on written assignments they produced.

Learning journals were used to elicit additional longitudinal data and to offer the L2 writers an opportunity to give an account of their own composing processes and behaviours, the rationale behind the strategies they use and the steps they tend to undertake while writing. The participants were asked to reflect on the processes as well as on the contents of their learning by critically reviewing their writing experiences including their particular learning goals and strategies. Active engagement of the students in reflective writing during the EAP course might be helpful in terms of promoting their self-reflection, fostering their critical thinking and, ultimately, gaining better insights into their own learning (Borg, 2001).

Table 5.4. Learning Journal Prompts

1	How did you feel when you wrote in English?
2	Was it a difficult topic to write an essay about? Why/why not?
3	How did you plan your writing? Did you use any particular strategies when planning?
4	How did you compose your essay? What steps did you take? What did you do first, second, and so on? Did you use any particular strategies when writing the essay?
5	Where did you get the information for writing (e.g., your own ideas, experiences, other peoples' experiences, books or other sources of information)?
6	Did you ever get stuck while writing/did you have to think hard? When did that happen and why? What did you do to get 'unstuck'/to find the way out?
7	What was your goal in terms of writing? Did you achieve your goal? If yes, how well did you achieve it? If not, why did you not achieve it?
8	What did you learn about academic writing this week?
9	What did you find was a problem for you in terms of writing? What were you trying to improve? What would you like to have done better?
10	Did you get a teacher feedback on your writing this week? What did you think of that? How did you feel about it? Did you find it helpful and understandable? Why/why not?
11	What did you learn from the feedback you got this week?
12	How are you going to apply the feedback you got on this essay to your other written assignments? Will you do anything particular as a result of the teacher's response?

5.7. Ethical Issues and Recruitment of Participants

In adherence to Lancaster University research ethics guidelines, approval to conduct the research was applied for and granted by the university prior to collecting the data. The study followed the guidelines as set out in Ethical Guidance for Research with Human Participants. As regards the recruitment of participants, three English teachers working on the EAP programme, recruited the students from their classes and conducted the consent procedures following the instructions given by the

researcher. All participants were handed in an information sheet (*Appendix E*) describing the nature of the research, its aims and procedures.

The students who agreed to take part in the study were asked to complete the background questionnaire (*Appendix F*) and sign the consent form (*Appendix G*) informing them about their rights. Importantly, the participants were not obliged to answer any questions they did not want to answer and they were free to withdraw from the study at any time if they felt uncomfortable. The questionnaires and the consent forms were then returned to EAP tutors, who passed them on to the researcher. The interview recordings, learning journal entries and academic essays were stored securely.

5.8. Data Collection Procedures

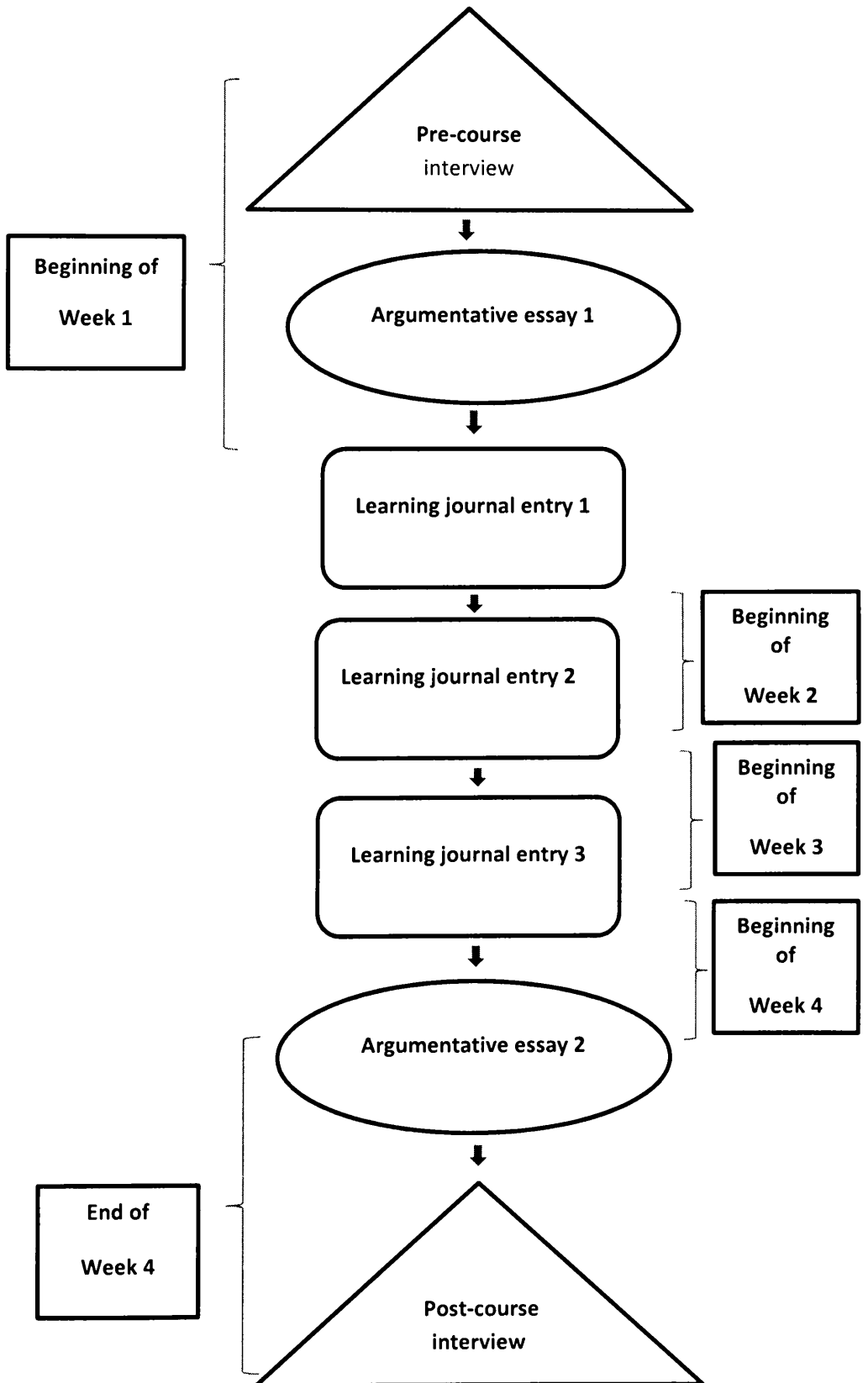
The data collected in 2012 with a group of PG students, was initially planned to be used as a part of a Pilot study. However, due to the interesting findings it generated, a decision was made to use that data for the Main study. Importantly, in 2013, more data was collected with a group of UG students. This time, I decided that the quantitative data should be complemented by the qualitative data elicited by means of interviews and learning journals in order to get a clearer picture of the student-writers' cognitive processes and behaviours.

Data collection took place over a period of four weeks, that is, from the beginning to the end of the EAP programme. Although this period might seem relatively short to observe linguistic development, the intensity of the programme is very high as it provides 60 hours of instruction, which is commensurate with a semester-long (15 weeks) course that offers four hours of instruction. Two writing

sessions were set outside the regular class hours of the EAP course. Each participant was given a prompt and asked to complete the task by typing an essay in no more than 45 minutes. The students were instructed to work individually and the use of a dictionary or any other reference materials was not allowed, in order to judge the participants' current level of linguistic development without the use of external resources. The researcher was always present and supervised the participants while they were completing the writing tasks. The tasks used in the study had been previously tried on a small group of students of a similar background and English language proficiency level as the research participants and proved to be manageable within the allocated time.

Several types of data sets were collected for the current study (see Figure 5.1.). This was done at the beginning, throughout and at the end of the EAP course by means of a) a written product, i.e., argumentative essay, observed and analysed via keystroke logging software *Inputlog*; b) in-depth open-ended semi-structured interviews conducted at the beginning and at the end of the four-week summer programme (adapted from Boshier, 1998; Cumming, 2006; Manchón & Roca de Larios, 2011), and c) self-reflection journals written during the EAP programme

Figure 5.1. Research Instruments Used in the Study



5.9. Data Analyses Procedures

5.9.1. *Quantitative Data Analyses*

Statistical analyses were carried out using SPSS (Statistical Package for Social Sciences) version 16.0 for Windows. The two main kinds of analyses used in this study were descriptive statistics and multivariate analyses of variance (MANOVAs) applied in order to analyse the development of writing skills of the participants in each group as well as to identify the differences between the two groups. Since the revisions data were not normally distributed, the nonparametric tests were used for statistical inference. The statistical test applied to examine differences from Time 1 to Time 2 was the Wilcoxon signed-rank test, a non-parametric equivalent to the paired sample t-test. Effect sizes was calculated and absolute effect sizes of 0.1 to 0.29 were taken as indicating a small effect, from 0.3 to 0.49 a medium effect and greater than 0.5 a large effect (Cohen, 1969).

5.9.1.1. Lexical and Syntactic Measures

Several software packages were used to analyse the lexical diversity and syntactic complexity of texts. These packages were Coh-Metrix 2.0 and Coh-Metrix 3.0, Synlex L2 Syntactic Complexity Analyzer and Synlex Lexical Complexity Analyzer, and VocabProfiler BNC. In order to avoid misinterpretation of the data by those computer-assisted tools, all essays were corrected by me for misspellings and erroneous punctuation so that the computational programs could detect and identify the words. The syntactic structures specific to the academic genre chosen for the analyses were coded manually. I did the initial coding, and following this a quarter of the data set was coded by a second rater, a PhD student in Applied Linguistics. The

inter-rater reliability for the coding of genre specific syntactic structures (Cohen's kappa) was 0.75, which according to Landis and Koch (1977) signifies 'excellent agreement'.

5.9.1.2. Fluency and Revision Measures

For the observation of the online revisions made by the participants throughout the process of text construction, keystroke logging program, *Inputlog 5*, was used. The program contains three modules: "(1) a data collection module that registers on-line writing processes on a very detailed level; (2) a data analysis module that offers basic and more advanced statistical analyses (e.g., text and pause analysis); (3) a play module that enables researchers to review the writing session" (Leijten & Van Waes, 2005). The 'record' function captures all the keystroke presses (including insertions and deletions), non-writing (pauses) and cursor movements made by the writer and stores accurate and detailed information about time and occurrence of all of these presses and movements in a log file. The second function, which is 'generate', provides the HTTP files of all the stored information including pause length. The last function 'plays' the whole written text as it was inscribed from the beginning to the end including all pauses in original time periods and cursor movements.

ATLAS.ti was used for coding the revisions. To standardise the process of coding and ensure its consistency, the coding scheme was adapted early in the process of analyses, and each category was clearly defined. I coded the data, and approximately a quarter of the data set was double-coded by a PhD research student, who was a native speaker of English. This was done in order to ensure the consistency

of coding and determine its reliability. The inter-rater reliability (Cohen's kappa) for the main categories of revisions was *0.87* for the orientation, and *0.79* for the action.

5.9.2. Qualitative Data Analyses

In addition to the quantitative analyses, the data collected by means of the interviews and learning journals were analysed using qualitative data analysis methods. It is important to note that the interview transcripts were first coded and analysed by me, checked by my supervisor, and then a consensus was reached on the interpretation of the data. As regards the learning journals, the data were coded manually by me, as a principal investigator, and approximately a quarter of the whole data set were also coded by a second coder, i.e., another PhD researcher, to ensure agreement.

Coding assists the researchers significantly when it comes to examining the data, identifying themes and subthemes, making relevant comparisons and being able to detect any patterns that require further in-depth investigation (Taylor & Gibbs, 2010). Coding is in fact one of the most important instruments of thematic analysis, consisting of the process of breaking down and reducing written text into manageable units. This type of analysis involved completion of the following steps: 1) identifying themes and subthemes in the texts, 2) selecting the most important themes and subthemes, 3) establishing theme hierarchies; and 4) linking the themes and subthemes into theoretical frameworks (Ryan & Bernard, 2003). The coding of the interviews and learning journal entries was carried out the same way. Specifically, once all recorded interviews were transcribed, I went through each transcript a number of times. The first time I examined the texts, I was able to identify the major themes

for the analyses. The second time I read through the participants' responses to the interview and learning log prompts even more carefully. While reading, I highlighted the ideas and concepts representing subthemes, which would underpin one of the main themes. One of the techniques used in the present study in order to identify subthemes is called *pawing* or *handling* of the data. This was done by eyeballing or scanning the transcripts and circling, highlighting and underlining the key words in the text, drawing lines and arrows down the margins in order to indicate various meanings and codes. Having done that, I started looking for different patterns and trends (Ryan & Bernard, 2003).

In the process of coding, *a priori* ideas were labelled first. These were identified from the research questions addressed in this study and from the questions asked during the pre-course and post-course interviews. In addition to *a priori* codes, some new subthemes, i.e., grounded codes, emerged from the analysis. When looking through the texts thoroughly, I had several questions about the data in mind, which helped me identify important ideas and concepts. To illustrate, among these questions were the following ones: 1) What is going on? 2) What is the respondent saying? 3) What do these statements take for granted? (Charmaz, 2003; cited in Taylor & Gibbs, 2010).

5.10. Summary

This chapter has described the methodology involved in conducting this study. This has included the information on the aims and research questions that guided the present research, the research context, the student-writers who participated in the study, the writing tasks used to elicit the data, and the coding used to quantify the

data. It has included some information about the linguistic measures used to analyse lexical diversity, syntactic complexity, fluency and revision behaviours of the second language writers. The quantitative and qualitative data analyses procedures have also been described in this chapter. The chapter that follows will present and discuss the findings of the research.

CHAPTER 6. Quantitative Results

6.1. Introduction

This chapter describes the research findings obtained from all quantitative analyses performed on the data set. It begins with the restatement of the research questions used in the study. Second, it explains the procedures of statistical analyses before presenting the results of the correlation analyses conducted on the linguistic variables of lexical and structural complexity. Third, the descriptive statistics and the results of the statistical analyses for the measures of lexical diversity and sophistication are described followed by a detailed illustration of statistical analyses of the syntactic complexity measures. Next, the results of the writing fluency analyses are presented. The chapter then gives the information on the revisions data set, specifically, the descriptive statistics and the results of the statistical analyses on the orientation dimension of revisions as well as the findings on the location of revisions made by the two groups of second language writers. Finally, a general overview of the quantitative analyses is given in the summary section of this chapter.

6.2. Research Questions

The first four research questions addressed in the current study were as follows:

Research Question 1: How do the lexical features of argumentative writing change in an intensive EAP programme in the case of a) the PG students who have

already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 2: How do the syntactic features of argumentative writing change in an intensive EAP programme in the case of a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 3: How does writing fluency change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

Research Question 4: How do the revision behaviours of: a) the PG students who have already completed their undergraduate degree in their home country and b) the UG students who intend to undertake undergraduate studies in the UK, change during an intensive EAP programme when writing argumentative essays?

6.3. Procedures of Statistical Analyses

Multivariate analysis of variance (MANOVA) was used to investigate the development of the students' writing skills over the course of four weeks on the EAP programme as well as to compare the written performance and development of the two groups of students. It is important to note that prior to conducting the MANOVA analyses, the data were tested in order to ensure that they conform to a set of assumptions. One of the first steps that was undertaken was to check the data for *univariate normality*. I obtained the skewness and kurtosis values, which gave me

some information about the distribution of scores for both groups. One other technique available in SPSS, i.e., using 'Explore' option of the Descriptive Statistics, was applied to assess the normality of my data. I evaluated the normality of the distribution of the data for each group separately as well as for the whole sample. In addition, I checked the data for *multivariate normality* using Mahalanobis distances.

MANOVA is sensitive to *outliers* (participants whose scores are notably different from the rest of the participants'). Therefore, I tested the data for *univariate outliers*, i.e., for each dependent variable separately, and for *multivariate outliers* (i.e., for a combination of scores on various dependent variables). To determine potential outliers, I first studied the histograms, focusing specifically on the tails of the distribution. It was clearly seen that some data were located out on the extremes. The second step of the analysis involved having a closer look at the boxplots. I could clearly distinguish four outliers, which appeared outside the box edge. All four sets of data, i.e., lexical diversity and sophistication, syntactic complexity, writing fluency and revisions behaviours, were checked for the presence of outliers. Since the scores of the four students across all data sets were found to be notably different from the scores of the whole subject population, a decision was made to exclude those outliers from further analyses.

The *level* of education (PG versus UG) and the *time* (the beginning versus the end of the EAP programme) were treated as independent variables. Three different MANOVAs were conducted on the five measures of lexical diversity and sophistication, 11 measures of syntactic complexity, i.e., five global measures and six measures specific to the academic genre, and nine measures of writing fluency. Moreover, the MANOVA was conducted on revisions dataset in order to examine the revision behaviours of the second language writers before and after the EAP course.

When the overall multivariate test was significant, the univariate F tests were examined for each dependent variable to identify which specific variables contribute to the significant overall effect and to determine if there were any significant differences from Time 1 to Time 2 within groups or between groups on any of the specific measures of writing. Partial eta squared was used to measure effect sizes. The data analyses were carried out using the SPSS statistical software package version 13. Before answering the research questions, correlation analyses were carried out on the data to assess the extent of inter-relatedness of the linguistic measures used in this study. Doing so was important in order to ensure that the variables chosen to be used as measures of lexical sophistication and syntactic complexity were independent of each other and not tapping into similar aspects of lexical and syntactic proficiency.

6.4. Correlation Analyses

Tables 6.1., 6.2. and 6.3. illustrate the correlation among measures of lexical diversity and sophistication, global measures of syntactic complexity and measures of syntactic features specific to the academic genre. With regard to lexical measures, no strong relationship between any of the five variables was identified. Correlation among the syntactic measures was weak to moderate in all cases, with correlation coefficients ranging from -0.224 (between syntactic structure similarity and mean length of T-unit) to 0.375 (between mean length of T-unit and dependent clauses per T-unit). In terms of measures of syntactic complexity specific to the academic genre, all seven variables correlated with each other weakly (correlation coefficients ranging from -0.03 to 0.35), with the exception of measures of prepositional phrases and complex post-modifiers, which showed a strong and significant correlation ($r=0.646$,

$p < 0.0001$). The analyses confirmed that the selected variables were relatively independent of each other and thus can provide independent information on facets of syntactic complexity.

Table 6.1. Correlations among the Measures of Lexical Diversity and Sophistication

Measure	Squared verb variation	MTLD	Log frequency of content words	Academic word list	Latent semantic analyses
MTLD	0.353**	1.000			
Log frequency of content words	-0.155	-0.161	1.000		
Academic word list	0.184	0.1	-0.259	1.000	
Latent semantic analyses	-0.178	-0.343**	-0.181	0.299**	1.000

** . Correlation is significant at the 0.05 level (2-tailed). * . Correlation is significant at the 0.01 level (2-tailed).

Table 6.2. Correlations among the Global Measures of Syntactic Complexity

Measure	Complex nominals	Mean length of T-unit	Dependent clauses per T-unit	Modifiers per noun phrase	Syntactic structure similarity
Mean length of T-unit	0.164	1.000			
Dependent clauses per T-unit	0.097	0.375**	1.000		
Modifiers per noun phrase	0.1	0.109	-0.07	1.000	
Syntactic structure similarity	0.055	-0.224**	0.056	-0.135	1.000

** . Correlation is significant at the 0.05 level (2-tailed). * . Correlation is significant at the 0.01 level (2-tailed).

Table 6.3. Correlations among the Measures of Syntactic Complexity Specific to the Academic Genre

Measure	Conditional clauses	Prepositional phrases	Relative clauses	Infinitive phrases	Simple post-modifiers	Complex post-modifiers
Prepositional phrases	-0.262*	1.000				
Relative clauses	0.263*	0.031	1.000			
Infinitive clauses	-0.155	0.031	-0.160	1.000		
Simple postmodifiers	-0.198	0.298**	-0.059	0.067	1.000	
Complex postmodifiers	-0.109	0.646**	0.245*	0.180	-0.217	1.000

** . Correlation is significant at the 0.05 level (2-tailed).* . Correlation is significant at the 0.01 level (2-tailed).

6.5. Lexical Diversity and Sophistication ¹

The descriptive statistics (mean and standard deviation) for all five lexical diversity and sophistication measures of the PG and UG students are displayed in Table 6.4. The descriptive statistics reveal that lexical diversity and sophistication increased from Time 1 to Time 2 for four measures of lexis (with the exception of the log frequency of content words) in both groups. Table 6.5. shows the MANOVA results for *time*, *level* and the interaction between *time and level* factors. The table further illustrates the statistics on the different measures of lexical diversity and sophistication. The Wilks' Lambda test resulted in significant main effects of *time* ($F(5, 62) = 4.816, p = 0.001$) and *level* ($F(5, 62) = 4.221, p = 0.002$), while the combined effect of *time and level* did not reach significance ($F(5, 62) = 1.499, p = 0.203$). First, in

¹ These results were published in Mazgutova and Kormos (2015)

terms of the *time* factor, on the whole, the students demonstrated more lexically varied performance at Time 2 than at Time 1. As regards the *level* factor, it appears that the PG students showed lexically more diverse performance than the UG students.

The *time* factor significantly affected the writers' performance on three measures of lexical variation. At Time 2, the students were able to produce lexically more diverse pieces of writing: *squared verb variation* ($F(3, 66) = 14.261, p < 0.000$), *academic word list* ($F(3, 66) = 9.418, p = 0.003$) and *MTLD* ($F(3, 66) = 5.413, p = 0.023$). The effect sizes on the first two measures can be identified as large, and on the *MTLD* measure -as medium. The comparisons on the two other measures of lexical diversity and sophistication did not reach statistical significance. Regarding the *level* factor, the MANOVA results indicate that there was a significant difference between the lexical performance of the UG and PG students and in terms of the two variables, i.e., *academic word list* ($F(3, 66) = 9.234, p = 0.003$) and *latent semantic analyses* ($F(3, 66) = 4.044, p = 0.048$). As can be seen from the table, PG students used more academic expressions in their writing compared to the UG students. When it comes to the combination of *time and level* factors, the test of between-subject effects showed that there was no significant interaction between these two factors on any of the specific variables meaning that there were no statistically significant differences found in lexical changes overtime between the UG and PG students' writing.

Table 6.4. Descriptive Statistics for the Measures of Lexical Diversity and Sophistication

Measure	Time	Level	Mean	SD
MTLD	Time 1	PG	75.55	19.08
		UG	72.36	11.15
		total	74.27	16.25
	Time 2	PG	78.21	16.88
		UG	87.66	12.20
		total	81.99	15.71
Squared verb variation	Time 1	PG	20.03	5.44
		UG	18.25	3.12
		total	19.32	4.68
	Time 2	PG	24.13	4.15
		UG	22.98	5.92
		total	23.67	4.88
Log frequency of content words	Time 1	PG	2.39	0.09
		UG	2.41	0.08
		total	2.40	0.09
	Time 2	PG	2.39	0.10
		UG	2.34	0.08
		total	2.37	0.09
Academic word list	Time 1	PG	5.19	2.09
		UG	3.43	1.54
		total	4.49	2.06
	Time 2	PG	6.44	2.39
		UG	5.21	1.64
		total	5.94	2.18
Latent semantic analyses	Time 1	PG	0.28	0.08
		UG	0.30	0.10
		total	0.29	0.09
	Time 2	PG	0.27	0.09
		UG	0.35	0.10
		total	0.30	0.10

Table 6.5. Results of the MANOVA on Lexical Diversity and Sophistication

Overall effects	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>
Time	4.816	0.001***	0.280
Level	4.221	0.002**	0.254
Time*Level	1.499	0.203	0.108
Effects on different measures			
Time			
MTLD	5.413	0.023*	0.076
Squared verb variation	14.261	0.000***	0.178
Log frequency of content words	2.411	0.125	0.035
Academic word list	9.418	0.003**	0.125
Latent semantic analyses	1.065	0.306	0.016
Level			
MTLD	0.658	0.420	0.010
Squared verb variation	1.566	0.215	0.023
Log frequency of content words	0.366	0.547	0.006
Academic word list	9.234	0.003**	0.123
Latent semantic analyses	4.044	0.048*	0.058
Time*Level			
MTLD	2.679	0.106	0.039
Squared verb variation	0.072	0.790	0.001
Log frequency of content words	1.913	0.171	0.028
Academic word list	0.287	0.594	0.004
Latent semantic analyses	2.050	0.157	0.030

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

6.6. Syntactic Complexity ²

The findings obtained from the analysis of the global measures of syntactic complexity, i.e., the descriptive statistics and the results of MANOVA analyses, are set out in Table 6.6. and Table 6.7., respectively. The data demonstrate that, for postgraduate students, the use of these syntactic structures remained largely unchanged from the beginning to the end of the study, with the exception of one measure, i.e., *syntactic structure similarity* between adjacent sentences.

² These results were published in Mazgutova and Kormos (2015)

In Table 6.7. the results of the MANOVA on 11 different measures of syntactic complexity (including the global measures and the measures specific to the academic genre) are listed. The general analyses revealed that the syntactic complexity of students' writing was significantly affected by the *time* factor ($F(11, 56) = 3.385, p < 0.001$) and by the combination of *time and level* factors ($F(11, 56) = 1.927, p = 0.05$). It is important to note that no significant effects of the *level* were generated on any of the measures of syntax. In order to explore the results in more depth, the specific measures of syntactic complexity were looked at, and several interesting observations were made. In terms of the global measures of syntax, significant differences between Time 1 and Time 2 were found on the two measures: *syntactic structure similarity* ($F(3,66) = 10.705, p = 0.002$) and *modifiers per noun phrase* ($F(3,66) = 6.667, p = 0.012$), effect sizes being large and medium, respectively. It is clear from the table that the writers used more similar sentence structures at Time 2 than they did at Time 1. As regards the measure of *noun phrase modifiers*, these structures were used significantly more frequently in the students' writing at the end than at the beginning of the EAP course. No other global measures of syntax appear to have been affected by the *time* factor. Likewise, the time did not influence any of the six measures of syntax specific to the academic genre.

Turning to the *level* factor, with respect to genre-specific syntactic measures, the results for the two groups of students differ considerably on some measures. To exemplify, one of the differences can be noticed in the frequency of infinitive clauses. The PG students used infinitive clauses in their writing less frequently than the UG students. It is, however, important to note that neither this nor any other difference reached statistical significance as far as the *level* factor is concerned.

Interestingly, there was a significant combined effect of the *time and level* on the two specific measures of syntax. Thus, the UG students demonstrated a more marked syntactic development from Time 1 to Time 2 in terms of their use of *complex postmodifiers* ($F(3,66)=7.836, p=0.007$) and *relative clauses* ($F(3,66)=4.912, p=0.03$) than the PG students. The effect size for the first measure was large, while for the second measure it was in the medium range. No other statistically significant differences were observed on any other general or specific measures of syntactic complexity.

Table 6.6. Descriptive Statistics for the Measures of Syntactic Complexity Measures

Measure	Time	Level	Mean	SD
Mean length of T-unit	Time 1	PG	16.70	2.08
		UG	16.26	3.06
		total	16.53	2.49
	Time 2	PG	16.50	1.65
		UG	16.93	4.05
		total	16.67	2.81
Dependent clauses per T-unit	Time 1	PG	0.83	0.21
		UG	0.72	0.29
		total	0.78	0.25
	Time 2	PG	0.77	0.32
		UG	0.84	0.25
		total	0.80	0.29
Modifiers per noun phrase	Time 1	PG	0.68	0.12
		UG	0.63	0.13
		total	0.66	0.13
	Time 2	PG	0.73	0.11
		UG	0.74	0.15
		total	0.74	0.12
Complex nominals	Time 1	PG	35.29	9.67
		UG	36.36	12.42
		total	35.71	10.69
	Time 2	PG	39.24	7.92
		UG	40.64	9.52
		total	39.80	8.49

Syntactic structure similarity	Time 1	PG	0.09	0.02
		UG	0.08	0.03
		total	0.09	0.03
	Time 2	PG	0.11	0.03
		UG	0.10	0.04
		total	0.11	0.03
Conditional clauses	Time 1	PG	4.28	3.53
		UG	2.80	3.93
		total	3.69	3.71
	Time 2	PG	5.79	3.70
		UG	6.16	5.42
		total	5.94	4.40
Prepositional phrases	Time 1	PG	50.63	14.92
		UG	48.39	17.51
		total	49.73	15.79
	Time 2	PG	45.50	16.51
		UG	43.64	17.39
		total	44.76	16.64
Relative Clauses	Time 1	PG	13.55	8.43
		UG	9.44	5.44
		total	11.91	7.57
	Time 2	PG	10.96	7.36
		UG	14.41	5.13
		total	12.34	6.70
Infinitive clauses	Time 1	PG	14.49	7.23
		UG	15.00	7.60
		total	14.69	7.27
	Time 2	PG	9.68	5.90
		UG	12.33	6.19
		total	10.74	6.08
Simple postmodifiers	Time 1	PG	33.70	9.88
		UG	33.22	8.18
		total	33.51	9.11
	Time 2	PG	34.21	8.98
		UG	30.84	12.32
		total	32.86	10.41
Complex postmodifiers	Time 1	PG	19.25	7.31
		UG	13.72	7.84
		total	17.04	7.91
	Time 2	PG	14.64	6.42
		UG	18.41	5.29
		total	16.15	6.20

Table 6.7. Results of the MANOVA on Syntactic Complexity

Overall effects	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>
Time	3.385	0.001***	0.399
Level	0.495	0.899	0.089
Time*Level	1.927	0.05*	0.275
Effects on different measures			
Time			
Mean length of T-unit	0.127	0.723	0.002
Dependent clauses per T-unit	0.274	0.602	0.004
Modifiers per noun phrase	6.667	0.012*	0.092
Complex nominals	2.983	0.089	0.043
Syntactic structure similarity	10.705	0.002**	0.140
Conditional clauses	5.941	0.017	0.083
Prepositional phrases	1.518	0.222	0.022
Relative clauses	0.484	0.489	0.007
Infinitive clauses	5.182	0.026	0.073
Simple postmodifiers	0.152	0.698	0.002
Complex postmodifiers	0.000	0.982	0.000
Level			
Mean length of T-unit	0.000	0.992	0.000
Dependent clauses per T-unit	0.064	0.801	0.001
Modifiers per noun phrase	0.458	0.501	0.007
Complex nominals	0.270	0.605	0.004
Syntactic structure similarity	1.276	0.263	0.019
Conditional clauses	0.306	0.582	0.005
Prepositional phrases	0.261	0.611	0.004
Relative clauses	0.037	0.848	0.001
Infinitive clauses	0.926	0.339	0.014
Simple postmodifiers	0.642	0.426	0.010
Complex postmodifiers	0.283	0.597	0.004
Time*Level			
Mean length of T-unit	0.435	0.512	0.007
Dependent clauses per T-unit	1.764	0.189	0.026
Modifiers per noun phrase	0.922	0.341	0.014
Complex nominals	0.005	0.944	0.000
Syntactic structure similarity	0.000	0.997	0.000
Conditional clauses	0.864	0.356	0.013
Prepositional phrases	0.002	0.963	0.000
Relative clauses	4.912	0.03*	0.069
Infinitive clauses	0.425	0.517	0.006
Simple postmodifiers	0.361	0.550	0.005
Complex postmodifiers	7.836	0.007**	0.106

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

To illustrate the above findings with some examples from individual students, only one instance of conditional clause use has been found in the essay produced by Student 1 at Time 1: (1) *"If they change their mind and find the real aim of exams, they would do better not only in next exams, but also in their future study."* In contrast, three instances of this syntactic construction usage have been detected at Time 2 in the essay written by the same student: (1) *"If students get cheating in exams as a habit, that must be dangerous."* (2) *"If the number keeps increasing, there is no need to have exams anymore."* (3) *"If every student cheats in exams, schools can cancel exams for exams cannot achieve their aim."*

With regard to differences observed in the usage of relative clauses from Time 1 to Time 2, Student 5 produced only two of these syntactic structures in their essay at Time 1: (1) *"They may do not enough time for their sleep and spare time to relax, which may lead students feel stressful."* (2) *"On the contrary, exams are important and effective method which can reflect students' achievement of study, they directly can know where are wrong or right."* Conversely, in the essay produced by the same student at Time 2, relative clause constructions were used five times: "(1) Many schools adopt the serious measure to deal with some students *who cheat in school or college exams*, for example these students will be dismissed automatically." (2) "Some of them may be afraid to go to school again and join other activities, *which could cause these students become timid and dissocial.*" (3) "Many researches and studies prove that someone has shadow *mentally who might have a unhappy future*, and they may do some wrong things in the future." (4) "In some American schools, these students will be recommended to have a class that is about psychology, *which can help students to avoid cheating again.*" (5) "To sum up, students' plagiarising is incorrect behaviour, *which should be avoided.*"

Two essays written by Student 7 can be used as an illustration of the difference in students' use of complex postmodifiers. At Time 1, only one instance of complex modifiers was observed: (1) "Many students claim that they have load too much *stress from exams, which is not benefit for satisfying their further study.*" However, at Time 2, Student 7 used four constructions of that kind in their writing: (1) "It is more basic than goodness and evil because someone pretends to be great with dishonesty, so as cheating *in the exams to get better results.*" (2) "As a consequence, some people view that it is necessary to dismiss the students *who have cheated in school or college exams automatically.*" (3) "However, since honesty is the basic virtue, it seems better that giving one more chance *to students to carry the moral education* than just eyes on their one dishonest spot." (4) "It is important to punish the cheated students as they do make serious mistakes, but dismissal is a too grave consequence *which might mean that they will lost the chance to go to school.*"

6.7. Writing Fluency

The second set of data analyses examined the changes in fluency of L2 writers over the course of four weeks on an intensive EAP programme. Table 6.8. shows the descriptive statistics for a range of writing fluency measures. To compare the written performance of students at Time 1 and Time 2 within groups and between groups, a MANOVA analysis was applied. The statistics on the nine specific measures are represented in Table 6.9. With respect to fluency, there are statistically significant main effects of *time* ($F(8, 59) = 3.596, p = 0.002$), *level* ($F(8, 59) = 5.469, p < 0.000$) as well as the interaction of *time* and *level* ($F(5.348, p < 0.000)$) factors. Concerning the separate measures of fluency and the effects of the *time* factor, it was found that

compared to the beginning of the EAP programme, at the end of the course, students appeared to spend significantly more time writing (*total writing time* ($F(3, 66)=7.624, p=0.007$) and *active writing time* ($F(3, 66)=5.975, p=0.017$). Furthermore, the *total pause time* increased significantly from Time 1 to Time 2 ($F(3, 66) =13.135, p=0.001$); however, the *total number of pauses* made by the students showed a significant decline from the pre-test to the post-test ($F(3, 66) =4.257, p=0.043$). Similar to the effects of time, the *level* factor yielded several significant differences in terms of writing fluency. It significantly affected *total writing time*, *total pause time* and the general measure of *writing speed*. With regard to the first two measures, the students in the PG group spent significantly more time writing their essays than the students in the UG group (*total writing time* ($F(3, 66)=22.185, p<0.000$), and paused for a longer time while writing (*total pause time* ($F(3, 66)=20.129, p<0.000$). The effect sizes can be identified as large for both measures. The other measure affected by the group *level* was the overall *fluency* of student writers. It appears from the findings that the UG students showed significantly better performance than the PG students as far as writing speed is concerned (*writing speed* ($F(3, 66) =5.411, p=0.023$). Finally, when it comes to the interaction effects of the *time and level* factors, several statistically significant differences were found. Likewise the individual effects of the time and level, the combination of the two factors influenced *total writing time* ($F(3, 66) =27.673, p<0.000$), *active writing time* ($F(3, 66) =3.400, p=0.07$) and *total pause time* ($F(3, 66) =24.145, p<0.000$). A very different pattern was observed for the UG students. Specifically, it did not take them as long to produce their essays at Time 2 as it did at Time 1, and the total pause time of that group appeared to decrease significantly at Time 2.

The *total number of revisions* was another measure of fluency significantly impacted by the combination of time and level factors. The PG students revised significantly more often at Time 2 than at Time 1. Conversely, the number of revisions made by the UG students decreased significantly from Time 1 to Time 2 ($F(3, 66)=4.554, p=0.037$); the effect size for this measure was small. Another interesting finding concerned the measure of *writing speed*, which was also influenced by the combination of the *time* and *level factors*. From MANOVAs, it can be inferred that the *writing speed* of the PG students decreased over the course of four weeks on the EAP programme, whereas the UG students wrote at a higher speed at Time 2, ($F(3, 66)=16.167, p<0.000$), with a large effect size. It is also apparent from Tables 3.8. and 3.9. that the interaction of *time and level* factors affected one more measure of writing fluency, which is the *burst*. The students in the PG group appeared to write in shorter bursts at Time 2 than at Time 1; however, undergraduate students demonstrated a different pattern, since their lengths of bursts increased significantly ($F(3, 66) = 6.899, p=0.011$). The effect size for these changes was in the medium range. The three other measures of writing fluency, i.e., *total number of pauses*, *total number of characters* and *fluency during burst* yielded no statistically significant results.

Table 6.8. Descriptive Statistics for the Measures of Writing Fluency

Measure	Time	Level	Mean	SD
Total writing time	Time 1	PG	3496.43	679.33
		UG	3638.36	398.54
		total	3553.20	580.66
	Time 2	PG	5564.83	1729.21
		UG	2993.89	449.18
		total	4536.45	1862.54
Active writing time	Time 1	PG	1558.05	361.66
		UG	1594.16	284.91
		total	1572.50	329.09
	Time 2	PG	1512.52	237.41
		UG	1268.94	348.50
		total	1415.09	307.00
Total pause time	Time 1	PG	1938.38	590.60
		UG	2044.17	436.69
		total	1980.70	529.96
	Time 2	PG	4052.30	1690.00
		UG	1724.90	327.21
		total	3121.34	1749.08
Total number of pauses	Time 1	PG	215.24	31.03
		UG	238.36	47.25
		total	224.49	39.39
	Time 2	PG	205.33	35.86
		UG	206.07	56.78
		total	205.63	44.60
Total number of revisions	Time 1	PG	260.86	113.61
		UG	294.14	107.56
		total	274.17	110.86
	Time 2	PG	287.86	106.92
		UG	212.14	81.36
		total	257.57	103.30
Total number of characters	Time 1	PG	3112.42	718.70
		UG	2946.00	662.53
		total	3045.86	691.75
	Time 2	PG	3020.04	420.25
		UG	2850.64	652.62
		total	2952.29	523.29
Writing speed	Time 1	PG	54.74	14.60
		UG	49.04	11.94
		total	52.46	13.73
	Time 2	PG	36.44	14.75
		UG	57.77	12.51
		total	44.97	17.33
Burst	Time 1	PG	6.68	0.97
		UG	5.66	1.33
		total	6.27	1.22
	Time 2	PG	6.39	1.38
		UG	6.95	1.25
		total	6.62	1.34
Fluency during burst	Time 1	PG	3.38	0.68
		UG	3.09	0.74
		total	3.26	0.71
	Time 2	PG	3.21	0.72
		UG	3.05	0.39
		total	3.14	0.60

Table 6.9. Results of the MANOVA on Writing Fluency

Overall effects	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>
Time	3.596	0.002**	0.328
Level	5.469	0.000***	0.426
Time*Level	5.348	0.000***	0.420
Effects on different measures			
Time			
Total writing time	7.624	0.007**	0.104
Active writing time	5.975	0.017*	0.083
Total pause time	13.135	0.001**	0.166
Total number of pauses	4.257	0.043*	0.061
Total number of revisions	1.159	0.285	0.017
Total number of characters	0.389	0.535	0.006
Writing speed	2.026	0.159	0.030
Burst	2.781	0.100	0.040
Fluency during burst	0.423	0.518	0.006
Level			
Total writing time	22.185	0.000***	0.252
Active writing time	1.871	0.176	0.028
Total pause time	20.129	0.000***	0.234
Total number of pauses	1.361	0.248	0.020
Total number of revisions	0.690	0.409	0.010
Total number of characters	1.245	0.269	0.019
Writing speed	5.411	0.023*	0.076
Burst	0.585	0.447	0.009
Fluency during burst	1.935	0.169	0.028
Time *Level			
Total writing time	27.673	0.000***	0.295
Active writing time	3.400	0.070*	0.049
Total pause time	24.145	0.000***	0.268
Total number of pauses	1.198	0.278	0.018
Total number of revisions	4.554	0.037*	0.065
Total number of characters	0.000	0.992	0.000
Writing speed	16.167	0.000***	0.197
Burst	6.899	0.011*	0.095
Fluency during burst	.162	0.689	0.002

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

6.8. Revision Behaviour

The second language writers' revision behaviours were also analysed in the present study. The results obtained from the analyses of the revisions data of the two groups of students are represented in Tables 6.10., 6.11, 6.12, 6.13 and 6.14 below.

6.8.1. Orientation of Revisions

The first two tables provide the breakdown of revisions based on the orientation dimension (made at the conceptual, lexical, grammatical or punctuation level). Several categories of revisions were distinguished following Stevenson *et al.* (2006), such as the revisions aimed at the alterations at the content, vocabulary, grammar, spelling, and punctuation levels. The total number of different kinds of revisions was also examined in this type of analysis. Tables 6.10. and 6.11. present the descriptive statistics and the results of MANOVA tests based on the orientation dimension of writers' revisions. From the tables, it can be clearly seen that neither the effect of the *time* ($F(6, 61) = 0.943, p = 0.482$) nor the combined effects of the *time and level* factors ($F(6, 61) = 0.891, p = 0.507$) reached statistical significance. In terms of the orientation of revisions, the only significant main effect identified was that of the *level* factor ($F(6, 61) = 5.268, p < 0.000$). In other words, a noteworthy difference was found between the revision behaviours of the UG and PG student-writers.

Table 6.10. Descriptive Statistics: Orientation of Revisions

Orientation of Revision	Time	Level	Mean	SD
Content	Time 1	PG	27.15	17.91
		UG	38.85	19.80
		total	31.83	19.30
	Time 2	PG	30.02	18.65
		UG	23.70	13.92
		total	27.49	16.99
Vocabulary	Time 1	PG	47.16	26.74
		UG	42.18	23.91
		total	45.17	25.40
	Time 2	PG	49.54	29.02
		UG	36.49	19.18
		total	44.32	26.04
Grammar	Time 1	PG	45.54	20.71
		UG	55.45	23.37
		total	49.50	22.03
	Time 2	PG	42.13	18.42
		UG	44.32	25.38
		total	43.00	21.15
Spelling	Time 1	PG	25.40	19.57
		UG	37.40	15.58
		total	30.20	18.81
	Time 2	PG	25.22	17.09
		UG	25.55	22.02
		total	25.35	18.90
Punctuation	Time 1	PG	31.57	16.48
		UG	58.02	34.87
		total	42.15	28.24
	Time 2	PG	27.53	20.63
		UG	56.18	35.19
		total	38.99	30.44

Table 6.11. Results of the MANOVA on the Orientation of Revisions

Overall effects	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>
Time	0.943	0.482	0.085
Level	5.268	0.000***	0.341
Time*Level	0.891	0.507	0.081
Effects on different measures			
Time			
Content	1.990	0.163	0.029
Vocabulary	0.071	0.791	0.001
Grammar	1.901	0.173	0.028
Spelling	1.747	0.191	0.026
Punctuation	0.209	0.649	0.003
Level			
Content	0.383	0.538	0.006
Vocabulary	2.077	0.154	0.031
Grammar	1.314	0.256	0.020
Spelling	1.837	0.180	0.027
Punctuation	18.352	0.000***	0.218
Time *Level			
Content	4.287	0.042*	0.061
Vocabulary	0.416	0.521	0.006
Grammar	0.536	0.467	0.008
Spelling	1.643	0.204	0.024
Punctuation	0.029	0.865	0.000

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

A significant effect of *level* is found in the *punctuation*-oriented revisions ($F(3, 66) = 18.352, p < 0.000$) as well as the *total* revisions ($F(3, 66) = 4.556, p = 0.037$). It is apparent from the table that the UG students made significantly more revisions targeted at punctuation than the students in the PG group.

Although no overall effects were found for the combination of the *time* and *level* factors, one specific effect was detected regarding the *content*-oriented revisions. The number of revisions for content made by the PG student-writers went up from Time 1 to Time 2, whereas, the UG students made significantly fewer content-oriented

revisions at Time 2 than at Time 1 ($F(3,66)=4.287, p=0.042$). MANOVA revealed no other effects on any of the specific measures of the orientation of revisions.

The data on the orientation of revisions were also analysed using a repeated measures analysis of variance (ANOVA), the results of which are demonstrated in Tables 6.12., 6.13., and 6.14. As depicted in Table 6.12., there were no statistically significant differences between the Time 1 and Time 2 performance in the PG group. This means that PG students edited their writing largely in the same manner at the beginning and at the end of the EAP programme. In contrast, the ANOVA analysis revealed some noteworthy changes with regard to the orientation of revisions in the UG group. Table 6.13. shows that there was a significant effect of time on content-oriented revisions and revisions in total. The students started to revise their essays for content and on the whole less frequently at Time 2 than they did at Time 1 (*content* ($F(3, 66)=12.585, p=0.004$), *total* ($F(3, 66)=5.323, p=0.038$). Finally, as regards the results of repeated measures ANOVA for both the UG and PG students (see Table 6.14.), the only significant effect was observed with regard to *total* revisions ($F(3, 66)=4.250, p=0.047$); and the effect size was small. No other statistically significant findings emerged.

Table 6.12. Results of Repeated Measures ANOVA (PG Students)

Measures	Time			Observed Power
	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>	
Content	0.421	0.524	0.021	0.095
Vocabulary	0.276	0.605	0.014	0.079
Grammar	0.701	0.412	0.034	0.125
Spelling	0.004	0.949	0.000	0.050
Punctuation	1.691	0.208	0.078	0.236
Total	0.186	0.671	0.009	0.070

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Table 6.13. Results of Repeated Measures ANOVA (UG Students)

Measures	Time			Observed Power
	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>	
Content	12.585	0.004**	0.492	0.906
Vocabulary	1.395	0.259	0.097	0.195
Grammar	2.159	0.166	0.142	0.275
Spelling	3.186	0.098	0.197	0.380
Punctuation	0.069	0.797	0.005	0.057
Total	5.323	0.038*	0.290	0.570

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Table 6.14. Results of Repeated Measures ANOVA for the Whole Sample

Measures	Time			Observed Power
	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>	
Content	1.568	0.219	0.044	0.229
Vocabulary	0.065	0.800	0.002	0.057
Grammar	2.806	0.103	0.076	0.370
Spelling	2.248	0.143	0.062	0.308
Punctuation	0.909	0.347	0.026	0.153
Total	4.250	0.047*	0.111	0.517

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

6.8.2. Location of Revisions

Changes in the writers' behaviours in both groups were also analysed in terms of the location of revisions (made in the Introduction, Main Part or Conclusion). Due to the fact that the analysed variables were not normally distributed, nonparametric tests were used for statistical inference. The statistical test applied to examine differences in the writers' revision behaviours from Time 1 to Time 2 was the Wilcoxon signed-ranks test, a non-parametric equivalent to the paired sample t-test.

From Tables 6.15. and 6.16., we can see that just as the analyses for the orientation of revisions, the analyses for the location dimension revealed no significant differences for the PG group. In contrast, several significant findings emerge in terms of the location of revisions in the UG group. One of the interesting observations to make from the data analyses is that from the pre-test to the post-test, the UG students, on the whole, edited their writing significantly less frequently in the Introduction part of their essay ($Z=-2.982$, $p<0.003$, $r=-0.422$); and the effect size could be identified as medium. There were two other statistically significant findings, specifically, the number of *content*-oriented ($Z=-2.542$, $p<0.011$, $r=-0.48$), and *grammar*-oriented revisions ($Z=-2.605$, $p<0.009$, $r=-0.492$) made in the Introduction to their essays declined from Time 1 to Time 2. The effect sizes were medium in both cases. The statistical analyses revealed no other significant differences with regard to the location of revisions in the group of the UG students.

Table 6.15. Descriptive Statistics: Location of Revisions (Frequency per 1,000 Words)

Measures	PG students				UG students			
	Time 1		Time 2		Time 1		Time 2	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Content:								
Introduction	33.48	32.58	40.63	53.23	54.57	30.87	27.54	22.94
Main Part	24.10	18.20	27.01	19.72	35.23	18.34	25.32	18.39
Conclusion	33.07	74.24	17.37	22.72	20.63	22.46	11.22	12.73
Vocabulary:								
Introduction	62.18	43.35	81.84	59.09	54.16	30.90	35.29	28.78
Main Part	47.05	25.81	48.41	31.88	38.11	26.10	36.33	17.33
Conclusion	70.48	67.72	45.80	43.31	18.65	26.75	29.61	27.32
Grammar:								
Introduction	49.21	37.95	62.69	52.87	93.68	52.59	46.76	43.47
Main Part	41.99	24.06	37.39	20.39	44.86	23.49	44.32	18.46
Conclusion	41.13	38.24	46.12	34.82	37.42	35.27	34.24	27.68
Spelling:								
Introduction	43.08	44.44	33.91	37.76	41.75	21.95	23.4	24.22
Main Part	21.26	18.17	23.47	17.20	35.38	18.45	22.16	16.16
Conclusion	21.30	32.10	29.41	27.33	34.71	31.29	34.65	39.00
Punctuation:								
Introduction	47.28	44.66	39.55	33.27	76.85	64.19	62.44	43.73
Main Part	23.99	16.34	25.83	20.31	51.92	26.81	52.14	32.26
Conclusion	32.87	61.81	19.49	20.46	46.13	34.35	39.92	50.24
Total:								
Introduction	235.23	121.90	262.62	155.13	324.34	135.12	195.78	109.28
Main Part	158.20	68.31	167.21	72.13	205.51	58.33	180.28	58.98
Conclusion	198.29	161.76	155.28	74.87	157.53	87.67	149.64	104.87

Table 6.16. Results of Wilcoxon Signed-rank Tests for the Location of Revisions

Measures	PG students			UG students		
	Z	p	r	Z	p	r
Content:						
Introduction	-0.571	0.568	-0.081	-2.542	0.011*	-0.480
Main Part	-0.982	0.326	-0.139	-1.726	0.084	-0.326
Conclusion	-0.450	0.653	-0.064	-1.112	0.266	-0.210
Vocabulary:						
Introduction	-1.816	0.069	-0.257	-1.664	0.096	-0.314
Main Part	-0.498	0.619	-0.070	-0.220	0.826	-0.042
Conclusion	-1.369	0.171	-0.194	-1.376	0.169	-0.260
Grammar:						
Introduction	-1.144	0.253	-0.162	-2.605	0.009**	-0.492
Main Part	-0.767	0.443	-0.108	-0.157	0.875	-0.030
Conclusion	-0.698	0.485	-0.099	-0.524	0.600	-0.099
Spelling:						
Introduction	-1.460	0.144	-0.207	-1.726	0.084	-0.326
Main Part	-0.821	0.412	-0.116	-1.915	0.056	-0.362
Conclusion	-1.164	0.244	-0.165	-0.035	0.972	-0.066
Punctuation:						
Introduction	-0.659	0.510	-0.093	-0.220	0.826	-0.042
Main Part	-0.336	0.737	-0.048	-0.471	0.638	-0.089
Conclusion	-0.539	0.590	-0.076	-0.549	0.583	-0.104
Total:						
Introduction	-0.821	0.412	-0.116	-2.982	0.003	-0.422
Main Part	-0.901	0.367	-0.127	-1.350	0.177	-0.191
Conclusion	-0.390	0.696	-0.055	-0.659	0.510	-0.093

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Another set of analyses examined the revision behaviours of the two groups of writers in further detail. In order to do so, comparisons were drawn between various kinds of revisions made in the Introduction and the Main Part, the Main Part and the Conclusion, and the Introduction and the Conclusion of their written texts. The pre-test and post-test data of both groups were looked at separately as part of the analyses. The results of the Wilcoxon signed-ranks tests for the PG group of writers are set out in Table 6.17.

Table 6.17. Results of Wilcoxon Signed-ranks Tests (PG Students)

Measures	Time 1			Time 2		
	Z	p	r	Z	p	r
Introduction-Main Part:						
Content	-0.955	0.339	-0.135	-0.886	0.376	-0.125
Vocabulary	-2.139	0.032*	-0.303	-2.892	0.004**	-0.409
Grammar	-1.009	0.313	-0.143	-1.762	0.078	-0.249
Spelling	-2.343	0.019*	-0.331	-0.525	0.600	-0.074
Punctuation	-2.435	0.015*	-0.344	-2.193	0.028*	-0.310
Total	-3.135	0.002**	-0.443	-2.704	0.007**	-0.382
Main Part - Conclusion:						
Content	-0.943	0.346	-0.133	-2.190	0.029*	-0.310
Vocabulary	-0.525	0.600	-0.074	-1.224	0.221	-0.173
Grammar	-0.336	0.737	-0.048	-1.229	0.219	-0.174
Spelling	-1.400	0.162	-0.198	-0.686	0.493	-0.097
Punctuation	0.552	0.581	-0.078	-1.429	0.153	-0.202
Total	-0.363	0.716	-0.051	-0.821	0.412	-0.116
Introduction-Conclusion:						
Content	-1.315	0.189	-0.186	-2.833	0.005**	-0.401
Vocabulary	-0.202	0.840	-0.029	-2.946	0.003**	-0.417
Grammar	-1.514	0.130	-0.214	-1.143	0.253	-0.162
Spelling	-2.419	0.016*	-0.342	0.000	1	0
Punctuation	-1.704	0.088	-0.241	-2.386	0.017*	-0.337
Total	-1.978	0.048*	-0.280	-2.973	0.003**	-0.421

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Regarding the PG students' behaviours, several statistically significant trends were observed. It is apparent from the descriptive statistics, that both at Time 1 and at Time 2, the greatest number of revisions were made in the Introduction. Thus, comparing the revisions made at Time 1 in the Introduction and in the Main Part, the following trends could be observed: the students made significantly more editing for *vocabulary* ($Z=-2.139$, $p<0.032$; $r=-0.303$); *spelling* ($Z=-2.343$, $p<0.019$, $r=-0.331$); and *punctuation* ($Z=-2.435$, $p<0.015$, $r=-0.344$) in the Introduction. The effect sizes were medium on all three measures. Importantly, more revisions in total were made in the Introduction than in the Main Part of the essays ($Z=-3.135$, $p<0.002$, $r=-0.443$). A similar pattern could be detected at Time 2 since more revisions to the text were made in the Introduction than in the Main Part. Statistically significant findings were obtained for the *vocabulary*-targeted revisions ($Z=-2.892$, $p<0.004$, $r=-0.409$), revisions at the *punctuation* level ($Z=-2.193$, $p<0.028$, $r=-0.31$) and all *revisions* in total ($Z=-2.704$, $p<0.007$; $r=-0.382$). The effect sizes for all variables can be characterised as medium.

Turning to the comparison of the PG writers' behaviours in the Introduction and the Conclusion, a clear trend of the prevalence of revisions in the former was observed at both Time 1 and Time 2. First, regarding Time 1 data, more revisions for *spelling* ($Z=-2.419$, $p<0.016$, $r=-0.342$) and all *revisions* in total ($Z=-1.978$, $p<0.048$, $r=-0.28$) were made in the Introduction. No other significant results were found for Time 1. Turning to the Time 2 data analyses, the significant findings emerged in terms of the revisions at the *content* level ($Z=-2.833$, $p<0.005$, $r=-0.401$), *vocabulary* ($Z=-2.946$, $p<0.003$, $r=-0.417$), *punctuation* ($Z=-2.386$, $p<0.017$, $r=-0.337$) and all *revisions* in total ($Z=-2.973$, $p<0.003$, $r=-0.421$), all effect sizes being medium. Finally, drawing the comparison between the revision behaviours in the Main Part and

the Conclusion, the only statistically significant difference was observed at Time 2, for the revisions at the *content* level. Specifically, students edited their texts for content more frequently in the Main Part than in the Conclusion of their essays ($Z=-2.190$, $p<0.029$, $r=-0.31$). The effect size was in the medium range. Table 6.18. shows the results obtained from the analyses of the revision behaviours of the UG students.

What is interesting in this data is that, overall, similar to the PG students, the UG students made significantly more revisions in the Introduction of their essays than in the Main Part and the Conclusion. From the analyses of Time 1 data, it is apparent that significantly more revisions targeted at the content and different aspects of the language were made in the Introduction than in the Main Part, i.e., *content* ($Z=-2.229$, $p<0.026$, $r=-0.421$), *vocabulary* ($Z=-2.291$, $p<0.022$, $r=-0.433$), *grammar* ($Z=-3.045$, $p<0.002$, $r=-0.575$), and *total revisions* ($Z=-3.107$, $p<0.002$, $r=-0.439$). The effect sizes for content, vocabulary and total revisions could be identified as medium, and the effect size for grammar as large. As regards the comparison between the revisions made in the Introduction and the Conclusion, more revisions for *content* ($Z=-2.731$, $p<.006$, $r=-.516$), *vocabulary* ($Z=-2.542$, $p<0.011$, $r=-0.480$), *grammar* ($Z=-2.605$, $p<0.009$, $r=-0.492$) and *total revisions* ($Z=-2.731$, $p<0.006$, $r=-0.386$) were made in the Introduction part of the essay. The effect size for the revisions at the content level can be characterised as large and all other effect sizes as medium. No significant differences emerged from the comparison of the revisions made in the Main Part and the Conclusion.

Table 6.18. Results of Wilcoxon Signed-ranks Tests (UG Students)

Measures	Time 1			Time 2		
	Z	p	r	Z	p	r
Introduction-Main Part:						
Content	-2.229	0.026*	-0.421	-0.408	0.683	-0.077
Vocabulary	-2.291	0.022*	-0.433	-0.345	0.730	-0.065
Grammar	-3.045	0.002**	-0.575	-0.220	0.826	-0.042
Spelling	-0.847	0.397	-0.160	-0.175	0.861	-0.033
Punctuation	-1.601	0.109	-0.303	-1.224	0.221	-0.231
Total	-3.107	0.002**	-0.439	-0.282	0.778	-0.040
Main Part - Conclusion:						
Content	-1.922	0.055	-0.363	-2.103	0.035*	-0.397
Vocabulary	-1.915	0.056	-0.362	-0.722	0.470	-0.136
Grammar	-0.973	0.331	-0.184	-1.224	0.221	-0.231
Spelling	-0.596	0.551	-0.113	-1.223	0.221	-0.231
Punctuation	-0.596	0.551	-0.113	-1.350	0.177	-0.255
Total	-1.601	0.109	-0.226	-1.287	0.198	-0.182
Introduction-Conclusion:						
Content	-2.731	0.006	-0.516	-1.783	0.075	-0.337
Vocabulary	-2.542	0.011*	-0.480	-0.785	0.433	-0.148
Grammar	-2.605	0.009**	-0.492	-1.013	0.311	-0.191
Spelling	-0.973	0.331	-0.184	-1.569	0.117	-0.297
Punctuation	-1.099	0.272	-0.208	-2.062	0.039*	-0.390
Total	-2.731	0.006**	-0.386	-1.726	0.084	-0.244

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

If I now turn to the analyses of the Time 2 data, several interesting observations can be made. First, as far as the difference between the revisions made in the Introduction and the Main Part, no statistically significant differences were found on any of the measures. Second, comparing the findings on the writers' revisions in the Introduction and the Conclusion, the single statistically significant observation that could be made from the data is the one regarding the revisions at the *punctuation* level. It has been found that more revisions were carried out in the Introduction part than in the Conclusion ($Z=-2.062$, $p<0.039$, $r=-0.390$), the effect size being medium. Finally, regarding the difference in the revision behaviours in the Main Part and the Conclusion, the only noteworthy finding is on the *content*-level revisions, i.e., significantly more revisions of this type were made in the Main Part of the essay ($Z=-2.103$, $p<0.035$, $r=-0.397$), the effect size being medium.

6.9. Summary

This chapter has presented the results obtained for the analyses of the linguistic variables of lexical diversity and sophistication, syntactic complexity, writing fluency as well as the results of the statistical analyses performed on the location and orientation of revisions made by the L2 writers.

Research Question 1 was as follows: How do the lexical features of argumentative writing change in an intensive EAP programme in the case of a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? The results of the analyses illustrated that the lexical features of students' writing change significantly over the course of four weeks on the EAP programme. The *time*

factor and the *level* factor yielded significant effects for lexical diversity and sophistication measures. It is obvious from the descriptive statistics gathered for the dependent variables that both the PG and UG students showed noteworthy gains on the variables of lexical diversity and sophistication. The three lexical measures which were significantly affected by the *time* factor were *squared verb variation*, *academic word list* and *MTLD*. As regards the difference between the performances of the two groups of writers, the MANOVA results indicated that the essays of the PG group were more lexically varied and sophisticated than those of the UG group. This significant difference between levels was observed on two specific measures of lexis: the *academic word list* and the results of the *latent semantic analyses*. No robust combined effects of the *time and level* factors on any of the measures of lexis were found.

Research Question 2 inquired into how the syntactic features of argumentative writing change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country; b) the UG students who intend to undertake undergraduate studies in the UK. As regards the effects of *time* on the syntactic features of students' writing, this factor has significantly affected the two global measures of syntactic complexity, i.e., *syntactic structure similarity* (the writers started to produce more syntactically homogeneous structures at the end than they did at the beginning of the EAP course), and *modifiers per noun phrase* (more of these syntactic structures were used on the post-test than on the pre-test). No significant differences were found on the syntactic performance of PG and UG students, however, a combination of the *time and level* factors had a statistically significant effect on several measures of syntax specific to the academic genre. The descriptive statistics and the results of the MANOVA show that the

syntactic features of the PG students remained largely unchanged, while the UG group demonstrated significant development with respect to two specific measures of syntax: the use of *relative clauses* and *complex postmodifiers*.

Research Question 3 asked how writing fluency changes in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country; b) the UG students who intend to undertake undergraduate studies in the UK. The MANOVAs conducted on a range of writing fluency measures revealed significant overall effects for the factors of *time*, *level* and an interaction between *time and level*. With respect to the *time* factor, the written output of the students was influenced significantly on the following measures of fluency: *total pause time*, *total writing time*, *active writing time* and *total number of pauses*. By the end of the EAP course, it took the students much longer to write their essays, and they spent more time pausing than they did at the beginning of the course. Interestingly though, the writers made significantly fewer pauses on the post-test. The effects of the level were detected on the measures of *total writing time*, *total pause time* and the measure of *writing speed*. Finally, the combined effects of *time and level* yielded significantly greater gains on fluency measures for the undergraduate students compared to the postgraduate students. Specifically, from Time 1 to Time 2, PG students spent significantly more time writing, pausing and made more revisions while writing than the UG group.

Finally, *Research Question 4* asked how the revision behaviours of: a) the PG students who have already completed their undergraduate degree in their home country and b), the UG students who intend to undertake undergraduate studies in the UK change during an intensive EAP programme when writing argumentative essays. With respect to the orientation of revisions, the only factor that yielded statistically

significant findings was the students' *level*. As can be seen from the results, the students in the UG group revised their writing for punctuation significantly more frequently than the PG students. Importantly, although the overall effect of the interaction of *time and level* factors did not reach statistical significance, there was one variable, i.e., *content*, which displayed a significant difference. While the UG group revised their writing for content much less frequently at the end of the EAP programme than they did at the beginning, PG students demonstrated the opposite trend, i.e., they made more content-oriented revisions from Time 1 to Time 2. Turning to the MANOVA analyses of the location of revisions, there were no statistically significant findings observed for the PG group. With respect to the UG group, the students edited their writing in the Introduction part of the essay significantly less frequently in the post-test than on the pre-test. They made significantly fewer content and grammar-targeted revisions at Time 2 compared to Time 1. It has also been found that both the PG and UG students revised their texts significantly more frequently in the Introduction than in the Main Body and the Conclusion parts of the essay.

CHAPTER 7. Qualitative Results

7.1. Introduction

This chapter provides an overview of the results of qualitative data analyses in relation to my research aims and to the previous studies in the fields of SLA and second language writing research. The themes and subthemes that emerged from the analyses are introduced and discussed in several sections below. Two major themes were identified from the analyses, namely writers' linguistic development and writing behaviours. These themes, in turn, were divided into several subthemes, which are discussed in further detail in this chapter. Thus, the first theme, writers' linguistic development, was analysed in terms of the 1) difficulties encountered by L2 writers; 2) writers' goals and perceived self-efficacy beliefs; and 3) writing strategies. As regards the second theme, L2 learners' writing behaviours, the sub-themes of 1) writing processes and 2) revision behaviours were examined in detail.

7.2. Perceptions of Writers' Linguistic Development

7.2.1. *Perceived Writing Difficulties*

One of the aims of the present study was to analyse specific themes emerging from the data that describe the areas of writing difficulty that ESL students might experience before, during and after studying on an intensive EAP programme and to identify the main factors that influence those difficulties. Thus, this section focuses on the overview of the problems that L2 learners might encounter with regard to their

general and academic writing performance. The first subsection, which is represented by the interview data, is dedicated to the description and analyses of the writing problems that the students experienced before and after taking the EAP course. The subsection that follows contains the analyses of the data collected over a period of three weeks on the pre-session programme, elicited by means of weekly learning journals.

7.2.1.1. Writers' Pre-Course and Post-Course Difficulties

During the interviews conducted at the beginning and at the end of the pre-session EAP programme, the participants were asked to indicate whether there were any aspects of writing that they found particularly challenging. A variety of perspectives were expressed by the respondents who reported on a range of difficulties which they believed prevented them from becoming successful writers. The issues most frequently mentioned by the students were associated with choosing appropriate words and phrases in writing, selecting information from various academic sources, expressing their own voice, showing their own position clearly, being logical and critical while reading and integrating other materials into their written assignments, citing, paraphrasing and summarising academic sources, producing accurate, coherent and cohesive texts alongside some other more minor issues. Table 7.1. below illustrates these areas of difficulty by offering some excerpts from the pre-course and post-course interviews conducted with the participants of the present study.

Table 7.1. Writers' Perceived Writing Difficulties before and after the EAP Course

Area of difficulty	Pre-course interviews		Post-course interviews	
	No of Ss	Examples	No of Ss	Examples
vocabulary	7	"When I want to write something, I just <u>can't find the exact words</u> " (P2). "Unlike a senior writer, I'm always <u>not satisfied with the vocabulary</u> I have, I just know simple words..." (P6).	3	"I <u>need to learn</u> more <u>vocabulary</u> because it is very important" (P9).
critical reading	3	"I <u>can't do some critical thinking about the logic</u> in the passage, that's why I <u>can't get logic</u> in my assignment" (P13).	0	
clarity of ideas	2	"Sometimes I <u>cannot express my point very clearly</u> . The reader might not know what I'm going to pass on" (P7).	2	"I can understand what I wrote, that's fine by me, but it may <u>not be a good article for others to read</u> " (P12).
selecting information from other resources	0		1	"It is <u>difficult</u> for me to <u>select the information</u> from some articles, I think it's the difficult part" (P5).
language accuracy	2	"I think my <u>grammar</u> is very <u>poor</u> " (P3).	2	"Sometimes I <u>get confused about the word forms and grammar</u> "(P6).
academic register	1	"I'm <u>not academic enough</u> and need more exercise" (P4).	4	"Sometimes I just write the essay from my heart, it's <u>too personal</u> maybe I should use the data equally" (P1). "I think my expressions and words are <u>not academic enough</u> in my writing" (P4).
expressing own ideas and drawing conclusions	1	"When I read the article I have to find the main idea. I usually use the words in the article but I <u>cannot come up with something by myself</u> with my own words" (P12).	1	"Now I find <u>it's more difficult to accurately support my ideas</u> " (P7).

use of referencing conventions	1	"I'm <u>not good at</u> writing correct <u>bibliography and references</u> " (P5).	0	
coherence and cohesion	1	"When I'm writing I may have Introduction, Body and Conclusion, But I <u>can't do it coherently</u> ..." (P9).	0	
organisation	0		3	"The structure of my essay has become more clear, especially Introduction, I think my <u>Conclusion is not very good though</u> " (P10).
reading comprehension and speed	1	"I <u>can't understand the information</u> very clearly, so I can't use the information very good"(P10).	2	"It's more <u>difficult to understand others' academic articles</u> " (P7). "It is still <u>difficult for me to read the article in a short time</u> " (P2).

The most frequently recurring problem pointed out by the students at the beginning of the EAP programme was linked to their ability to use appropriate words in writing. As can be seen from the pre-course interviews, half of the participants viewed lack of vocabulary as the main obstacle that hindered them from being efficient English writers. By the end of Week 4, however, the number of students who believed that insufficient vocabulary resources were their main issue in written production more than halved.

The second most common source of perceived writing difficulty that ESL learners appeared to experience with regard to their general and academic writing performance was linked to their lack of ability in critical thinking. The analyses of the interview data show that some students do not have a clear idea of what being critical about the materials they read involves. Nevertheless, the data suggests that student-writers were faced with this problem primarily at the beginning and in early weeks of

studying on the pre-sessional EAP programme, and in the post-course interviews, none of the respondents named critical thinking and argumentation as a challenge. It can thus be inferred that, by the end of a four-week course, they no longer felt that their ideas were illogical and that they could not demonstrate critical thinking skills in their writing.

Equal number of students at pre-course and post-course interviews claimed that they did not feel capable enough of expressing their ideas with sufficient clarity in writing. This problem remained a source of perceived writing difficulty throughout their studies on the EAP programme. In the words of one student: *"Sometimes I cannot express my point very clearly. The reader might not know what I'm going to pass on"* (P7I1).

The qualitative analyses of the interviews also revealed that a small number of students admitted that constructing grammatically correct sentences was one of the issues they were faced with as English writers at the beginning of the EAP course. Some writers commented that they did not think they were capable of producing accurate structures when writing their essays in the target language. Upon completion of their studies on the EAP programme, the number of those students who considered grammatical accuracy as one of their main writing challenges remained unchanged.

A few participants at both pre-course and post-course interviews acknowledged their weaknesses in academic reading. Thus, it might be right to infer that the learners believed that many problems they experienced with reading were closely tied to and, what is more, frequently led to problems with writing. Thus, the specific areas of difficulty the writers experienced on the EAP course included the following: reading comprehension and reading speed, selecting most relevant and

appropriate information from other reading resources, presenting ideas convincingly and drawing conclusions from what they read.

The current study has also revealed that academic register constituted one of the areas of difficulty that some students came across in terms of writing. Only one student stated that they were *"not academic enough and need more exercise"* (P4I1) when the course started. However, it is worthwhile emphasising that the number of students conscious of their own limitations with respect to academic style increased four-fold by the end of the EAP course. For instance, as one of the respondents stated during the post-course interview: *"I don't know much about how to write different kinds of academic articles. I need more help"* (P14I2).

Only one out of 14 students interviewed at the start of the EAP programme viewed using referencing conventions, citing, and paraphrasing information from other sources, as a particularly demanding task. That student made the following comment: *"I'm not good at writing correct bibliography and references"* (P5I1). The post-course interview data, however, shows that none of the respondents thought that they particularly struggled with referencing at the final stage of the course.

Another area of perceived difficulty that emerged as a result of the pre-course interview data analyses was related to writers' ability to use signposting and produce coherent and well-linked texts. When one of the students was asked to name the most demanding aspect of writing essays, they stressed the following: *"When I'm writing, I may have Introduction, Body and Conclusion, but I can't do it coherently"* (P9I1).

The final observation made as a result of the interview data analyses was that the student-writers started to perceive essay organisation as one of the prime sources of writing difficulty as the EAP course progressed. In fact, none of the interviewees

felt they were struggling with structuring their written assignments at the beginning of the programme. Interestingly though, by the end of their studies, nearly quarter of the students recognised one or more aspects of writing structure, e.g., introduction or conclusion, as a limitation. Specifically, one of the students admitted: *"The structure of my essay has become more clear, especially Introduction, I think my Conclusion is not very good though"* (P10I2).

7.2.1.2. Writers' On-Course Difficulties

In addition to the interview data, the learning journals entries collected over the course of three weeks on the intensive EAP programme were examined in order to identify major sources of difficulty that students might have with regard to their general and academic writing performance. The specific questions the students were asked to respond to as part of their learning logs were as follows: *"What did you find was a problem for you in terms of writing?"* and *"What would you like to have done better?"* The areas of writing difficulty identified from student responses and some specific examples of their quotes illustrating each of these areas are set out in Table 7.2.

Table 7.2. Writers' Perceived Writing Difficulties while Studying on the EAP Course

Area of difficulty	Week 1			Week 2		Week 3	
	No of Ss	Examples	No of Ss	Examples	No of Ss	Examples	
vocabulary	3	"My <u>vocabulary is not so big as native speaker</u> of English. When I write an essay, I have to think a lot about the words and sentences" (P1).	4	"I have <u>limited vocabulary</u> " (P6). "I <u>lack vocabulary</u> " (R7). "Sometimes I <u>can't find proper words</u> to avoid monotony" (P13).	3	" <u>Vocabulary is my problem</u> " (P6). "I'm <u>not proficient in using vocabulary, reporting words</u> " (P8).	
critical thinking	3	"I find it <u>difficult to find critical and creative ideas</u> in a short time" (P14).	2	"I <u>don't know how to read critically</u> . I'm trying to use the information from texts more properly" (P11).	1	"There is <u>limitation in my thinking</u> which make essay not comprehensive enough" (P7).	
logic	3	"The ideas are <u>hard to come up with and to organise into logical writing</u> " (P14).	2	"I need to think <u>hard to make my writing logical</u> " (R8).	1	"It's very <u>difficult to find logic</u> between each evidence" (P13).	
clarity of ideas	5	"I <u>don't know how to express my ideas</u> in writing, or I have no idea about the topic" (P6).	2	"I <u>get stuck when expressing my own opinion</u> and ideas in writing" (P12).	4	"Sometimes I <u>don't know how to explain my ideas much clearly</u> and more convinced... My essay is <u>not comprehensive enough</u> " (P7).	
selecting information from other resources	2	"I usually <u>get stuck</u> because I <u>don't know how to find the right idea</u> " (P3). "I find it difficult to select materials I can use in my essay. I want to improve the skill of analysis, which can help me to <u>choose proper information from other articles</u> " (P5).	2	"I <u>don't know how to select information</u> in support of my essay because there are many materials" (P5).	2	"It's <u>hard to select useful information</u> ...I have to make an overall evaluation" (P14).	

use of referencing conventions	2	My <u>referencing is weak</u> - need to improve it (P5).	4	"Referencing is sometimes <u>difficult</u> . I need to review my notes and revise Gold Book" (P5). "I still <u>have some problem with references</u> , especially secondary quotations and Internet sources" (P13).	1	"Many times I <u>don't know how to use references correctly</u> " (P11).
expressing own ideas and drawing conclusions	6	"I <u>cannot present reasonable evidence</u> or support for my stand" (P8). "I <u>don't have enough evidence</u> to support my opinion. Connecting evidence to the topic is tough. I <u>wish my ability to draw conclusions were better</u> " (P12).	6	"Using <u>too much data is a problem</u> . I need to write my own opinions" (R1). "I find it <u>hard to support my argument</u> because the evidence from the textbook are limited" (P6).	7	" <u>Lacking my own idea is still a problem</u> " (P1). "Using every information as evidence is <u>difficult</u> " (P4). "In terms of <u>analyses of information</u> , I usually <u>struggle on it</u> " (P5). "I <u>need to use more evidence from research</u> " (P8).
academic register	2	"My writing <u>is not academic enough</u> " (P4)	2	"I find it <u>difficult to find academic words</u> for my essay" (P3).	3	"Some <u>academic works</u> . I will read more academic writing" (P2).
language accuracy	5	"I make <u>grammar mistakes</u> " (P4). "I usually <u>don't know how to spell the word</u> " (P9). "Another <u>problem I have is grammar</u> " (P10).	2	"My use of words is <u>not accurate</u> " (P8).	2	" I can't write without dictionary and Internet to help me correct my <u>grammar mistakes and spelling</u> " (P9). "I still have <u>a lot of mistakes</u> to correct, especially the ones I always make but would rarely notice or realise them" (P12).

coherence and cohesion	3	"I do not know how to organise sentences" (P3). "I'm still confused about how to link two paragraphs" (P5).	2	"I need to pay attention to cohesion" (P8).	0	
speed of reading	2	"My reading speed is a little slow" (P10).	2	"I spend more time on reading data" (P9).	1	"My reading speed is slow" (P10).
reading comprehension	1	"Sometimes I can't understand the questions very clearly" (P10).	1	"Sometimes I can't understand the materials very clearly. If the topic is difficult and unfamiliar, I have some difficulty about understanding the topic" (P10).	0	
organisation	0		1	"I find it difficult to write Introduction and summary because they look actually the same and it's hard and boring to write it twice" (P7).	4	"I get stuck when I organise the material" (P13). "I don't know how to make the Introduction and the summary better" (P11).

From the data represented in the table above, it is apparent that the most problematic aspect that the L2 writers believed they were faced with while producing their assignments was associated with the ability to support their own ideas with solid evidence. Just under half of the respondents in the first two weeks and half of the respondents in Week 3 of the EAP programme reported that they considered establishing their own voice in writing and making inferences from what they had read particularly demanding. As emphasised by one of the students: *"I don't have enough evidence to support my opinion. Connecting evidence to the topic is tough. I wish my ability to draw conclusions were better"* (P12LJ1).

The analyses of the learning journal data throughout the three weeks have shown that the L2 writers found it quite difficult to express their opinions clearly in writing. This also accords with earlier observations made with the aid of the pre-course and post-course interviews. One of the most interesting findings to emerge from the learning journals data was concerned with the students' ability to engage in critical thinking. The learning journals data from Table 7.2. can be compared with the interviews data from Table 7.1. It can be inferred from both data sets that upon completion of the EAP course, the students felt that they were more confident in their ability to think and write critically. The analyses of the data show that only one student out of 14 (as opposed to three students in the first week of the programme) still thought their writing was weak because it lacked argumentation. A very similar pattern was observed with regard to the students' difficulty in producing logical arguments in writing. As can be seen from the learning journals' data, the number of participants who considered logic as one of the main challenges in their written performance went down from three (in Week 1) to one person (in Week 3).

Reflective logs have also revealed that some learners might tend to perceive writing in English as overwhelming due to their lack of general and academic vocabulary in the target language. Roughly a quarter of the participants across all three weeks believed that inappropriate word choice prevented them from succeeding as second language writers because it made their writing repetitive and monotonous. To exemplify, in the middle of the EAP course, one of the students stated: "*Sometimes I can't find proper words to avoid monotony*" (P13LJ2).

Another area of writing difficulty named by a few participants while studying on the EAP course was academic register. This result largely agrees with the interview findings in that it probably implies that more students began to understand and value

the significance of adhering to academic writing style. Apparently, they understood how challenging it was and started to set some specific goals to aim for in the short and long term.

The results of the learning journals analyses are broadly consistent with the interview data, which confirmed that the students did not initially realise how demanding structuring an academic essay could be. In fact, in Week 1, none of the learners pointed out the 'organisation' of the text as a major source of perceived writing difficulty. There was a gradual increase in the number of students who considered essay structure a challenging aspect of writing. It might be worth noting that those students acknowledged that they learned to structure some parts of written assignment but still found it difficult to master other parts. For example, as one student admitted: *"I don't know how to make the introduction and the summary better"* (P11LJ3).

In Table 7.2., there is an obvious decreasing trend in the number of writers who regarded coherence and cohesion at sentence and paragraph levels as a challenge in their written production. It can be clearly seen that while, by the end of Week 1, nearly quarter of the participants (3 out of 14) felt their essays lacked progression of thought and signposting, none of the respondents in Week 3 mentioned cohesion as their difficulty in writing.

With respect to general and academic reading areas such as reading comprehension, speed of reading and selecting information from other resources, approximately the same numbers of students mentioned these in their reflective logs as factors contributing to their dissatisfaction with their own writing performance throughout the three weeks of doing the EAP course. The analyses have shown that in

the first two weeks, only one student reported that they struggled with making sense of the information read in academic sources. To illustrate, in one of the journal entries, they claimed as follows: *"Sometimes I can't understand the materials very clearly. If the topic is difficult and unfamiliar, I have some difficulty about understanding the topic"* (P10LJ2). However, having been asked about their weaknesses in Week 3, the students did not see reading comprehension as a problem affecting their writing performance anymore. Regarding referencing conventions, at the end of Week 1, this aspect of academic writing was not perceived as a major limitation by the participants. Surprisingly, the number of students who saw this as an issue doubled by the end of Week 2, but then decreased considerably by the end of Week 3 of study on the EAP course. In fact, just one student stressed that they found it difficult to *"use references correctly"* (P11LJ3).

7.2.2. Writers' Goals and Self-Efficacy Beliefs

This section is devoted to the analyses and discussion of the writers' goals and self-efficacy beliefs throughout their participation in the pre-sessional EAP programme. First, it offers an overview of the students' goals prior to the start of the programme, as elicited by means of the pre-course interviews. The next subsection moves on to describe the writers' goals while they were doing the pre-sessional course. These data have been collected with the aid of three learning journal entries completed by the research participants in the first three weeks of the EAP programme. The third subsection, which is dedicated to the description of the writers' goals upon their completion of studies on the pre-sessional EAP course, contains the findings of the post-course interview data analyses. The subsection that follows is concerned with

the description of the writers' perceived self-efficacy beliefs before, during and after the EAP course.

7.2.2.1. Writers' Pre-Course Goals

In their first interview session, conducted at the beginning of the EAP programme, in response to the question: *"What kind of goals or aims do you set in terms of improving your academic writing skills?"* a range of answers were elicited from the participants. Table 7.3. illustrates the distribution of students' answers to this particular question.

Table 7.3. Students' Goals before the EAP Course

Goal	Pre-course interviews
improve logic	5
improve critical thinking	3
enrich vocabulary	3
make writing style more academic	2
make writing more native-like	2
learn to use referencing conventions	2
write with more precision	1
improve writing speed	1
improve ability to synthesise	1
improve cohesion	1
learn to produce longer texts	1
make ideas convincing /supported with evidence	1

Five student-writers out of 14 (participants 1, 3, 7, 8 and 13) claimed that their ultimate aim was to make their writing more *logical* by the end of the EAP programme. As indicated in the following two excerpts: 1) *"My essay...a little bit messy, it lacks logic...maybe my essays would be more logical in the future"* (P111); 2)

"When I write an essay, I just put some information together. Sometimes it's out of order, maybe not logical enough. I want to be more logical after the study" (P8I1).

The second most common aim reported by three out of 14 students, as found from the data analyses, was the writers' urge to develop their critical and independent thinking skills, which as one of the respondents felt *"most Chinese students cannot have"*(P7I1). As can be seen from the interview data, approximately one-quarter of the research participants recognised the value of critical thinking and expressed dissatisfaction with their ability to make inferences and draw conclusions from what they have read in academic papers. To illustrate, during the pre-course interviews, one student pointed out the following: *"I think my concluding abilities are not very good. I usually use the words in the article but I can't come up with something by myself with my own words"* (P12I1).

Three students out of 14 (participants 8, 10 and 14) acknowledged that their primary aspiration was to enrich their vocabulary in English as a result of taking the EAP course. This aim is reflected in the following comments of the students: 1) *"I hope my vocabulary will be better"* (P8I1); 2) *"I think the first thing is to expand my vocabulary"* (P10I1).

Interestingly, only a small number of learners (two out of 14 respondents) recognised the importance of native-like performance and expressed their desire to be able to produce texts which would be as accurate and fluent as L1 English writers'. The following quotations illustrate this aim: 1) *"I should look at how native speakers write and learn how to write"* (P2I1); 2) *"I'm trying to write more like native speakers"* (P6I1).

Another target, as revealed over the course of the interviews, was students' willingness to make their writing style more academic and improve their use of academic referencing conventions. Specifically, these goals were stated by only two out of 14 participants and can be illustrated in the following comments: 1) *"I want to reasonably use other people's words, because I always forget to have the quotation marks and the references"* (P4I1); 2) *"I want to learn to write the bibliography correct and references better because I'm not good at it"* (P5I1).

The analyses of the pre-course interview data helped me to identify a set of other goals, as expressed by only individual students. Specifically, one participant claimed that they aim to *"make writing more connected, linked [and] cohesive"* (P1I1). In other words, they considered coherence and cohesion essential characteristics of academic writing. It is worth pointing out another goal mentioned by one of the students, i.e., ability to write with precision and clarity: *"I will find exact words to express what I want to say"* (P3I1). Interestingly, another participant was not satisfied with their writing pace and expressed their goal as follows: *"I want to increase my writing speed- I write things very slowly, especially when type on a computer"* (P4I1).

7.2.2.2. Writers' Goals on the EAP Course

If I now turn to the analyses of the data elicited by means of the learning journals collected from the learners, several noteworthy observations could be made. The themes that emerged from the journal entries over the course of three weeks on the EAP course are presented in Table 7.4.

Table 7.4. Students' Goals while Studying on the EAP Course

Goal	Week 1	Week 2	Week 3
make writing style more academic	8	4	7
improve organisation and clarity of expression	4	7	6
improve language accuracy	3	1	2
make writing more native-like	2	1	0
make ideas convincing /supported with evidence	2	2	0
improve critical thinking	1	2	0
enrich vocabulary	1	0	1
learn to use referencing conventions	0	2	0
improve syntactic complexity	1	1	0
improve writing fluency	0	1	0
improve writing skill in general	0	0	2

The most common goal, as reported by the participants, was their willingness to modify their style of writing in English. It can be seen from the collected data that approximately half of the participants felt their writing was not academic enough and needed major improvement. The majority of those students maintained the same goal during the whole period of studying on the EAP/Study Skills programme. To illustrate, at the end of Week 1, one of the respondents explicitly stated their lack of confidence in their own ability to write in academic style: *"I want to write more academic paper"* (P1LJ1). Comparing the goals set by the same participant in the next two weeks of the EAP programme, the following changes could be observed. By the end of Week 2, the student felt they were able to make some progress, specifically in their ability to cite academic sources; however, they still realised there was some room for improvement: *"I want my essay to be more academic. I have achieved a little, but not all. Now I can use the data that I read and add references"* (P1LJ2). Similarly, by the end of Week 3, they maintained the same goal having felt that they achieved even more than in the previous week: *"I want to write a real academic essay. Now it completes at half level. There is still space for me to achieve it"* (P1LJ3).

The second most common goal that emerged from the learning journal entries was the students' interest in making their essays better structured and the ideas more clearly expressed in writing. With the progression of the course, more students seemed to have realised the significance of clear organisation of their essays, and, by the end of Week 2, half of the participants viewed this as their primary objective. For instance, one of the students indicated that their goal was to *"make their writing well-organised and clearly explained"*. They also added that in order to achieve this aim, they would *"need more practice"* (P2LJ2).

A small number of students (participants 2, 3, 6 and 14) realised they have to reduce the number of grammatical errors in their writing and identified improving language accuracy as their primary aim while studying writing on the EAP programme. Importantly, all four respondents acknowledged that they need to complete as many written assignments and tasks as possible in order to achieve a desired outcome. For example, talking about this issue, one student-writer indicated the following: *"I need to spend more time on practicing writing to avoid mistakes"* (P14LJ1).

In addition, two students acknowledged that their aim was to make their writing more native-like. For instance, one of them commented as follows: *"My goal in terms of writing is that I can use proper word and sentences, like native speakers do, in my essay and I can substitute some words and avoid repeat"* (P8LJ1).

Learning how to make their writing more convincing and finding the right balance between demonstrating their awareness of the ideas reported on in other studies and using their own ideas was seen as an essential part of the EAP programme curriculum, but only by a small number of participants. As indicated by one student-

writer: *"I try to achieve good organisation and clear arguments with enough evidences. I think it will be better if I reference more materials next time"* (P6LJ2).

Another goal set by some students was focused on developing their critical thinking and argumentation skills in writing. Having completed half of the EAP course, the students began to realise that they do not experience as many difficulties with critical thinking as they did when they began their studies. Thus, as one of the students pointed out: *"By the end of Week 2, I have achieved my goal to some extent. Now I feel more comfortable with my writing. I still have to improve my critical thinking without tutor's guidance"* (P13LJ2).

7.2.2.3. Writers' Post-Course Goals

Students' beliefs about their writing goals changed considerably over the course of four weeks on the EAP programme. Table 7.5. summarises the post-course goals as acknowledged by the research participants.

Table 7.5. Students' Goals after the EAP Course

Goal	Post-course interviews
make writing style more academic	6
improve lexical complexity and variation	2
improve language accuracy	2
improve logic	1
make writing more native-like	1
make ideas convincing/supported with evidence	1
improve organisation	1
learn to write in different genres	1
improve writing skill in general	1

The interview data have shown that, in contrast to the beginning of the EAP programme, when more than a third of the students identified making writing more logical as their central objective, only one student still considered it to be a priority at the end of the course. Importantly, half of the participants (participants 1, 2, 3, 4, 5, 12 and 14) viewed making their writing style more academic as their ultimate goal with regard to writing skills development. Some students' comments given below illustrate this goal: 1) *"I can't advertise my idea in the academic way. I think every idea need to be packaged in the academic style"* (R4POST-22); 2) *"I want to be more academic and formal in writing in English"* (P12I2).

At the pre-course interviews, none of the participants claimed they needed to achieve higher accuracy and lexical sophistication; however, several students identified this as their main end-of-course aim with regard to writing skills advancement. For instance, one student commented as follows: *"My goal is to reduce my grammar mistakes in my essay and to improve my vocabulary-some of my vocabulary is so easy for academic writing"* (P6I2). Similarly, another student identified syntactic complexity and lexical variation as their major writing objectives. This can be inferred from the following quotation: *"I do not have so much variety of language. I use the one pattern, but I want to say the sentence in another way"* (P13I2).

Only one participant out of 14 indicated that writing and thinking in a native like way constitutes their main aim when it comes to fostering their academic writing skills. Specifically, they stated: *"My aim in writing is to learn to write like English speaker. I want to learn what is English speakers' way of thinking"* (P8I2).

Whilst during the pre-course interviews, nearly half of the participants mentioned that making writing logical constitutes one of the central aims with regard to their writing skills improvement, during the post-course interviews, only one participant (participant 3) indicated logic as their ultimate objective.

The comment made by one of the participants shows that improving the organisation of their written texts constitutes the main goal they have in terms of their writing skills advancement: *"My aim is to have a good clear structure and organisation for other people to be able to read it (P9I2)*. Willingness on the part of students to become aware of and be able to write in different genres can be viewed as another writing objective. In the following extract from the interview, one of the participants mentioned the following: *"I hope to learn more about how to write different kinds of articles. I'm curious about that and also I feel a little afraid because I don't know much about how to write different kinds of academic articles" (P14I2)*. Finally, in the comment given below, one individual expressed their ultimate goal in very broad and general terms, not singling out any specific components that they were interested in developing and emphasising that they were interested in advancing their writing skills as a whole: *"Writing better is my goal and I always continue to study hard and come to achieve my goal" (P14I2)*.

7.2.2.4. Writers' Perceived Self-Efficacy Beliefs

The second set of analyses examined the changes in the L2 writers' self-efficacy beliefs over the course of four weeks of studying on the pre-session course. The interviews conducted at the beginning and at the end of the EAP programme and the three sets of learning journal entries collected throughout the programme helped to

reveal some interesting observations with regard to students' perceptions and feelings about their own progress as academic writers. Having been asked "*How do you see yourself as a writer?*" and "*How do you feel when you write in English?*" the students gave a wide range of replies which are all summarised in Table 7.6.

As can be seen from the analyses of the pre-course interviews, the majority of participants (11 out of 14 participants) were not satisfied with their own written performance in English. Thus, it could be inferred that writing constituted a challenge for them and resulted in the feelings of anxiety and confusion. For example, one of the interviewees commented as follows: "*I'm not good as writer. Every time I write, I feel upset and don't know what to do and how*" (P3I1). The remaining three participants (participants 4, 6 and 14) did not think their writing skills were particularly weak and highlighted some of their strengths as English writers, such as the basic knowledge of academic essay organisation and the ability to use the language with fluency and coherence. As stated by one student: "*I'm not really good at writing, but I can use the structures and organise writing well; I can use linking words*" (P14I1). Turning to the findings of the post-course interviews, a very different pattern was observed.

All 14 participants acknowledged that their writing skills improved considerably from the beginning to the end of studying on the pre-sessional EAP course. It is important to underline different degrees of writers' confidence in their own development as academic writers. Four students (participants 1, 5, 9 and 13) claimed that they notably advanced as writers over the duration of the EAP course. To exemplify, one of the participants indicated the following: "*I made a big progress in writing. Now I can write very clearly. My writing has become more smooth*" (P9I1). The rest of students pointed out that they noticed some improvement in their writing ability compared to four weeks previous; however, they were still slightly anxious and

concerned about certain aspects of their written performance. To illustrate, one of the interviewees expressed a belief that *"as a writer, [he] can organise [his] essay well"*. He then added that though he *"may not be very good at language skills, but [he is trying] to make the best of the whole essay organisation"* (P612).

Table 7.6. Students' perceived self-efficacy beliefs before and after the EAP course

Ppt	Pre-course self-efficacy beliefs	Post-course self-efficacy beliefs
1	Writing is the weakest among language skills.	I have improved my writing skills a lot. I can analyse the data from reading materials and divide my essay into three parts: Introduction, Body and Conclusion.
2	I'm not a good writer. I know almost nothing about it.	I have become better at writing, not as nervous as before the EAP. I feel more confident and easier to write in English.
3	I'm not good as writer. Every time I write, I feel upset and don't know what to do and how.	I feel better when writing. I'm not struggling with understanding the main points; finding exact words, and organising the essay.
4	I can write fluently, but my writing is not academic enough.	I don't think I'm an outstanding writer, but I can handle the topic. I feel easier when writing. I can do everything that the teacher asks me to do.
5	I'm not good at writing in English.	I think my writing is better than four weeks ago. I improved a lot in the use of references.
6	My organisation is not bad, but I'm not satisfied with vocabulary, grammar and sentence structure.	As a writer, I can organise my essay well. I may not be very good at language skills, but I try to make the best of the whole essay organisation.
7	I'm not a good writer in English.	I feel more confident. I can do better now than before.
8	I have only some basic knowledge and skills about writing.	I learnt how to write an essay, but I'm still beginner in writing.
9	I'm not a good writer.	I made a big progress in writing. Now I can write very clearly. My writing has become more smooth.
10	I don't think I'm a good writer. My English is not very good.	I got some improvement, but I still have some problems, especially the structure has become more clear in the Introduction.
11	I find it difficult to write. I often get confused.	I feel better than before because I have practiced my writing and got some new knowledge about how to write well and my writing is more academic now.
12	I'm not good at writing.	I feel more confident when writing, write more fluently and have more proficiency.
13	I'm a bad writer. I always feel stressed when writing. Also, I'm a bad reader.	I feel more comfortable and very confident. I think I'm much better than before.
14	I'm not really good at writing, but I can use the structures and can organise writing well; I can use linking words.	I have learned more about academic style. I learned how to take notes. I know how to reference. I know what can be included in a Conclusion.

Over the course of three weeks, respondents were asked to comment on their own vision of themselves as writers. The summary of the responses elicited by means of the learning journals is represented in Table 7.7. The data shows an obvious trend indicating students' increasing confidence in their own writing ability. It is apparent that at the end of Week 1, the students experienced a range of difficulties with regard to their performance as English writers. Specifically, approximately third of the students (participants 1, 5, 6, 8 and 10) claimed that they encountered these issues primarily because of the major differences that exist between their native language and English. As suggested by one of the writers: *"It is very different from writing in Chinese. I need to translate Chinese into English"* (P1LJ1).

A common view amongst the surveyed students in Week 1 was that they felt uncomfortable, nervous, and lacking the skill when they write in English. As regards the students' self-efficacy beliefs in Week 2 of the EAP programme, over two thirds of the students (participants 1, 5, 6, 8, 9, 10, 12, 13, and 14) indicated that they started to feel more comfortable and gained in confidence as the course progressed. It is worth pointing out that there were some students (participants 2, 3, 4, and 7) who believed that they had not made any progress in terms of their writing proficiency and still experience anxiety and confusion. Regarding the writers' self-efficacy beliefs, by the end Week 3, 90% of the students felt relatively confident about their own academic writing ability. However, a small number of students (participants 7 and 12) persisted that they were getting confused about certain features of writing, such as the use of academic register, ability to paraphrase, summarise and evaluate sources and some other aspects of writing addressed on the EAP course. By the end of the course, despite some apprehension experienced by the minority of students, most of them

noticed major improvement in their written performance and felt positive and confident about their learning progress.

Table 7.7. Students' perceived self-efficacy beliefs during the EAP course

Ppt	Week 1	Week 2	Week 3
1	It is very different from writing in Chinese. I need to translate Chinese into English.	I feel a bit easier when I write in English.	I can now handle basic skills of English writing.
2	I feel worried and nervous.	I feel confused and empty-headed.	I feel non-inductive.
3	I feel upset.	I feel confused about how to organise writing well.	I feel better compared with Week 1.
4	Sometimes I feel very difficult to carry on writing.	I feel writing in English is neither difficult nor easy.	I can express the words that I want.
5	My writing is not effective. My fluency in English is worse than in Chinese.	I feel more confident in terms of academic writing after having EAP classes and useful tutorials.	I feel more confident in academic writing, but still confused about writing emails and text messages.
6	I do not feel confident about my writing. Thinking in Western way is more difficult in English writing.	I feel easier when I structure the whole essay. I can use more various words to express the same meaning.	I feel better than in the last three weeks. I feel the structure is clearer than before.
7	I get confused about how to use English accurately and make sentences diverse.	I still struggle a bit with such things as Introduction and writing a summary.	I struggle a bit with changing words and paraphrasing.
8	I cannot express what I want to say because I don't know how to form ideas in English.	Compared to last week, I pay more attention to citation and paraphrasing, but I think I'm not skilful yet.	Writing is still difficult for me. However, I like it more now because I think I made progress.
9	I don't know how to write. I always feel anxious and powerless.	I feel better than before; I started to get used to essay writing in English.	I feel my writing is more fluent than before.
10	I feel English is very different from Chinese. Learning English is easy but being proficient is hard.	My writing is getting more and more smooth, but there are still some grammar mistakes.	My writing is as good as last week. A lot depends on the topic and on how familiar it is.
11	Writing is so difficult and uncomfortable.	Writing becomes more and more difficult.	I feel at ease this week.
12	I feel a little nervous when I write academic essay or assignment.	Writing has become more fluent. I can express my own ideas in English.	I feel more confident when I write in English. Sometimes I still feel anxious if I cannot use some words or phrases.
13	I feel stressed and unconfident. I keep using the same words, phrases and patterns every time.	I feel more comfortable and confident when writing. Even though I still encountered some language problems, I managed to solve them.	When I know well about the content I read, I feel easy and relaxed when writing.
14	I always doubt about whether the sentences I write are suitable. Also, the structure of English writing confuses me.	I feel confident about the structure and organisation of my writing. I have become more familiar with the way referencing works. I have to read more and learn to do the writing task better next time.	I feel less confused about which words or expressions are academic. I know how to cite and use evidence from other materials to support my own ideas.

7.2.3. Writing Strategies

The results of the analyses have shown that all participants employed a range of strategies, which could be categorised as follows: doing extensive reading, getting substantial general and academic writing practice, keeping a learning journal or reflective log, using monolingual dictionaries and other reference materials, memorising vocabulary, correcting and revising their own writing, watching television in English, doing speed writing exercises, and using various social strategies.

One of the questions the participants were asked as a part of the interviews held at the start and at the end of the EAP programme was *How are you trying to improve your writing in English?* The analyses demonstrated that every learner had their own preference with regard to the strategies they would apply to help them foster their general language and academic writing performance, and they appeared to be using those strategies in many different ways. Table 7.8. summarises the pre-course and post-course interview data and offers some specific examples to illustrate each strategy.

The most interesting observation was that both at the beginning and at the end of the EAP course, the participants pointed out the strategy of extensive reading as the one of the most efficient ways to improve their writing. Having come to the final stage of their studies on the pre-sessional programme, most participants (11 out of 14) in the current study emphasised that reading widely, including reading of the academic papers related to their major, was particularly conducive to the development of their writing skill. As indicated by one student: *"I read more, since I'm studying Accounting and Finance, I read some finance news and other articles from journals related to accounting and finance"* (P7I2).

The second most prevalent strategy, i.e., 'doing more writing', was mentioned by eight out of 14 participants at the pre-course interviews who admitted that getting substantial writing practice assisted with the improvement of their academic writing skills. The students argued that doing as much practice as feasible was one of the most effective ways of facilitating their own writing. It should be noted that by the end of the EAP programme, the number of students who perceived writing regularly as a vital learning strategy, decreased four-fold.

One other writing strategy related to the use of monolingual dictionaries and phrasebooks. In the interviews, less than a quarter of students indicated that they extensively used the English language and study skills reference resource used on the EAP programme, intended to help them to learn about the organisation and register of academic writing assignments, amongst other things.

During the pre-course interviews, less than a quarter of participants (three out of 14) pointed out 'imitating writing style' as one of the techniques that they applied on the EAP programme and were intending to use when they commenced their main degree studies at the university. The students stated that they found academic papers from books and journals that had a clear structure and adhered to academic writing conventions and imitated this format to frame their own writing. As one of the writers acknowledged: *"If it's a good sentence in a book or model essay, I'm just copying it"* (P9I1). It is worth emphasising though that at the post-course interviews only one student indicated that they copied the academic style of other writers and integrated it into their own assignments.

Another type of writing strategy deployed by one participant at the beginning and two participants at the end of the EAP programme was the memorisation of

vocabulary. The results suggest that some students frequently memorised words, sometimes memorised phrases, and less frequently memorised complete sentences. They seemed to believe that learning and reciting vocabulary by heart would result in successful written performance in English. One participant commented as follows: *"I want to keep my habits of memorise the English words, the vocabulary, repeat and remember the formal vocabulary"* (P4I2).

One more strategy only a small number of students, mentioned by one student at the pre-course and two students at the post-course interviews, said they used to be involved in checking and reviewing what they have written. This seems to contradict the findings of the interview phase of the research where the participants reported going back and thoroughly revising their essays for language accuracy.

There were two other writing strategies which seemed to be less common since they were reported by only a very small number of writers in this study. One of these strategies included watching TV programmes in English without subtitles. Only two students at the beginning of their studies in the EAP programme believed that watching TV programmes in the target language would be particularly helpful for all language skills development, including writing. However, interestingly, during the end-of-course interviews, none of the students mentioned this learning strategy as a way to develop their writing skills. The second relatively unpopular learning strategy mentioned by only one participant at the beginning of the EAP course can be identified as speed writing. The student claimed that choosing a topic prompt and responding to this prompt within the shortest possible time assisted them considerably with their writing skills advancement.

It is important to point out another set of writing strategies which appeared to facilitate students' general and academic writing skills. These can be defined as social strategies. The results of the interview data in the current study have clearly demonstrated that the majority of learners, ten out of 14 at the beginning and 12 out of 14 at the end of the EAP programme, highly appreciated tutor feedback and tended to address their teachers whenever they needed to get further clarification, explanation or some other kind of support with any specific aspect of their writing. Thus, as indicated by one of the students: *"I will ask my tutor to check the grammar for me. They may give me some suggestions and I will make a note of these suggestions"* (P14I1).

Table 7.8. Students' Writing Strategies Used before and after the EAP Course

Writing strategy	Pre-course interviews		Post-course interviews	
	No of Ss	Examples	No of Ss	Examples
extensive reading	8	"I <u>read more</u> , reading is very important to writing. I <u>read more academic papers</u> . I <u>improve my English by reading the newspapers every day</u> " (P4).	11	"I <u>read more academic papers</u> . My major is economics so I will <u>read more essays, papers or other materials related to my subject</u> " (P1). "I'm trying to <u>read more English books...</u> " (P3).
doing more writing regularly	8	"Write more...because practice makes perfect...I think just <u>do more writing</u> -it is the quickest way to improve it" (P1).	2	"We will be required to write something on my degree programme, and I will just do my homework and <u>improve through practice</u> " (P13).
keeping a diary	2	"...every day <u>write some diary</u> ...I will write about all the things that happened to me today" (P3).	2	"I'm just trying to keep a diary..." (R14).
imitation	3	"I read more academic articles...and <u>write something similar...but not the same</u> I hope next time I can use the phrases and words in that article and will become my own" (P12).	1	"...I will try to write something, maybe <u>imitate a good essay</u> , I will try to <u>imitate the writing style...</u> " (P14).

using dictionaries and reference books	3	"I <u>refer to some reference books</u> such as how to write, how to make progress with your writing. <u>Gold Book is very good for me</u> to make me write better because in such books the author tells us how to write, organise your ideas, use the right vocabulary, the right academic style" (P14).	2	"...If I need some advice to write I will <u>use the Gold Book as a source</u> " (P11).
watching TV without subtitles	2	"... <u>watch TV drama without subtitles</u> " (P4).	0	
memorisation	1	"... <u>recite some vocabulary</u> and read more essays and imitate the style and practice-write more" (P8).	2	"...I will <u>remember the whole sentence</u> because it is easier than remembering 1 word on its own" (P9).
checking and revision	1	"...writing a lot of times and <u>review what you wrote before</u> . I think <u>the review</u> is the most important step" (P5).	2	"... <u>correct similar mistakes</u> from the previous writing" (P6).
speed writing	1	"I give myself a topic and test myself- <u>respond to this topic in the shortest time</u> , both <u>in speaking and writing</u> . The time of thinking and writing will be controlled by the clock" (P4).	0	
social strategies: a) asking tutor	10	"I expect to <u>get some help from my tutor</u> , some advice on how to write something that the readers will be interested in..." (P12).	12	"I think <u>feedback was very useful for me</u> . Every time my teacher told me every mistake in my assignment and told me how to improve it...After the tutorial, I will read the assignment again and <u>find some advice from my teacher</u> ..." (P3).
b) asking friends and classmates	4	"I always... <u>send my essay to my friends</u> . Some friends' English is very good. <u>They do like to help me</u> correct my grammar mistakes and they <u>will give me some suggestions</u> about my opinion" (P4).	2	"Sometimes I don't have enough ideas and I <u>will ask my classmates</u> ...sometimes I don't know how to write about the topic and <u>my roommate</u> who studies for foundation in Britain, her English is better than mine, and she <u>will help me</u> " (P10).

7.4. Learners' Writing Processes

7.4.1. Writing Processes before and after the EAP Course

This section discusses writing processes in which ESL students partake when planning and composing their texts. I begin with the analysis of the writing processes elicited by means of pre-course and post-course interviews. In order to closely examine the writing processes of the ESL students before taking the EAP course I asked the participants several questions as part of the pre-course interviews: *1) Have you got your own method of writing in English?* *2) What steps do you usually follow when writing?* and *What do you do first, second, third?* Similar questions such as *1) Have your methods of writing changed?* and *What steps do you follow now when you write in English?* were asked during the post-course interviews to investigate the changes that took place in students' writing processes over the course of four weeks of studying on the pre-sessional EAP programme. What follows in Table 7.9. below is a summary of the participants' planning and composing strategies employed before and after taking the EAP course. As can be seen from the table, a number of writing strategies were identified as a result of the analyses. These included some *cognitive strategies* such as drafting (producing the first draft and the final draft of the assignment), revising and editing, *metacognitive strategies* such as planning, *social strategies* such as getting feedback from tutors and peers, and *search strategies* such as using the library and the Internet to look for information and using other people's writing as a model for their own.

Table 7.9. Students' Writing Strategies before and after the EAP Course

Writing strategies before the EAP course	No of Ss	Writing strategies after the EAP course	No of Ss
identifying key words in the essay title	2	identifying key words in the essay title	5
forming one's own position before reading and selecting information	4	analysing and understanding the essay title	7
making a vague essay plan in one's mind	6	writing an outline before writing an essay	10
searching for relevant reading materials	4	searching for relevant reading materials	8
doing reading mainly from one source	7	doing extensive reading before forming one's own position	10
selecting useful information	7	selecting useful information	7
working on the first draft of an essay	9	working on the first draft of an essay	14
writing an introduction prior to other sections of an essay	5	writing an introduction after all other sections of an essay	8
editing writing for language use and mechanics first	7	revising writing for meaning before editing for language use and mechanics	10
writing the final draft	12	writing the final draft	14

The results of the current study provide important insights into the writing processes and strategies that students claimed to employ before and after taking a four-week pre-session course. The interview data suggest that while certain strategies remained largely unmodified throughout the students' study on the EAP programme, others were transformed substantially by the end of the programme. One of the most important findings made as a result of the interview data analyses was that the composing processes of the ESL writers were becoming much less linear and more cyclical in nature. In fact, during writing, as reported by the students themselves, they were constantly involved in planning, revising and editing of their essays.

The analyses of the post-course interviews have indicated that before starting the actual writing process, a large number of students pointed out that they were engaged in planning of the content and structure of their assignments. As mentioned

by one participant: *"Before I would write my essay from beginning to the end, but now I think I should make an outline first, write an Introduction and then think of 3-4 key topic sentences...and finish each paragraph and last I will complete my summary"* (P11I2). In fact, before taking the EAP course, many students did not consider writing an outline of their assignments and had only a vague sketch of ideas in their mind, without putting them down on paper.

It has also been inferred from the interviews that students' writing strategies have changed considerably. Before doing the EAP course, as acknowledged by a number of students, they did not do any particular preparation for writing. The analysis shows that upon completion of the programme, the student-writers began to follow certain steps before they did the actual writing. One participant when being interviewed stated as follows: *"I read all of the articles first, look up in the dictionary, take notes, put my claim and evidence and get organised to write the assignment. Before EAP course, I always did writing in a limited time, just sit and write"* (P9I2).

It might also be worth pointing out that the sequence of students' writing changed considerably. At the beginning of the pre-sessional programme, approximately one third of the participants began their composing processes by writing the introduction of the assignment. However, with the progression of the EAP course, the students began to realise that there are advantages of writing the introduction last. Thus, one of the writers stated: *"I start to write with body paragraph, then I write the introduction, I started to do so on the EAP programme...sometimes I add new things in the body paragraphs"* (P7I2).

Before the EAP programme commenced, a number of students underestimated the importance of having a clear understanding of the essay topic and task title prior to

searching for and selecting relevant reading materials. Having studied on the programme for four weeks, the students began to realise the importance of analysing the key words in the assignment title as the first stage of the writing process. As indicated by one of the participants: *"Now I know, when I write an essay I first understand the title, then I will find the key words..."* (P3I2).

More than a quarter of the participants stated that prior to the EAP course they were less confident in their ability to choose supporting information which would act as evidence for the claims they make in writing. They also emphasised that studying on the pre-sessional programme enabled them to use evidence from multiple reading resources, and they learnt how to select useful information: *"Before I didn't research too much information from the articles, I just focused on one article...overtime, I read more information and learn how to select information and I know how to contradict the author's idea or claim"* (P5I2).

Another finding of the research was the fact that the L2 writers appeared to review and revise their texts throughout the writing process. The main difference detected in the course of the analysis is that while at the beginning, most students seemed to modify their texts at the local level, focusing predominantly on linguistic aspects of writing, such as grammatical accuracy, vocabulary, spelling and punctuation, by the end of the EAP course, the focus of their attention shifted to a more global level, such as the content and organisation of their writing.

The current study also found that, by the end of the EAP programme, the student-writers began to read extensively, thoroughly selecting information from a range of academic sources before forming their own opinion. Thus, one participant noted as follows: *"Every time I do reading first and pick up the useful information and*

mix it with my idea. But in the former, every time I write an essay, firstly, I form my own opinion, and then find the information and read them. Now I read first, after- I have my own idea" (P4I2).

7.4.2. Revision Behaviour before and after the EAP Course

As a part of the pre-course and post-course interviews, the research participants in the study were asked the following questions: *Do you have your own methods of checking and revising what you have written?* and, *Have your methods of revising and checking your assignment changed? If so, how?* The results of the analyses clearly demonstrated that the majority of participants engaged in one or more forms of revision during the writing process, although the number of changes they made varied substantially. The range of revision strategies included the following: 1) revising the essay only after the whole draft has been produced; 2) rereading the essay several times to identify the flaws in writing; 3) revising the essay for accuracy, specifically focusing on a) grammatical errors and b) spelling mistakes; 4) revising the essay for meaning, logic and coherence; 5) revising the essay for general improvement when overall being dissatisfied with what has been written. Also, when revising their writing, some students applied the social strategies: 6) getting tutor feedback on different aspects, and 7) asking their peers and friends, particularly those who are native speakers of English, to help them with editing and proofreading of their assignments. Table 7.10. below summarises all revision strategies used by the writers prior to and after taking the EAP course. Some examples of each strategy, elicited by means of the interviews, are also represented in this table.

Table 7.10. Students' Revision Behaviours before and after the EAP Course

Revision strategy	Pre-course interviews		Post-course interviews	
	N o of Ss	Examples	N o of Ss	Examples
no revision for language accuracy during writing	6	"I always <u>finish my writing first</u> . If I have enough time, I might check. If I find some problems I will try to correct it" (P10).	7	" <u>After I write a draft I will do the review, do the revise work to check some details to avoid mistakes.</u> " (P8).
backtracking	6	"When checking I will <u>read my essay from the beginning to the end...</u> " (P3).	7	"I just <u>read the whole essay from the start</u> and I will highlight a word or words in the article I'm not sure is used correctly and maybe highlight some sentences." (P8).
revising for accuracy: a) grammar b) spelling	5 2	"Firstly, I will check the verb is <u>-ed or -ing, actually it's all grammar mistakes</u> because other mistakes are hard to check out" (P6). "Actually, in the checking procedure, I always put the emphasis on the... <u>spelling checking...</u> " (P4).	2 2	"When I have time, I do the checking. Sometimes I get confused about the <u>word forms and grammar...</u> " (R6). "I may not too many changes, I just read it for several times and <u>checking spelling mistakes.</u> " (P1).
revising for meaning	0		3	"Now I barely check my grammar and spelling mistakes. I just <u>want to make sure now that every topic sentence is put at the beginning of each paragraph and my conclusion is equal to my introduction.</u> " (P4).
revising for general improvement	2	"If I <u>find some problems</u> I will <u>try to correct it</u> " (P10).	7	"I just read it again and <u>find where is trouble...</u> " (P2).
asking tutor to help	6	"I will rewrite some parts of my essays or assignments and <u>hand it in to my teacher</u> , and she will reread and give some of her ideas, suggestions and I can improve next time" (P12).	2	"After the tutorial, I will read the assignment again and <u>find some advice from my teacher</u> and then change some words or complete some sentences" (P3).
asking peers and friends to help	3	"Sometimes I <u>use my friends, my American friends to check it</u> . They just correct passage and change everything" (P13).	3	"If I rewrite something, I will sometimes <u>ask my friends to see my paragraph and give me some advice on it</u> " (P11).
no revision	3	"I <u>don't like checking</u> very much. I always <u>finish my writing task and hand it in</u> " (P10).	1	"Actually I <u>do not do that</u> . It depends, but usually I'm exhausted to revise. The spellchecker does it for me" (P13).

One of the most common strategies the students said they employed can be characterised as *write first, revise later*. In fact, as indicated by a large number of students, they tended to complete the whole assignment first and only then go through it and make all necessary changes and revisions to what had already been written. As one of the students stated during the interview: *"After I write a draft, I will do the review, do the revise work to check some details to avoid mistakes..."* (P8I2).

A substantial number of participants, just under half of students at pre-course interviews and exactly half-at post-course interviews, articulated the view that backtracking or rereading their essay several times from the beginning to the end was one of the main revision strategies they used and found particularly efficient. One student-writer, reflecting on their revision behaviours, commented as follows: *"I usually read the essay again and again because there are some mistakes concealed so maybe at first sight we cannot find them so you should read again and then you could find them"* (P1I1).

From the data in Table 7.10. it is apparent that prior to the EAP course, more than a third of student-writers checked their essays for accuracy, in particular, searching for grammatical errors. As mentioned in one interview: *"When checking I will read my essay from the beginning to the end and read word by word and check grammar mistakes ...and others. First, I will begin with grammar because my grammar is not very good"* (P3I1). What is interesting in this data is that, at the end of the EAP course, the number of students who focused predominantly on grammar when editing their writing declined substantially. Only two out of 14 participants admitted that they checked their assignments for surface accuracy. An equally small number of students, two out of 14 during both pre-course and post-course interviews, indicated that they revised their essays for the accuracy of spelling. Some learners

developed a number of strategies for revising their own written work while studying on the EAP programme. As indicated by one participant: *"When checking spelling, I would read backwards the lines because when we read we may not see mistakes in each word. I look at every individual word to check the spelling; that is what my tutor on EAP taught me"* (P7I2).

None of the students reported that they revised their essays for meaning at the beginning of the EAP course; however, after four weeks of studying on the pre-session programme, nearly quarter of students were aware of the importance of reading and revising their writing for meaning with the aim to maintain coherence and logic. It can be inferred that in order to concentrate more on ideas, the students seemed to postpone their focus on linguistic errors until later. As indicated by one of the interviewees: *"Before I check grammar and other mistakes, I will check that the Introduction contain my position and the main point and goals, I mean the task..."* (P5I2).

A number of respondents' comments regarding their revision strategies were much less specific. Learners' desire to achieve general improvement of their writing was another theme identified in the course of the interview data analyses. At the beginning of the EAP programme, only two students out of 14 acknowledged that their revision behaviours were targeted towards general improvement. Importantly, by the end of the four weeks of studying on the programme, half of all participants indicated that they tend to revise their writing addressing not one particular aspect, but a wide range of aspects such as structure, coherence and cohesion, and different aspects of language accuracy.

The analyses of the interviews have shown that the students were not confident enough in their ability to revise their essays. Therefore, having reread their assignments, they used social strategies, such as addressing their tutor and peers, who they believed were able to assist them with improving their assignments before submission. Nearly half of the students, six out of 14, articulated the view that tutor feedback and suggestions were essential when it came to revising their writing during the pre-course interviews. As observed by one writer: *"I just read it myself through at average speed, highlight the things I'm not very sure about...after that I will talk about the problems with my friends and tutor. When I can't find the problem myself, maybe they can help me"* (P14I1). Surprisingly, by the end of the EAP course, the number of students who highlighted the importance of getting tutor's help with revising their writing decreased three-fold. This could imply that the students became more confident in their writing and believed they were skilled enough to revise their essays alone. Another social strategy employed by some writers when revising their assignments involved the support of peers and friends. The same number of students at pre-course and post-course interviews pointed out that they consulted other students, preferably native speakers of English when they needed assistance with their writing.

An additional finding to emerge from the interviews was that some students never actually engaged in the process of revising of their assignments. At the beginning of the EAP course, three participants admitted that they were not doing any revision either because they did not have time, felt exhausted or simply did not like checking and preferred to submit as soon as they finished writing. It appears that students began to realise the value of revision by the end of the course, only one student stated that they did not edit their writing beyond the use of a spellchecker.

7.5. Summary

This chapter has presented the results of the qualitative analyses elicited by means of semi-structured interviews and learning journals. The findings suggest several noteworthy changes during the EAP course concerning learners' difficulties and writing strategies. Vocabulary, which was initially perceived as the biggest writing challenge, was no longer viewed as a major source of difficulty by the end of the course. Conversely, academic register, which was hardly mentioned as a writing challenge at the beginning of the EAP course, was found to be one of the main sources of writing difficulty after the four weeks. Regarding learners' writing strategies, although it is true to say that every learner chose to use their own strategies, some strategies, e.g., extensive reading, remained dominant throughout the course.

With regard to writers' goals and self-efficacy beliefs, the nature of goals set by the students throughout the EAP course remained largely unchanged. However, it has been observed that by the end of Week 4 most participants realised that making their writing style more academic, which was reported on as the main source of writing difficulty, constituted their major goal while studying at the university. Importantly, the EAP course made writers notably more confident in their own writing ability as evidenced by the fact that students' self-efficacy beliefs increased considerably. As regards the findings on composing and revision behaviours of the L2 writers, it was discovered that students' writing has become less linear and more recursive in nature. In addition, by the end of the EAP course, the writers had started to get involved in planning and revising of their essays for meaning more frequently than in Week 1. The findings made as a result of the quantitative and qualitative data analyses are discussed in the chapter that follows.

CHAPTER 8. Discussion

8.1. Introduction

In this chapter the results of quantitative and qualitative data analyses are synthesised and discussed in relation to the research questions. The chapter begins with the discussion of the second language writers' linguistic development over the course of four weeks of studying on the intensive pre-sessional EAP programme. It progresses with an overview of learners' cognitive processes, addressing the changes observed in writing fluency and in their writing and revising behaviours over the course of the programme. Then, it moves on to the discussion of psychological factors that can potentially affect second language writing, specifically focusing on L2 writers' goals and perceived self-efficacy beliefs. Finally, it discusses the challenges writers tend encounter and strategies they choose to use when they attempt to overcome these challenges.

8.2. Linguistic Development in the Written Products³

The first two research questions addressed in the present study were as follows:

1) How do the lexical features of argumentative writing change over the course of an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

³ Parts of this section were published in Mazgutova and Kormos (2015)

2) How do the syntactic features of argumentative writing change over the course of an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK?

These research questions were investigated through the quantitative analyses of the data collected by means of two argumentative essay writing tasks administered at the beginning and at the end of the EAP programme. Several software packages including *Coh-Metrix 2.0* and *Coh-Metrix 3.0*, *Synlex L2 Syntactic Complexity Analyzer* and *Synlex Lexical Complexity Analyzer*, and *VocabProfiler BNC* were used to aid with the analyses. In addition, the qualitative tools such as the interviews and learning journals were found helpful in the triangulation of the quantitative results.

8.2.1. *Lexical Development of L2 Writers*

Research Question 1 attempted to obtain information about the UG and PG students' lexical development and discovered some interesting patterns for both groups of writers. The UG group was found to have made significant improvements in all measures of lexical diversity and showed the largest gains on measures assessing lexical variability. These results that might be explained with increases in students' L2 writing competence are parallel with the findings of past research, that has also shown that higher-proficiency writers demonstrate greater lexical diversity than lower-proficiency ones. To illustrate, lexical variability was also found to be one of the most sensitive indicators of L2 proficiency in a study by Crossley *et al.* (2011). Similarly, Crossley and McNamara (2009) discovered that the essays of higher proficiency writers tend to be more lexically diverse in contrast to the essays of less proficient

writers. An increase was also detected in the variation of verbs used for both the UG and PG groups in my study. For the UG group, the effect size for this change was large, while for the PG group, it was considered medium. Verb variation was found to differentiate L1 and L2 writers of French in a study by Harley and King (1989) and was also shown to be a useful predictor of proficiency-related differences in oral production (Lu, 2012).

The increase in variability of the words used can be explained by the interplay of a number of factors. On the one hand, during the one-month period of the study, the learners' receptive and productive vocabulary size could have grown due to the incidental learning of new words in the target language environment and during the EAP course. Although explicit vocabulary learning is important, substantial amounts of new words are still acquired incidentally by attending to meaning without conscious attempts to learn. As pointed out by Pellicer-Sánchez and Schmitt (2010), "even one exposure [can] lead to considerable learning of word form and meaning recognition..." (p. 44). Classroom instruction creates multiple opportunities of input, which could potentially give students a chance to encounter and learn academic words and phrases incidentally by attending to meaning. This assumption receives strong support by considering the increase in frequency of words from the academic word list in the students' writing. Furthermore, it is also possible that the students were paying conscious attention to varied lexical choice and the use of formal and academic vocabulary in their essays after completing the EAP course. The students' lexical improvement might be attributable to their frequent exposure to academic materials (Storch & Tapper, 2009). The students in the present study were involved in extensive reading and received feedback on their writing, where their attention was also drawn to academic expressions. The results of the interview analyses clearly demonstrate that

the number of writers whose major goal was to enhance their academic vocabulary and style increased three-fold over the course the EAP programme. This may be explained, at least in part, by the effect of the EAP course having raised the students' awareness of the importance of academic vocabulary and the need for a clear academic style in order to succeed in their upcoming course.

8.2.2. *Syntactic Development of L2 Writers*

Moving on to the discussion of *Research Question 2*, the results of my analysis indicate several major trends with regard to the student-writers' syntactic development. First, the UG group of students demonstrated changes in their use of complex noun phrases and conditional clauses in the area of syntax. Second, despite an expectation that with the development of writing skills students would use more varied syntactic structures, syntactic structure similarity increased indicating, in fact, that the PG students applied a smaller variety of syntactic constructions in their academic writing than the UG students. Finally, the UG group showed improvements in considerably more areas than did the PG group. I will now discuss each of these findings in turn below.

The current study shows syntactic changes in the writing of the UG group. Measures of clausal embedding, which are often assumed to be representative of syntactic complexity in writing (see e.g., Brown & Yule, 1983; Bulté & Housen, 2012, 2014; Hyland, 2002), were not found to change significantly during the EAP programme. In the case of PG learners, the trend was for these measures to decrease somewhat. In contrast, noun-phrase complexity increased significantly in the UG group in terms of the frequency of complex nominals and noun-phrase modifiers, the

usage of relative clauses as postmodifiers and the frequency of complex postmodifiers overall. This indicates that these learners reached a stage of development where their noun phrase constructions became embedded and elaborate (cf. Biber *et al.*, 2011; Crossley & McNamara, 2014). As pointed out earlier, in the PG group, noun-phrase complexity did not continue to rise; on the contrary, a negative tendency was observed. This pattern of change illustrates that it is probably at this point that students started using syntactically less complex but conceptually more abstract lexical units to express their views and opinions (Byrnes, Maxim, & Norris, 2010).

A particularly interesting finding was that syntactic structure similarity had significantly increased in both groups by the end of the EAP programme. This result contrasts with that of Crossley and McNamara (2014) who found a decrease in syntactic structure similarity in the MSU corpus. A comparison of the mean values of the similarity scores in the two studies reveals that the essays in the MSU dataset had higher similarity indices both at the beginning and at the end of the academic writing programme than the texts in my study. This might be due to the fact that the learners represented in the MSU corpus might have had lower proficiency than the participants of my study, and that their texts were descriptive in nature, whereas mine were argumentative. I hypothesise that the development in the variety of syntactic constructions in learners' writing might not be linear. Initially students move from the use of similar constructions towards variety, but beyond a point variety impacts the readability of texts. Crossley, Greenfield and McNamara (2008) argue that similar syntactic constructions "provide important links between sentences" (p. 489). Therefore, we might hypothesise that the participants in my study might have used similar syntactic constructions, adjacent to each other, to increase the cohesion of their writing by grammatical means.

The results of the analyses clearly show that only minor improvements with regard to syntactic complexity of writing were observed for the group of PG students. It is not surprising to find that students whose linguistic competence is already at a relatively advanced level, as attested to by their IELTS scores, and who have already gained some literacy experience in their L1 during their university studies, make more limited linguistic progress in an EAP programme that does not explicitly focus on areas of syntax and vocabulary. Shaw and Liu's results (1998) also indicate only a minor development in the syntactic complexity of students' essays in an EAP setting similar to that in the current study. Nevertheless, the changes that can be observed in the syntactic features of the PG students' writing both in terms of global syntactic complexity and specific to the academic genre are mostly moving towards the syntactic characteristics of academic writing. Specifically, the mean length of T-units and clausal embedding can be observed to decrease and modifiers per noun phrase, complex nominal and syntactic structure similarity increase. Interestingly, complex post-modification and the frequency of relative clauses and prepositional phrases drop slightly, although not statistically significantly in this group. Nevertheless, when compared with the corpus data in Biber *et al.* (2011), the frequency of these features can still be considered as approaching the frequency values observed in native speakers' writing. The most important syntactic change that took place in the writing of the PG group was a reduction in the use of infinitive clauses. Taken together with other syntactic changes in terms of the reduction in clausal complexity and in the increase of frequency of words in the academic word list, this might indicate that these students move in the direction of relying more on nominalisation in their writing than on pre- and post-modification. This can be illustrated by the case of one of the student-writers in whose essay at the start of the EAP programme one can find six

instances of nominalisation, out of which on four occasions the student repeats the word *dismissal*. In the post-test, the same student uses nominalisation nine times (e.g., in sentences such as "Although it requires *memorization* of some ideas and knowledges, in fact it also requires students to be able to truly understand and adapt it to their everyday's *usage*.").

There might be another possible explanation for the rather limited development in terms of syntactic complexity observed in this study. As noted by Tavakoli and Rezazadeh (2014), the reason for the lack of substantial development in this linguistic area might be related to the written task type of argumentation. The students might have experienced additional cognitive load when producing argumentative texts during the pre-course and post-course writing sessions. Argumentation unlike descriptive or narrative writing, is characterised by "high content interactivity..., i.e., the degree to which information is interrelated or discrete" (Tavakoli & Rezazadeh, 2014, p. 101). This could potentially have triggered the shift of attention from syntactic complexity to other linguistic aspects of writing, such as lexical variation or grammatical accuracy.

8.3. Development in the Writing Process

The following research questions were concerned with the changes in the cognitive processes that were observed in the present study over the course of four weeks on the EAP programme. These questions were as follows: 3) How does writing fluency change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? 4) How do

revision behaviours change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? These research questions were examined with the aid of the keystroke logging programme *Inputlog*, which captured learners' on-line writing processes and revealed some interesting findings with regard to the development of writing fluency and revision behaviours among the UG and PG students. I also coded and analysed the interview transcripts and learning journal entries in order to interpret my study findings.

8.3.1. *Writing Fluency*

In terms of *Research Question 3*, one of the important observations is that differential trends in the development of writing fluency were seen for the groups of UG and PG students. Specifically, the results for the measures of writing time and pause time showed major differences between the written performance at Time 1 and at Time 2 for the UG students, indicating that it took them much longer to write their essays at the beginning than it did at the end of the EAP course. Furthermore, their total pause time decreased from the pre-course to the post-course testing session. Another statistically significant finding that emerged from the analysis concerns the increase in the writing speed of the UG students. This finding corroborates that of Sasaki (2000), who also discovered that the more proficient the student-writers become in their L2, the higher their speed of text production is. Importantly, significant differences were also detected on the measure of burst length in my study. The results of this study match those observed by Abdel Latif (2009) and Sasaki

(2000) in that having obtained more skill and expertise as writers, the UG students produced their texts in longer chunks or bursts.

Another noteworthy finding in the current study was that the UG students made significantly fewer revisions at the end than at the beginning of the EAP course. This lends support to Thorson's (2000) and Chenoweth and Hayes' (2001) findings, who also found that student-writers tend to spend more time revising when they are less proficient in the target language. Therefore, I might also infer that as the UG students' level of writing expertise became higher, some of their cognitive processes may have become more automatised. Therefore, they did not have to revise their texts for language and mechanics as often as they might have needed when they had lower writing proficiency level.

With regard to the change in the total number of pauses, although the results of the analysis failed to show a significant effect, it can be clearly seen from the descriptive statistics that the number of pauses both the UG and PG students made went down from the beginning to the end of the EAP course. These results confirm the findings of Sasaki (2000), who also claimed that as writers gained in their writing skills, they seemed to make their global essay plan in advance, and they did not need to stop and think while writing as frequently as novice writers did; hence, they made fewer pauses. On the contrary, less experienced writers appeared to stop and plan what they were going to say when they finished producing one semantically coherent chunk.

Moving on to the changes observed in terms of the writing fluency of the postgraduate students in my study, a number of interesting observations were made. Unlike the UG students, the PG students appeared to spend significantly more time

writing and pausing at the end of the EAP course than they did at the beginning of the course. Another important finding, which contrasts with the observations made for the UG group, concerns the number of revisions made by the PG students. Interestingly, the postgraduate students made significantly more revisions at Time 2 than they did at Time 1. These findings are consistent with the results of Palviainen *et al.* (2012) who also discovered the same pattern for the students of the highest level in their study, i.e., CEFR C1 and C2. These observed changes in the writing time and in the number of revisions may be attributed to the fact that more skilled writers were more consciously involved in editing than less skilled ones. This result further supports the assumption of Barkaoui (2007), who claimed that as the writers gain more expertise, they start to edit their texts continuously. In other words, revising and editing become recursive in nature, occurring throughout the writing process. It could thus be inferred that the PG students in my study, having gained experience as L2 writers over the course of four weeks of intensive academic writing instruction, began to revise their essays more thoroughly from the start of the writing process not waiting until the final draft was completed. This also explains why their total writing time had significantly increased.

To conclude, the findings of my research suggest opposing trends in fluency development for the two groups of student-writers. On the question of the UG students' writing fluency, my study found that they became more fluent over the course of the pre-session programme. This can be concluded from the changes observed on a number of fluency measures, i.e., decrease in the writing time and pause time and increase in the writing speed and burst length. These findings support previous research (e.g., Abdel Latif, 2009; Chenoweth & Hayes, 2000; Sasaki, 2000) regarding the relationship between L2 writers' increased experience with the language

and their writing fluency development. What is surprising is that the opposite trend was observed for the group of PG students in this study. The rather unexpected results might be attributed to a change in the students' revision attitudes and behaviours. Interestingly, the PG students became more conscious when reviewing their assignments. This was likely to have slowed down their writing process, negatively affecting the speed of writing and pause time. On the whole, although their writing speed went down and they seemed to pause longer I cannot conclude that the PG students became less fluent by the end of the programme. According to my data, I can infer that increased number of revisions in the PG students' writing at Time 2, in particular at the content-level (as discussed in further detail in the section below), is indicative of their writing development on the EAP course.

8.3.2. Writing Processes and Revision Behaviour of L2 Writers

Moving on to *Research Question 4*, another aim of investigating the writing processes of the L2 learners in the current study was to identify the sequences of writing behaviours that they tend to use at the planning, composing and reviewing stages. Analyses of the interview data and the learning journals indicate some interesting differences in the learners' writing processes from the beginning to the end of the EAP programme.

The findings of this study clearly demonstrate that writers' composing and revision behaviours changed substantially during the course. One of the main differences is a more recursive approach to writing taken by most of the participants at the end of the EAP programme. In fact, having improved in a number of areas over the course of the four weeks of intensive instruction, the students started to move

backwards and forwards between the already produced and emerging text while composing; in other words, their writing processes became less linear and more recursive in nature. When asked during the interview about the changes they have noticed with regard to their own methods of writing, one of the students stated: *"Yes, they definitely changed. Before I wrote from the start to the end in a regular way coz I felt like if I don't write like that I will confuse myself. In the past, I just wrote something down without much consideration. But now I read and analyse the topic and choose my own side of this topic and find related information to support my view. Then I start writing. And I prefer to write section and go back to correct it"* (P12I2). This finding is in line with previous research findings (e.g., Manchón *et al.*, 2009; Roca de Larios *et al.*, 2001; Roca de Larios *et al.*, 2008) that have shown that as learners' competence as writers grows, their allocation of attention to various cognitive processes becomes more evenly distributed over time. My interview data also shows that writers adopt a more strongly process-oriented approach to writing by getting involved in a range of activities such as planning of ideas, writing the first draft, revising their essay for content and structure, getting feedback from peers, going back to the first draft and making relevant editing for language accuracy and mechanics.

Another noteworthy finding to emerge from the data in the present study was concerned with the students' attitude to planning. The results of the interview data indicate a major change in the student-writers' approach to planning their writing. To illustrate, at the start of the pre-session programme, less than half of the participants in the current study mentioned preparing an outline for their essays. It is important to note that at the start of the EAP course, student-writers in my study talked about having only a random list of ideas in their mind rather than a detailed writing plan.

However, when interviewed in the last week of the course, nearly three quarters of the participants maintained that they prefer to devise a thorough essay outline prior to beginning the actual writing process. By engaging in the planning activity, writers tend to focus more on how they are actually going to complete the task (Tavakoli & Rezazadeh, 2014). As emphasised by Tavakoli and Rezazadeh, "planning is expected to ease cognitive processing load and to facilitate to recall all the relevant background knowledge" (p.102). The results of the present study thus show that upon completion of the pre-sessional course, students' attitude and approach to planning changed considerably. These observations are in agreement with Silva's (1993) findings which showed that, on the whole, less skilled writers appear to do less planning both at the global and local levels than skilled writers. Importantly, as students gain more skill and expertise as writers, the more time and effort they tend to allocate to planning of their texts (Flower, 1980).

The results of the pre-course and post-course interview data analyses indicate another notable change in students' composing behaviours. At the beginning of the EAP programme, approximately one third of students affirmed that they began the actual writing process by drafting an introduction of the essay. Conversely, closer to the end of the programme, having gained more writing experience, more than half of the students talked about drafting an introduction only after all other essay sections have been completed. A similar observation was made in Zamel's (1983) study. This change in writers' composing strategy might have happened because as students get more experience as writers, they seem to realise that not all ideas enter writer's mind at the same time. This means that during the actual composing process, writers often tend to go back to what they have written, add more ideas or completely substitute one argument for another. Doing so usually affects the main argument, which needs to be

clearly laid out in the introduction (Zamel, 1983). Thus, not having the introduction written first gives student-writers more flexibility to augment their text with more ideas and avoid spending time on completely restructuring what has already been written. An interesting trend was also observed in terms of the location dimension of writers' revisions; specifically, the revisions made in the introduction part of the essay. The results of the statistical analysis showed that the UG writers made significantly fewer revisions to the introduction during the post-course writing. This is perhaps not surprising given that the students no longer needed to go back to the drafted introduction and make changes to what they had written. As many participants said at the interviews, they preserved the ideas for the introduction in their mind and drafted them as one paragraph only after the entire essay was written.

A further noteworthy finding of this study, based on the keystroke logging data, is that, from the beginning to the end of the EAP course, the PG students, as a more skilled group of writers, revised their essays for content significantly more frequently than the UG student-writers. Conversely, the UG students, who apparently had less writing experience, made significantly more punctuation-oriented revisions than the group of PG students. The PG writers in the present study behaved similar to L1 writers described in literature (e.g., Lindgren & Sullivan, 2006; Stevenson *et al.*, 2006) in that they were more engaged in high-level reflective activity while reviewing their essays than the undergraduate students. Due to lack of linguistic competence, less skilled writers tend to pay more attention to language forms regardless of the writing task type (Choi, 2007). As noted by Bereiter and Scardamalia (1987), such behaviour is typical of novice writers. The findings of my study are in agreement with Zamel (1983), who also observed that when the writers are less skilled, they tend to be easily distracted by local problems from the beginning of the writing process making

surface changes to words and phrases but not concentrating on the substantive meaning of the text as a whole. This increased attention to surface errors might inhibit writers' higher order processes, such as generating and organising ideas.

The aforementioned results were also supported by the interview and learning journal data. In Week 1 of the EAP programme, only two out of 14 participants stated that they would revise their essay for content prior to engaging with surface editing. Interestingly though, in Week 4 when revising their assignments, more than three quarters of all participants in the study reported that they prioritised focusing on the content and structure before turning to the editing of their texts for language and mechanics. This could stem from the writers' intention to concentrate on the flow of thought and coherence of ideas in writing when engaging with revisions, rather than on individual grammatical and lexical flaws (Myhill & Jones, 2007). According to Fitzgerald (1987), more skilled and competent writers appear to revise more for ideas and make more thematic-level changes to the text than those who are less skilled. Research shows that as ESL writers gain more skill, they appear to address "language-related concerns primarily after their ideas have been delineated" (Zamel, 1983, p. 165).

One of the dominant revision strategies highlighted by more than three quarters of student-writers both at the beginning and at the end of the EAP programme was *backtracking*, i.e., rereading of what they have already written. Backtracking has several important purposes (Myhill & Jones, 2007). Firstly, it aids the writers considerably when it comes to generating and triggering new ideas. When writers read through their essays the second time they can reflect on what they have written and consider the coherence of their ideas and whether the ideas are sufficiently clearly expressed as to be interpretable by the reader (Silva, 1993). Reading back over what

has been written might assist student-writers in the process of evaluation and editing of written assignments. As pointed out by Manchón *et al.* (2000), backtracking helps writers "to cope with the limited capacity of working memory", which often acts as a constraint when concentrating on "various lower and higher level text demands" (pp.14-15). Furthermore, in the process of rereading, writers might attempt to resolve the problems with lexical search and retrieval (Manchón *et al.*, 2007). In other words, whenever they get lost in the middle of writing a sentence and struggle with expressing the intended meaning, they might read the sentence or clause from the beginning until the right word or phrase comes to their mind. Importantly, backtracking, the most popular revision strategy throughout the EAP course as reported by UG students in the interviews, might have helped them to lower the information processing load.

Another revision strategy found to be prevalent among the students in the pre-session programme was *delaying revising and editing* of writing until the entire writing piece or most of it was completed. Fifty percent of students both during pre-course and post-course interviews indicated that they tended to widely use this strategy because engaging in both composing and editing at the same time require considerable mental effort. Myhill and Jones (2007) rightly concluded that this cognitive strategy might help student-writers reduce the demands of working memory during the actual process of writing. To summarise, the attitude of the writers towards this revising strategy has not changed from the beginning to the end of the EAP course and it continued to be one of the writers' preferred revision strategies.

One interesting observation made as a result of qualitative analysis is that half of the participants indicated, in their end-of-course interviews, that their revisions are mainly targeted at *general improvement* of their writing, as opposed to only two

students in pre-course interviews. One possible explanation for students' rather imprecise responses when talking about their revision strategies lies in overall dissatisfaction with their own writing. The interviewees in my study, similar to the participants of Myhill and Jones (2007), spoke of attempting to make their writing "*sound better*". It seems that student-writers often revise their texts not because they detect a specific error in what they have produced, but because they have thought of a better way to express what they have already said in their essay. One might infer that after having studied on an intensive EAP programme for four weeks, the students gained more expertise and confidence as writers and began to revise their texts for general improvement rather than for minor linguistic detail. In other words, they began to revise their writing by ear, characterised by Silva (1993) as introducing changes to what they wrote on the basis of what actually "sounds" good, rather than merely editing written texts for specific language and mechanical errors. On the whole, it can be concluded that writers' increased tendency, after studying on the EAP programme, to revise their texts for general improvement rather than largely for specific language problems, could indicate that they have become more efficient at evaluating and reflecting on their own writing processes.

8.4. Psychological Factors Affecting L2 Writing

This section of the chapter is dedicated to the analysis of psychological factors affecting second language writing, specifically focusing on learners' goals and self-efficacy beliefs as well as the difficulties and strategies they employed. The last two research questions addressed in the present study are as follows:

5) How do writers' goals and self-efficacy beliefs change during an intensive EAP programme in the case of the UG students who intend to undertake undergraduate studies in the UK? and 6) How do writers' difficulties and writing strategies change during an intensive EAP programme in the case of the UG students who intend to undertake undergraduate studies in the UK?

The research questions above were investigated by coding and analysing the participants' pre-course and post-course interview transcripts and learning journal entries completed over the course of three weeks on the EAP programme.

8.4.1. L2 Writers' Goals and Self-Efficacy Beliefs

In response to *Research Question 5*, it can be concluded that, on the whole, the types of goals that students set remained largely unchanged from the time they started until the time they finished their studies on the pre-sessional EAP programme. An analogous trend was observed by Cumming (2006) who states that learners tend to maintain similar goals for writing skills improvement over time. As discovered with the aid of the data from interviews and learning journals in my study, the most prevalent goals that they appeared to maintain throughout the whole period of the EAP course included the following: 1) making their writing more academic, 2) developing critical thinking skills, 3) developing logic, 4) improving clarity of ideas, and 5) learning to produce structured arguments. It is important to note that some of the goals were pointed out only in the pre-course interviews and were indicated neither during nor at the end of the EAP course. Among these goals were improving logic, mentioned by most of the participants during the first interview session, enriching vocabulary, synthesising source materials, making writing more precise and

cohesive, and producing longer texts at a higher speed. There are several potential explanations for these goals which were mentioned only at the start of the pre-session programme. First, it can be assumed that students, having gained confidence in their writing skills, no longer believed that their ideas were lacking in terms of precision or cohesion. They might also have started to realise that quantity is not as essential as quality; therefore, none of them reported on aiming for speedy production of written texts. Another possible reason for not mentioning increased speed of written production as one of the writing goals might have been shaped by the dissimilar nature of tasks that students were required to complete before and after their studies on the pre-session programme. To illustrate, IELTS essays, which all participants were taught to compose prior to the EAP course, are always expected to be completed within a restricted time period, whereas, the assignments the students encountered on the EAP programme were not monitored and could be completed within the whole week at students' preferred time. One other factor that might explain the variation in the pre-course and post-course findings with regard to students' goals is that by the end of Week 4, they might have already achieved some goals they had originally set for themselves, for instance, *making their writing logical and cohesive*.

A common feature found in student interviews and learning journals throughout the EAP course was setting goals for further improvement. Most participants acknowledged their existing problems and highlighted the improvements they made while studying on an intensive EAP programme. As one of the UG students stated in their post-course interview: *"I just don't know how to prove my evidence clearly, sometimes my examples are not supporting my main point...but on the whole I improved a lot in my writing. I am better than before. I can listen to my tutor's advice and...abandon some of my own drawbacks and keep on the advantages of writing and*

read more academic essays and texts to help me finish my own essay..." They then provided some self-assessment: *"I hoped I could read and write more, but sometimes I was lazy and didn't do enough"* (P5I2). As can be seen, the participants often explained why they thought they were experiencing certain problems as writers. Interestingly, most participants were also able to elaborate on their future plans with regard to what needs to be done to eliminate their problems and hypothesised about the future aims and learning outcomes. Talking about this, one interviewee said: *"I still want to be more academic and be formal in writing in English. Maybe in the future, as my class goes, I will write more about my Major. I want to be a journalist or a teacher to teach my Major, so I want more practice. I will also read about other author's ideas, Next time I will have new ideas and it will help me to improve my writing"*(P9I2). The writers' reflection shows that they were able to diagnose their difficulties and set some clear goals for future development.

It can be inferred from the results of the qualitative analyses that the students became increasingly aware of the challenges and demands of writing at the university level and expanded their goals from those directed at mere language improvement to those focused on academic writing development. To exemplify, one of the participants made the following comment in their journal entry in Week 3 on the programme: *"Write in more academic way... I have not achieved this goal yet. I have to do more practice and read more books to know how to write better"* (P4LJ3). This suggests that learners' goals for writing skills development in the current study were linked not only with their short-term plans but also with their long-term academic aspirations, such as their further university studies, after completing the EAP course, as well as with their career expectations. Most of the interviewed students indicated that in order to realise their long-term objectives, they would require more guidance from their

instructors and peers, including classmates, however, most importantly, they themselves would need to be more responsible for their own learning and put in considerable effort through extensive practice. As one interviewee puts it: "*My goal is to write appropriate academic articles when I begin my undergraduate degree programme. I need more professional knowledge and more practice*" (P10I2). Hence, it can be inferred that having become more experienced as writers, students began to realise the importance of setting realistic goals for the long term, which would help them to succeed not only when completing a particular writing task on the EAP course, but which would also assist them in completing their degree programme.

Turning to the analyses of writers' self-efficacy beliefs, Zimmerman, Bandura and Martinez-Pons (1992) claim that perceived self-efficacy integrates the level of goal challenge people set for themselves, the amount of effort they mobilise and their persistence in the face of difficulties (p. 664). In reply to the second half of *Research Question 5*, the analyses of the qualitative data in the current study have clearly demonstrated that from the start of Week 1 to the end of Week 4, student-writers became noticeably more confident in their writing skills. A possible explanation for this rise in students' ratings of their own skills can be found in Bandura's (1997) theory regarding learners' mastery experiences. According to Bandura, mastery experiences or outcomes interpreted as successful can foster one's self-efficacy beliefs. In line with Andrade *et al.* (2009), given that all student-writers had completed three pieces of writing by the end of Week 4 on the EAP course, there was a high likelihood that they had experienced a sense of mastering the assignments, especially after having received constructive teacher feedback. Another factor that might have helped students in terms of stimulating their sense of achievement was the learning journal entries they were required to complete during the EAP programme. According to Manchón (2009b),

learning journals could have enhanced student-writers' self-confidence by "fostering mastery experience" (p. 256). My findings confirm those of Manchón (2009b), and suggest that the learning journals, which allowed the participating L2 writers reflect on various aspects on the course without being preoccupied with linguistic accuracy, lexical sophistication and syntactic complexity of writing, might have helped them become more confident in expressing their ideas in written form.

All three essays completed by the participants during their studying on the EAP programme were non-graded assignments, which could potentially have reduced their anxiety level. Unlike Prat-Sala and Redford's (2012) study, in which every written assignment was graded by two lecturers, there was no marking whatsoever of students' writing in the EAP programme in this study. The course tutors provided students with detailed feedback on every essay followed by one-to-one tutorials to discuss their strengths and weaknesses as academic writers and offer some suggestions for further improvement. Thus the fact that there was no high-stakes assessment on the programme, in line with Martinez *et al.* (2011), could have made students feel less anxious and more motivated to complete all written assignments.

Another factor which might have had an impact on students' self-efficacy beliefs is the vicarious experience of observing the actions of other people, specifically, of other students on the pre-session course. My findings are in line with those of Manchón (2009b), who suggests that introducing student-writers to so called "models by other students" and inviting them to study and critically evaluate these pieces of writing might equip them with more self-confidence and boost their sense of achievement. The participants of the current research were also given access to good examples of EAP students' writing from the previous years. As reported by more than half of the participants during the end-of-course interviews, seeing successful attempts

of other student-writers made them realise that they can also accomplish the task successfully if they invest enough of effort and are highly motivated.

To conclude, it was unsurprising to observe a steady increase in students' level of self-belief and motivation from the beginning to the end of an intensive pre-sessional EAP course. As highlighted by Pajares and Valiante (1997), when students have sufficient self-confidence in their writing ability, they develop greater interest in writing and are able to overcome difficulties they are faced with when completing writing tasks.

8.4.2. Writers' Difficulties and Writing Strategies

As regards *Research Question 6*, the present study contributes to writing research in terms of offering valuable insights into the most challenging aspects of writing faced by L2 students planning to study at a UK university and how these difficulties might relate to their writing strategies. According to Kubota (1998) and Al Badi (2015), several factors, including weak writing ability in the L1, low English language proficiency and lack of experience in second language composition, appear to contribute to the difficulties that students might encounter as second language writers.

The findings of this study, which seem to corroborate those observed in earlier research (e.g., Bitchener & Basturkmen, 2006; Evans & Green, 2007; Leki & Carson, 1994; Phakiti & Li, 2011) identified several areas of difficulty for the L2 writers, i.e., lexical retrieval, critical reading and argumentation, clarity of expression, ability to accurately reference academic resources, grammatical accuracy, coherence and cohesion and some other aspects of general and academic writing. This study found

that the student-writers analysed tended to experience largely the same kinds of problems before, during and after taking the pre-sessional EAP programme. The issues mentioned by the students included the problems with critical reading, vocabulary, logic and clarity. Interestingly, the largest number of participants, as demonstrated in the interview and learning journal data, experienced difficulties with word usage, especially in the academic context.

Second language researchers often emphasise the importance of vocabulary and its essential role in producing written texts. Leki and Carson (1994) identify vocabulary knowledge as the central language component that ESL learners need to work on in order to make sufficient progress in writing. The results of Leki and Carson's survey clearly indicate that vocabulary development was viewed as the most prevalent feature of L2 students' writing needs. Similarly, the data in my study also revealed that the acquisition and appropriate usage of lexis was perceived as one of the most challenging aspects of academic writing. Second language writers seem to notice a number of lexical problems they are faced with while composing and revising their texts and they realise that lack of vocabulary is likely to severely inhibit written communication. My findings indicate that word usage constituted the most demanding aspect of writing for most participants, especially before the start of the EAP programme and in its first week. However, upon progression in the course, only a small number of students reported lack of vocabulary as a major obstacle they encountered in academic writing. One could infer that the students, having read extensively and practiced incorporating new vocabulary into their assignments, gained confidence in their ability to use academic words and expressions in writing. The results obtained from the qualitative analyses seem to corroborate the findings of the quantitative analyses also conducted as a part of this study. As reported earlier in

Chapter 6 Section 5, the participants were found to make significant progress in many aspects of lexical competence including the variety of verbs and frequency of academic vocabulary used and lexical diversity over the course of the EAP programme, and, as the analyses of the interviews and learning logs show, they no longer considered vocabulary as their greatest challenge.

There might exist another possible explanation for students' experiencing fewer difficulties with vocabulary at the end of the EAP course than at the beginning. Having been asked about their writing difficulties, many students might not really have been aware of what it was, specifically, they found problematic in terms of their writing. With the progression of the EAP course, they recognised that there were other challenges with academic writing besides vocabulary, such as the coherence arguments (*"I may have introduction, body and conclusion, but I can't do it coherently"* (P3I2), clarity of ideas to the target audience (*"I can understand what I wrote, but it may not be a good essay for others to read"* (P7I2), logic (*"I just can't do some critical thinking about the logic in the passage that's why I can't get logic in my assignment"* (P5I2). Thus, by the end of Week 4 on the programme, the students must have realised that there were multiple problems with academic writing they needed to address.

Although the difficulties with language use and word choice are often perceived as problematic for student writers, they are still less problematic than writers' those affecting the development of coherent arguments (Bitchener & Basturkmen, 2006). Argumentative writing indeed constitutes a considerably more challenging task type than, for example, descriptive writing (Khaldieh, 2000). Previous research (e.g., Ramanathan & Kaplan, 1996; Ramanathan & Atkinson, 1998) has shown that learners coming from Confucian cultures, for example, the UG

participants in my study who were all Chinese, tend to be unskilled and inexperienced in building arguments and critically evaluating what they read. The results of the interview and learning journal analyses in the present study have shown that at the beginning of the EAP course, most students were uncertain about what was expected of them and were unaware of what 'argumentation' actually entails. Conversely, as can be seen from the post-course interviews, none of the participants talked about experiencing difficulties with critical reading and argumentation by the end of Week 4 of the programme. As can be seen in one of the interviewees' responses: *"I learned something about critical thinking. By doing the assignment, I understood how to evaluate claims in an objective way and how to support it against others' claims"* (P4I2). A possible explanation for this major change in student-writers' perception of their own writing difficulties is as follows. Having composed several research-based assignments, in each of which they were expected to argue and write a critical review, and having received some feedback from their tutors, the students might have gained more confidence as academic writers and no longer thought of argumentation as an unsurmountable challenge.

As noted by Kobayashi and Rinnert (2008) and Phakiti and Li (2011), L2 learners' previous experience might have an impact on their academic reading and writing challenges. For instance, IELTS-style essays which the participants were taught to write in the past differ considerably from the academic research-based assignments they were expected to produce during the pre-sessional EAP course. Specifically, in order to produce IELTS-style essays, learners were not required to read extensively referring to previous studies. However, when it comes to the essays written on the EAP course, learners were expected to integrate the relevant arguments from several academic sources and use convincing evidence to back up their own

claims. When asked about difficulties they have encountered as writers, some students in my study also mentioned certain aspects of reading, e.g., reading comprehension, ability to select information as they read and reading speed. These findings concur with those of Phakiti and Li's (2011) who suggested that there is a strong relationship between reading and writing difficulties that students might encounter on a pre-session programme. Writing is indeed closely intertwined with reading, and student-writers should be consistently encouraged to read in the target language in order to both improve the content of their assignments and acquire new vocabulary.

Second language learners are likely to get frustrated and give up on completion of a writing task if they lack strategies that can help them to accomplish such task (Wolfersberger, 2003). The results of the interview data analyses in the present study have clearly demonstrated that a wide range of *cognitive strategies* were applied by the student-writers in the process of composition. One of these strategies was extensive reading, which students reported on using more frequently upon completion of, rather than at the beginning of the EAP programme. One can infer that reading extensively was seen by the students as one of the most efficient ways to generate ideas for their assignments. As can be seen from the pre-course interviews, the student-writers had not initially been aware of the value of extensive reading and largely used a single source to extract ideas for their own writing. However, with the progression of the EAP course, they changed their approach to reading and began to read more widely. Reading appropriate material plays a key role in improving students' writing. It has been stressed by Al-Badi (2015) that, via reading, writers become familiar with academic writing style, develop larger lexical repertoire and learn how to accurately use complex syntactic structures in their own assignments. Al Badi (2015) also suggested that students' motivation to write increases dramatically as

a result of reading diverse sources because they encounter not only a broad range of themes but also a wide variety of lexical and syntactic structures, which they can then adapt in their own writing.

One strategy acknowledged as particularly efficient by the participants in my study involved reading well-written examples of argumentative texts and studying those with a critical eye. As reported by a number of student-writers, reading others' writing might have aided substantially in developing their critical reading and reflection skills. For example, one of the respondents said in her learning journal entry: *"Sometimes the ideas can make me stuck. It's hard to find out some critical and creative ideas in a short time. The problem could be solved with more reading and practice to see how other people show their ideas when they are given the topic and learn something from their writing"* (P2LJ1). Learners should indeed be encouraged to read academic articles with a particular focus on organisation, coherence, cohesion and language use since doing so undoubtedly helps them to form their own position and on the whole be well-prepared for their own writing. Second language writers appear to be dependent on other academic reading materials in order to get assistance with ideas for their essays as well as with the language (Hinkel, 2004). This concurs with the previous research by Mu and Carrington (2007) who also found that students were inclined to read widely in order to better familiarise themselves with the topic about which they were writing. As observed by one participant in Mu and Carrington's study, one of the main differences that exist between academic writing in Chinese and in English is that in the former, external sources are only briefly mentioned, while in the latter, there is a tendency to review and discuss a number of studies by comparing and contrasting their findings. Importantly, another value of extensive reading lies in the opportunities it creates for the enrichment of vocabulary. The participants of my

study claimed that they had learnt a substantial number of academic words and expressions by reading widely. As pointed out by one of my interviewed participants: "*reading is a good way to improve writing because I can collect some useful words and sentences from other writers*" (P6I2). It might also be inferred that the strategy of extensive reading has helped student-writers paraphrase and summarise language structures and use them adequately in their own assignments.

Another cognitive strategy mentioned by some students in my study was that of *imitation*. This involves searching for good examples of academic writing, including student essays and models by expert writers, with the intention of reading and copying their format and style of writing. The results of my research show that Chinese students have traditionally tended to appreciate imitation and believed that it is useful for language learning. Interestingly though, this strategy was mentioned by the participants in the pre-course interviews, and thus can be assumed as being largely dominant at the beginning of the EAP course. By the end of their studies, only one student reported seeking models for their writing in order to imitate their structure, language and style. It seems possible that this result is due to the knowledge that writers gained about plagiarism in academic writing. The themes of avoiding plagiarism and the significance of originality of writer's ideas have been covered in detail on the EAP programme. The students might have, thus, wrongly assumed that imitating other writers' manner of expression and structure might unintentionally result in unacceptably close resemblance of their written text to that of the original. This might be worrying as imitation of factors such as textual organisation or style might be thought to provide a valuable strategy for the construction of written work. Perhaps raising the awareness of the distinction between the appropriation of effective

textual organisation or style and wholesale reproduction of text and ideas might improve writing outcomes.

Another cognitive strategy employed by only a very limited number of students in the present study, i.e., by one writer at the beginning, and two writers at the end of the EAP course, was *editing* the written text *for accuracy*. It has been found that L2 writers often appear to begin revisiting their texts for accuracy only after the first draft of the whole assignment has been written. This supports research findings of Huang and Chen (2006), who also indicated that L2 students of Chinese background, like the participants of the present study, often check whether there are mistakes in their writing only once they have completed the whole writing task.

Turning to *social strategies*, a number of researchers have claimed that interaction with other people does indeed aid learning and facilitate further improvement in the writing process. The results of my study differ from the findings presented by Mu and Carrington (2007) who discovered that ESL writers draw equally on the assistance of teachers and that of their peers. Interestingly, in my study, the number of students who prefer to address their tutors for assistance and feedback on their writing substantially exceeded the number of students who chose to refer to their peers. My findings accord with the observations made by Huang and Chen (2006), who established that cooperative learning is not particularly popular among Chinese university students. In fact, only very few student-writers (four of 14 at the pre-course and only two of 14 at the post-course interviews) talked about asking their friends and classmates for suggestions and advice on their writing. It might thus be inferred that Chinese students might not particularly value peer support and prefer to either work on their own or get feedback from their tutors. One of the likely reasons for teacher feedback being more popular among L2 writers is the expertise, knowledge and skill

that the teachers tend to possess. The findings of Leki and Carson (1994) demonstrate learners' preference of teacher feedback to peer support. Specifically, it was discovered that ESL students required more individual attention from their tutors. The students in Leki and Carson's research asked to increase the number of one-to-one-tutorials and decrease the amount of group work time. Some students in Leki and Carson's (1994) study explicitly stated that working in groups with other students is not a substitute for one-to-one contact with tutors. The participants of my study, likewise, noted that receiving teacher feedback is critical for their development as academic writers because it tends to be comprehensive (unlike the feedback they get from peers) and balanced, i.e., focused on both strengths and weaknesses. The latter was emphasised as particularly essential since teachers, who tend to be skilled writers themselves, can give valuable and appropriate suggestions for students' further improvement.

The third group of writing strategies employed by a number of participants in the present study were the *meta-cognitive strategies*. These were found to be particularly vital in writing. As pointed out by O'Malley and Chamot (1990), meta-cognitive writing strategies are used to monitor the language learning process as a whole, and include selective attention advanced planning, self-evaluation and delayed production. As regards planning, the majority of the participants of my study clearly indicated in the post-course interviews that they plan how to structure their written assignments by drafting a detailed plan or at least by creating a mental picture or a mind map. The students justified their choice to use mind maps by saying that mental planning assists them considerably with generating ideas for writing. Interestingly, a number of students acknowledged comparing their writing with the previous pieces of writing that they had completed earlier, i.e., in the previous weeks on the EAP

programme. This could perhaps have helped them to monitor and observe their own performance and set goals for themselves.

8.5. Summary

This study aimed to investigate the linguistic development and changes in the processes of second language writing in the two groups of students on an intensive EAP summer programme. In terms of the relationship between writing fluency and revision behaviours of the UG and PG writers, some interesting observations were made. Specifically, the UG and PG groups were found to be moving in different directions with regards to the measures of second language writing fluency and revision orientation. As can be seen in Figure 8.1., which gives a conceptual representation of these patterns, by all traditional standards, the writing fluency measures of the PG students showed a downward trend during the four weeks of intensive study on the EAP programme. These measures included total pause time, writing speed and the number of revisions, which can all be considered to be indicative of the fluency of L2 writing. Interestingly, an increase in these three measures from was observed for the UG student-writers. Concerning the comparison of the orientation and location of revisions (see Figure 8.2.), it can be seen that at the beginning of the course, the UG students revised their essays more frequently for content and grammar; however, there was a significant change after the course ended, i.e., they began to revise their writing for content and grammar less frequently. This could be partially attributable to the change in the planning and composing behaviours of the UG writers. As reported by a number of participants during the pre-course and post-course interviews, with the progression of the course, they began to plan their

writing more thoroughly, and the majority even wrote a detailed outline of the ideas that they were going to include in the assignment. This might indicate that having planned the content of the essay at the beginning of the writing process, the students did not feel they needed to make major modifications with regard to ideas during the actual writing process. Therefore, they made fewer revisions for content at the end of the EAP programme. In contrast, the PG students, who initially revised for content less frequently, by the end of four weeks on the programme, started to revise more frequently. It can be argued that content-oriented revisions, which involved the construction of meaningful units took a lot of cognitive effort and often could not be done during the process of producing their essays. Thus, there may be a relationship between the PG writers' reduction in fluency and increased number of revisions for content. This might imply that the PG students gave more consideration to the actual content of their writing by the end of the EAP course.

Figure 8.1. Change in fluency: the PG and UG groups

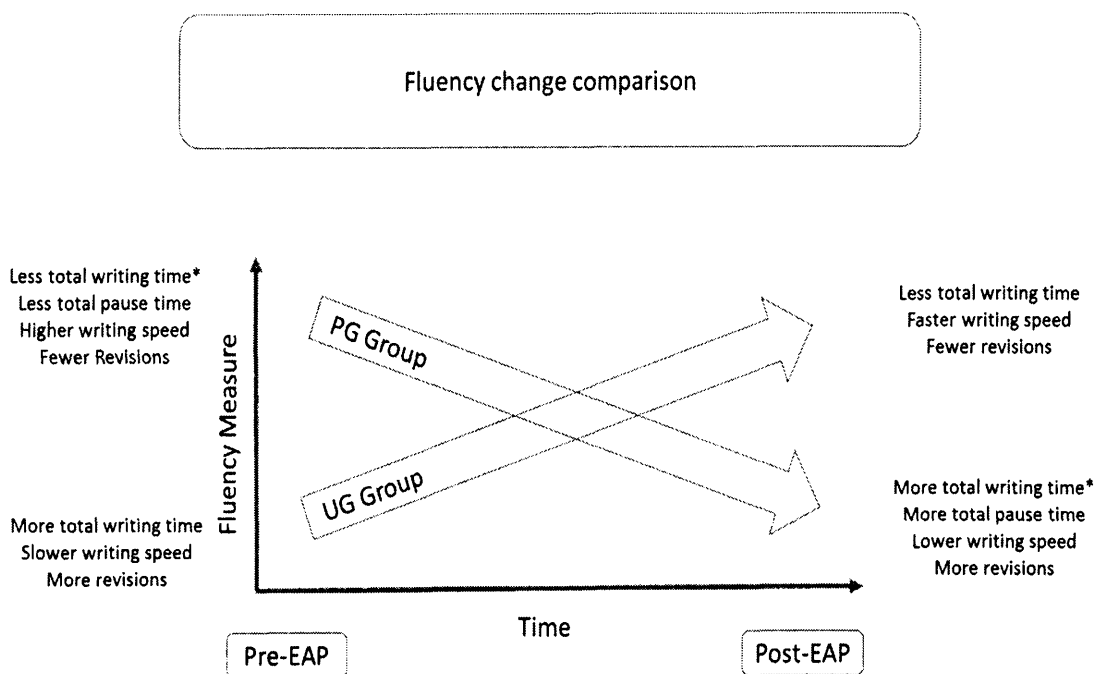
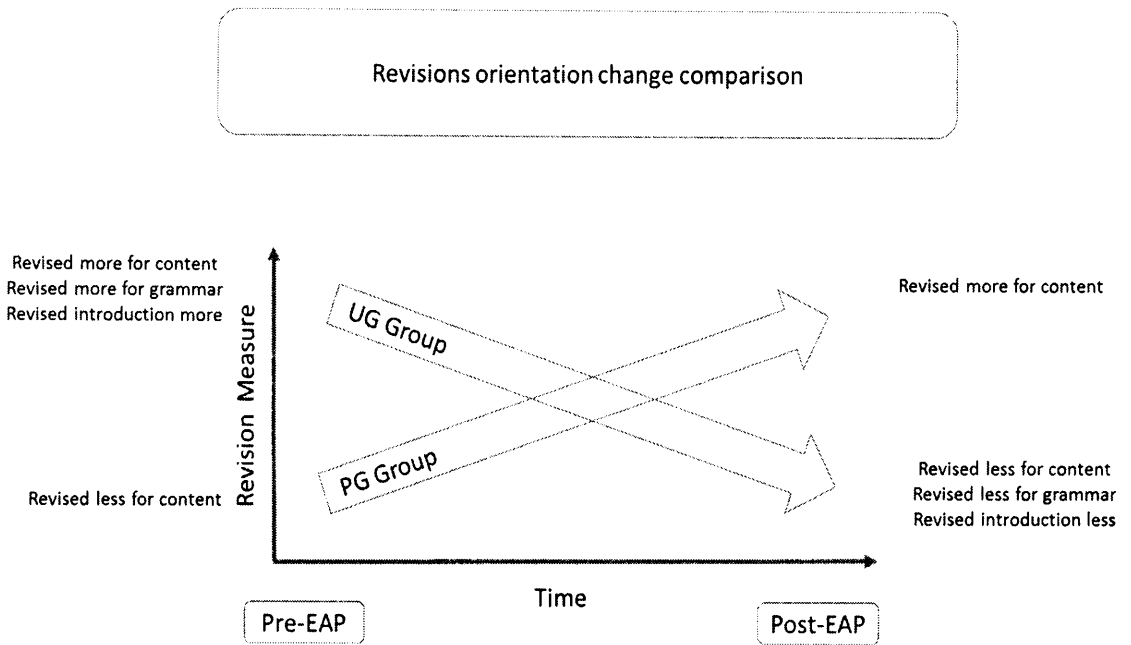


Figure 8.2. Change in revisions: the PG and UG groups



Previous research (e.g., Zimmerman, Bandura, & Martinez-Pons, 1992; Zimmerman & Bandura, 1994; Pajares, 2003) demonstrated that learners' self-efficacy positively correlates with their writing achievement. It was thus hypothesised that L2 learners' writing competence and self-efficacy increase as they use writing strategies and receive regular teacher feedback on their writing in the EAP programme. Interestingly, the results of the analyses have shown a close link between learners' increased use of writing strategies, lexical and syntactic development, and rise in self-efficacy beliefs. As the interview data revealed, students' initial conception of writing in general and of their own academic writing skills in particular were rather negative. However, upon progression in the course, there seemed to have been a major change in students' self-efficacy beliefs demonstrated by the fact that they began to reflect positively on their learning and writing experiences on the EAP programme. The students might have gained this sense of achievement as a result of the knowledge and

skills they acquired during the actual academic reading and writing sessions over the course. As inferred from the post-course interviews, the writers' extensive involvement in a salient in-class discussions, individual tutorials and series of out-of-class self-study activities could have triggered the strengthening of their self-efficacy beliefs. Before the EAP course writers seemed to associate the teacher with judgement, examination and grading, whereas during the programme, they may have reconceptualised the teachers' role and began to see them as facilitators to learning and as source of constructive feedback on writing. On the whole, the intensive nature of the EAP programme, exposure to a variety of academic reading and writing materials, individualised teacher feedback on the overall quality of written assignments and immersion in the target language environment could indeed all have contributed to increases in the lexical and syntactic complexity of students' writing and to the positive changes observed in writers' self-efficacy beliefs.

A particularly interesting relationship between students' writing difficulties, writing strategies, goals and linguistic development was also found in this study. As can be seen from the qualitative data collected at the beginning of the EAP programme, the main source of writing difficulty for student-writers was lack of sufficient vocabulary knowledge. During the intensive four-weeks of the EAP programme, the participants were involved in substantial writing practice and used a range of vocabulary-oriented learning strategies and tools, e.g., memorisation of new words and structures, monolingual dictionaries and reference books. All these activities must have assisted substantially with enriching their lexical knowledge in English and, as a result, after the EAP course, only few students felt that vocabulary was still a source of difficulty for them. This finding agrees with the results of the quantitative analysis which showed noteworthy lexical gains of the UG students over

EAP course. This improvement in students' lexical knowledge might also have affected the nature of the goals they set for themselves on the pre-sessional programme. The student-writers must have realised that having gained knowledge, in terms of lexis, there were other important aspects of writing they could develop during the course. Thus, the post-course interview data showed that the students felt that academic register constituted the most challenging aspect of writing for them. In fact, the explicit focus of the EAP programme was on advancement of students' academic reading and writing skills and students were expected to make progress in these areas. However, having become more knowledgeable and skilled as academic writers, they may have realised that there is more scope for further improvement and set *modifying writing style* as a new long-term objective for the post-EAP studies. Interestingly, they seemingly aspired to attain this goal by engaging with extensive reading of academic materials and referring to their tutor for feedback and suggestions on their writing. On the whole, a noteworthy pattern observed in this study was that the use of various writing strategies during four weeks on the EAP course might have helped them to overcome their writing difficulties and shaped their writing goals and objectives.

CHAPTER 9. Conclusion

9.1. Introduction

Chapter 8 provided a discussion of the findings of the present study. This chapter begins with a synthesis of the results for each of the six research questions investigated in the study followed by the discussion of methodological contributions of the research. The chapter then continues with an overview of theoretical and pedagogical implications of the results in the fields of SLA, second language writing and EAP. The chapter ends with the discussion of the limitations of the study and directions for further research.

9.2. Summary of the Results

To briefly summarise the findings of this study, each research question and corresponding results on student-writers' linguistic and cognitive development and on the psychological factors of second language writing are provided in this section.

Research Questions 1 and 2: On linguistic development of L2 writing

1. How do the lexical features of argumentative writing change over the course of an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? It was found that there were improvements in terms of lexical diversity for both the UG and PG groups of writers. However, the UG students showed larger gains in lexical development,

according to several measures of lexical variation and sophistication, over the course of four weeks than the PG group. It was hypothesised that this change might be due to the growth in students' receptive and productive vocabulary as the result of incidental rather than conscious learning of lexis on the EAP programme.

2. How do the syntactic features of argumentative writing change over the course of an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? The results showed that the UG students' writing demonstrated development in some aspects of syntactic complexity, specifically, improvements were detected in noun-phrase complexity and in the use of genre-specific syntactic constructions. As regards the PG group, the main syntactic changes were manifested in a reduction in clausal complexity along with the increase in word frequency. These findings imply that by the end of the EAP programme, the PG students used nominalisation more frequently in their writing rather than pre- and post-modification. The frequency of these features in students' writing approximated those of L1 writing.

Research Questions 3 and 4: On cognitive development of L2 writing

3. How does writing fluency change in an intensive EAP programme in the case of: a) the UG students who intend to undertake undergraduate studies in the UK? b) the PG students who have already completed their undergraduate degree in their home country? The UG and PG student-writers' fluency changed in various ways. First, regarding the UG group, the students tended to write faster, pause less and make fewer revisions at the end than at the start of the EAP course. In contrast, at the end of Week 4 on the programme, it took the PG group of writers more time to produce their

essays, they appeared to pause more and made significantly more revisions than they did in Week 1.

4. How do writing processes and revision behaviours change in an intensive EAP programme in the case of: a) the PG students who have already completed their undergraduate degree in their home country? b) the UG students who intend to undertake undergraduate studies in the UK? It was found that by the end of the EAP course, the majority of students adopted a process-oriented approach to writing. In contrast to the beginning of the course, the students' writing became more recursive and they had demonstrated being more aware of the importance of planning in the writing process. In terms of revisions, the results showed that while the number of revisions made by the UG students went down, the PG group made significantly more revisions at Time 2 than they did at Time 1. Importantly, PG students seemed to have stronger focus on content-related revisions than the UG students at the end of the EAP programme.

Research Questions 5 and 6: On psychological factors of L2 writing

5. How do writers' goals and self-efficacy beliefs change in an intensive EAP programme in the case of the UG students who intend to undertake undergraduate studies in the UK? The findings of the study showed that the goals UG students set for themselves changed from those targeted mainly at linguistic improvement of their writing to those directed at academic writing development in a broader sense. The students' goals in Week 4 became more long-term in nature and focused on further advancement of their academic writing skills while studying on their degree programmes. Turning to the second part of the research question, the results of the qualitative analyses indicate that writers' self-efficacy beliefs changed considerably.

The UG students might have become more confident in their writing skill because their academic writing expertise grew over four weeks. This can be clearly seen from the responses given by the vast majority of respondents during the post-course interviews. Reciprocally, the extensive academic reading and writing experience they gained in the pre-session programme and constructive feedback they received from their EAP tutors might have increased their self-efficacy beliefs.

6. How do writers' difficulties and writing strategies change in an intensive EAP programme in the case of the UG students who intend to undertake undergraduate studies in the UK? While on the whole, the UG students seemed to encounter similar writing difficulties throughout the course, it is worth emphasising that the nature of some of these difficulties changed considerably after the EAP course. At the end of the four weeks, the groups of students no longer considered insufficient vocabulary as their major writing problem. The results of the statistical analyses show that the UG group demonstrated significant development in lexis; thus, it might be inferred that they fulfilled this particular goal. Regarding the change in the writing strategies, L2 students applied a broad range of cognitive, metacognitive and affective strategies by the end of the EAP course. To illustrate, they began to read other academic papers extensively, plan their essays more thoroughly and strongly appreciated tutor feedback on their writing.

9.3. Contributions of the Study to the Field

The findings of my study have important implications for the fields of second language writing, SLA and EAP research and teaching to be elaborated upon below. The methodological contributions of the study will be discussed first, followed by an

overview of the theoretical implications for SLA and second language writing and finally, the pedagogical implications for writing and EAP.

9.3.1. Methodological Contributions

In contrast to the majority of research in the areas of SLA and L2 writing which relied either on only quantitative or qualitative methods, the current study adopted a mixed-methods approach, in which both quantitative data from the academic essays and qualitative data from the interviews and learning journals was collected and triangulated. It was expected using mixed methodology would offer deeper insights into writers' cognitive processes and would elucidate their linguistic and cognitive development over time. It was hypothesised that triangulating different sources of data would allow more reliable interpretations of the findings. Importantly, my hypothesis was confirmed since there were hardly any contradictions, with the exception of one mismatch in terms of learners' revision behaviours, observed between the qualitative findings elicited by means of the learning journals and semi-structured interviews. Thus, it can be concluded that the qualitative data in my study are well-triangulated and reliable.

An important methodological contribution of my study lies in the application of a relative new methodology, i.e., keystroke logging, to collect and analyse the research data. This unobtrusive tool allows one to record all keystrokes and mouse movements and store the data for later processing. Thus, it "ensures an ecologically valid research context" (Van Waes, Leijten, & Van Weijen, 2009, p. 41). In particular, the keystroke logging software assisted me with 1) the writing fluency analysis since it allowed me to retrieve detailed data on pausing and writing time, and 2) on-line

revisions analysis as potential window on cognitive processing. Importantly, the keystroke logging methodology was complemented with qualitative instruments, i.e., semi-structured interviews and weekly learning journals in order to enhance the understanding of the research data.

9.3.2. Theoretical Implications

The fact that the less proficient group of writers made substantial improvements in lexical diversity and sophistication indicates that lexical development in these areas took place without explicit vocabulary instruction on the EAP programme. Similarly, the syntactic features of students' writing that are typical characteristics of academic genres were also found to develop, albeit modestly, in the UG group. In line with recent studies in the EAP context (Bulté & Housen, 2014; Crossley & McNamara, 2014; Friginal & Weigle, 2014), this suggests that development in the syntactic domain of L2 academic writing may be possible in the absence of explicit language instruction. Nevertheless, it is important to note that the duration of study was relatively short compared with other studies investigating writing development on an EAP course (e.g., Shaw & Liu, 1998; Storch & Tapper, 2009); hence, my research does not really provide evidence for the development of underlying knowledge representations of complex syntactic structures or features of writing characteristic of academic genres, especially because I did not analyse the accuracy with which the students used these constructions. However, what this study does show is that students' "repertoire of choices" (Ortega & Byrnes, 2008, p. 287), of specific syntactic structures and lexical features, moved in the direction of "idealized

writing profiles" (Byrnes *et al.*, 2010, p. 91) as expected for university-level academic writing assignments.

Another theoretical implication concerns the findings made in the study with regard to fluency development of L2 writers. Previous research (e.g., Chenoweth & Hayes, 2001; Johnson, *et al.*, 2012; Marzban & Norouzi, 2011; Sasaki, 2000; Storch, 2009) showed that *composing rate* or *writing speed* as it is often referred to, has been one of the most frequently used measures of writing fluency. The results of the analyses in the present study have demonstrated that by the end of the EAP course, the students in the UG group improved their writing speed, whereas for the PG students, the opposite trend was observed. However, on the basis of these findings, one cannot conclude that after studying on the programme for four weeks, the PG students became less fluent. Abdel Latif (2009, 2013) argues that the measure of writing speed might not be a valid measure of writing fluency. One explanation is that skilled L2 writers might produce fewer words per minute not because they are disfluent, but because they are slow and unskilled at typing. What is even more important is that since writing speed is a product-based measure, it cannot mirror writers' text production fluency as accurately as some process-based measures, e.g., pauses and bursts, can. Therefore, care should be taken when using writing speed as a measure of fluency, especially in task-based writing studies (Housen & Kuiken, 2009; Skehan, 2009; Skehan & Foster, 2007; Wolfe-Quintero *et al.*, 1998).

The findings of the present study have important implications with regard to the goal setting of L2 student-writers. Interestingly, the nature of the goals that learners set at the beginning, throughout and at the end of the EAP programme remained fairly stable. Most students were oriented towards learning to write as well as writing to learn. As reported by the students themselves, they aimed to develop

various aspects of argumentation as well as to improve their lexical and grammatical knowledge through engaging in extensive writing practice tasks. My results are in agreement with those of Cumming (2006) who showed that learners' goals for writing are largely determined by their long-term academic and career aspirations. After having studied for four weeks on the EAP programme, a number of participants of my study acknowledged in the interviews and learning journals entries that they continued to experience difficulties with certain aspects of academic writing and the students highlighted their aspiration to further improve their writing skills while completing their university degree programmes.

9.3.3. Pedagogical Implications

On the basis of the results of the current study, some conclusions can be drawn and recommendations made with regard to helping students develop academic writing skills. First, since vocabulary was identified as one of the biggest challenges that writers reported facing before the start of the EAP program, teachers might consider directing their students to academic books, journals, magazines, educational websites and other learning resources which can assist them substantially with enriching their lexicon in English as well as using these resources in class. Second, students need to get adequate exposure to academic writing conventions in the ESL context. In order to be able to produce well-written academic essays, they need to develop awareness of academic writing style in the English language and be equipped with various cognitive, metacognitive and social strategies. Specifically, students should be taught to read extensively and use other scholars' ideas to support and challenge their own arguments. Teachers might also need to invite students to develop more a precise

outline of the message to be conveyed in their essay and in what particular order they are going to present their claims, i.e., to focus on essay planning. When gathering ideas for their own assignments, student-writers might be encouraged to use peer support by working together with other students, developing group posters, presenting those to other groups and getting feedback from peers. To illustrate, poster work is widely used on the EAP programme and proved to be an efficient collaborative activity that helps learners to brainstorm and collect ideas for their own assignments.

The present study also provides additional evidence with respect to the importance of students' engagement in revision procedures throughout the writing process. Students need to be encouraged that the essays should be revised for content and organisation prior to considering the specific grammatical, lexical and mechanical aspects of writing. Also, teachers need to emphasise that a backtracking strategy, which involves rereading the text that has been written, might assist student-writers considerably when evaluating and reflecting on what they have written. Rereading their essay gives writers multiple opportunities to identify the flaws and inconsistencies which they did not notice the first time and helps them to generate some ideas for their writing.

The results of this study also suggest that the use of model essays, checklists and self-assessment tools that include descriptions of lexical and syntactic characteristic features of academic writing might assist L2 learners in various phases of the writing, editing and revision process. At the beginning of Week 1 and at the end of Week 4, the participants of the current study were invited to complete a self-assessment checklist in order to help them monitor their academic progress on the EAP course. They were also introduced to some examples of former EAP students' successful writing, which was expected to assist them with their own essays. Some

participants of the present study acknowledged that imitating the writing style of other skilled writers helped them to make their own writing more academic. It should however be acknowledged that, in accordance with the interview and learning journals data, academic register remained the biggest source of difficulty for the students. Therefore, it can be inferred that four weeks of doing EAP might not be sufficient to develop students' confidence as academic writers and help them overcome this particular challenge in writing.

Importantly, learners should be encouraged to take risks with the language, which could have a positive impact on their writing skills development. To illustrate, they might be involved in some free writing and diary writing activities. One form of writing that the participants in the current study were asked to complete once every week on the EAP programme were learning journals. Completing the journal entries on a regular basis enabled students to get extensive writing practice, helped them to overcome their fears and challenges with academic writing, and assisted them in terms of goal setting for the future.

On the whole, the findings of this research are particularly relevant to EAP/Study Skills summer programmes. Importantly, the study provided consistent and solid evidence for the quality of educational practices in the EAP programme itself. The participants' lexical and syntactic gains over the course of four weeks have clearly demonstrated that the design of the pre-session course delivered strong linguistic and academic benefits to students. Students' positive feedback on the course and the growing number of students enrolling provide further evidence of the success of the EAP programme. The major positive change in students' attitude to academic writing and their increased use of writing and revising strategies have confirmed that the materials used to teach academic reading and writing skills on the EAP

programme and tutors' approach to these materials were highly efficient and most suited to the learners.

9.4. Limitations and Directions for Future Research

Despite the significance of its findings the present study is not without limitations which should be followed up by further research. First, regarding the research participants, since the numbers in both groups were relatively low, individual differences might have masked the patterns that could have emerged had the sample size been larger. It might be thus useful in future to replicate the research so that the results might be confirmed by a study with a larger sample size.

Another shortcoming of the study is that the participants represented a population with relatively homogenous language proficiency, B1 and B2 levels according to CEFR scale. It may therefore be worthwhile to investigate students' performance across a wider range of proficiency levels to better understand the genuine patterns of linguistic and cognitive development of writers on the programme.

Furthermore, the results of this study may be somewhat biased with regards to gender and participant nationality and culture since there were eight times as many female participants as male participants and the majority of them were Chinese. Although both gender and ethnic composition of my sample were congruent with the demographic characteristics of the student population on the EAP programme, the findings may only have limited generalisability to other student populations. Thus more evidence is needed when generalising the outcomes of the study to other nationalities and cultures. The current research could potentially be replicated with writers of different L1 and cultural backgrounds. It might also be worth trying to

eliminate the possible gender bias and involve the equal number of male and female students in future studies.

It might also be difficult to generalise the findings of the study because it was conducted in one particular institution and on one particular programme. Another limitation is that the fact that the researcher of this study fulfilled the role of a teacher and academic co-ordinator on the EAP programme. This might have had an impact on the research data, causing bias and subjectivity with regard to some conclusions drawn.

An issue which impacts on the generalisability of this study, to some extent, is the fact that the sample of participants were self-selecting, that is to say that they volunteered to be part of the research project. There may well be bias in this sample, in that those who are most willing to volunteer to be participants in a study may also have over- and under-represented traits. For example, the sample may be more motivated, have higher self-efficacy or be less anxious about their writing performance than the general population of EAP students. Obligatory participation of a random sample of students was not logistically possible and also, arguably, was not ethical. This is a difficult issue to resolve and is common in research which requires voluntary participation, therefore the interpretation of the results should take this possible bias into account.

Other limitations of the present study are linked with the use of the quantitative data collection tools. First, it should be acknowledged that the results might have been different if a different type of writing task had been selected. Since only argumentative essays were chosen to be used to elicit the research data, a replication of the study could be made with a different type of writing genre. Using

another task, such as a research report or an article review, for example, instead of an essay, might have revealed different sets of findings. It is possible that the results of this study might not be generalisable to other types of writing tasks. Apparently, students' written performance in the L2 depends not only on the type of the writing task, but also on writers' familiarity with the essay topic. Since the essay themes assigned to the participants during the pre-course and post-course writing sessions were chosen from the field that all students were expected to be familiar with, it might be interesting to assign less familiar topics to see whether any linguistic or cognitive changes would be observed in their writing. Only lexical and syntactic features of students' writing were analysed; thus, further analyses on textual and discourse features might yield additional insights into development of writing. It might also be interesting to rate the essays and see whether improvement in specific rating criteria would be made.

Another shortcoming of this study concerns the qualitative tools applied. The interviews and reflective logs did undoubtedly offer useful insights into writers' cognitive thought processes. Furthermore, the *Inputlog* software applied in the study to record students' writing unobtrusively provided detailed information concerning text construction. However, if the data gathered by means of the keystroke logging had been triangulated with concurrent verbal protocols, more detailed insights might have been gained into learners' writing processes. The present study is also limited in that during the interviews conducted at the beginning and at the end of the EAP course, the participants' L2 rather than their L1 was used. The primary reason for this was the assumption that the students' current English language proficiency level would allow them to express their thoughts without major difficulties. It should, however, be acknowledged that since students are more competent in expressing their

thoughts in L1, using Chinese might have helped to elicit a deeper understanding of writers' cognitive processes and experiences. Thus, improved interview procedures in future studies could involve using the participants' first language when asking them about their perceptions of their writing processes and behaviours.

Since the present study was conducted on an intensive programme, there is some doubt as to whether it is feasible that a substantial amount of linguistic development can occur within such a short period of time, i.e., four weeks. There is, therefore, a need to examine the development of students' writing over a more extended period, for example, over six months or longer. A longitudinal design of the study would allow the researcher to compare the findings and analyse the changes in students' writing skills development in more detail.

It might be interesting to explore the improvement of students' writing by examining measures of grammatical accuracy in future research. By looking at accuracy, the existence of the trade-off effect between complexity and accuracy could be researched. As learners' pool of attention is limited, complexity and accuracy enter into competition for attentional resources while the task is being performed. Hence, "tasks which are cognitively demanding in their content are likely to draw attentional resources away from language forms" (Skehan & Foster, 2001, p.189). It would thus be useful to analyse grammatical accuracy to discover whether it has improved during the four weeks of intensive EAP teaching.

A more detailed analysis of the changes in nominalisation and noun-phrase complexity in the students' essays might also have been informative. Another possible future research direction is to investigate the development of students' writing by means of a series of individual case studies, which would help to identify specific

particular factors linked to L2 writing development on EAP programmes (Norris & Manchón, 2012). In terms of research methods, the application of multiple data gathering and data analysis techniques might be worthy of inclusion in further studies. Specifically, the integration of concurrent protocols into the research design (Bosher, 1998; Cumming, 2006; Manchón, 2011) would likely lead to a better understanding of learners' composing behaviours. The interrelation between learners' perceived difficulties, the strategies they use and the syntactic, lexical and cohesive features found in their writing could also be explored. This would offer insights into the factors that appear to affect learners' perception and assessment of their own difficulties in L2 writing, both in general and when producing academic texts in particular. It would also be interesting to conduct multiple case studies to investigate writers' linguistic and cognitive development in-depth. The main advantage of using a multiple case study as opposed to a single case study approach is that it enables researchers to "identify common grounds regarding the most salient variables of interest for determining the what, why and how of L2 writing development" (Norris & Manchón, 2012, p. 231).

Second language writing could further explore the interrelation between students' perceived difficulties, strategies, and syntactic, lexical and cohesive features found in writing. It might be useful to identify the factors that affect learner perception of difficulties in writing. The results of such studies might offer constructive information for the development of writing assignments. It could be useful when answering some controversial questions, for example, 'Should timing be strictly set at the outset of the task and would that help students achieve their best performance?', 'What is the relationship between the essay topic and the quality of writing produced?' and others. It might also be interesting to see whether or not the students use the same

writing strategies in naturalistic contexts, i.e., where they are not required to write an essay within a restricted time. Such research might provide considerable insight into writing processes and inform second language writing research.

Although the present study has a number of limitations, it attempted to contribute to the fields of SLA, L2 writing and EAP by investigating the factors that might assist learners in terms of their linguistic and cognitive development on a highly intensive pre-sessional programme. To conclude, this study provided consistent evidence of the existing link of writers' goals, and strategies to their self-efficacy beliefs and academic writing achievement. A number of interesting findings made as a result of the analyses demonstrated that this research was a worthwhile attempt to investigate the efficiency of intensive EAP teaching for second language learners' writing skills advancement. I hope that this study may eventually make some small contribution to easing the burden non-native English speakers face with regards to their writing development when coming to study in an English medium institution.

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APPENDICES

Appendix A. Examples of Argumentative Essays

An undergraduate student essay (Time 1; Topic B)

Any student caught cheating in school or college exams should be automatically dismissed. How far do you agree?

At present, more and more students caught cheating in school because they want to get good score without effort. Some schools think it should be immediately expelled but I don't think so, I think it depends on how order of severity they do.

Everyone make mistakes so everyone should have the chance to be forgiven but if the mistake is too serious, we need to think differently. About cheating, I think punishment can divide into warning, disciplinary punishment and dismissed.

During the test, students always meet some questions they do not know how to answer so they start to peep other students' answer sheets. At this time, I think supervisor could warn them stop it but if they still peep answer sheets maybe supervisor should cancel their qualification examination and give them disciplinary punishments. Generally speaking, cheaters will not cheat because they want to cancel punishment and they found the consequences of cheating are too serious that they cannot bear liability. If just thus much I think students could be forgiven after all they are young people.

However, more seriously, some students' behaviour make us cannot forgive them. For example, some students will buy the answer, it means they pay the money to another student who has good performance. To this behaviour, I think school have to automatically dismissed them because it is not just lazy problem, it is the question of morality and it also will influence other students especially lazy students. As to other situation such as bribing teacher, buying essay... I think it should take the same approach.

An undergraduate student essay (Time 2; Topic A)

Exams cause unnecessary stress for students. How far do you agree?

Introduction

Nowadays with the development of society, population is become more and more so personnel selection is become more and more important. However, in many populous nations, it is more difficult for them to select personnel fairly so exams arise. A lot of people argue that exams give students too much stress that they should not have, but I still claim examing is a relatively fair and reasonable way for students especially for some poor students who have less oppotunities than rich. Next I plan to introduce 'the exams bring power to students' in section1 and ' the exams bring oppotunities to students' in section 2.

Section 1: The exams bring power to students

Lots of people argue that exams cause unnecessary stress for students but they do not find the positive impacts in exams. Firstly, because of exams students have to listen carefully in class and study hard after class, as the old Chinese saying goes: Pressure gives us an impetus. Without pressure we will become lazy. Secondly, examing is also a good way to check students whether they master the knowledge completely. Examing is just a way for teacher to know the case study of students better. So sometimes the stress is necessary.

Section 2: The exams bring oppotunities to students

In many developing countries personnel is the prime force of productivity, but there are always many oppotunites for rich, so it become harder for poor who have good ability to get oppotunities. Under the constitution, examing has become the only

relative fair way for rich students and poor students to compete. That is why Gaokao is so important for students in China, a famous university could bring more opportunities to students.

Conclusion

Things have two sides indeed exams bring stress for students even families, they spend a lot of money and energy on studying but maybe still fail in Gaokao. After all these are small number of case, for most students they always can get a good result if they study hard before. To sum up, the positive impacts that exams bring is absolutely greater than negative impacts.

A postgraduate student essay (Time 1; Topic A)

Exams cause unnecessary stress for students. How far do you agree?

In modern society, people are living under so much pressure in daily life, work as well as study. It is known that the majority of people have the same thought that exams cause extra unnecessary stress for them, especially for the students. But on the other hand, people like me hold the opposite point of view. We believe that sometime people need some stress at certain level to push them moving forward, to succeed. In this essay, I am going to argue whether the exams cause unnecessary stress for the students.

To begin with, it is the students' job to do well in the exams so that they can differ themselves from those who pay little attention to study. Firstly, the exams may not be the best way to identify a good student, but it is the fastest way for the teachers to be aware of the situation of students in the whole courses. Secondly, the students can individually get to know how well they are doing in their own self-study hours from the exams. For example, they can understand if they are making a progress or not.

Then, apart from the responsibilities for the students to do well in the exams, the stress is not as unnecessary as people think. In the opposite, it could be more necessary for the students to get better and better in their study. One reason for this is that exams are like clocks ticking in students' life. At some stages of study, students are asked to do some exams in different subjects. It is like getting upstairs. If the students do the exams frequently, it becomes a good habit for the students to keep the pace of study without losing themselves to think less or learn less. The other advantage of stress causing by exams is that it can pre-train the students to get used to what they are going to face in their future career. As it is believed, working is more challenging than

studying at school. Students could come along with more difficulties after school. Therefore, if they cannot defeat the fear of stress only causing by exams, how can they overcome other stress in life?

To conclude, it is a good thing for the students to have some stress in study like the exams and other stress. They can learn better and be more successful thanks to the stress or the failure causing by the bad exams. Because it in return can make them consider the unnecessary stress necessary only if they step in their future life career to know there is more challenge waiting for them.

A postgraduate student essay (Time 2; Topic B)

Any student caught cheating in school or college exams should be automatically dismissed. How far do you agree?

Cheating has become a more serious phenomenon in schools in recent years. This has raised a heat discussion on how do punish the students in order to reduce the frequency of this issue. If a student by any method is caught cheating, it is reasonable to get dismissed according to different situations. However, it is not necessary to dismiss all the students who got caught automatically. The first section will illustrate on three situations that will happen when students cheat. Then, the second section will move on to analyze if it is efficient to set up a policy.

To begin with, there are at least three situations when cheating is accounted for. The first situation is that when a student is caught cheating, if he or she does that on purpose or not. Studying at school is not easy to control the environment, especially the effects of the environment that can have on a person. Some students are born to be lazy and bad, while some others are born to follow the others which, in this case, will lead them to terrible mistakes. The second situation is that for the teachers, if their evidence is strong enough to prove the students' cheating action. It is very important to have hard evidence when anyone tries to accuse anyone for sins. If the evidence of cheating is not convincing enough, the students or the parents will probably not take the assumption made by schools seriously. The third situation is if a student is indeed caught cheating and he or she admits that, it then can be decided by the schools. However, although the punishment in this situation should be tough, it is also the students' attitudes that should be considered first, because "everybody deserves a

second chance". Therefore, expelling students is not always the last choice for schools or colleges.

Schools have every right to set up standard rules to manage the students especially those who are in junior grades struggling with ruling themselves. In the same time, how strict can each of the policy be is depending on many factors. For example, generally, how frequent does cheating happen in a period of time. If this issue does not exist at all, it is not necessary to set up a certain strict policy wasting other resources. If this is a serious problem with high frequency in short time, it is the schools responsibility to set up some strict rules and policies such as automatically expelling a student if committed cheating in exams.

Appendix B. Examples of Interview Transcripts

Pre-course interview

Interviewer (I): *How do you see yourself as a writer in English?*

Participant (P): Actually I think in my country we just write some compositions our teachers told and we don't have practice ourselves. My grammar and vocabulary will be better than some constructions, and other factors.

I: *How are you trying to change it/improve it?*

P: When I see many titles, I don't know how to write about it, I get confused.

I: *How are you trying to improve it?*

P: I try to read more and practice more when I have some free time.

I: *How does writing in your opinion help you to learn the language and learn about the language?*

P: writing can improve my grammar and how to make complex sentences, but I don't know how to speak well.

I: *How does writing help you to develop language skills?*

P: yes, yes, by using some useful sentences I can use it in other places like listening and discussion, erm oral English.

I: *I want to ask you about your expectations on the EAP programme. What kinds of writing do you expect to be doing on the EAP programme?*

P: I want to abandon my old style of writing because we always write compositions in the test like IELTS, so I want to write the articles by the British process so I can make some change in my reading to writing to improve my English. I think the essay is a little worrying, but I have no choice to do so...

I: *What is good academic writing in your opinion? What does it involve?*

P: it may have erm...good introduction and summary and it is well-organised by the main points erm...higher words, no, not simple words, and some long sentences with "which", "that".

I: *What goals or aims do you have as to improving your writing in your future studies on EAP programme and later at the university? Do you have any goals?*

P: I think although essay is worrying but I will write more than before and write longer than before and make the writing look more complete, I mean apart, connected, linked, cohesive..

I: *Students have their own methods of writing, some steps, what you do first when you write, what you do second, third? Do you have some kind of strategy or steps that you follow?*

P: I will find some key words and list them on the paper and make construction, and catch the abstract and the summary. Then, I will think how much paragraphs I will write and topic sentences in the paragraphs and find some examples to support topic sentences.

I: *My next question is about the feedback on writing. Did you ever get feedback on your writing? What did you do with it?*

P: I will pay attention to disadvantages of my paper, and through the feedback I will improve my work where I do not do so well.

I: *What kind of feedback do you find especially useful?*

P: My teacher told me I cannot copy the sentences from the articles I have read I must use my own sentences. I can take her advice to improve my writing. She told me both about my weaknesses and strengths.

I: *How do you revise what you have written?*

P: erm...I will follow the advice from my tutor and make my writing erm...more perfect than before by the way she told me.

I: *How are you trying to improve your writing in English? What are you doing to improve your writing?*

P: from some books or guidebooks that teach you how to write. I can borrow some books from the library. The student book we were given on EAP programme told me some useful books to borrow from the library to learn the EAP well.

Post-course interview

I: *How do you see yourself as a writer now after 4 weeks on EAP?*

P: I think I feel better than before because I have practiced my writing for more than 3 weeks and get some new knowledge about how to write well or write more academic.

I: *How do you feel when you write now?*

P: sometimes it is difficult to catch up some clear ideas to prove my main point, but other aspects, like how to write the Introduction or Conclusion and using the references correctly is better for me to write.

I: *How does writing help you to learn the language?*

P: writing includes not only the vocabulary and some paragraphing and some model sentences I can use in other skills, like listening and reading.

I: *How does writing help you to develop language skills?*

P: when I write my essay I can keep some useful sentences to help my reading and listening.

I: *Have your expectations been met on the EAP programme?*

P: yes, I think so, not all achieved but I can get better than before, I improved a lot in my writing. I can listen my tutor's advice and erm...abandon some of my own drawbacks and keep on the advantages of writing, and read more academic essays and texts to help me finish my own essay.

I hoped I could read and write more, but sometimes I was lazy and didn't read more.

I: *Imagine a new student has arrived on the EAP programme. How would you explain what good academic writing is?*

P: it should have well-organised introduction and summary and body paragraphs should connect to key points listed at the beginning, and if they are some researches from other persons, we should write the references at the end of essay. Some referencing, paraphrasing, quotation and citation well. I have also learned the Introduction should include the key points, my own position and the route map.

I: *Have your goals with regard to writing changed in 4 weeks on the EAP course?*

P: before I hoped I can practice my English by the EAP course and improve my presentations by using spoken English well, but now I think English is not the only important thing to learn, but also my future degree course is very important to learn, so I need to acquire some knowledge to become familiar with my Major course. Sometimes I just don't know how to prove my evidence clearly, sometimes my examples are not supporting my main point.

I: *Have your methods of writing changed in 4 weeks?*

P: before I would write my essay from beginning to the end, but now I think I should make a clear outline first, write an Introduction and then think 3-4 key topic sentences about my body paragraph and finish each paragraph and last I will complete my summary.

I: *How do you feel about the feedback that you got on EAP?*

P: I think it was suitable, erm... useful for me. If I did something well, she would tell me, and if I didn't present my opinions clearly she would also tell me how to present it.

I: *What did you do with the feedback?*

P: I will read it carefully and at the tutorial I would discuss it with my tutor. If just one paragraph is not very well, I would revise the paragraph and take some advice from my tutor.

I: *Have you got your own method of checking and revising what you have written?
Has it changed?*

P: I think there are many useful methods in Gold Book. it can teach you some to be more mitigated when I present my own view. If I rewrite something I will sometimes ask my friends to see my paragraph and give me some advice on it. I think I learned it on the EAP course, my tutor also asked me to listen to other students' advice.

I: *How are you trying to improve your writing in English?*

P: I should read more academic essays and make some notes about the useful sentences and keep them down and use them for my next writing or essay. I can also add something from my Gold Book and if I need some advice to write I use the Gold Book as a source.

Appendix C. Guidelines for Learning Journal Entries

Please, read the instructions carefully before you start writing your diary entries.

Studies have shown that *reflection* upon one's learning is a key to a full learning experience. For this reason, you will be asked to keep reflective journals or learning diaries as a part of the experiment you agreed to take part in.

- ✓ What should I write? Please respond to each of the 13 prompts (questions) given below in each of your weekly diaries. Do not worry about your spelling, grammar and punctuation when you write since we are interested in your experiences and thoughts.
- ✓ How long will it take me to write each entry? Each weekly journal entry will take roughly 25-30 minutes to complete. You might take more or less time depending upon your time constraints and the amount of detailed information you wish to include.
- ✓ How many entries will I have to submit? You will be asked to submit 3 entries.
- ✓ When will I have to submit my reflective learning entries? Please, complete 1 entry (answering all 13 questions) and submit it to your ARW tutor on *Thursday*.
- ✓ Please take some time each week to complete your learning diaries. Write your responses to each question in the space given below each question.

Many thanks for taking part in this study!

Appendix D. Examples of Learning Journal Entries

Learning journal entry 1 (Week 2)

1. How did you feel when you wrote in English?

I want to write a good essay. But I always found what I write every time are in similar forms. What I mean is the writing style is simple. Specific vocabulary and sentences are used every time. And I feel I cannot express what I really want to say. Because I don't know how to form in English.

2. Was it a difficult topic to write an essay about? Why/why not?

I don't know which topic the question mention is. If it is the topic of assignment, I think it is not a difficult one because I have written many essay to evaluate some issues.

3. How did you plan your writing? Did you use any particular strategies when planning?

After collect information I usually form a structure in my mind and then write the draft. Now I learned to draft an outline first.

4. How did you compose your essay? What steps did you take? What did you do first, second, and so on? Did you use any particular strategies when writing the essay?

1) Search information related to topic in mind. If I have enough time and with permission, I will search from books or Internet; 2) An outline or just a structure in mind; 3) Write a draft; 4)Revise the essay in words, grammar, seldom in the structure.

5. Where did you get the information for writing (e.g., your own ideas, experiences, other people's experiences, books or other sources of information)?

Mainly my own experiences, thoughts and if I can collect information from books and Internet. I will focus on it.

6. Did you get stuck while writing/did you have to think hard? When did that happen and why? What did you do to get unstuck/to find the way out?

Yes, this situation happened when I thought I cannot present more reasonable evidence or support for the stand I set up. Sometimes I will be in a contradictory situation and I want to overthrow what I have already written down.

7. What was your goal in terms of writing? Did you achieve your goal? If yes, how well did you achieve it? If not, why did you not achieve it?

My goal in terms of writing is that I can use proper word and authentic sentences in my essay and I can substitute some words and avoid repeat. I didn't achieve it I think in many aspects I didn't well. Maybe because I lack to understand of some rules.

8. What did you learn about academic writing this week?

I learnt how to write a reference list and how to write main body paragraph.

9. What did you find was a problem for you in terms of writing? What were you trying to improve? What would you like to have done better?

Vocabulary and form of sentences, maybe way of thinking. Write to improve, I think. Read more articles.

10. *Did you get teacher feedback on your writing this week? What did you think of that? How did you feel about it? Did you find it helpful and understandable? Why/why not?*

Yes, got it on Wednesday. I think it is useful for me to find my weakness and improve it.

11. *What did you learn from feedback you got this week?*

I did not do well in many details, such as use of tense, grammar mistakes. Tutor gave me some good advice and I find it very useful. Next time I will do better in these aspects.

12. *How are you going to apply the feedback you got on this essay to your other written assignments? Will you do anything particular as a result of teacher's response?*

I will look at essay and feedback many times and I will do some record about the things important. It is convenient to check after a long time.

13. *In what way has writing helped you learn the language this week?*

Vocabulary and some rules.

Learning journal entry 2 (Week 3)

1. *How did you feel when you wrote in English?*

Compared to last week, I pay more attention to the form of citation and paraphrasing. But I think I am not skilful now.

2. *Was it a difficult topic to write an essay about? Why/Why not?*

For me, assignment 2 is not difficult. Because there are many text to refer to and I am good at writing an argument.

3. *How did you plan your writing? Did you use any particular strategies when planning?*

I will plan my writing according to the material I collected.

4. *How did you compose your essay? What steps did you take? What did you do first, second, and so on? Did you use any particular strategies when writing the essay?*

The steps are not changed. First read the topic and then collect information. Next an outline. Writing introduction, main body and conclusion. Finally check vocabulary and make correction.

5. *Where did you get the information for writing (e.g., your own ideas, experiences, other people's experiences, books or other sources of information)?*

Now I just use the information from textbook. Meanwhile, I will put my own idea and experience in my essay.

6. *Did you get stuck while writing/did you have to think hard? When did that happen and why? What did you do to get unstuck/to find the way out?*

When I am writing, I need to think hard to make it logical. And I also pay attention to the cohesion. It happened when I do not make a very good outline. To find the way out, I will finish or improve my outline.

7. What was your goal in terms of writing? Did you achieve your goal? If yes, how well did you achieve it? If not, why did you not achieve it?

To be more skilful, write convincing article. Not yet. I think sometime I still make some mistakes and the use of language is not good enough.

8. What did you learn about academic writing this week?

About how to be critical and use mitigation claims in my essay.

9. What did you find was a problem for you in terms of writing? What were you trying to improve? What would you like to have done better?

Problem: use of words is not accurate.

Improvement: still vocabulary and diversity of sentence forms, how to paraphrase and how to be critical.

Better: the structure of essay and use of material.

10. Did you get teacher feedback on your writing this week? What did you think of that? How did you feel about it? Did you find it helpful and understandable? Why/why not?

I learned many things from the feedback. For example, how to write a good introduction and use more accurate reporting words. It's helpful. Because I learned new standard in writing.

11. *What did you learn from feedback you got this week?*

I used to write a very brief introduction of my essay. And now I learned that I should summarise each section in one sentence and make it clear to reader.

12. *How are you going to apply the feedback you got on this essay to your other written assignments? Will you do anything particular as a result of teacher's response?*

When I write other assignments, I will know how to write my introduction. And I will focus more on the reporting verb and the form of reference.

13. *In what way has writing helped you learn the language this week?*

I know more words and find it more difficult to read and understand some materials in this week course, like Sowden. I will go on!

Learning journal entry 3 (Week 4)

1. How did you feel when you wrote in English?

Writing is still a difficult task for me. However, I like writing now because I think I make progress.

2. Was it a difficult topic to write an essay about? Why/Why not?

The topic is easy to understand, but it is not easy to write a good sample. I used to assessing and evaluating others' ideas just on the basis of my personal view. Now I need to use more evidence from research. It is not a simple change for me.

3. How did you plan your writing? Did you use any particular strategies when planning?

I think drawing an outline is very necessary. Not so much changes this week. In class, we do the poster to help writing, but it seems not so useful for me. Because I am accustomed to writing in my own logic order. Others' thought sometime is not accepted by me. But I admit there are good points from others.

4. How did you compose your essay? What steps did you take? What did you do first, second, and so on? Did you use any particular strategies when writing the essay?

The same steps as last week.

5. Where did you get the information for writing (e.g., your own ideas, experiences, other people's experiences, books or other sources of information)?

Usually use my own ideas and experiences to give argument. I know it is not convictive. So I will try to collect information from other sources, such as Internet and other's articles.

6. Did you get stuck while writing/did you have to think hard? When did that happen and why? What did you do to get unstuck/to find the way out?

When I look for others' evidence to support my claim and write claims with different intention to make all the information I gave a "whole" passage, which make sense. To find a way out, I just go through the outline in my mind. Maybe I will change some parts to improve the whole.

7. What was your goal in terms of writing? Did you achieve your goal? If yes, how well did you achieve it? If not, why did you not achieve it?

First, let other people easily understand my expression. Then when I become more skilful, I want to deliver words with my own characteristic.

Not yet. Write more, ask for other people's advice and change or improve my writing style.

8. What did you learn about academic writing this week?

Use less personal experience in refute others' claim. Because my personal idea is not convincing too.

9. What did you find was a problem for you in terms of writing? What were you trying to improve? What would you like to have done better?

1. Not proficient in using vocabulary, like reporting words.

2. Still need to learn what is not authentic expressed in English writing.

3. Learn to change my habit, like not mitigated when refute others.

10. *Did you get teacher feedback on your writing this week? What did you think of that? How did you feel about it? Did you find it helpful and understandable? Why/Why not?*

Very useful. Tutor points out some mistakes that I made before. So I remember to avoid making the same mistakes next time.

11. *What did you learn from feedback you got this week?*

Mitigated claims and avoid using too many personal ideas and experience in academic writing.

12. *How are you going to apply the feedback you got on this essay to your other written assignments? Will you do anything particular as a result of teacher's response?*

I will apply the two points mentioned above to my own written essay. I will write the feedback down in my notebook and regularly review until I master it.

13. *In what way has writing helped you learn the language this week?*

Mentioned in the interview. Learn more about the culture, improve my reading skill

Appendix E. Information Sheet

Date: June 2013

INFORMATION SHEET

As part of my Doctoral studies in the Department of Linguistics and English Language, I am conducting a study that involves collecting some data through argumentative writing tasks.

I have approached you because I am interested in how L2 learners use the English language in writing. The study will be conducted on the EAP (Study Skills) pre-sessional summer programme during a one month period, and it is important that you participate in all sessions. The experiment would involve your participation in two interview sessions (at the beginning and at the end of the EAP program), submission of three learning diaries (one entry per week), and taking part in two additional essay writing sessions (45 minutes each). These sessions will be conducted in the computer lab since students will be asked to type their essays in Microsoft Word with the aim of further analyses via keystroke logging, the program that captures all insertions and deletions, pauses and cursor movements.

You will be rewarded with a £10 Amazon voucher and given some feedback on your writing in return for your participation in the present study.

Importantly, your participation in the experiment and your performance will not affect your progress and evaluation on the EAP/ (Study Skills) Programme and your relationship with the university and the department.

I would be very grateful if you would agree to take part in my research.

You are free to withdraw from the study at any time but not later than one month after the final research meeting with me. If you decide to withdraw within this time period your data will be destroyed and not included in the study. After this date, your data will be used for my PhD research and in any subsequent publications based on this research project. At every stage, your name will remain confidential. The data will be kept securely and will be used for academic purposes only. The audio recordings of the interview will be encrypted.

If you have any queries about the study, please feel free to contact myself at d.mazgutova@lancaster.ac.uk, or my supervisor, Dr Judit Kormos, who can be contacted at j.kormos@lancaster.ac.uk or by phone on +44 1524 593039. If at any stage of the study you wish to speak to an independent person about this project, you are welcome to contact the Head of Department, Prof. Elena Semino, at e.semino@lancaster.ac.uk or by phone on +44 (0)1524 594176.

Signed

Diana Mazgutova

Appendix F. Background Questionnaire

Name: _____

Age: _____

Gender: Female Male

Highest level of education:

High School

BA/BSC

MA

PhD

Other

Field of study: _____

First language: _____

Length of study of English: _____ years

Length of stay in English speaking countries: _____ months/ _____ years

IELTS scores:

Overall Band Score: _____

Listening: _____

Reading: _____

Writing: _____

Speaking: _____

UNIVERSITY OF LANCASTER

Department of Linguistics and English Language

Consent Form

Project title: **Linguistic and Cognitive Development of L2 Writing during an Intensive English for Academic Purposes (EAP) Programme**

1. I have read and had explained to me by Diana Mazgutova the Information Sheet relating to this project.
2. I have had explained to me the purpose of the project and what will be required of me, and any questions have been answered to my satisfaction. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation.
3. I understand that my participation is entirely voluntary and that I have the right to withdraw from the project within one month after the last data collection meeting.
4. I have received a copy of this Consent Form and of the accompanying Information Sheet.

Name:

Signed:

Date: