A quantitative study of the relationships between second language (L2) learners' characteristics and their academic English writing performance





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DEDICATION

To God and Her Majesty the Queen Elizabeth II who spiritually and morally supported me;

To my dearest parents who brought up and accompanied me with love;

To all my teachers and professors who planted the seeds of knowledge, sprinkled them with love, and patiently nurtured their growth in order to produce my dreams and inspire me to believe in my dreams.

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Dominus illuminatio mea (The Lord is my light)

Motto of University of Oxford

"… giant leaps often start with small step";
"… small steps can make a world of difference";
"It is often the small steps, not the giant leaps, that bring about the most lasting change".

The Queen's Christmas message 2019

ABSTRACT

While interest in L2 writing research has increased substantially in recent years, research on learner's characteristics (e.g., individual differences, learning strategies and socio-psychological factors) remains relatively scarce. Drawing on the theoretical framework of L1 negative transfer, socio-cognitive orientation and social and emotional learning (SEL) theory, this dissertation develops an operational definition of learner characteristics and explores the relationships between L2 learners' characteristics and their academic English writing performance. This research project was based on a questionnaire survey to 229 undergraduate students at one public university in Shanghai, China, with results analysed statistically (multiple and hierarchy regression). Participants' essays were assessed by holistic ratings of wiring quality. The findings from this research showed that many variables such as individual differences (i.e. year of study, English and writing proficiency), learning strategies (i.e. writing teachers, overseas study, editing and proofreading) and socio-psychological factors (i.e. writing self-confidence and anxiety, teaching and learning context) significantly predicted participants' academic writing performance. The main conclusion to be drawn from this research was that L2 learners' individual differences explained the greatest amount of variation in their writing scores. In terms of methodological approach, this dissertation recommends that future work should conduct in a qualitative or mixed-methods way to explore L2 learner's ideology of academic writing in depth. Further, this dissertation suggests that future studies should consider taking ESL context into account so that a more comprehensive study involving all conceptual L2 learners is included. Discussion including a comparison to previous literature and pedagogical implications were also discussed.

Keywords: *L2 learners, learner characteristics, academic writing, individual differences, learning strategies, socio-psychological factors*

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Abbreviations

CASEL	The Collaborative for Academic, Social, and Emotional Learning
EAL	English as an Additional Language
EAP	English for Academic Purposes
EFL	English as a Foreign Language
EMI	English as a Medium of Instruction
ESL	English as a Second Language
IELTS	The International English Language Testing System
K – 12	From Kindergarten to 12^{th} grade
MANOVA	Multivariate Analysis of Variance
L1	First Language
L2	Second Language
NESs	Native English Speakers
RQ	Research Question
SEL	Social and Emotional Learning
SLA	Second Language Acquisition
TESOL	Teaching English to Speakers of Other Languages
UG	Universal Grammar

CHAPTER 1. INTRODUCTION

1.1 Background

Writing has always been an essential research field in applied linguistics. Even before the 60s, writing was always regarded as a representation of speech to assess learner's language production while it served as a tangible and reliable data for researcher's analysis (Matsuda & Silva, 2020). Nevertheless, writing was only viewed as a tool to assist the learning of speech rather than a proper goal of language learning in the early years of applied linguistics (Matsuda, 2001a). It was not until the latter half of the 20th century that written discourse and writing instruction started to receive much attention as a field of research in applied linguistics. In recent years, second language (L2) writing has gradually turned into an interdisciplinary research field including many relevant subject disciplines such as cultural studies, composition studies and psychology (Leki, 2000; Matsuda, 2003). Learning how to write in an L2 becomes one of the most challenging aspects of second language acquisition (SLA) since L2 writing involves a quite complicated cognitive process where writers draw upon a set of internalised skills and knowledge to compose a piece of work for readers (K. Hyland, 2013; Polio & Friedman, 2017; Sevgi, 2016).

Since L2 writing research is still a budding field compared to other L2 skills, the necessity of study writing is of paramount importance. First, there is a fast-moving worldwide shift towards employing English as a medium of instruction (EMI) in so many worldwide educational contexts. Therefore, many domains such as professional advancements in scientific and commercial fields rely on English writing. Second, as Matsuda (2001b) points out, enormous pressure should be exerted to make texts 'unmarked in the eyes of native English users' (p. 35) instead of conforming to native English speakers (NESs) norms. And last, 'the permanence and materiality of written text leave writers so vulnerable to critical inspection and negative evaluation' (Leki, 2003, p. 104). The three qualities as mentioned above perplex the academic English writing acquisition in the modern era in ways that can require L2 writing stakeholders to raise a unique awareness of the academic community where the learning occurs.

The majority of scholars who are interested in studying L2 writing have been mainly analysing learner's texts (e.g. coherence and cohesion, lexical resource, syntactic complexity) rather than the one who writes the texts (Bardovi-Harlig, 1992; Bychkovsa & Lee, 2017; Crossley & McNamara, 2011; Geist, 2017; Polio, 1997). However, it should be emphasised that the written

texts can be considered as a vivid reflection of one's identity, intuition, and rational thought. In turn, one's ideological and social repertoire often influences his writing linguistically (un)meaningful after struggling to figure out how to create meaning. In this sense, I argue that more research should be conducted to study the subject who writes the texts, for example, one's background, one's learning strategies and psychological aspects. In other words, study should focus on learner's *characteristics*. People have various characteristics affecting their life affairs, and the way they learn to write is also influenced by their characteristics. Although previous research (e.g. Silva, 1993) has shown the similarities between L1 and L2 writing, the writers themselves possess unique characteristics when producing L2 texts and these characteristics vary extensively from both psycholinguistic and sociolinguistic perspectives. Therefore, learner characteristics need both 'micro-analytic and macro-analytic' (Cumming, 1998) research studies to fully understand their interrelations.

1.2 Rationale

My interest in this research field lies in three aspects: personal experiences, social pressures and academic necessities. Firstly, as an L2 writing learner, although I have received most education from Australia (early education in China), English writing is always the most significant obstacle lying on my way to academic and career success; therefore, it is also the top barrier that I have to overcome in the past, at present and for years to come. It is highly likely that similar to most global L2 writers, I experienced more or less similar challenges like ungrammatical and vague expressions, writing apprehension and inconsistencies with the logic when producing academic discourse. In essence, I would like to explore, at least, some aspects influencing L2 writing to interpret a long-lasting enigma embedded in my heart.

Secondly, as an L2 writing teacher, I was astounded by the irrationalities in English teaching, especially writing, in China. I witnessed that schools have obsessively sought uniformity in writing thoughts, jamming writing 'models' or 'samples' into rigid standards. Also, I saw parents shoving their children since pre-school age into English writing training with enormous investments of time, effort and wealth, but in vain. Moreover, the devastating severe competition in education has made dozens of parents and students break down. Learners' impressive imaginations were distorted during the process of English writing that only cared about scores. However, it should not be ignored that quality academic writing has become the 'entry ticket' of global tertiary education in recent years. According to Yang & Badger (2015),

writing performance, in particular academic writing, is widely used in combination with academic results as a major means of assessing whether prospective students should be admitted to degree-level courses, and as a predominant way of judging what current university students' academic performance is across various disciplines and courses in Anglophone contexts. Therefore, it is not surprising that academic writing is becoming the 'educational focus' from K-12 to higher institutions in global educational contexts.

Thirdly, as an L2 writing novice researcher, I am fully aware of the intricacies, multiplicities and highly interdisciplinary characteristics of L2 writing as echoed by Ortega (2012, p. x) that "everyone knows that writing is a mysteriously complex, irremediably social, deeply visceral activity". In this regard, the difficulty and variability of researching L2 writing may scare away those who are determined to proceed at the outset but hindered in the meantime. More importantly, the amount of writing research is, to a greater extent, lower than research in listening, reading, speaking and many other areas in the field of applied linguistics and second language acquisition (K. Hyland, 2016; Porte & Richards, 2012). In addition to the relatively low quantity, the research focus is another problem. According to a review article by Silva & Brice (2004), research in L2 writing mainly involves written texts, assessment, corrective feedback and genre studies. Although learner's characteristics have also been investigated, for example, writer goals (Cumming, Bush, & Zho, 2002) and learner's writing anxiety (Cheng, 2002), the paucity of research in writer's multiple characteristics related to their writing can be easily identified. In a recent analysis of the empirical research in the *Journal of second language writing* (1992 – 2016) (Riazi, Shi, & Haggerty, 2018), there were few studies on learner's characteristics displayed in a top ten primary research focus list[1] though a few characteristics like writing strategies could be found co-researched under some categories. Hence, it seems that extreme scarcity of comprehensive, systemic and integral research into L2 learner's characteristics and academic writing can be identified. This study is hoped to contribute to the elimination of that gap in the literature.

1.3 Research aim and objectives

First and foremost, as I stated in section 1.2, as an L2 writing learner, an L2 writing teacher and an L2 writing researcher, my personal aim is to find some potential reasons of

[1] Top ten research foci in JSLW (1992 -2016): 1. Feedback; 2. Instruction; 3. Language and literacy development; 4. Assessment; 5. Composing processes; 6. L1 vs. L2 7. Source-based writing; 8. L1 and L2; 9. L2 writing quality; 10. Professional development (Riazi et al., 2018, p. 47).

unsatisfactory academic writing performance among global L2 learners, especially in EFL contexts and attempt to offer suggestions for both L2 writers and instructors.

Given the common problems L2 writers encountering and the paucity of learner's characteristic studies, the aim of this dissertation is to investigate the relationships between various L2 learner's characteristics and their academic writing performance, with a view to offering guidance on the way forward. The following objectives have been identified as being of paramount importance in helping to achieve the aforementioned aim:

(I). Define L2 learners, learner characteristics and academic English writing;
(II). Evaluate critically individual differences, learning strategies and socio-psychological factors concerning L2 writing in the relevant literature;
(III). Implement statistical analysis (multiple linear regression) to explore how well individual differences, learning strategies and socio-psychological factors predict academic writing performance respectively;
(IV). Which variable in a set of variables (i.e. individual differences, learning strategies and socio-psychological factors) is the most powerful predictor of writing scores;
(V). Implement statistical analysis (hierarchical multiple regression) to investigate if one set of variables explain a statistically significant amount of variance in writing scores after accounting for all other variables.

1.4 Dissertation structure

This dissertation consists of six chapters including the present introduction. Chapter 2 firstly defines central concepts in this study, followed by critically examining the literature around L2 learner's individual differences, learning strategies and socio-psychological factors regarding academic writing. Additionally, one or more theoretical frameworks guiding each characteristic category are presented. Chapter 3 firstly presents research questions and then justifies the methodologies employed for this research based on the research questions. It further discusses issues involving philosophical assumptions, research design and data collection methods as well as the approach to data analysis. The chapter ends up discussing validity, reliability and ethical considerations related to this study. Chapter 4 presents the findings that answer research questions based on the statistical analysis of the data. Accordingly, Chapter 5 discusses the interpretations of the findings with reference to each research question and previous literature. The final Chapter 6 provides a concise conclusion

along with acknowledging the pedagogical implications, study limitations and suggestions for future research.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

This literature review will examine the main issues surrounding the relationships between L2 learners' characteristics and their academic writing performance. This review commences by defining three operational terms in this research study: L2 learners, learner characteristics and academic writing. Reviews of L2 learners' characteristics are based on the 'conceptual categories' (Chandler & Munday, 2020). It indicates that thematic reviews of the literature are structured around three main topics: L2 learners' individual differences, L2 learners' learning strategies and their socio-psychological factors in relevance to their impacts on academic writing. After the introduction of three key terms, each thematic review begins with one or two corresponding theoretical frameworks to show my epistemological paradigm in exploring a given research problem, to help readers understand the reasons why I decide to look into a particular topic and to employ dominant theories to address given research problems (Imenda, 2014; Liehr & Smith, 1999). Although the main structure of this review is organised thematically as a whole, each thematic review follows the chronological order since the progression of time can help readers have a clear picture of how a theory develops from past to present and see some contrasting findings from historical and contemporary research. At the end of this section, it is hoped that a critical understanding of central issues is revealed, that readers can be better informed in these fields and that there will emerge a clear focus, and justification, for empirical research in the field of L2 writing in terms of various learners' characteristics.

2.2 Definitions of L2 learners, learner characteristics and academic writing

2.2.1 L2 learners

Defining L2 learners is not as straightforward as it sounds because it is more complicated than it appears to be due to the diversity of L2 learners with a multiple and mixed backgrounds, needs, characteristics, and so forth (Ferris, 2009; Matsuda & Silva, 2020). Historically, many scholars identify this notion from a psycholinguistic way in which L2 learners have no intuitive knowledge or without a complete and possible innate competence in the target language (Davies, 1991; Pennycook, 1994; Stern, 1983). Put simply, psycholinguists approach the status of the speaker from the strongest possible sense of the genetic determinants of speech

acquisition. Today, L2 learners generally refer to anyone whose first or primary language is not English. In terms of writing, Matsuda & Silva (2020) define L2 writers as 'anyone who is writing or learning to write in a language other than their native language' (p. 284). Generally speaking, such definition is adopted regardless of whether an L2 speaker is literate in his/her L1 or understands/speaks/writes in additional languages. Ferris (2009) elaborates this term more concretely that in most cases, L2 refers to 'the language primarily spoken by parents and other adult relatives in the home during the [speaker's] early years, prior to beginning school or becoming literate' (p. 3-4). She (2009) further divides the group of L2 learners into four different categories based on the nature, timing and purpose of each particular type: *L2 student* (L1 is not English), *International student* (on a visa for short-term or training programme), *Late-arriving resident student* (arrived after age 10 or have been in English-speaking countries less than 8 years) and *Early-arriving resident student* (children of first-generation immigrants).

Ferris's (2009) notion of *International student* as L2 learners have received much attention these years. The basic idea of international students as L2 learners is that learners hold student visas to pursue their studies in the *Inner Circle* countries (i.e., Australia, Canada, New Zealand, South Africa, U.K. and U.S.A) with the stated intent to return to their hometown when the study programme is finished (Ferris, 2009; Leki, 1992; Reid, 1998a, 1998b). Valdés (1992, 2006) considers international students who choose to learn the L2 to be *elective bilingual* learners, distinguished from *circumstantial* ones (*required*), *incipient* ones (*active*) and *functional* ones (*stable*). One typical characteristic of this group is that they might, more or less, experience culture shock and thus taking time to adjust themselves to an entirely different education system. In brief, international students as L2 learners are more likely to maintain their original linguistic and cultural identity while studying overseas for their personal benefits, especially instrumental purposes.

The boundary between L1 and L2 learners, therefore, is a blurry one. The traditional notion of L2 learners as '[language] not grown in their mind/brain' (Chomsky quoted in Paikeday, 1985, p. 58) is being challenged. For example, writing, in particular, is not acquired or learned by anyone but through explicit instruction as Leki (1992, p. 10) rightfully observes, 'no one is a native speaker of writing'. Many alternative terms such as *overseas students* are not always used consistently in the literature. It should be pointed out that substitutionary terms like *English as a Second Language (ESL), English as an Additional Language (EAL), English as a Foreign Language (EFL), international student, bilingual student, multilingual speaker,*

transnational student, non-native English speaker, crossover student and *Generation 1.5* have appeared in the literature during the past two decades and they are employed at times in different papers as synonyms to *L2 learners* (Bennell, 2019; Cunningham, 2019; Doolan, 2017; Y. Du, 2019; Jarratt, Losh, & Puente, 2006; Morton, Storch, & Thompson, 2015; Murphy, 2017; Okuda, 2019; Williams & Lowrance-Fauhaber, 2018). As the above-mentioned discussions indicate, L2 learners significantly vary from one another nowadays. It is highly likely that the only real similarity, as Ferris (2009) notes, is that learners have been exposed to at least two different cultures and commence life speaking another language(s).

2.2.2 Learner characteristics

Individual learner characteristics play an important part in facilitating or impeding the L2 learning process (Pawlak, 2012; Skehan, 1989). Characteristics generally refer to the typical things about learners that influence their language acquisition. Regarding L2 writing, a large body of literature focus on learner characteristics such as age, aptitude and intelligence, L1 writing experience, gender, length of residence, learning style, apprehension, working memory capacity, religious affiliation, travel experiences, educational background, motivation, corrective feedback and so forth (H. Brown, 1973; Knörzer, Brünken, & Park, 2016; Kormos, 2012; Matsuda & Silva, 2020; Oller, Hudson, & Liu, 1977; Pimsleur, 1966). The relevant factors are so massive and chaotic in early research studies until D'Anglejan & Renaud (1985) summaries the features of learner characteristics, focusing on three major categories: cognitive variables, affective variables and social or situational variables. Their systematic review showed that these three variables interacted with one another to affect language learning in both quantitative and qualitative studies. Another comprehensive review of studies on L2 writing by Zhang (2008) indicates that L2 writing is quite a sophisticated process that involves the participation of several factors. He further inquiries into L2 writing from five fields: L1 writers' characteristics, L2 writing process, L2 writing feedback, L2 writing instruction and L2 writers' texts. Most recently, an in-depth study (Kormos, 2012) on the role of individual differences in L2 writing reviews the two most prominent learner characteristics – cognitive factors and motivational factors, and explore the affection of these factors on how L2 learners acquire the target language through L2 writing. In line with her research findings, several studies confirm that motivation is perhaps the most significant determinant (Dörnyei & Ushioda, 2011) in that learners' positive beliefs about themselves (C. White, 2008) and the

ability to autonomously take control of their own learning (Cotterall, 2008) are essential if L2 learners are willing to invest more time and effort required to develop linguistic capital (Peirce, 1995).

Although there is reasonably widespread agreement on some key learner characteristics presented above, there is less consensus over the role of many other individual characteristics, L2 learner's background in particular (Griffiths, 2018). For example, when considering age, the conventional idea is strongly influenced by critical period hypothesis that the younger L2 learners are, the better their L2 production would be; however, recent research has indicated more optimism for mature L2 learners (Moyer, 2014). When it comes to the role of gender, it is the common belief that males are worse language learners and less strategic than their counterparts. Indeed, much previous research demonstrates that performance difference between male and female in writing tasks does not exist (Hashemnejad, Zoghi, & Amini, 2014; Meece, Glienke, & Burg, 2006), and sometimes where a male advantage has been indicated, it is stronger (Sunderland, 2000).

2.2.3 Academic writing

Academic English writing functions as a gatekeeper for the majority of students worldwide due to internationalisation of higher education and desire for excellent academic performance. Globally, there exist some general characteristics and universal themes with the experience of writing in academia: a formal tone and style, short and concise sentences, precise and appropriate word choice, coherence and cohesion, structured and evidence-based, hedging and active verbs (Cumbria, 2019; Leeds, 2019; Reading, 2019; Sheffield, 2019; USC, 2019). In this regard, such shared framework of academic writing seems to be characterised by impressive conventions as echoed by 'recurrent practice' (Trowler, 2009); 'regularities of pattern' (Hyland, 2011); 'rigid structural template' (Thody, 2006); 'hidden features' (Street, 2009); 'scientifically thinking and reasoning in school settings' (DiCerbo, Anstrom, Baker, & Rivera, 2014; Oktarina, Emzir, & Rafli, 2018). However, academic writing is one of the most esoteric concepts to define because it varies significantly in the academic genre and register (Singh & Lukkarila, 2017). The notion of academic writing is never static and develops in a non-linear and heterogeneous way. Indeed, it is flexible, elastic and adaptable as a 'transformative activity' (Murray & Moore, 2006); 'endless variation' (Hyland, 2011); 'transformation of knowledge' (Tardy, 2005); 'genre networks' (Swales, 2004); 'socially discursive activity'

(Kamler & Thomson, 2014); ‘multi-dimensional, wide-ranging and subtle environment’ (L. Tran, 2013) and ‘continuous and reflective practice’ (de Caux, Lam, Lau, Hoang, & Lynette, 2017).

Historical and current research on academic writing is not restricted within the linguistic field but at the discursive and social level. Many authors explore the writing issues into a different perspective including power relations (Abraham, 2015; Fairclough, 2001; Li, 2017), epistemological issues (English, 1999; C. Jones, Turner, & Street, 1999) and writing identity (Ivanic, 1995, 1997). Casanave (2003) describes writing as a *socio-political* artefact, arguing writing today is in pursuit of satisfactory academic performance in exam-oriented cultures, *political* as well as *intellectual and instructional* agendas in power-infused setting, and material objects in the social community. Hyland (2001, 2002, 2017) argues that academic writing is about the representation of self and an identity with individual authority. His studies show the authorial pronouns (e.g. *I, we, our, us*) are an important means of demonstrating an academic identity and gaining acceptance for others’ ideas. Tardy (2005) proposes academic writing as a knowledge transformation process, which requires authors to use their rhetorical power to convince readers in terms of worthiness, importance and reliability.

Paradoxes, complexities and contradictions in academic writing as discussed above make it a demanding, challenging and even troublesome task. Nevertheless, examining, analysing and understanding the dilemma zone in academic writing can, deep down, help writers to have a good command of the way, the time and the contents they write, to produce high-quality paper with a better position, to make more sense of writing experience and to eventually manage the paradoxes arising in academic writing (Murray & Moore, 2006). I attempt to conclude with a comprehensive, although not immaculate, definition of academic writing:

It is a ubiquitous but unique style of representation that anyone utilises to make intelligent choices and to define the intellectual boundaries within and between different academic disciplines, and thus never progressing on a habitual and regular track.

2.3 Characteristics of L2 learner’s individual differences and L2 writing

In an early review of seventy-two reports of empirical research comparing studies into L1 and L2 academic writing, Silva (1993) reports that L2 writing is more complicated, more

constrained, and less effective although there exist some similarities of general composing process patterns between L1 and L2 writing. The subjects involved in those 72 studies were predominantly undergraduate students in their late teens and early twenties with a variety of language backgrounds. Factors such as age, personality, L1 proficiency, gender, and family all play a vital role in their L2 writing development and performance. Silva (1993) further summarises that 'L2 writing is strategically, rhetorically, and linguistically different in important ways from L1 writing' (p. 669). Such differences can affect the following writing and learning topics: composing process (e.g. planning & reviewing), sense of reader and writer, text features (e.g. accuracy & structure), learning experiences and classroom expectations, and intuitions about language. The following subsections start by drawing the *Theories of L1 Negative Transfer* concerning writer's backgrounds, followed by examining L2 learners' individual differences including age, gender, socio-economic backgrounds and their self-beliefs.

2.3.1 Theoretical framework: Theories of L1 negative transfer

Previous experience and daily observation (e.g., Mahmound, 2019; Sun-Alperin & Wang, 2011) show people that one's performance in an L2 is affected by the language(s) which he has already known. For example, when a native speaker of Chinese says something in English like '*Linda is talkative but **he** is warm-hearted'*, an utterance parallel to the English '*Linda is talkative but **she** is warm-hearted'*. In fact, Chinese native speakers are unlikely to distinguish between, '*he', 'she'* and '*it'* because the articulation of three third-person pronouns is the same ('*ta*') in mandarin. In English writing examples, one typical input error commonly occurring among Chinese learners is the misspelling of the words like '*now' (**k**now), 'seudo' (**p**seudo), 'det' (de**b**t), 'condem' (condem**n**)*. It easy to notice that all letters missed in those English words are 'silent'. Ellis (1994) defines these types of phenomena as 'L1 negative transfer' where 'a general cover term for a number of difficult kinds of influence from languages other than the L2' (p. 341). Put simply, L1 negative transfer describes L1 features that are different from the L2, interfering with successful acquisition. Examples mentioned above are just two types of transfers from L1 occurring at the language level. Indeed, L1 negative transfer goes beyond linguistic factors. Early studies have already shown that sociolinguistic factors (e.g. social context and the relationship between the speaker and the addressee) (Odlin, 1990); markedness (B. White, 1987); prototypicality (Kellerman, 1989); language distance and psychotypology

(e.g. accept similarities in learners' native language) (Kellerman, 1977); and developmental factors (Taylor, 1975) can all elicit L2 errors as a result of the L1 negative transfer. I argue here that learners' L1 is a determining factor as Ellis (1994) pinpoints that 'no theory of L2 acquisition is complete without an account of L1 transfer' (p. 341).

Theories of transfer have been in discussion from various points of view since the advent of Contrastive Analysis Hypothesis[2] (Fisiak, 1978; Lado, 1957; Wardhaugh, 1970). Behaviourists in the 1950s and 1960s (e.g., Rivers, 1964, 1968; Skinner, 1957) considered language transfer to be a significant source of error and interference in L2 learning since the 'confirmed habits' in the L1 have been so persistent and deeply rooted. The interlanguage theorists in the 1970s (Selinker, 1972; Selinker, Swain, & Dumas, 1975) belittled the impact of the L1 in SLA. Nevertheless, they noted that learners' L2 usages are often unstable during the change, and many L2 errors have predominantly something to do with finding rules and developmental sequences instead of being traced to L1 influence.

Theorist today, in general, would take the position that cross linguistic impacts play an indispensable part in L2 learning, at all language levels from phonetics to discourses (Mitchell, Myles, & Marsden, 2013; Ortega, 2009). However, different perspectives on the extent and nature of these impacts can be discovered in many research studies (Hufeisen & Jessner, 2009; Klein & Perdue, 1992; Ringböm, 2007). For instance, from a Universal Grammar[3] (UG) point of view, the issue of language transfer is considered somehow differently. If L2 learners have access to UG indirectly, for example, through the working example of a natural language that L1 provides, the L1 greatly influences their L2 learning. In contrast, if L2 learners have direct access to their potential UG, L1 only has a peripheral effect on SLA. Mitchell et al. (2013) observes that 'a learner's interlanguage cannot have properties that are not sanctioned by Universal Grammar' (p. 64) at any given point in time when applied to the L2 context.

2.3.2 Overview: Individual differences

[2] Contrast Analysis Hypothesis claims that the best language-teaching materials are based on a contrast of the two competing linguistic systems. It exists in strong and weak versions, the strong one arising from evidence from the availability of some kind of metatheory of contrastive analysis and the weak from evidence from language interference (Wardhaugh, 1970, p. 123).

[3] Learners are seen to be active creators of a linguistic system and are guided by innate knowledge called Universal Grammar (Mitchell et al., 2013, p. 200).

It is either because L2 learners may reach a certain level of competence which helps them to communicate to their own language satisfaction, or because they 'fossilise'[4] at some levels, many L2 learners may never acquire the target language proficiency. Individual learner differences such as linguistic, social, and psychological factors, which researchers have identified as influential learning outcomes, are all significant roles playing in learners' successful L2 acquisition (Ellis, 1994; Fasold & Connor-Linton, 2014; K. Hyland, 2003; Skehan, 1989). No two individual learners in the world are entirely the same, and their various backgrounds and personalities could affect how fast and how well they are able to produce L2 writings. It is assumed that when L2 learners produce writings, their words and sentences can show their different characteristics regarding age, gender, and socio-economic status. Hyland (2013) also points out that distinct writing experiences, various language aptitudes and 'levels of motivation, various metacognitive knowledge of their L1 and experience of using it, particular to write' (p. 32) can be reflected in L2 writers' work.

Individual differences are seemingly easy to define in Dörnyei's (2005) words: 'they concern anything that marks a person as a distinct and unique human being' (p. 4). It has been long observed that there is a wide variation among L2 learners concerning their ultimate attainment of language competence. Therefore, studies of individual differences, to some extent, shed light on variations in SLA processes and the influences of these differences on how L2 learners develop their language learning.

2.3.2.1 L2 learner's age

There is a widely-held lay belief that the younger L2 learners are, the easier and better they are able to acquire an L2 than their older counterparts. This can be mainly traced to the Critical Period Hypothesis (Lenneberg, 1967), according to which language learning will be more difficult after puberty because language learning happens naturally and effortlessly during a fixed span of children's early years. However, many studies have been conducted in recent twenty years to rebut the critical period hypothesis. Lasagabaster & Doiz (2003) utilised different measures of accuracy, complexity and fluency to compare the writing production of school learners who had begun their English study at different ages. Their findings showed that

[4] Fossilisation, also known as stabilisation, refers to the end-state of SLA, specifically to an end-state that is not native-like. The state when a foreign language learner reaches a plateau and remains at a level of proficiency short of native-like mastery (VanPatten & Benati, 2015).

the mature writers outperformed the young learners in all measures except the number of sentences. In another empirical study, Torras, Navés, Celaya, & Pérez-vidal, (2006) examined whether and how the total length of instruction affects the rate of writing performance at different ages. The results demonstrated that early starters did not achieve higher levels of written proficiency compared to the late starters after 726 hours of total instruction time. These studies indicate that an earlier start in learning an L2, especially writing, does not guarantee a quicker and more effective acquisition, and a higher level of ultimate success in the various subskills that consist of an integral part of the writing skills. Nevertheless, some scholars challenge that researchers who are interested in 'age factor' do not know whether the benefits gained by the young learners in some fields (e.g., fluency and lexis) before their puberty may have a prolonged influence in the long run, after more extensive study periods.

The results and findings from 'age studies' in L2 seem contradictory as some studies appearing to reveal child superiority while others are favouring adults. While different explanations of the age-language acquisition relationship have been put forward, the hypothesis that there exists a critical period appears the most tenable at present. However, researchers today focus more on the ultimate level of acquisition instead of the rate of attainment. In fact, although some studies have observed that adults might initially be faster learners to acquire an L2, younger learners generally outstrip their counterparts in the long run (Long, 1990). Obviously, much work remains to be done in this *age* topic. Perhaps Mackey's words (2014) can best reflect and conclude the age debate here: the ultimate success in SLA may be highly *more likely* for younger generations while it is still *possible* for the late starters.

2.3.2.2 L2 learner's gender

Like the conventional stereotype of better language learners tended to be younger ones, gender studies in relation to SLA also have the well-known 'gendered' stereotype. It has been found and widely accepted that females outperform males in almost all language-related fields from a historical perspective (Arnot, David, & Weiner, 1996; Boyle, 1987; Burstall, 1975). In many cultures, languages may be viewed as 'female subjects' simply because females tend to choose language subjects. Females, thus, almost always outstrip males in the 'standardness of their speech' and 'use of prestige forms' according to sociolinguistic research (Labov, 1991), and they seem to be in the forefront of linguistic variation and change. Gender differences in SLA research inevitably arise to support the 'women-dominated' and 'women-mastered' ideology

because of the superior innate language ability, higher achievements in four skills (listening, reading, writing & speaking), highly motivated and positive attitudes, good representation of female-featured characters in learning materials, teachers' predominated perceptions of the gender roles in languages, characteristically global female learning style, more classroom interactions in girls and so forth (Bacon & Finnemann, 1992; Clark, 1998; Dart & Clarke, 1988; Jenkins & Cheshire, 1990; Maccoby & Jacklin, 1974; Myers, 1992; Nyikos, 1990; Oxford, 1994; Sunderland, 2000; Wikeley & Stables, 1999). Mackey (2014, p. 458-459) empirically observes that 'females tend to use a greater variety of language learning strategies than males, and they use them more frequently … females usually have more positive attitudes towards learning an L2 and maybe more motivated'. In a recent large-scope empirical research project, van der Slik, van Hout, & Schepens (2015) reported that females performed better than males in all language testing fields. In terms of writing proficiency, women testers achieved, on average, higher than male counterparts, even when all surveyed confounded and their interactions were taken into consideration. Their findings are also in line with Gu's study (2002) that female participants outperformed male counterparts regarding English writing proficiency regardless of their academic majors.

Although SLA literature is more likely to produce evidence of a female dominance concerning language studies, research in the past two decades, towards a more complicated direction, reveal that men and women may differ in working on specific learning tasks and in various learning contexts (Lillis, McMullan, & Tuck, 2018). For instance, female learners are inclined to employ local strategies[5] while male learners prefer to utilise global strategies[6] in producing L2 writings (Young & Oxford, 1997; J. Zhang, 2000). Additionally, gender is, similar to age, likely to interact with other variables to influence every aspect of the SLA process. Indeed, some studies (e.g., Aiston & Jung, 2015; Mayer & Rathmann, 2018) suggest that males are better language learners and writers in some specific contexts and surroundings. Gender interacts with such variables as age, environment, and especially, socio-economic status.

2.3.2.3 L2 learner's socio-economic backgrounds

Learners' socio-economic status is traditionally constructed by ways of a synthetic measure which gives thought to income, occupation and educational levels (Ellis, 1994). Today, SLA

[5] Planning what to write next step by step.
[6] Deciding how to organise the text as a whole and detailed planning of overall organisation.

research is replacing the term '*status*' with '*background*' simply because the idea of socio-economic factors is not restricted to the individuals themselves but extends to their families, ethnic groups and even living areas. In an early study (Skehan, 1990) of language learning aptitude and foreign language proficiency regarding participants' family background, participants from middle-class families regularly outperformed those from lower- and working-class families. Another earlier study (Heath, 1983), additionally, suggested that not only did one's socio-economic backgrounds relate to outcomes, but the experiences of the world that one's social class has also mattered. Heath's ethnographic research found that the language working-class black students utilised at home is different from the one at school while the intermediate class children maintained the same regardless of the environment and locations. All these research findings reflect that learners from lower socio-economic backgrounds are not as successfully educated as those with higher socio-economic backgrounds.

There is also a general consensus that learner's ethnic group membership may exert a profound impact on one's attitudes and behaviours towards SLA (Giles, Bourhis, & Taylor, 1977; Larsen-Freeman & Long, 1991; Parameshwaran, 2014; V. Tran, 2010). According to Ellis (1994), such impact presents three distinct profiles as to normative, socio-structural views and socio-psychological views of the relationship. For example, research based on a socio-structural view of the relationship between learner's ethnicity and L2 performance seeks to explore to what extent one's ethnicity affects the interactions between learners from various ethnic communities. Giles & Johnson's (1981) ethnolinguistic identity theory (as cited in Ellis, 1994) pointed out, 'members of an in-group may or may not adopt positive linguistic distinctiveness strategies when communicating with members of an out-group' (p. 209). Also, studies grounded on a socio-psychological perspective of the link between learner's ethnicity and L2 learning lie in the role of attitudes. According to Ellis (1994), "learners hold towards the learning of a particular L2 reflect the intersection of their views about their own ethnic identity and those about the target-language culture" (p. 207). For instance, China has the largest population in the world consisting of 1 dominant nationality (the 'Han') and other 55 minority nationalities. Some minority nationalities have their unique writing systems (e.g., Mongolian script, Tibetan script and Uyghur alphabets) distinct from the official written Chinese characters. Undoubtedly, the way those minority groups compose essays is quite different from the Han nationality in that there are unique ideological presentations and representations behind their writing systems (Feng & Sunuodula, 2009).

2.3.2.4 L2 learner's beliefs

According to Dörnyei & Ryan (2015), 'beliefs were viewed in the original version … as being based on strong factual support and open to change through rational explanation or persuasion' (p. 186). It is universally acknowledged that one's beliefs influence his linguistic behaviours dramatically. For instance, Chinese learners believe in the core argument ('climax') of an essay is supposed to be in the very end and thus, resist the logic of academic English writing with an open and direct viewpoint at the beginning (Wu & Zhang, 2016). Connor (1996) first termed this comparison as Contrastive Rhetoric as she stated that it 'maintains that language and writing are cultural phenomena. As a result, each language has rhetoric conventions unique to it. Furthermore, the linguistic and rhetorical conventions of the first language interfere with the writing of the second language' (p. 5). The idea of beliefs in cultural differences in writing is approached from a dynamic perspective today. Scholars are challenging the stability of beliefs and propose a proto-dynamic framework of one's belief system. Barcelos & Kalaja (2011, p. 285-286) summarised seven significant features[7] of the dynamic perspective of beliefs and argued that even for the same person, one might have diverse, even contrasting beliefs regarding the same writing at different times, affected by various personal and situational variables.

Early studies proposed that one's learning beliefs were established through individual understandings and constructions of experiences and events, and then served to affect following behaviours. A few influential series of studies by Horwitz (1985, 1987, 1988, 1999) provided a fact that L2 learners varied enormously in their beliefs, leading to different learning outcomes. Recent years' research on various learners' beliefs leading to different writing performance shows the strong evidence of cultural differences behind them. How the written texts are structured and organised, what counts as sound evidence and examples, when and where clear linguistic features are utilised and so forth, all vary across cultures. Although it is far from conclusive, many studies (e.g., Grabe & Kaplan, 1996; Hinkel, 1999; Hyland, 2003) show that there exist fundamental divergences between L1 writers and L2 writers in their different beliefs in all aspects of writing, and such cultural preconceptions are more likely to impede practical writing delivery.

[7] Fluctuating, complex, ideologically determined, intrinsically related to other affective constructs, other-oriented, influenced by reflection and related to action in complex ways.

In a nutshell, in alignment with Dörnyei's argument (2005, p. 217) that 'epistemological beliefs influence higher order thinking, particular when learners encounter complex information', it is reasonable to believe that previous research into L2 learners' beliefs has yielded some proof that the beliefs L2 learners hold can influence the way that they write in an L2. It is also not difficult to believe that learners' *philosophies* usher their learning methods and selection of learning strategies, which, in turn, produce different forms of writings such as diversified ways of organising an essay structure.

2.4 Characteristics of L2 learner's strategies and L2 writing

Learning strategies play a more influential role than any other learner characteristics regarding individual differences in L2 learning (Dörnyei & Ryan, 2015). According to Weinstein, Husman, & Dierking (2000, p. 727), 'learning strategies include any thoughts, behaviours, beliefs, or emotions that facilitate the acquisition, understanding, or later transfer of new knowledge and skills'. The topic of writing strategies, in particular, should be approached from a broader research movement termed 'writing process' (Manchón, de Larios, & Murphy, 2007; J. Zhang, 2008), that aims to gain insights into the mental processes writers experience while writing essays. L2 writing is such a complicated process of expression which starts from brainstorming, drafting, responding to feedback, revising, to final proofreading and editing while L2 writers produce, express, and elaborate their ideas in a non-native language. It is more difficult for L2 writers to compose L2 writings than their L1 writings since they have two, sometimes more than two, languages at their disposal (A. Cohen, 2011). In this section, a theoretical framework of cognitive approach will be examined before discussing two topics – learning strategies (i.e. planning & translation) and instructional strategies (i.e. teacher & peer feedback) that L2 writers often employ.

2.4.1 Theoretical framework: Cognitive approach and socio-cognitive orientation

The cognitive approach to L2 writing strategies focuses on the learner-internal perspective (Manchón et al., 2007). In this sense, writing strategies are equivalent to how L2 writers take up writing, either explicitly or implicitly, which involves any action utilised in the course of composing a text. Some scholars view this trend as 'a process or operation applied to the task of writing' (Whalen, 1993) and 'techniques and procedures used to perform writing task'

(Khaldieh, 2000). However, learner's writing strategies can be viewed from a macro-writing process either at a general level or a taxonomic level (Manchón et al., 2007). At the general level, writing strategies are *globally* planned where L2 writers spend much time planning a detailed overall organisation (Sasaki, 2000, 2002). In contrast, writing strategies can be employed by L2 writers from just one macro-writing process at the taxonomic level where writers only pay attention to one aspect (e.g., planning, writing and revision) at a time (Chenoweth & Hayes, 2001; Lally, 2000; Takagaki, 2003). In short, the above-mentioned studies give a holistic picture of L2 learner's writing strategies from putting into action to eventually becoming automatised.

Recent years' theory of L2 writing strategies have been shifting from a cognitive perspective to a more socio-cognitive orientation. This perspective has been developed by goal theories in educational psychology (Cumming, Busch, & Zhou, 2002) and socio-cognitive views of literacy development (Spack, 1997). In essence, scholars adopting the socio-cognitive orientation argue that L2 writers tend to respond to the requirements emerged in the discourse community in which they compose and learn to compose (Cumming, Busch, et al., 2002; Spack, 1997; L. Yang, Baba, & Cumming, 2004). Put simply, not only is writing a text-composing process, but also a way of social construction. For instance, L2 writers employ writing strategies which make the best use of the social context (e.g. attending writing training and seeking models), or they try to satisfy the demands of assignments to complete a degree. In an empirical study by Leki (1995), the author found that L2 writers used strategies to work on their writing tasks by taking a stance towards instructors' requirements, either catering to or resisting them. It could be seen that such writing processes are based on the cognitive structures which construct writers' knowledge of their world via the interplay between the subject and environment. In brief, this socio-cognitive perspective towards the writing process has shed light on the interaction of the social and cognitive factors by engaging in the development of the L2 writer's strategic ability.

2.4.2 L2 learner's strategies

L2 learners may apply different strategies to guarantee that their individual goals, such as outstripping their peers or completing a degree programme, can be achieved via writing tasks. Previous research shows that writers prefer to employ different writing strategies according to their L2 proficiency levels (Akyel, 1994; Bailey, 2019; He, Chang, & Chen, 2011; Sasaki,

Mizumoto, & Murakami, 2018). Two writing strategies, namely *planning* and *translation*, have been brought into focus in the empirical literature.

2.4.2.1 Planning

Previous studies have reported the positive effect of strategic planning ideas in L2 writer's compositions (Lay, 1982; Whalen & Ménard, 1995; Wolfersberger, 2003; Yuan & Ellis, 2004). Scholars have reached an agreement that strategic planning using learners' mother tongue is effective in L2 writing regardless of whether the writing topics are related to L1 culture (Friedlander, 1990; Lally, 2000). Relying on L2 writers' mother tongue results in more careful and detailed essay planning and drafting, which produces better compositions regarding ideas, structures, and contents. In a recent study by Khonamri, Mahmoud, & Fallahpour (2017), 30 L2 participants were required to undertake an argumentative essay under three distinctive strategic planning conditions, namely form-oriented, meaning-oriented and unguided-oriented strategic planning[8]. The results suggested that writers under guided strategic planning outperformed those under unguided strategic guidance in terms of accuracy and complexity in their compositions. Researchers further pointed out that writers under form-oriented strategic planning produced better essay than other two groups regarding complexity. However, an earlier study (Akyel, 1994) examining essay writing in English and Turkish indicated that mother tongue used in planning essays did not make a significant difference in the quality of the overall writing performance. Instead, L2 writers would employ different planning strategies according to their levels of English proficiency. Taken together, the effects of pre-task planning on L2 writing seem positive in writers' essays in terms of content accuracy and linguistic richness although the extent of writing effectiveness depends on different planning strategies utilised.

2.4.2.2 Translation

Translation strategy or L1 use in the writing process is a widely-acknowledged method employed by L2 writers during the process of formulation. Manchón et al. (2007) observe that translation is utilised mainly for three objectives in L2 writing: generating text, tackling

[8] Form-oriented: learners were instructed in how to plan the form of their written production before engaging in strategic planning. Meaning-oriented: learners were instructed in how to plan the meaning of their written production before engaging in strategic planning.

linguistic and stylistic problems, and organising and structuring texts. Although translation strategy used in the L2 writing process has sparked a hot debate between the possible positive or negative influence on the written products, numerous studies have been conducted to confirm that language switching strategies play a specific role in L2 writing process and output (S. Jones & Tetroe, 1987; Qi, 1998; Wolfersberger, 2003; Woodwall, 2002). Cohen & Brooks-Carson (2001) reported that translation strategy could cause a detrimental effect on L2 writing for inexperienced learners because L1 use is a time-consuming process to translate and back-translate into writers' mother tongue to produce further lines. As a result, the translation strategy imposed an additional burden on L2 writers. Nevertheless, Plata-Ramírez's qualitative study (2016) on L2 Spanish students' perceptions of L1 use in their L2 writing process in one recently completed writing task at one America university revealed that most participants were aware of the advantages, which translation strategies made a great contribution to their L2 writing process including contents, revising and task examining. This result is also in line with findings in an earlier study by Kobayashi & Rinnert (1992) that 48 Japanese university students, from different year-of-study and subject disciplines, completed both an essay written directly in English and written first in Japanese and then translated into English. In general, the essays under the translation pathway were rated higher than those written directly in English in terms of content, organisation, style and holistic judgements. As Manchón et al. (2007) observe that 'the L1 allows the learner to think, access ideas, then access worlds, albeit slowly, then evaluate those words by back-translation to judge appropriateness' (p. 242). With the increasing proficiency level of L2, writers should have better control over language, and thus fluency is improved.

2.4.3 L2 writing feedback

Providing feedback on L2 learner's writings is central to L2 studies because it not only helps instructors to understand their students' written performance but also helps students know how well they performed in their writings and what they can improve in future tasks (K. Hyland, 2003; Séror, 2009; J. Zhang, 2008). This is also clear in the valuable recognition of writing feedback echoed by Sánchez-Naranjo (2019, p. 613) that 'it [feedback practice] serves to maintain standards, provide credibility and improve performance'. Hence, the past three decades have seen a dramatic increase of research on exploring the role corrective feedback that played in learners' writing performance (Bitchener & Knoch, 2008; Ferris, Pezone, Tade, & Tinti, 1997; F. Hyland, 2000; G. Nelson & Murphy, 1993; S. Yoon, 2011; S. Yu & Lee,

2014). From a socio-cognitive perspective, writing is never an individual and isolated task. Instead, writers usually interact with other people (e.g. teacher-student conferencing feedback) and entities (e.g. dictionaries), either directly or indirectly. Teacher feedback and peer feedback are the two key aspects that scholarly studies tend to examine most.

2.4.3.1 Teacher feedback

It should be stressed first that teacher feedback in helping students to produce better essays is not without criticism. A few early researchers have challenged the effectiveness of teacher feedback in relation to L2 writing. For instance, Sommes (1982) points out that writers often misunderstand instructors' written comments because of its poor quality in terms of vagueness and inconsistency. Connors & Lunsford (1993) also report that teachers' feedback is often so formal and authoritarian that students become insensitive to it. However, most studies on teacher feedback, particularly in the 21st century, prove that it remains an important strategy to help L2 learners to compose and revise their writings appropriately and effectively (López, van Steendam, Speelman, & Buyse, 2018; van Beuningen, 2010; Zou & Delin, 2017). In López et al.'s study (2018), 139 Spanish students were found significant improvement in their English writing performance after a 6-week intensive English learning programme where all participants received both direct corrective feedback[9] and metalinguistic corrective feedback[10]. Ferris (1997) found that 47 freshman students representing ten native language groups preferred longer and text-specific written feedback which benefited their writings substantially after several revisions. Z. Zhang & Hyland's research (2018) on student engagement with the teacher and automated feedback on L2 writing noted that highly engaged learners preferred both positive and negative teachers' feedback in that encouraging comments could motivate them to aim higher while constructive criticism can demonstrate them where their mistakes are, and thereby working further for improvement. Overall, most studies tend to show that both positive and negative teacher feedback seems to be beneficial to learners' behavioural and cognitive engagement with L2 writing.

2.4.3.2 Peer feedback

[9] Direct Corrective Feedback: providing students with the correct target language form above an error (López et al., 2018, p. 824).
[10] Metalinguistic Corrective Feedback: involving underlining an error and providing a code above this error to indicate its type (López et al., 2018, p. 824).

Similar to teacher feedback, the theoretical strength of peer feedback is due to the fact that the process of peer review[11] is a social process. According to K. Hyland (2003), peer feedback helps writers 'engage in a community of equals who respond to each others' work and together create an authentic social context for interaction and learning' (p. 198). On the positive side, several studies showed that not only did L2 writers gain from exploring how different people understand their ideas but also benefited in terms of essential skills, critical analysis and systemic revision (Leki, 1990; S. Zhang, 1995). Moreover, from a practical view, learners manage to be engaged actively in learning writing while receiving comments and suggestions from one or more authentic reviewers in a non-threatening context (Bitchener & Ferris, 2012). Other advantages of employing peer-review strategy involving increasing writing self-efficacy, developing learners' critical reading and analytical skills, and reducing apprehension about writing, are also proved effective and fruitful in L2 learners' overall writing proficiency (M. Lee & Evans, 2019; Mendonça & Johnson, 1994; Ruegg, 2018). On the negative side, it is because L2 writers are often rhetorically inexperienced that they may not have the full capacity to assess the contents and structures in an essay but pay more attention to surface forms (e.g. sentence-level problems) (K. Hyland, 2003). Additionally, there is also a growing agreement that peer feedback strategy demands careful training. Two decades of studies in L2 peer review (e.g., Berg, 1999; Chang, 2016; Hansen & Liu, 2005) have observed that without proper, sufficient and professional training, learners cannot replace the role of trained instructors because their feedback may involve unclear, unprofitable and sometimes even excessively judgemental and sarcastic comments.

2.5 Characteristics of L2 learner's socio-psychological variables and L2 writing

In addition to L2 learner's individual differences and learning strategies, their socio-psychological factors influencing L2 writing performance have received much attention for quite a long historical span (Csizér & Tankó, 2017; Daly & Miller, 1975; Holliday, 1994; Larson, 1985; Mauranen, 1993; Sanders-Reio, Alexander, Reio, & Newman, 2014). At the social level, Hyland (2003) argues that learner's learning contexts including the culture, society, institution, resources, course, and class can affect how they view L2 writing and how their writings proceed, thereby motivating or demotivating them to accomplish the different

[11] Peer review, also known as peer feedback or peer response, refers to the exchange of drafts between two or among multiple learners for oral, written or a mix of oral and written feedback (Chang, 2016, p. 82).

goals of writing. For instance, the morale of teachers and classmates within one institution could determine L2 learners to maintain the status quo or plan to aim high. This 'assimilation pattern' is explained by the fact that L2 learners easily accommodate the existing 'writing environment' around them (J. Nelson, Liu, Fiez, & Perfetti, 2009). Similar to contextual factors, L2 learner's psychological factors are closely related to writing activities where affectivity is at the core of writer's performance (Gabryś-Baker & Bielska, 2013). Both historical and current research has shown quite a few psychological variables involving personality, motivation, emotion, language anxiety, self-esteem, and mood have a strong relationship with L2 writing (Boroujeni, Roohani, & Hasanimanesh, 2015; Chastain, 1975; Clachar, 1999; Daly & Wilson, 1983; Massé & Popovich, 2005; Muhammad, 2015; Pintrich & de Groot, 1990). This section will employ 'small-culture' theory (Holliday, 1999) and social and emotional learning theory (SEL) as theoretical frameworks before discussing one social factor (i.e. small cultures) and two psychological factors (i.e. anxiety and motivation) in detail.

2.5.1 Theoretical framework: small culture(s) & social and emotional learning theory

2.5.1.1 Small culture(s)

It should be emphasised first that 'small culture(s)' can indicate any learning context from the society to the writing class as long as such cultures serve for the social construction purposes (Holliday, 1999). Holliday utilised the concept of 'small cultures' as an alternative to replacing the default idea of 'large cultures' dominating in cultural influences on applied linguistics and SLA. The traditional large culture paradigm generally refers to learner's nationality and ethnicity while a small culture paradigm "attaches 'culture' to small social groupings or activities wherever there is cohesive behaviour, and thus avoid culturist ethnic, national or international stereotyping" (Holliday, 1999, p. 237). In other words, smaller-scale situations and practices (e.g. a small institutional committee and a friendship group) that contain a cohesive in-group can form their own set of practices, behaviours and understandings. Therefore, a single classroom could be envisioned as a small culture, as can disciplines or professions. According to Atkinson (2016), small cultures are distinctive as they are not only involved within large cultures but also potentially go beyond them. Holliday (1999) further stresses that the small culture paradigm is more related to social processes rather than social products whenever and wherever they emerge, viewing small culture as a fluid and dynamic place for social construction.

2.5.1.2 Social and emotional learning (SEL) theory

Early in the 20th century, American psychologist Lightner Witmer (1909) became the first person to explore the relationship between L2 learners and experimental psychology, arguing that emotional life shapes learning and thinking. Later, Wechsler's (1943) 'non-intellective skills' needed for people to succeed in learning and H. Gardner's (1983) theory of interpersonal and intrapersonal intelligence lay the foundation for contemporary SEL theory. According to a widely used definition by given by CASEL[12] (2020), 'social and emotional learning (SEL) is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others establish and maintain a positive relationship, and make responsible decisions'. Over the past two decades, SEL has been demonstrated a practical approach to decrease negative social interactions and increase academic achievement among L2 writing studies like self-esteem movement (Baumeister, 2005), social skills improvement (Gresham & Elliot, 2008), academic improvement (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), motivation and engagement enhancement in EFL writing (S. Yu et al., 2019) and so forth. Specifically, L2 writer's affective and emotional responses to their teachers, peers, and institutions (e.g., Rastegar & Karami, 2013; Tassinari, 2016) have been widely examined concerning their writing proficiency in various teaching and learning settings.

2.5.2 Social variables: small culture(s)

Previous studies on various small-cultural factors involving attitudes toward English in society, study-abroad experiences, the influence of stakeholders (school, employer, government, etc.), syllabus design, and technological and reprographic resources can all affect L2 learner's writing proficiency (Collentine, 2009; Ferriman, 2013; Llanes, Tragant, & Serrano, 2018; Porter, 2003). K. Hyland (2003) pinpoints that 'educational practices are shaped by the cultures in which they operate' (p. 37). At a societal level, learners' writing performance may be influenced by the country where they live or the simple fact whether they hold imperialistic, pragmatic or indifferent attitudes toward English (K. Hyland, 2003). Both Johnstone's (2011) and Runić's (2019) studies showed a clear difference between eastern and western ways of teaching L2 writing because of the cultural schemata. Both studies observed that in many Asian

[12] The Collaborative for Academic, Social, and Emotional Learning (CASEL) is a trusted source for knowledge about high-quality, evidence-based social and emotional learning (SEL) (CASEL, 2020).

cultures such as China, Japan and Korea, learners prefer to conserve and reproduce existing knowledge, pursuing reverence for what has been established through imitation and memorisation. Although these ways of learning have shown respect for knowledge, Western societies might interpret them as duplicating others' ideas without independent thinking in academic writing. In contrast, students in western contexts are always required to analyse questions, reflect critically on arguments, and revise their thoughts via recursive redrafting when having an English writing class. This kind of 'hidden cultural curriculum' (Hyland, 2003, p. 38) could easily be detected in the culturally distinctive attitudes toward writing, which can substantially impact on L2 learner's writing strategies and process.

At an institutional level, L2 writing can also vary greatly because of the relationships among stakeholders, patterns of interaction, modes of class delivery, instructor cooperation, and decision making (Powers & Nelson, 1995). Writing classes are commonly delivered in institutions like schools and training centres, each of which varies significantly in terms of their goals and the priority that they give to writing courses in the curriculum. Ferriman's (2013) study about the impact of blended e-learning on undergraduate academic English essay writing showed that learners using a combined on-line bulletin board and face to face communication in writing class wrote longer texts, used more references and achieved higher essay scores than those with face to face communication only. Another earlier study by Canagarajah (1999) indicated how tertiary learners in the Jaffna peninsula of Sri Lanka frowned on contrasting ideologies designed in their English writing course. He further pointed out that writing instructors could develop 'a thinking on language, culture, and pedagogy that is motivated by the lived reality and everyday experience of periphery subjects' (p. 5). More recent studies (e.g., Jang, 2018; Llanes et al., 2018) suggested that a short intensive study-abroad programme for L2 learners had a positive influence on L2 writing skills. These studies confirmed that four L2 writing aspects (i.e., written fluency, lexical richness, grammatical complexity and accuracy) improved remarkably after a period of short-term study overseas. Overall, small-cultural factors differ in the status people offer English, the modes it is instructed and the uses to which L2 writing is put.

2.5.3 Psychological variables

Psychological factors such as L2 writer's personalities, emotions, motivation, self-efficacy and self-regulation can capture attention and cognitive engagement, and affect the level of efforts

writers put in their actual L2 writing (Han & Hiver, 2018). As Kormos (2012) notes, psychological factors exert a great impact on 'the extent to which [learners] notice gaps in their knowledge, the aspects of language they pay attention to, and, consequently, how they exploit the learning opportunities provided by writing' (p. 400). Therefore, psychological factors exert influence on L2 writing development since they are bound up with L2 writing proficiency (Dörnyei & Ryan, 2015; Oxford, 2017; Piniel & Csizér, 2015). In the following subsections, I will mainly examine two variables – anxiety and motivation, which have received much and more attention in this field (Dörnyei, 2012; Leary, 2007; Markus & Ruvolo, 1989; Pajares, 2001).

2.5.3.1 L2 learner's writing anxiety

Writing anxiety, also known as writing apprehension, is a common problem with which most L2 learners are confronted before and during the writing process. Bloom (1985) defines writing anxiety as 'a label for one or combination of feelings, beliefs, or behaviours that interfere with a person's ability to start, work on, or finish a given writing task that he or she is intellectually capable of doing' (p. 121). Since high levels of foreign language anxiety can cause learners to have writing difficulties, volumes of research have been conducted to find out some possible ways to alleviate the problem (Daly, 1985; Karakaya & Ülper, 2011; Muhammad, 2015; Öztürk & ve Çeçen, 2007).

A few widely-acknowledged barriers which anxious writers may face are related to form, fear, feelings of embarrassment and perfectionism. Masny & Foxall's (1992) study showed that L2 learners studying intermediate ESL writing in a community college were more concerned about vocabulary and grammar than the actual contents. They demonstrated that the traditional method, often stressing grammar, to teaching writing in L2 class resulted in L2 learners' anxiety. In this case, the process writing approach[13] is advocated as it focuses more on content than form, thereby reducing writers' anxiety. However, contrary to the results from Masny & Foxall (1992), one recent study (Muhammad, 2015) on 57 Egyptian university students' writing apprehension indicated that L2 learners should start by improving their linguistic knowledge (e.g., lexical richness and syntactic complexity) in order to reduce writing anxiety.

[13] The process writing approach "treats all writings as a creative act which requires time and positive feedback to be done well. In process writing, the teacher moves away from being someone who sets students a writing topic and receives the finished product for correction without any intervention in the writing process itself" (British Council, 2020).

In addition, he suggests that top priorities should be given to the learners' self-beliefs about their English language competence and perceived writing competence, and thus increasing their self-confidence in writing. This finding is also in alignment with results from Sanders-Reio et al.'s (2014) research on writing self-efficacy beliefs and apprehension at a large public university in south Florida. Their large quantitative survey (n = 738) showed that students' beliefs about writing did relate to their writing self-efficacy, apprehension and performance. As expected, learners with low writing self-efficacy had high writing apprehension and vice versa. Moreover, writing self-efficacy positively predicted performance while apprehension about grammar negatively predicted writing performance. In short, although studies had a different focus on the aspects of L2 writers' apprehension, the majority of findings reached an agreement that L2 learners' anxiety plays a detrimental role in L2 writing.

2.5.3.2 L2 learner's writing motivation

Research into motivation was initiated from the 1970s by a Canadian social psychologist Robert Gardner, and he divided motivation, as a complex construct, into three elements: a desire for an achievable goal, 'investment' extended in this goal and satisfaction with the goal (R. Gardner, 1985, 2010; R. Gardner & Macintyre, 1993). Research on the relationship between learner's motivation and L2 writing has proliferated during the past two decades such as EFL writing motivation and engagement (S. Yu et al., 2019), self-efficacy and task value in L2 writing (Raoofi & Maroofi, 2017), effects of mastery and performance goals among EFL writers (He, 2005), achievement values, goal orientations and interest among learners (Wigfield & Cambria, 2010). In one study, Troia, Harbaugh, Shankland, Wolbers, & Lawrence (2013) employed a large sample of L2 learners (n = 618) to explore how relationships between writing motivation and writing proficiency differ between age, gender, and teacher judgement of writing ability. They found out that three moderators of writing motivation (i.e., age, gender and writing ability) significantly affected L2 learners' writing motivation and performance. They further summarised that 'motivation is not a unitary construct, but rather is comprised of several related components, including self-efficacy beliefs, interest … and attributions for success and failure' (Troia et al., 2013, p. 18). Their finding is echoed, to a certain degree, by another longitudinal study (Sasaki, 2011) that focused on the effects of varying lengths of study-abroad experiences on Japanese EFL students' writing ability and motivation. Her over three and a half years' study showed that L2 writers' writing performance did not change in a linear way, but the more time learners spent overseas for further study, the more significant

progress they can make in their L2 writing ability because of the study motivation during overseas study. Likewise, lengths of study-abroad experiences, in this case, serve as a moderator to suggest the different levels of writing motivation, thereby influencing L2 learners' writing ability accordingly. In a nutshell, motivational factors play a prominent and influential role in attaining writing success, although how learners motive themselves differs considerably.

2.6 Summary and emerging issues

The review of relevant literature on L2 learner characteristics showed how L2 learner's individual differences, learning strategies and socio-psychological factors influencing their writings. It further suggests that learner characteristics are so extensive, complex and hybrid that it is difficult and inappropriate to examine them separately. To begin with, variables including individual differences are so vast that almost no author conducts a review or empirical study including all variables. Next, research suggested that L2 learner strategies did play a specific role in their writing performance. However, strategic effectiveness has still been in debated across contemporary literature. Additionally, as learning strategies often interact with many individual differences such as age, gender, L1 and culture, the traditional single and linear way to measure learning strategies should be critically evaluated. The final subsection on L2 learner's socio-psychological factors needs much research to prove their impacts on writing competence. For example, whether extroverts or introverts are better writers has been a subject of much debate for years (Angelova & Riazantesva, 1999; Kayaoglu, 2013). One's personality may never have a direct influence on his writing performance, but his unique personality decides on specific learning strategies, and thereby resulting in different writing performance.

A crucial issue for the exploration of learner characteristics is that recommendations on future directions ought to be based on research. Unfortunately, there was no agreed comprehensive overview of learner characteristics. Although some scholars like Kormos (2012)[14] attempted to provide a classification, they seemed to form various patterns based on their own ontological and epistemological paradigms. To arrive at a deeper and more complete understanding of how L2 learner's characteristics are influencing wiring ability, empirical data will be carried out. Specifically, such studies need to seek out how various characteristics interact with each other to predict learner's writing proficiency. The next phase of this research study will detail the

[14] See section 2.2.2 in this chapter for details.

research methods to be employed to capture the empirical data, including details on the research strategy to be adopted, data collection techniques, sample selection, and management of the researcher's role.

CHAPTER 3. METHODOLOGY

3.1 Introduction and research questions

This chapter introduces the design of this research study and outlines the methodological framework underpinning this research. Firstly, research questions will be presented, followed by a brief overview of ontological and epistemological positioning of the study's methodological approach. A justification for the research design including the sampling, instrumentation and pilot study will then be described. After that, descriptive information of the data and approach to data analysis are explained. Finally, this chapter ends up with the discussion of issues of validity, reliability, ethics and potential methodological limitations to pursue the quality and rigour in this research study.

The overall research question reflects the general aims of the study as follows:

To what extent do second language (L2) learners' characteristics relate to their academic English writing performance?

The following four sub-questions have guided the investigation:

(I). To what extent do L2 learners' *individual differences* predict their academic English writing performance?
(II). To what extend do L2 learners' *learning strategies* predict their academic English writing performance?
(III). To what extend to L2 learners' *socio-psychological factors* predict their academic English writing performance?
(IV). Of *individual differences*, *learning strategies* and *socio-psychological factors*, which block of variables explains the greatest amount of variation in L2 learners' academic English writing performance?

3.2 Philosophical assumptions: A quantitative approach

This research study is based on a quantitative methodological research approach in that it is concerned with quantities and measurements. Firstly, the ontological positioning of this study is objectivism. As Bryman (2016, p. 33) defines, objectivism 'asserts that social phenomena and their meanings have an existence that is independent of social actors'. It suggests that social phenomena confront people as external facts that are independent of consciousness and

experience. In this study, academic writing is a tangible object. It has rules and regulation which requires standard procedures for people completing it. Writer's performance is categorised into different levels within a 'division' of marking criteria. Although the degree to which these features exist from discipline to discipline is variable, academic writing has a reality that is external to the writers who compose it. Furthermore, academic writing shows a 'hierarchy' because it exerts pressure on learners to conform to its unique requirements in any discipline. Learners write the essay to which they are assigned, learn and apply the rules and regulations, follow the standardised writing procedures and so on. If they do not employ and obey these principles, they could get an unsatisfactory result or even discontinue current studies. Therefore, academic writing can be considered a constraining force which acts on and restrains learners. Overall, academic writing has truth and meaning residing in it since 'careful scientific research can attain the objective truth and meaning' (Crotty, 1998, p. 4). This is the ontology underpinning the positivist stance.

Secondly, the epistemology positioning of this study is positivism. According to Creswell (2014, p. 7), positivists 'hold a deterministic philosophy in which causes (probably) determine effects or outcomes'. Therefore, the problems investigated by researchers reflect the need to identify and evaluate the causes which impact outcomes. In this study, different kinds of L2 learner characteristics are independent variables that comprise hypothesis and research questions. The researcher's knowledge is based on careful measurement of the "objective reality that exists 'out there' in the world" (Creswell, 2014, p.7). Phillips & Burbules (2000) point out that data, evidence and rational considerations shape knowledge. In practice, the researcher gathers information on a questionnaire based on measures completed by the L2 writers. A research study conducted in positivist spirit, in this case, selects to engage in survey research and employ the quantitative method of statistical analysis.

3.3. Research design and data collection methods

3.3.1 Survey

Although it is necessary that research designs should be appropriate for the research problem, they should also be well adapted to the way that empirical evidence is utilised to reach conclusions – to the logic of enquiry employed in the research study (Hedges, 2012). This study employs the survey design to help the researcher understand what kind of population is well suited to the investigation of the research topic. Also, the survey design guides me to formulate

the research instrument and how it should be conducted. As Creswell (2014) defines that a survey is a method of collecting systemic information from a sample of people by studying that sample population.

There are several basic purposes and rationales for which the survey research has been employed in this study. Firstly, the goal is to generalise a selected sample to a larger population so that inferences could be made about some perspectives, behaviours or characteristics of this population. Secondly, survey research is the preferred type during the data gathering procedure for this study because of the economy of the design and the rapid turnaround in data collection (Fowler, 2009). Concerning the instrument, using an online questionnaire to reach potential participants is beneficial to both the researcher and the research in that it saves much researcher's time and money to travel and collect data, seems to be easier and more efficient to analyse data and produces fast and large responses from participants without the time and venue restrictions. Finally, survey research is an ideal way to investigate the associations between variables (Addington-Hall, 2007). In this study, various L2 learners' characteristics will be tested to find the associations with their English writing performance. However, it should be stressed that survey research could not establish the relationship(s) between cause and effect. Instead, longitudinal survey, which collects data and follows the same population over time, has been suggested to better analyse causation than cross-sectional surveys (Addington-Hall, 2007; Cohen, L., Manion, L. & Morrison, 2017; Creswell, 2014). In a nutshell, as this survey research is a representative selection from the population of L2 undergraduate students in Shanghai, it employs multiple regression to address the three central elements within it: L2 undergraduate students at a public university in Shanghai (sampling), online questionnaire design (instrumentation) and statistical analysis to make predictions (choice of data collection method), which will be examined closely in the following subsections.

3.3.2 Sample

3.3.2.1 Recruitment

The researcher aimed for 150 participants, aged from 18 – 24, in total with 50 each in Year 1, Year 2 and Year 3 at a public university based in Shanghai[15]. Ideally, the research expected a

[15] In general, undergraduate degrees in all public universities in China require students to have a full-time study for consecutive 4 years. The last year's students (Year 4) are intentionally opted out to be considered as

gender-balanced sample. Participants come from various subject disciplines, and they all took the College Entrance Examination (CEE) where English is part of mandatory exam subjects before they were enrolled in this university. In this regard, these potential participants are not randomly assigned since only a convenience sample is employed. In other words, this study is a quasi-experiment as the researcher used naturally formed groups in an institution.

Once official ethical approval (see Appendix A) was received by the Departmental Research Ethics Committee (DREC) and the oral agreement with the dean of the English Department and 3 English teachers in the target university, the potential participants were recruited through an online advertisement (see Appendix B), calling for volunteers needed for an L2 writing research study. A combination of convenient and purposive sampling was employed to recruit participants because of a limited time frame of the researcher's full-time master study and the previous working experience the researcher had in that target university. All participants who voluntarily participate in this study must read and accept the terms and conditions of the participant consent form (see Appendix C). The participant information sheet (i.e. written information) (see Appendix D) is also attached as a hyperlink at the top of the participant consent form to help them better understand the research aims, data protection information, complainant procedures, relevant contact details, as well as the rights, benefits and potential risks of taking this online survey.

3.3.2.2 Participants

The total final number of participants involved is far more than what the researcher had expected, which is beneficial in terms of the sample size. Overall, 229 students participated in this study consisting of 113 males and 116 females, which reflects a quite gender-balanced sample. 98.3% of the participants study in a full-time mode, while only four students are enrolled part-time. Furthermore, participants are quite evenly distributed among Year of Study, with 78 (Year 1), 76 (Year 2) and 75 (Year 3) respectively. The whole sample also shows quite diverse demographic characteristics in terms of their age, subject disciplines, hometown, and ethnicity. Firstly, the participants were aged 18 to 24 years (*M = 20.3*, *SD = 2.7*) and scattered among four broad subject disciplines and majors, with Humanities Division (*n = 75*), Sciences Divisions (*n = 71*), Medical Sciences Divisions (*n = 19*) and Social Sciences Division (*n =*

participants because the finalists are often involved in corresponding internship programme and positions which are not based on campus.

64). Secondly, although nearly half of the participants (45.4%) come from the place where the target university is located (i.e. Shanghai), 28 out of 34 different provinces, autonomous regions, special administration regions and direct-administered municipalities in China consist of the rest of the participants' hometown. Finally, it is highly expected that most participants (83.4%) are the Han Chinese[16]; however, there are still 36 participants from one of the 55 Chinese minority groups, and another two students are not Chinese citizens.

3.3.3 Instruments

3.3.3.1 Questionnaire

One of the most widely-used methods of data collection in L2 research is to utilise questionnaires of various kinds (Dörnyei, 2007; Dörnyei & Taguchi, 2010; Duff, 2010). As Brown (2001, p. 5) defines, 'questionnaires are any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers'. The reason why questionnaires are quite popular among social sciences research including cost-effectiveness, highly versatile, easy designing and collection of vast information efficiently in a way that is readily accessible (de Vaus, 2014; Dörnyei & Taguchi, 2010; Gillham, 2008; Tymms, 2012; Wilson & McClean, 1994).

The questionnaire was delivered online via Qualtrics[17]. A friendly Microsoft Word version of the complete questionnaire can be seen in Appendix E. This questionnaire consists of five sections. 21 questions were designed in section A to ask participants' personal information, backgrounds and general levels of English and English writing proficiency. They are connected with RQ I on L2 learner's individual differences. Section B and C explore participants' knowledge, learning styles and attitudes towards their L1 (Chinese) and L2 (English) writings. Both section B and C were designed by utilising the Likert scale to explore participants' the extent to which they agree or disagree with the given statements, with 29 statements and 35 statements in section B and C respectively. Both sections are in relevance to RQ II on learning strategies. Similar to the previous two sections, section D also explores participants' opinions,

[16] The Han Chinese is the largest ethnic group in China, accounting for 92% per cent of the total Chinese population (R. Du & Yip, 1993).
[17] A software allows researchers to create and disseminate online surveys to field responses of academic research (Ginn, 2018).

perspectives and attitudes in socio-psychological orientation by employing the Likert scale with 25 statements, which could address RQ III. The final section E is the essay question. Participants voluntarily participate in the final essay as well as the feedback option from a professional marker.

3.3.3.2 Writing task

The writing task is the last question appearing on the questionnaire. The topic, time frame and word limit of the essay were agreed by four professional writing teachers and markers including the researcher himself from 3 online meetings. The instructions and topic of the essay are illustrated as follows:

> Directions: For this part, you are allowed 30 minutes to write a short essay on ***the importance of building trust between teachers and students***. You can cite examples to illustrate your views. You are expected to write at least 200 words but no more than 250 words.

All markers were fully aware of the participants' previous English study history, background knowledge, current study modes, and the average English writing proficiency level locally (Shanghai) and nationally (China) to design this writing task. One sample of participant's writing is illustrated in Appendix F.

3.3.3.3 Scoring

Assessing academic writing requires professionally trained markers and well-designed marking procedures. As Weigle (2009) noted, six qualities of test usefulness involving reliability, construct validity, practicality, impact, authenticity and interactiveness should be pursued to best avoid the subjective scoring and ensure the reliability and validity of scoring. Firstly, the writing task band descriptors are taken from IELTS[18] Test (academic module). Each participant's essay is scored using a 9-band scale with half mark included, ranging from Band 1, where one only knows a few words in English, up to Band 9 for those who have full command of English writing. Each essay is assessed concerning four aspects: task response, coherence and cohesion, lexical resource, and grammatical range and accuracy. The detailed

[18] IELTS: The International English Language Testing System is a professional widely accepted English test developed and monitored by the British Council, IDP: IELTS Australia and the University of Cambridge ESOL Examinations. It measures the English proficiency of those who plan to study or work where English is utilised as a means of communication.

explanations of these four band descriptors and their corresponding band scores are illustrated in Appendix G. Secondly, all four experienced makers, who have a master's degree or above with an English or linguistic major, have been teaching English in universities from 6 to 11 years. Each of them has been professionally trained in various English writing assessment jobs nationally and internationally. Furthermore, all markers attended three 2-hour online meetings as a rater training session to familiar with the band descriptors and addressed the potential problems. Although markers assess each essay concerning four aspects as mentioned above, it should be emphasised that all markers agreed on using holistic marking[19] rather than analytic marking[20] since the previous one tends to produce a higher level of inter-rater agreement while the later one usually leads to higher self-consistency (Barkaoui, 2011; Tomas, Whitt, Lavelle-Hill, & Severn, 2019; Verrappan & Sulaiman, 2012).

To further ensure a fair and accurate judgment of all participants' writing performance, the researcher calculated interrater reliability[21] scores among the markers. To determine the degree of consistency between marker A, B, C and me, each marker independently scored the writers' essay in Year 1, Year 2 and Year 3 respectively and the researcher himself assessed all essays. Then, the researcher computed the correlation between each maker's and his sets of scores in ReCal[22] software (Freelon, 2010, 2013). According to Krippendorff (2004, 2013), the Krippendorff's alpha value over 0.75 indicates an excellent agreement beyond chance. As a result, all interrater reliability scores in this study are satisfactory to support the statistical analysis. Detailed information and statistics are summarised in the following table:

Table 1. Interrater reliability scores of participants' writing tasks from 4 makers

	N (Year 1)	N (Year 2)	N (Year 3)
Coders	2	2	2
Cases	78	76	75
Decisions	156	152	150
Krippendorff's alpha (interval)	**0.795**	**0.809**	**0.885**

Finally, for those who asked for feedback on their essays, one of the markers sent a report of participant's writing performance to the corresponding email address. The report includes

[19] The assigning of a single score to a script based on the overall impression of the script.
[20] Scripts are rated on several aspects of writing or criteria rather than given a single score.
[21] Also known as *interscorer reliability, judge reliability* and *observer reliability*, it is the degree of agreement between two or more scores, judges, or raters (B. Johnson & Christensen, 2020).
[22] ReCal: Reliability Calculator (http://dfreelon.org/utils/recalfront/).

detailed explanations of the four aspects to give evidence on the final score received. Both markers and the researcher are willing to offer this service as it not only serves as a 'reward' to participants who voluntarily participated in this study but also helps them better understand the strengths and drawbacks to improve their academic writing in the long run. One sample of marker's feedback, which responded to a participant's essay (see Appendix F), is illustrated in Appendix H.

3.3.4 Pilot study

It is necessary for researchers to pilot a questionnaire before its administration in the main phase of a study since pilot participants can offer valuable feedback on the clarity of the instructions, suggest problems or potential pitfalls of administration of the questionnaire, highlight questions of the length of time, ambiguous wording, etc. (de Vaus, 2001, 2014; Dörnyei & Csizér, 2012; Dörnyei & Taguchi, 2010; M. Miles, Huberman, & Saldaña, 2020). In this study, a pilot study was undertaken by five international undergraduates who were the researcher's previous students studying in Australia, China, and the UK now. The written information, consent form and the questionnaire were sent to them electronically via a link directing to Qualtrics platform. All pilot participants were asked to note down the total length of completing this questionnaire and any feedback on question wording, the experience filling in the questionnaire and other comments.

According to the pilot participants' feedback, the instructions and formatting of the questionnaire were satisfactory. Additionally, no questions would cause any harm to the participants, which is the objective and responsibility of the researcher. The main problems focus on the timing and ambiguities of some questions. Firstly, all pilot participants felt that it was difficult to distinguish the nine options under parents' socio-economics status. The researcher adopted the categories from UK government, and it is highly likely to be the root for confusions as everyone interprets words and concepts differently due to a different cultural and ideological systems (B. Johnson & Christensen, 2020). Hence, the researcher decided not to uses parents' socio-economic status as independent variables in the main study. Secondly, three pilot participants reported that it took them a rather long time to complete the whole questionnaire including the writing task. Although participants would be reluctant to complete a lengthy questionnaire in haste, the researcher sticks to the total length of it as the average recorded time of five pilot participants is 23.2 minutes, a feasible design for a questionnaire

survey. Finally, other minor issues involving typos, grammatical and spelling errors were also corrected based on pilot participants' feedback.

3.4 Data measures and descriptive information

The following table provides how variables are operationalised:

Table 2. Variables' operationalisation

Variable's name and operationalisation	**Item(s) on Questionnaire**
RQI: Independent variable I: Individual differences -**Gender** (binary variable, measured by male and female) -**Year of Study** (categorical variable, measured by Y1, Y2 & Y3) -**Subject disciplines** (categorical variable, measure by 4 main divisions) -**Ethnicity** (categorical variable, measured by the Han, minorities & not Chinese) -**Parent's educational background** (categorical variable, measured by 7 levels) -**English proficiency** (continuous variable, self-reporting from 1 to 7) -**English writing proficiency** (continuous variable, self-reporting from 1 to 5)	See Question 2, 3, 5, 7, 12, 13, 17 & 21 in Section A Multiple (linear) regression
RQII: Independent variable II: Learning strategies -**Study with native speakers** (binary variable, measured by Yes or No) -**Previous experiences in English-speaking countries** (binary variable, measured by Yes or No) -**Extra English writing trainings** (binary variable, measured by Yes or No) -Perspectives on translation, outline, editing & proofreading, good word choice & beautiful sentence, idioms & proverbs, structure, organisation & format, logic thinking & using dictionaries (measured by Likert Scale[23], strongly disagree 1 – strongly agree 5)	See Question 15, 16 & 19 in Section A, statement 4, 7-14, 19, 22 & 30-35 in Section C and statement 11 in Section D Multiple (linear) regression

[23] Likert-scale responses were reverse-coded where appropriate to provide more intuitive interpretations of the results.

RQIII: Independent variable III: socio-psychological factors -Perceptions on self-confidence, anxiety, motivation, teaching & learning styles (measured by Likert Scale, strongly disagree 1 – strongly agree 5)	See Statements 1-3, 17-18, 20-29 in Section C and statements 1-7, 9-10, 12, 14-15, 17-25 in Section D One-way factor analysis & multiple (linear) regression
RQIV: block entry (I + II + III)	All variables with statistical significance above Hierarchical multiple regression
Dependent variable: **Writing scores** (continuous variable, marked from 1.0 to 9.0)	See Question 4 in Section E

Participant's English writing score is the only dependent variable in this study. In total, 229 essays are marked by four teachers (*M = 5.31, SD = 1.4*) from the lowest 1.0 to the highest 8.5. Much information about independent variables has been given when introducing participants (See 3.3.2.2). Regarding parents' educational level, more than half of the participants' parents had a high school qualification equivalent or above, with fathers and mothers occupying 68.6% and 64.2% respectively. Only around 10% or less of the parents had primary school qualifications or been illiterate, reflecting a relatively high average educational background. In terms of learners' beliefs, nearly two-thirds of participants (65. 5%) considered themselves struggling with English writing though only around one-third of them (35. 7%) rated themselves as an overall low proficiency English learner[24]. Detailed distribution and frequency tables concerning parents' educational levels and self-English reports are attached in Appendix I and J respectively.

3.5 Approach to data analysis

3.5.1 Multiple regression

All questionnaire data were entered into SPSS[25]. In order to predict scores on a dependent variable (i.e. writing performance) from scores of various independent variables (i.e. learner's characteristics), the researcher decided to employ regression analysis to address all research questions. As Johnson & Christensen (2020) defines, regression analysis is 'a set of statistical

[24] Those believed that their current overall English proficiency is B1 equivalent or below.
[25] Statistical Product and Service Solutions (SPSS) is a widely used statistical programme for statistical analysis in social science.

procedures used to explain or predict the values of a dependent variable based on the values of one or more independent variables' (p. 496). To be exact, since there are two or more independent variables to examine in each research question, multiple linear regression analysis will be utilised to address which variable in a set of variables is the best predictor of an outcome and how well a set of variables can predict a particular outcome (Hatch & Lazaraton, 1991; J. Miles & Shevlin, 2006; Muijs, 2011; Pallant, 2016).

3.5.2 Assumptions of multiple regression

Several essential assumptions such as multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals should be checked prior to multiple regression analysis (Pallant, 2016). Hence, it is of paramount importance to first guarantee that the data satisfy the assumptions of various tests to run multiple regression reliably in order to further analyse these data.

To begin with, the dependent variable is expected to be a continuous variable and normally distributed. Secondly, there is no evidence of multi-collinearity among all independent variables. Thirdly, the Scatterplot of the standardised residuals forms 'a regular rectangular pattern', with most of the scores concentrated in the centre. Finally, the presence of outlier can also be identified from the Scatterplots. All assumptions mentioned above are illustrated in Appendix K, L, M and N respectively.

3.5.3 One-way factor analysis

As relevant or similar statements in Likert scale measured all predictors concerning socio-psychological factors, the researcher decided to do a one-way factor analysis before conducting the multiple regression. In total, 35 selected items (see Appendix O) on the scale were subjected to principal components analysis (PCA). The suitability of data for factor analysis was checked. Inspection of the correlation matrix suggested the presence of many coefficients of .3 and above. Bartlett's Test of Sphericity (Bartlett, 1954) was statistical significance, and the Kaiser-Meyer-Olkin value was .93, exceeding the recommended value of .6 (Kaiser, 1970, 1974) (see Appendix P). Three factors were extracted based on Kaiser's criterion (Pallant, 2016). Only the first three factors recorded eigenvalues above 1, explaining a total of 58.46% of the variance (see Appendix Q). Further inspection of the Scree plot (see Appendix R) suggested a clear

break after the third component. Oblimin rotation was performed to aid in the interpretation of the three components. All three components indicated many strong loadings and all variables were loaded substantially on only one component. The *writing anxiety* items were loaded strongly on Component 1, followed by *self-confidence* items on Component 2 and *teaching & learning context* on Component 3. There were weak positive correlations (r_{1-2} = .14; r_{1-3} = .45; r_{2-3} = .28) among the three factors (see Appendix R). The results of this analysis support the use of *writing anxiety, self-confidence and teaching & learning contexts* items as separate scales. Factor scores of three new variables were saved and renamed accordingly for later regression analysis.

3.6 Validity and reliability

There are many kinds of validity and reliability, and their meanings in quantitative, qualitative and mixed methods research vary. According to Cohen, Manion, & Morrison (2018), threats to validity and reliability can never be erased completely, and researchers shall 'indicate these clearly [and] demonstrate fidelity to the approach in which the researcher is working and abiding by the required principles of validity and reliability' (p. 245). In general, validity is concerned with accuracy. Firstly, internal validity is increased in this study as testing procedures, treatments or experiences of the participants would not threaten the researcher's ability to draw correct inferences from this data regarding the participants. Although this research was conducted for the purpose of prediction and influence, it focused on the goal of attempting to determine whether a causal relationship exists between the dependent and independent variables being investigated. Secondly, construct validity is boosted in that the variables were all adequately measured since the researcher operationalised a construct by identifying a specific instrument to be utilised to empirically measure the construct. Moreover, there is no hypothesis guessing, the bias in the design, and the researcher's initial expectations to threaten the construct validity. Finally, the researcher tended to generalise from the sample of individuals on which this study was conducted to the larger target populations (e.g. all undergraduate students in China) despite the selected sample, the timing and the uniqueness of the setting. Therefore, external validity could also be increased, which, in turn, brings about another important factor – reliability to evaluate the quality of research.

In brief, reliability is concerned with consistency. In most educational and psychological contexts, reliability refers to the consistency of a measure of a concept or stability of a set of

test scores (Bryman, 2016; L. Cohen et al., 2018; Creswell, 2014; B. Johnson & Christensen, 2020). In this study, participants' writing task scores on any one characteristic tend to be related to their scores on the other characteristics. Although it seems difficult to guarantee the external reliability at this stage since it is unlikely to measures the stability of this test over time, the satisfactory interrater reliability scores and pilot study could make up for a loss.

3.7 Ethical considerations

This study strictly adhered to the British Educational Research Association Ethical Guidelines for Educational Research (BEAR, 2018). In addition, the researcher submitted the ethical form to the Central University Research Ethics Committee (CUREC) at University of Oxford (see Appendix S) and received approval letter (see Appendix A) on April 27th, 2020.

In this study, participants are free to decide for themselves what is best for them. Put simply, they may withdraw themselves from the study without giving a reason by advising the researcher of this decision at any time. Therefore, all participants are expected to read and accept the informed consent (see Appendix C) to commence the questionnaire survey. The delivery and acceptance of the consent form to participants before the data collection underpin the principle of autonomy. Another fundamental concern regarding research ethics is the principle of privacy, confidentiality and anonymity. When designing the questionnaire in this study, the researcher did not record participant's name at all not only because it would not play any role in data analysis but also because the researcher saved much time and energy inventing pseudo-names to protect participants from public embarrassment or psychical and emotional threat. To further protect the ready-to-use data, all electronic data were encrypted in the researcher's own hardware device, especially to prevent unauthorised access. Furthermore, all data were backed up in Microsoft Office OneDrive 365 provided by University of Oxford to prevent the unexpected loss. Data are only shared by his supervisor on request, and three professionally trained makers have the right to access to participants' writing tasks only.

3.8 Limitations

There are several limitations to be identified in this methodology section. Firstly, the questionnaire can be tightened up for clarity and efficiency. As suggested by Dörnyei & Taguchi (2010), an appropriate questionnaire in any research study should be no more than

four pages long or take more than thirty minutes to complete since long questionnaires can become counterproductive. In the pilot study, there have already been several participants reporting the lengthy issue. Gillham (2008) further argues that long questionnaires are 'so easy to do quickly and badly that, in a way, they invite carelessness' (p. 11). The researcher is expected to take the length and layout decisions on questionnaire more carefully between the initial idea of preparing a questionnaire and going about writing the first draft.

Secondly, the approach to collecting data is limited in quantitative orientation. Several research evidence shows that the qualitative approach to data analysis, for instance interviews and case studies, could give researchers in-depth insight into L2 writing performance (e.g., Cao, Yu, & Huang, 2019; Kang, 2015; Takagaki, 2003). Nevertheless, I should stress that Covid-19 pandemic throughout this academic year has led to lockdowns, temporary business and institutions closedown, restricted air travel throughout the world. Consequently, it is unlikely and so inconvenient to get access to research subjects. It is impossible for the researcher to visit potential participants in person as they are so geographically dispersed.

Finally, although the sample size of this study is relatively large (n = 229), generalisations must be made cautiously from this empirical work. For example, the results of this research might not be generalised to represent, for example, all L2 university students worldwide. Shanghai is one of the metropolises in the world, one out of four special administration municipalities[26] in China, and top achiever in PISA[27] 2018 Worldwide ranking (OECD, 2019), it could be an educated inference that the resources, investments, opportunities to English study are far more than the other areas, regions, and cities. Hence, the results of this research might not be generalised to the wider research community to represent other L2 learners' writing performance. Perhaps, a defence of this is also given, with the researcher appealing to *relatability* as his objective rather than *generalisability*.

[26] Beijing, Chongqing, Shanghai, Tianjin are the four special administrative regions in China.
[27] The Programme for International Student Assessment (PISA) tests students' average performance on mathematics, science and reading.

CHAPTER 4. FINDINGS

4.1 Introduction

This chapter presents the findings based on quantitative data collected from the questionnaire in relevance to the study's four research questions. The first three sections show the results of how individual differences, learning strategies and socio-psychological factors predict participants' writing scores by conducting multiple (linear) regression. The final section ends up with a three-block hierarchical multiple regression analysis to investigate how much of the variance is explained by adding variables.

4.2 Research question I: Individual differences

A multiple (linear) regression was carried out to investigate whether L2 learners' individual differences significantly predict their writing scores. Outputs displaying model fit information and assumption checks are illustrated in Appendix T and the summary of key statistics is reported in Table 3:

Table 3. Individual differences predict writing performance

	B	s.e.	β	p
Individual differences				
Intercept	7.26	0.27		***
gender(male)	0.01	0.13	0.01	
Y2	0.50	0.15	0.17	**
Y3	0.73	0.16	0.25	***
SciDiv	-0.01	0.17	0.01	
MedDiv	0.11	0.22	0.02	
SocsciDiv	0.24	0.15	0.08	
minorities[28]	-0.35	0.18	-0.09	
Fdegree+[29]	-0.01	0.09	0.01	
Fmidsch-	0.04	0.06	0.03	
Mdegree+	0.10	0.09	0.06	
Mmidsch-	-0.16	0.06	-0.14	**
Englishproficiency	0.34	0.07	0.28	***
EnglishWriproficiency	0.40	0.07	0.34	***
R Square	0.68			
Adjusted R Square	0.66	$F_{[15, 213]} = 30.60$		***

Note1: B = Unstandardized coefficients; s.e. = Standard error;
β = Standardized coefficients; p = Significant value
Note2: All parameter estimates are from SPSS 26. * = p<.05; ** = P<.01, *** = p<.001

As shown in Table 3, this model explained a significant amount of variance in the outcome; together they explained 68% of the variance in writing scores (R^2 = .68), further indicating that the model significantly predicts the writing performance ($F_{[15, 213]}$ = 30.60; p < .001).

The constant (intercept) is interpreted as the conditional mean of writing scores when all independent variables in the model are zero. The intercept here is the conditional mean for participants who are (a) identified as female, (b) first-year student, (c) in Humanities division, (d) the Han ethnicity, (e) parents' educational level is senior high school or equivalent and (f) both English proficiency and writing proficiency are zero. Firstly, the unstandardised coefficients for second- and third-year students suggest that their conditional mean for writing scores is .50 and .73 higher than the first-year students respectively. Furthermore, among all

[28] Ethnicity is marked by three categories namely *1. the Han, 2. minorities and 3. not Chinese*. As only two participants report themselves in the third category, it was excluded for dummification.
[29] Parents' educational levels are marked from the highest 1 to the lowest 7. Based on the sample size, they were recoded into a new two-variable version: *degree level or higher* (degree+) and *junior middle school or lower* (midsch-) for both father and mother.

coefficients of parents' educational levels, only the mother's education level with junior middle school or lower is statistically significant ($\beta = -.14$; $p < .01$). In other words, participants whose mothers had a junior middle school degree or lower achieved, on average, -.16 writing marks lower than the reference group (senior high school).

Regarding the two ordinal predictors, both participants' self-evaluation on their overall English proficiency ($\beta = .28$; $p < .001$) and English writing proficiency ($\beta = .34$; $p < .001$) significantly predicted their academic writing performance. Put simply, when participants' self-report on their English proficiency and writing proficiency is one scale-step higher, writing scores are .34 and .40 higher respectively. Overall, the final predictive model (individual differences) was:

Writing score = 7.26 + .50 (Y2) + .73*** (Y3) - .16** (junior middle education or lower for mother) + .34*** (English proficiency) + .40*** (writing proficiency)**

It is clear that writing proficiency seems to be the most powerful predictor among all individual differences based on the larger effect size ($\beta = .34$; $p < .001$).

4.3 Research question II: Learning strategies

A multiple (linear) regression was carried out to investigate whether L2 learners' learning strategies significantly predict their writings. Outputs displaying model fit information and assumption checks are illustrated in Appendix U and the summary of key statistics is reported in Table 4:

Table 4. Learning strategies predict writing performance

	B	s.e.	β	p
Learning strategies				
Intercept	6.25	0.30		***
No native teachers	-1.02	0.18	-0.36	***
Yes English countries	0.64	0.17	0.23	***
No writing training	-0.47	0.17	-0.17	**
words & sentences	-0.01	0.09	-0.01	
idioms & proverbs	0.11	0.08	0.08	
model structure	0.16	0.09	0.10	
outline	0.00	0.10	0.00	
logic	0.23	0.10	0.14	*
translation	-0.13	0.08	-0.11	
editing & proofreading	0.36	0.11	0.20	**
use dictionaries	0.11	0.09	0.07	
R Square	0.50			
Adjusted R Square	0.47	$F_{[11, 205]} = 18.31$		***

Note1: B = Unstandardized coefficients; s.e. = Standard error;
β = Standardized coefficients; p = Significant value
Note2: All parameter estimates are from SPSS 26. * = p<.05; ** = P<.01, *** = p<.001

As illustrated in Table 4, this model explained 50% of the variance in writing scores ($R^2 = .50$), further indicating that the model significantly predicted writing performance ($F_{[11, 205]} = 18.31$; $p < .001$).

The intercept here is the conditional mean of writing performance for participants who (a) study with native speakers before or now, (b) have no previous experiences in English-speaking countries, (c) have extra English writing training outside class and (d) all other learning strategies were measured by strongly disagree. All three binary variables significantly predicted writing scores. First, the predictor concerning participants who have not studied with native English teachers ($\beta = -.36$; $p < .001$), on average, achieved -1.02 writing marks lower than those with native English teachers. Also, those who had previous experiences in English-speaking countries ($\beta = .23$; $p < .001$) had significantly higher results (.64 marks) on average than those who did not. Finally, participants without extra English writing training outside class ($\beta = -.17$; $p < .01$) achieved, on average, -.47 marks lower than those with additional writing training after class.

Regarding the eight ordinal variables, only two learning strategies significantly predicted participants' writing scores. Participants employed logic strategy (β = .14, p < .05) and editing and proofreading strategy (β = .20, p < .01) achieved, on average, .23 and .36 marks higher in writing scores respectively. Overall, the final predictive model (learning strategies) was:

Writing score = 6.25 - 1.02* (no native teachers) + .64*** (exp in English-speaking countries) - .47** (no writing training) + .23* (use logic) + .36** (employ editing)**

In this model, participants who have not studied or are not currently studying with native English teachers became the most powerful predictor among all learning strategies regarding the larger effect size (β = -.36; p < .001).

4.4 Research question III: Socio-psychological factors

A multiple (linear) regression was conducted to investigate whether L2 learners' socio-psychological factors significantly predict their writing scores. Outputs displaying model fit information and assumption checks are illustrated in Appendix V and the summary of key statistics is reported in Table 5:

Table 5. Socio-psychological factors predict writing performance

	B	s.e.	β	p
Socio-psychological factors				
Intercept	5.28	0.29		***
writing self-confidence	0.60	0.13	0.42	***
writing anxiety	-0.18	0.08	-0.13	*
teaching & learning context	0.44	0.09	0.31	***
writing motivation	0.01	0.10	0.01	
R Square	0.44			
Adjusted R Square	0.43	$F_{[4, 198]} = 39.54$		***

Note1: B = Unstandardized coefficients; s.e. = Standard error;
β = Standardized coefficients; p = significant value
Note2: All parameter estimates are from SPSS 26. * = p<.05; ** = P<.01, *** = p<.001

As shown in Table 5, this model explained 44% of the variance in writing scores (R^2 = .44), further indicating that the model significantly predicted writing performance ($F_{[4, 198]}$ = 39.54; p < .001). The intercept shows the value of writing scores (5.28) when all predictors are

measured zero. Teaching and learning context, as the only social factor in the model, significantly predicted participants' writing scores (β = .31; p < .001), suggesting that those who were satisfied with the teaching and learning context achieved, on average, .44 marks higher than those not.

Two out of three psychological factors predicted writing scores but with different levels of significance. Firstly, a higher level of writing anxiety (β = -.13; p < .05) significantly predicted lower writing scores (-.18 marks), on average. Secondly, participants' self-confidence significantly predicted (β = .42; p < .001) their higher writing scores (.60 marks) on average. Overall, the final predictive model (socio-psychological factors) was:

Writing score = 5.28 + .60* (self-confidence) - .18* (anxiety) + .44*** (satisfactory teaching & learning context)**

In this model, participants' self-confidence became the most powerful predictor among all socio-psychological factors based on the larger effect size (β = .42; p < .001).

4.5 Research question IV: Block entry analysis

A three-block hierarchical multiple regression analysis was conducted to investigate which block of variables explains the greatest amount of variation in L2 learners' academic English writing performance and how much variance was explained by each block. In total, 13 significant independent variables based on previous analysis were entered into the following three blocks in sequence:

Block 1 (individual differences): Year 2 + Year 3 + Mother's education (midsch-) + English proficiency + Writing proficiency;
Block 2 (learning strategies): No native teachers + English-speaking countries (Yes) + No writing training + use logic + employ editing;
Block 3 (socio-psychological factors): self-confidence + anxiety + teaching & learning context

Outputs displaying model fit information and assumption checks are illustrated in Appendix W and the summary of key statistics is reported in Table 6:

Table 6. Hierarchical multiple regression predicting writing score

	Predictors	R	R^2	R^2 Change	B	s.e.	β	p
Step 1		0.81	0.65***	0.65***				
(Block 1) Individual differences	Intercept				7.47	0.25		***
	Year 2				0.55	0.15	0.19	***
	Year 3				0.84	0.17	0.28	***
	Mmidsch-				-0.11	0.05	-0.10	*
	Engproficiency				0.36	0.07	0.30	***
	Wriproficiency				0.45	0.07	0.38	***
Step 2		0.83	0.68**	0.03**				
(Block 1+2) Individual differences Learning strategies	Intercept				7.68	0.35		***
	Year 2				0.44	0.16	0.15	**
	Year 3				0.74	0.16	0.25	***
	Mmidsch-				-0.10	0.05	-0.09	
	Engproficiency				0.32	0.07	0.27	***
	Wriproficiency				0.34	0.08	0.29	***
	No native teachers				-0.25	0.16	-0.09	
	English countries (Yes)				0.13	0.15	0.05	
	No writing training				-0.15	0.15	-0.05	
	Logic				0.07	0.08	0.04	
	Editing & proofreading				0.22	0.08	0.12	**
Step 3		0.83	0.69	0.01				
(Block 1+2+3) Individual differences Learning strategies Socio-psychological	Intercept				7.32	0.41		***
	Year 2				0.43	0.16	0.14	**
	Year 3				0.73	0.16	0.25	***
	Mmidsch-				-0.09	0.05	-0.08	
	Engproficiency				0.34	0.07	0.28	***
	Wriproficiency				0.26	0.09	0.23	**
	No native teachers				-0.19	0.17	-0.07	
	English countries (Yes)				0.17	0.15	0.06	
	No writing training				-0.12	0.15	-0.04	
	Logic				0.04	0.09	0.02	
	Editing & proofreading				0.20	0.08	0.11	*

writing self-confidnce	0.16	0.08	0.12	*
writing anxiety	-0.04	0.09	-0.03	
Tech & lear context	0.02	0.07	0.01	

Note1: B = Unstandardized coefficients; s.e.= Standard error;
β = Standardized coefficients; p = significant value
Note2: All parameter estimates are from SPSS 26. * = p<.05; ** = P<.01,
*** = p<.001

In the first step of hierarchical multiple regression, five predictors were entered. This model was statistically significant ($F_{[5, 195]} = 73.34$; $p < .001$) and explained 65% ($R^2 = .65$) of the total variance of writing scores. All five predictors made a significant unique contribution to the model (see Table 6). After entry of learning strategies at Step 2, the total variance explained by the model as a whole was 68% ($F_{[10, 190]} = 40.95$; $p < .001$). The introduction of learning strategies explained additional 3% of variance in writing scores, after controlling for all individual differences variables (R^2 change = .03; $F_{[5, 190]} = 3.63$; $p < .01$). In this model, five out of ten predictors were statistically significant, and writing proficiency had the largest effect size ($\beta = .29$; $p < .001$) compared to other four significant predictors. After entry of socio-psychological factors at Step 3, the total variance explained by the model as a whole was 69% ($F_{[13, 187]} = 32.24$; $p < .001$). The introduction of socio-psychological factors only explained additional 1% of variance in writing scores but did not show a significant F change (R^2 change = .01; $F_{[3, 187]} = 1.69$; $p = .17$) after controlling for all individual differences and learning strategies variables.

CHAPTER 5. DISCUSSION

5.1 Introduction

This study investigated the relationships between L2 learner's characteristics and academic English writing performance in a higher education context in Shanghai, China, exploring the extent to which learner's characteristics predict their writing competence. The study provided new insights into the relationships between learner's characteristics and writing regarding individual differences, learning strategies and socio-psychological factors in a Chinese EFL context. Several factors like year of study, editing strategy and writing anxiety all appeared to be strongly associated with the writing performance. Some of the findings have been supported in previous studies (e.g., Ackerman, 2003; Llanes et al., 2018; Mendoca & Johnson, 1994; Snow, 1992). However, the findings have also provided new insights into understandings between L2 learner's characteristics and writing performance concerning a few factors, filling a gap in the literature that has previously investigated the Chinese university students, but outside of the mainland. This section mainly examines each research question in light of findings.

5.2 Research question I: Individual differences

In L2 writing research, there has long been a debate about whether males or females perform better in writing tasks (K. Hyland, 2003). This study did not show that female participants outperformed male counterparts in writing performance as several studies demonstrated (Gu, 2002; D. Johnson, 1992; van der Slik et al., 2015). Indeed, the present study also did not suggest the male students scored slightly higher but the difference was insignificant. The insignificant 'gender' predictor seems to be irrelevant to writing scores in this study as Kubota (2003) stresses that writing is not determined by one's gender but 'constructed, negotiated, and transformed through social practices' (p. 37) informed by discourses, social settings and power relations. Learners' subject disciplines are not typically paid substantial attention in studies of L2 writing as well as in the broader field of SLA. Subject disciplines did not predict the writing scores in this study, but it might be worth investigating learners' writing performance with an English major compared to those with other majors in an EFL learning context.

Although no relationship has been found between participants' ethnicity and their writing performance when all independent variables were involved, it was a significant predictor in an analysis in which it was the sole predictor. In the simple linear regression, it was found that

those who are minorities ($\beta = -.45$; $p < .001$), on average, achieved -1.71 marks lower than the Han Chinese (see Appendix X). Indeed, the relationship between being in a minority group and writing performance was shown in a few earlier studies (e.g., Ellis, 1994; Sato, 1981). Interestingly, mother's education level (junior middle school or lower) is the only significant predictor among all categories under parents' educational background. However, it cannot be concluded that mother's educational level has a strong relationship with their children's writing scores because first, the present study did not show that mother's high education level (degree level or above) could predict participants' writing scores. Additionally, there are almost no substantial empirical studies to support it.

As expected based on earlier research (Dörnyei, 2005; Kormos, 2012), L2 learner's individual differences play an essential role in their writing performance but there is still a lot to learn from the findings in the present study. This study did not investigate the age factor since the age differences among year 1, year 2 and year 3 learners are only one to two years, and the average length of English study is similar to each other according to the descriptive information. Nevertheless, year-of-study was a significant predictor on participants' writing scores. In this regard, it can be said that the more time one spends in a higher institution for academic studies, the better the English writing scores can be achieved. This finding is confirmed by another study (Knoch, Rouhshad, Oon, & Storch, 2015) that 31 undergraduate students' L2 writing was greatly improved in terms of fluency after a three-year degree study in a higher institution. More research focusing on L2 writing even after one-semester instruction in tertiary education (e.g., Larsen-Freeman, 2006; Storch & Tapper, 2009) also showed some improvement on writing proficiency, albeit relying on the measures employed.

Finally, studies in L2 writing have found that good writers, in general, view themselves as proficient English users (Baaijen, Galbraith, & de Glopper, 2014; Gunnarsson, Housen, van de Weijer, & Källkvist, 2015; Majchrzak, 2018). This study confirms that learner's self-report on their English proficiency and writing proficiency were two significant predictors of writing performance. A potential explanation for why L2 learner's self-beliefs significantly predicted their writing scores lie in the opportunity to construct a new language identity (Majchrzak, 2018). Mastering an L2, especially writing, can allow students to freely express open opinions and embarrassing topics. It is also worth noting that some L2 writing studies (e.g. Yoon & Hirvela, 2004) regard self-belief rating report as a good self-confidence indicator to motivate

learners to work harder and efficiently, which will be discussed as a socio-psychological factor in section 5.4.

5.3 Research question II: Learning strategies

Research question II mainly investigates the relationships between L2 learner's learning strategies and their writing performance. First, whether participants had previous study experience overseas, especially in English-speaking countries, was significantly associated with their writing proficiency. Generally, participants' writing scores are relatively lower if they do not have abroad study experience. This finding is consistent with previous studies about the development of L2 writing ability during a period of abroad study from one semester up to eight years (Churchill & Dufon, 2006; S. Jones & Tetroe, 1987; Sasaki, 2004, 2007, 2011).
Second, in line with an enormous amount of earlier research concerning the impact of extra writing tutorials and training (Y. Choi, 2010; H. Lee, 2010; Nakamaru, 2010; Park, 2012; Weigle & Nelson, 2004; L. Yu, 2020), it is also not surprising that there was a strong relationship between participation in additional writing classes after school and participants' writing scores in the present study. The finding suggests attending additional writing tutorials positively predicted their overall writing performance. Nevertheless, several issues such as learner's preferences of tutoring strategies, a trust in tutor's writing and the match between tutor and tutee's motives in the writing class should be considered thoughtfully to examine the impact of extra writing training (Okuda, 2019). Moreover, the status of tutors in many writing centres can also influence the writing quality as Wablstrom (2013) recalled the vivid experience of being a non-native writing teacher:

> Students come to me expecting a native speaker, while my background places me in the writing center's most archetypal customer group. I urge students to write candidly, to cut unnecessary hedging and hesitation, to jump right in and write boldly from the heart – while simultaneously concealing my true identity as best I can (p. 10).

Similar to the English writing learning contexts, whether studying regularly with native English teachers turned out to be the most powerful variable among all learning strategies in this study to predict participant's writing scores. In brief, participants who have not studied with native English teachers achieved significantly lower writing marks on average than those have. Although a few studies (e.g., C. Liu, 2012; Walkinshaw & Duong, 2012) reported quality

writing teaching among non-native English teachers, global L2 learners, in most cases, prefer a 'native-speaker mode' (Kirkpatrick, 2006). The bulk of literature reports that learners across all ages tend to study with native English-speaking teachers because they are relatively more comprehensible, accurate, and reliable regarding teaching and assessing academic writing (Alseweed, 2012; Butler, 2004, 2007; Chun, 2014; Kinzler, Corriveau, & Harris, 2011; K. Lee, 2002).

In terms of the specific rhetorical (e.g., words and idioms), cognitive (e.g., revising and imitating) and metacognitive (e.g., planning and outlining) strategies participants employ before, during and after the writing, only editing and logic strategies predicted their writing scores. This is surprising as a large volume of research conducted over the past three decades has shown that almost all specific writing strategies could improve L2 learner's writing performance, albeit to varying degrees (Casanave, 2004; M. Johnson, Mercado, & Acevedo, 2012; Leki, 1995; Wang & Wen, 2002). Most writing strategies can help L2 learners, especially novice writers, produce long essays without too much retrieval from long-term memory (Hinkle 2004). For instance, learners can adopt well-written sentences and employ them in their own writings during the process of intensive reading. The significant editing and proofreading strategy, in this study, is another classic example to help writers reduce grammar errors, facilitate acquisition processes, promote learner autonomy and so forth (Cresswell, 2000; Diab, 2010; Suzuki, 2008; Zhi & Hegelheimer, 2013). Likewise, logic and critical thinking strategy also strongly predicted writing proficiency both in this study and many different contexts around the world (Afshar, Movassagh, & Arbabi, 2017; Jodeiri, 2005; F. Liu & Stapleton, 2014; Stapleton, 2002). One possible explanation of the insignificant of other strategies in the present study, contrary to the findings of most empirical research, is that some strategies might be transferred from L1 writing into L2 writing negatively without significance. In one study by Mu & Carrington (2007), they suggest that Chinese students are encouraged to employ planning, revising, imitating and other positive transferable strategies while should avoid transferring Chinese cohesive and organising strategies into English writing negatively. In this sense, it is crucial to identify whether writing strategies are transferred into second language writing positively or negatively.

5.4 Research question III: Socio-psychological factors

Teaching and learning context is the only socio-cultural factor that predicted participants' writing scores based on the results of multiple regression analysis. L2 writing research has been criticised for overwhelmingly focusing on writers themselves while ignoring the 'environment and transmitter' factors (Matsuda & Silva, 2020). This study found that English learning environment in China, writing class and instruction, teachers and their teaching styles had strong relationships with learner's writing performance, which is broadly in agreement with the relevant literature. Many scholarly articles have primarily investigated the strong impact of an academic discourse community, especially university tutors and professors (K. Hyland, 2012; Santos, 1988), instruction in writing English for Academic Purposes (EAP) (Baghbadorani & Roohani, 2014; Hyon, 1996), and multimodal writing context (Bowen & Whithaus, 2013; Miller-Cochran, 2017) on L2 writing. To sum up, for L2 learners, learning to write is part of becoming socialised into the academic discourse community while for writing instructors, they are encouraged to be *players* who have clear and specific expectations for academic writing in EAP contexts.

It is interesting to note that writing motivation did not predict participants' writing scores in this study, confirming results from a few studies (e.g. Hashemian & Heidari, 2013) that there was no relationship between the participants' motivation and success in academic writing. However, it is contrary to the findings of a large volume of literature in the past three decades that learner's motivation plays a seminal role accounting for their success in academic writing tasks (Eccles, Adler, & Meece, 1995; Graham & Perin, 2007; Greene, Miller, Crowson, Duke, & Akey, 2004; Pintrich, Smith, García, & McKeachie, 1993; Wigfield & Cambria, 2010; Yumusak, Sungur, & Cakiroglu, 2007). One possible explanation is due to the limitation of this study's questionnaire design. Other psychological variables were measured by many statements and extracted the strongly loading factors by one-way factor analysis. Nevertheless, motivation was measured by only one statement in the questionnaire and utilised for regression analysis. Indeed, it is worth analysing the motivation in the simple linear regression, and the results showed that it was significantly predicted ($\beta = .50$; $p < .001$) the writing scores where motivation was the sole predictor (see Appendix Y). Another explanation is that, as found by Raoofi and Maroofi (2017), motivation is such a broad term that it includes many constructs and concepts, which cannot be measured as an umbrella term. Their study found that motivational constructs and concepts such as self-efficacy, task value, intrinsic and extrinsic value, goal orientations and attributions were all associated with L2 learner's writing performance but to different degrees. Likewise, learner's self-confidence is another construct

measured in writing motivation studies, which confirmed its significant role played in L2 writing in this study.

Finally, the results of writing anxiety suggested that it had an adverse effect on participants' writing scores. In brief, the more anxious participants are, the lower their writing scores tend to be. This finding confirms the results of previous studies (e.g., S. Choi, 2014; S. Lee, 2005) in which anxiety level influences L2 writing performance, and further supported that writers' preoccupations, negative feelings, and avoidance behaviour could have predicted their lower writing scores (Zabihi, 2018). Finally, this result challenged an early hypothesis by Pajares and Johnson (1994) that writing anxiety should not be viewed as an independent affective variable directly influencing learners' competence in writing.

5.5 Research question IV: Block entry analysis

This research question explores which block of variables explains the greatest amount of variation in L2 learners' academic English writing performance among individual differences, learning strategies and socio-psychological factors. According to the three-block hierarchical multiple regression, this study showed that only Block 1 (individual differences) explained a quite substantial amount of variance in writing scores. Block 2 (learning strategies) explained a very small amount of additional variance in writing score, as demonstrated by significant but small R^2 change (3%). Although Block 3 (socio-psychological factors) explained an even smaller amount of variance (1%) in writing score, such change did not show any statistical significance.

When all ten individual differences and learning strategy variables were included in Step 2 of the regression model, no learning strategies except editing and other four individual differences[30] were significant predictors of writing scores. The most powerful predictor of writing scores was participant's writing proficiency level based on effect size ($\beta = .29$). Since abundant research has been excessively studied the role of individual differences played in L2 speaking and reading skills but less has been done to study their role in L2 writing (Kormos, 2012), this study makes an important contribution towards filling a gap in the relevant literature.

[30] Year 2, Year 3, English proficiency and writing proficiency.

CHAPTER 6. CONCLUSION

This chapter commences by presenting a brief summary that precedes the discussion of pedagogical implications, study limitations and some suggestions for future research.

6.1 Coda

This study utilised multiple linear regression analysis to investigate the relationships between L2 learners' characteristics and their academic writing performance. The results showed individual differences (year of study, English and writing proficiency), learning strategies (teacher's status, abroad study, writing training, logic and editing) and socio-psychological factors (self-confidence, anxiety, teaching and learning context) significantly predicted participants' writing performance. The hierarchical multiple regression results suggested that L2 learner's individual differences explained the largest proportion of variance in writing scores. The results further provided strong statistical evidence for how well L2 learner's characteristics were able to predict their wiring competence. As learning to write in an L2 is an intricate, time-consuming task which demands high concentration, continuous effort and steadfast determination (Han & Hiver, 2018), this research is hoped to encourage investigation into how teachers can employ new writing strategies and shift the focus to some effective ones like editing and proofreading to improve learner's writing proficiency. Moreover, since academic writing is a central practice in teaching and learning in global higher education, it is hoped that curriculum designers could change existing or establish new writing programmes to motivate mastery of writing in a second language. In essence, all stakeholders are encouraged to better understand L2 learner's characteristics, cognitively, linguistically and socio-culturally to facilitate writing.

6.2 Implications

This quantitative research study highlighted the relationships between L2 learner's characteristics and their academic writing performance, and thus, it suggests some pedagogical implications for both teaching methodology and curriculum design in academic contexts. First, L2 writing teachers, being the medium and the reliable source of knowledge for almost all L2 writers, have the most significant contribution to the development of L2 learners' academic writing skills (Lankshear & Snyder, 2000). Since editing and proofreading strategies proved to

be strongly significant for L2 learner's proficient writing in the present study, writing instructors are suggested to employ both peer and self-correction after students composed a piece of work. With the help of a guidance sheet on what kinds of mistakes to look for, students can edit and correct mistakes in their own essay. Likewise, they can edit each other's written work and discuss possible corrections with one another. This strategy helps develop learner autonomy as well as an essential technique for examinations (Spratt, Pulverness, & William, 2011). Therefore, peer and self-editing and proofreading can help L2 writers become more aware of their own learning needs and independent of the instructors. Additionally, as all psychological factors had strong associations with L2 learners' writing performance in this study, teachers are advised to endeavour to boost learners' self-confidence and eliminate their writing anxiety as much as possible by exposing them to sample model writings, having them experience writing progress and success, and offering encouraging feedback substantiated by success (Schunk, 2003). Teachers are further recommended to apply the sources of self-efficacy messages into the writing class by giving progress feedback (e.g., "*This revised version is far better than the previous one*"). It should also be stressed that persuasive or even negative comments are fruitful even though tangible successes in writing performance are more likely to have stronger impacts on the increase in writing self-confidence and decrease in writing anxiety but much more studies are needed.

In addition to writing instructors, relevant policymakers like curriculum designers can also reflect on this study. According to the findings of this research, teacher's native status, learner's overseas study experience and extra writing training can be viewed as the skeleton of L2 learner's proficient academic writing. In this regard, it can be suggested that curriculum designers should assign more writing classes into the current syllabus, or at least, distribute more evenly among other L2 skills. Moreover, when designing curricula for EAP programmes, curriculum designers are encouraged to attempt to combine non-native English teachers with native English-speaking teachers in writing classes. After all, being exposed to authentic materials and teaching environment, L2 learners can increase language proficiency and cultural awareness much easier (Clarke, 1989; Kozhevnikova, 2014). Lastly, it is recommended that curriculum designers seek opportunities for cooperation with overseas schools, universities or institutions to establish, for instance, exchange programmes for writing courses over a period of time, either progressively during the term time, intensively during the term break or both.

6.3 Limitations

There are several limitations to this study. Firstly, the researcher only utilised a holistic marking method to assess participants' writings. Although this study achieved high interrater reliability scores among markers, holistic marking should not be the sole method for deciding the final writing marks, as it cannot, by itself, guarantee valid or accurate evaluation of writing quality (Barkaoui, 2011; O'Laughlin, 1994). In fact, holistic scoring suggests little about the performance of the writers in various aspects (e.g. vocabulary and content) of writing. Instead, analytic marking can make up for this disadvantage as it reveals contrasting differences between the writing components. However, due to the limited study period for one-year master degree, it is unlikely to utilise two marking systems together. Future research can employ both holistic and analytic marking method to assess learners' writings to ensure its accuracy and validity, especially when writing score is the only dependent variable that is measured once in a quantitative study.

Secondly, there were some issues with the content and length of the questionnaire. One section of the questionnaire has not been used in statistical analysis, but participants did spend much time answering them. It is risky that respondents lost interest if the questionnaire was lengthy, which, in turn, influenced their hasty responses in later questions and the final writing task. Moreover, the clarity of some questions could have been improved. The different and complicated terms in socioeconomic status confused many participants, which could lead to inaccurate responses, although these variables were not employed for coding and analysis in the end. The potential reason of this issue is that I refined my research questions afterwards so that some of the questions in the questionnaire were not helpful to answer them properly and directly.

Finally, the methodological choices were constrained by the quantitative method in this study. Indeed, many writing studies utilised either a qualitative method (e.g. interviews in Hyland, 2013), multi-methods (e.g. case studies and interviews in Okuda, 2019) or mixed-methods approach (e.g. Michel et al., 2020; Tabari & Ivey, 2015) to investigate the relationships between one or more L2 learners' characteristics and their writings. In this sense, qualitative findings can encourage participants to expand on their responses and provide deep reasons as to why specific characteristics strongly predict the writing performance while others are not. Nevertheless, it is highly unlikely to employ another research method, especially qualitative

one, in this study because of the short research period. Additionally, the Covid-19 pandemic caused geographical barrier to interview or observe participants.

6.4 Recommendations

Since this study was conducted in an English as a Foreign Language (EFL) context, future studies should take into account L2 learners' characteristics in an English as a Second Language (ESL) context. Although learners in ESL contexts (e.g. India, Malaysia & Singapore) are also considered L2 learners, their 'English background' characteristics are different from those in EFL contexts since ESL speakers come from British colonies (Galloway & Heath, 2015). It is worth comparing ESL learners' writing performance with EFL's so that a more comprehensive study involving all *conceptual* L2 learners is included. Apart from researching context, in order to better understand L2 learner's academic writing competence, further research is needed to explore their beliefs and attitudes qualitatively towards writing, and whether it relies on their writing experience. L2 writers' identity and ideology help them align with various writing tasks and mediate writing choices (Bhowmik, 2016), which, in turn, are reflected in their writings. Being acquainted with studies on writers' ideologies can help writing instructors understand L2 learners better, and the incentives underlying their actions.

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APPENDICES

Appendix A: Ethical approval letter on behalf of DREC

Sandra Mathers
Mon 27/04/2020 16:30

- Ariel Lindorff <ariel.lindorff@education.ox.ac.uk>;
- Kunlong Jin;
- Education Research Office

Dear Kunlong and Ariel

To what extent do second language (L2) learners' characteristics relate to their English writing performance? (approval ref: ED-CIA-20-193)

The above application has been considered on behalf of the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants.

I am pleased to inform you that, on the basis of the information provided to DREC, the proposed research has been judged as meeting appropriate ethical standards, and accordingly, approval has been granted.

Should there be any subsequent changes to the project which raise ethical issues not covered in the original application you should submit details to research.office@education.ox.ac.uk for consideration.

Good luck with your research study.

With kind regards,

Dr. Sandra Mathers
Department of Education
University of Oxford

Appendix B: Recruitment and advertisement material

Department of Education
University of Oxford
15 Norham Gardens
Oxford, OX2 6PY





Dr Ariel Lindorff (PI)
ariel.lindorff@education.ox.ac.uk
Oxford University telephone number: 01865 611023
Kunlong Jin (MSc Student)
kunlong.jin@education.ox.ac.uk

To what extent do second language (L2) learners' characteristics relate to their English writing performance

Ethics Approval Reference: ED-CIA-20-193

VOLUNTEERS NEEDED FOR Second Language Writing Research



This research is conducted in the Department of Education at University of Oxford, UK as my own MSc dissertation to better understand the background, thoughts and beliefs of learners of L2 academic writing (English).

I am looking for volunteers, aged 18 – 24, who used to and/or currently have the English class(es), to write a short piece of English writing based on a given topic. In this sense, you are invited to answer a short questionnaire to better understand your characteristics in relation to your writing performance. You would be invited to participate in an online questionnaire with a writing task in the end. The session would take about 15 minutes of completing a questionnaire and up to 30 minutes to finish your writing task. You will be asked to complete questions with clear instructions in various sections. The writing task is attached at the end of

the questionnaire. You are encouraged to complete the writing task as much as you can although you are free to opt out. If you choose to receive your (optional) marks and detailed feedback, these will be sent to you after about a month to help you identify the strengths and weaknesses of your writing.

If you are interested and would like more information please contact Kunlong Jin at the Department of Education, 15 Norham Gardens, Oxford, OX2 6PY on kunlong.jin@education.ox.ac.uk. There is no obligation to take part. Thank you!

Appendix C: Participant consent form

Department of Education
University of Oxford
15 Norham Gardens
Oxford, OX2 6PY





Dr Ariel Lindorff (PI)
ariel.lindorff@education.ox.ac.uk
Oxford University telephone number: 01865 611023
Kunlong Jin (MSc Student)
kunlong.jin@education.ox.ac.uk

PARTICIPANT CONSENT FORM

Central University Research Ethics Committee (CUREC) Approval Reference: **ED-CIA-20-193**

To what extent do second language (L2) learners' characteristics relate to their English writing performance

Note: The written information and informed consent form will be delivered online before the actual questionnaire are going to dispatched via Qualtrics to potential participants.

Purpose of Study: This research is conducted by the Department of Education of University of Oxford, UK, to better understand the background, thoughts and beliefs of learners of L2 writing (English).

		Please initial each box
1	I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any adverse consequences or penalty.	☐
3	I understand that research data collected during the study may be looked at by authorised people outside the research team. I give permission for these individuals to access my data. The anonymization of data will be conducted before any authorised outsiders have access to the data.	☐
4	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐

5	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
6	I understand how this research will be written up and published.	☐
7	I understand how to raise a concern or make a complaint.	☐
8	I agree to take part in the study. I hereby assign to the researcher all copyright in my contribution for use in all work stemming from this project and future projects	☐
		☐

Appendix D: Participant information sheet (written information)

Department of Education
University of Oxford
15 Norham Gardens
Oxford, OX2 6PY





Dr Ariel Lindorff (PI)
ariel.lindorff@education.ox.ac.uk
Oxford University telephone number: 01865 611023
Kunlong Jin (MSc Student)
kunlong.jin@education.ox.ac.uk

To what extent do second language (L2) learners' characteristics relate to their English writing performance

PARTICIPANT INFORMATION SHEET

Central University Research Ethics Committee (CUREC) Approval Reference: **ED-CIA-20-193**

1. ***Why is this research being conducted?***

This research is conducted in the Department of Education at University of Oxford, UK as my own MSc dissertation to better understand the background, thoughts and beliefs of learners of L2 academic writing (English).

2. ***Why have I been invited to take part?***

You have been invited because we are looking for volunteers, aged 18 – 24, used to and/or currently having the English class(es) to write a short piece of English writing based on a given topic. In this sense, you are invited to answer a short questionnaire to better understand your characteristics in relation to your writing performance.

3. ***Do I have to take part?***

No. You can ask questions about the research before deciding whether or not to take part. If you do agree to take part, you may withdraw yourself from the study, without giving a reason by advising me of this decision at any time. All data collected from you will be destroyed if you wish to withdraw from this study. You are guaranteed not to have any academic penalty if you decline to participate or withdraw from this study.

4. ***What will happen to me if I take part in the research?***

Once you read and signed the informed consent, you are welcome to participate this study. You will be asked to compete an online questionnaire under several sections with proper instructions. You are also encouraged to write a short piece of writing as much as you can based on a given topic in end of the questionnaire. You will be invited to complete your questionnaire during part of your class session, which lasts around 15 - 20minutes for the questionnaire and up to 30 minutes for your writing task.

5. Are there any potential risks in taking part?

The following risks are involved in taking part of my research study:

1. Some questions may involve some personal data like your family social-economic background, original birth place, date of birth and you might feel uncomfortable to share your personal information.
2. A few questions in the questionnaire may involve topics which you might have strong opinion and feelings related to academic writing.

To reduce any potential risks, personal data will be anonymised and you are always welcome to opt out of any question which you feel uncomfortable to give an answer or share your opinions.

6. Are there any benefits in taking part?

Yes. The ultimate goal of my research is to help second language learners improve their academic English writing. In general, once you complete your writing task in the end of the questionnaire. Two professional markers will assess your work. After a month or so, you will not only receive a mark based on your writing performance, but also a detailed feedback and comments on the strengths and weaknesses of your writing task. I hope that our feedback and comments could help you to improve in your future writing.

7. What happens to the data provided?

The information you provide during the study is the **research data**. Any research data from which you can be identified (data of birth, birth place, SESs) is known as **personal data**.

Personal / sensitive data will be stored in my personal computer safely for 3 years until I securely destroy them. All the collected data will be encrypted in my personal hardware device, especially to prevent unauthorised access.

Other research data will be stored for at least 3 years after publication or public release of the work of the research.

Dr Ariel Lindorff (Supervisor) and I will have access to the research data. Responsible members of the University of Oxford may be given access to data for monitoring and/or audit of the research. Additional individuals will have access only to anonymised data in order to mark and give feedback on the written task.

I would like your permission to use anonymised data in future studies, and to share data with other researchers (e.g. in online databases). All personal information that could identify you will be removed or changed before information is shared with other researchers or results are made public.

8. *Will the research be published?*

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The research will be written up as a student's dissertation. On successful submission of the dissertation, it may be deposited both in print and online in the University archives to facilitate its use in future research. If so, the dissertation will be openly accessible.

9. *Who has reviewed this study?*

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (Reference number: **ED-CIA-20-193**).

10. *Who do I contact if I have a concern about the study or I wish to complain?*

If you have a concern about any aspect of this study, please contact Kunlong Jin (kunlong.jin@education.ox.ac.uk) or Dr Ariel Lindorff (ariel.lindorff@education.ox.ac.uk), and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Education DREC Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible: Dr Liam Gearon (liam.gearon@education.ox.ac.uk).

11. *Data Protection*

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study.
The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest.
Further information about your rights with respect to your personal data is available from http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/.

12. Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Dr Ariel Lindorff (PI)
ariel.lindorff@education.ox.ac.uk
Oxford University telephone number: 01865 611023

Kunlong Jin (MSc Student)
kunlong.jin@education.ox.ac.uk
Department of Education
15 Norham Gardens, Oxford, OX2 6PY
United Kingdom

Appendix E: Sample questionnaire



Second Language (L2) Writing Questionnaire

This survey is conducted in the Department of Education at University of Oxford, United Kingdom as my own MSc dissertation to better understand the background, thoughts and beliefs of learners of L2 academic writing (English). This questionnaire consists of 5 sections. Please read each instruction and write your answers. This is not a test/exam so there are 'right' or 'wrong' answers. The results of this survey will be utilised only for my MSc research purposes so please give your answers sincerely. Thank you very much for our help!

Section A: Personal Information

Please provide the following information by selecting or typing your response(s) in the space given below:

1. Year of Birth: _____
2. Gender: **M / F**
3. Year of Study: **1st / 2nd / 3rd**
4. Student status:
   A. Full-time student
   B. Part-time student
   C. Visiting student
   D. Others (Please specify:) _____
5. Subject disciplines and majors (Please choose one of the divisions below):

A. **Humanities Division** (Arts, Classics, English Language & Literature, History, Linguistics, Modern Languages, Music, Oriental Studies, Philosophy)
B. **Sciences Divisions** (Chemistry, Computer Science, Earth Sciences, Engineering Sciences, Materials, Mathematics, Physics, Plant Sciences, Statistics, Zoology)
C. **Medical Sciences Divisions** (Biochemistry, Clinical Medicine, Clinical Neurosciences, Medicine, Oncology, Orthopaedics & Rheumatology, Paediatrics, Pathology, Pharmacology, Physiology, Anatomy & Genetics, Population Health, Primary Care Health Sciences, Psychiatry, Surgical Sciences, Women's & Reproductive Health)
D. **Social Sciences Division** (Anthropology, Archaeology, Business, Economics, Education, Geography and the environment, Global and Area Studies, Government, International Development, Law, Politics and International Relations, Social Policy and Sociology)

6. Please state the Provinces (e.g., Sichuan, Jiangsu) or Autonomous Regions (e.g. Xinjiang, The Inner Mongolia) or Direct-administered municipalities (e.g., Beijing, Shanghai) or Special Administrative Region (e.g., Hong Kong SAR) you came from in China _____
7. Ethnicity (Please choose one of following items):

A. the Han
B. China's ethnic minorities (minority, national minority, minorities, racial minorities and minority group)
C. Not Chinese citizen

8. Do you have any disabilities which impede your learning? (Please choose one of the following options):
   A. Not applicable
   B. Disabilities (any forms)
   C. Prefer not to say
9. How many brother(s) and/or sister(s) do you have?
   A. None
   B. 1
   C. 2 – 4
   D. More than 4
   E. Prefer not to say
10. Please circle one of the following categories that best describe your father's social-economics status:
   A. Higher managerial & professional
   B. Lower managerial & professional
   C. Intermediate occupations
   D. Small employers & own account
   E. Lower supervisory & technical
   F. Semi-routine occupations
   G. Routine occupations
   H. Never worked/long term unemployment
   I. Prefer not to say
11. Please circle one of the following categories that best describe your mother's social-economics status:
   A. Higher managerial & professional
   B. Lower managerial & professional
   C. Intermediate occupations
   D. Small employers & own account
   E. Lower supervisory & technical
   F. Semi-routine occupations
   G. Routine occupations
   H. Never worked/long term unemployment
   I. Prefer not to say
12. Please circle one of the following categories that best describe your father's educational background:
   A. Degree level or above (bachelors, masters and doctorate)
   B. Senior High school or technical/vocational college
   C. Junior Middle school
   D. Primary school
   E. Other qualifications

F. No qualification or illiterate
G. Prefer not to say

13. Please circle one of the following categories that best describe your mother's educational background:
    A. Degree level or above (bachelors, masters and doctorate)
    B. Senior High school or technical/vocational college
    C. Junior Middle school
    D. Primary school
    E. Other qualifications
    F. No qualification or illiterate
    G. Prefer not to say
14. How long have you studied English (in years)? _____
15. Have you ever had or do you currently study with native English-speaking teacher(s)? **YES / NO**
16. Have you spent a period of time in English-speaking countries (e.g., Australia, Canada, New Zealand, South Africa, UK and USA) for working, travelling or studying purposes before? **YES / NO**
    If your answer to previous question is **YES**, please answer the following questions:
    (16a). I have spent a period of time in the following English-speaking countries (click all that applies to your situation and indicate the total length in this country at the blank space provided below, e.g., 3 months, year:
    Australia _____
    Canada _____
    New Zealand _____
    South Africa _____
    UK _____
    USA _____
    (16b). To what extent did such overseas experience help you in learning:
    Listening & Speaking: **not useful / neutral / useful/ very useful**
    Reading & Writing: **not useful / neutral / useful/ very useful**
    Overall comprehension: **not useful / neutral / useful/ very useful**
17. Please rate your current overall proficiency in English by selecting one of the following options:

A. **Mastery or proficiency (C2)** – Able to understand with ease virtually everything heard or read. Able to summarize information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Able to express themselves spontaneously, very fluently and precisely, differentiating finer shades of meaning even in the most complex situations.
B. **Effective operational proficiency or advanced (C1)** – Able to understand a wide range of demanding, longer causes, and recognize implicit meaning. Able to express ideas fluently and spontaneously without much obvious searching for expressions. Able to use language flexibly and effectively for social, academic and professional purposes. Able to produce clear, well-structured, detailed text on complex subjects, showing controlled use of organizational patterns, connectors and cohesive devices.

C. **Vantage or upper Intermediate (B2)** – Able to converse about general matters of daily life and topics of one's speciality and grasp the gist of lectures and broadcasts. Able to read high-level materials such as newspapers and write about personal ideas.
D. **Threshold or intermediate (B1)** – Able to converse about general matters of daily life. Able to read general materials related to daily life and write simple passages.
E. **Waystage or elementary (A2)** – Able to converse about familiar daily topics. Able to read materials about materials about familiar everyday topics and write simple letters.
F. **Post-Beginner (A1)** – Able to hold a simple conversation such as greeting and introducing someone. Able to read simple materials and write a simple passage in elementary English.
G. **Breakthrough or beginner** – Able to give simple greetings using set words and phrases. Able to read simple sentences, grasp the gist of short passages, and to write a simple sentence in basic English.

18. Have you ever had Chinese writing trainings outside schools/universities? **YES / NO**
    If your answer is **YES**, please answer the following questions:
    (18a). Did the experience help you in learning to write in Chinese? **YES / NO**
    (18b). Did the experience help you in learning to write in English? **YES / NO**
19. Have you ever had English writing trainings outside schools/universities? **YES / NO**
    If your answer is **YES**, please answer the following questions:
    (19a). Did the experience help you in learning to write in Chinese? **YES / NO**
    (19b). Did the experience help you in learning to write in English? **YES / NO**
20. How do you rate your proficiency in overall Chinese writing ability?
    A. 5 (highest)
    B. 4
    C. 3
    D. 2
    E. 1 (lowest)
21. How do you rate your proficiency in overall academic English writing ability?
    A. 5 (highest)
    B. 4
    C. 3
    D. 2
    E. 1 (lowest)

Section B: L1 Variables

Below are a series of statements about Chinese reading and writing. There are no right or wrong answers to these statements. I would like you to tell how much you agree or disagree with the following statements by simply circling a number from 1 to 5. While some of the statements may seem repetitious, take your time and try to be as honest as possible.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

(Ex.) If you **strongly agree** with the following statement, circle the number like this:

I like Her Majesty the Queen Elizabeth II very much.	1	2	3	4	⑤

1. I think I can express my ideas or feelings through writing in Chinese.
2. I think I can communicate with others through writing in Chinese.
3. I think I can reflect my inner world through writing in Chinese.
4. I think a good Chinese composition should be creative.
5. I think a good Chinese composition should be interesting.
6. I think in a good Chinese composition, the sentences flow well.
7. I think a good Chinese composition should have main points supported by examples.
8. I think a good Chinese composition employs good word choice and beautiful sentences.
9. I think a good Chinese composition requires many idioms and proverbs.
10. I think that writing in Chinese is more difficult than speaking or listening in Chinese.
11. I think that writing in Chinese is more difficult than reading in Chinese.
12. I feel anxious when writing in Chinese.
13. I believe English interferes with my Chinese writing.
14. I believe that logical thinking is a very important factor in being a good Chinese writer.
15. I believe that a high level of proficiency in Chinese is the most important factor in being a good Chinese writer.
16. I feel confident with my ability in Chinese.
17. I believe English aids my Chinese writing.
18. I think Chinese writing is difficult.
19. I like the Chinese writing teacher's teaching style.
20. I have learned a lot from Chinese writing class(es).
21. What the Chinese instruction taught in class is different from what I expected.
22. What the Chinese writing teacher taught in class is different from what I expected.
23. I am satisfied with the Chinese writing instruction at universities.
24. I like the Chinese writing instruction that I have had at universities.
25. I think outlining when writing in Chinese is very important.
26. I think rereading what I have written when writing in Chinese is very important.
27. I think revising when writing in Chinese is very important.
28. I think editing when writing in Chinese is very important.
29. I think using a dictionary (either electronic or paper) when writing in Chinese is very important.

Section C: L2 Variables

Below are a series of statements about English reading and writing. There are no right or wrong answers to these statements. I would like you to tell how much you agree or disagree with the following statements by simply circling a number from 1 to 5. While some of the statements may seem repetitious, take your time and try to be as honest as possible.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	**2**	**3**	**4**	**5**

(Ex.) If you **strongly agree** with the following statement, circle the number like this:

I like Her Majesty the Queen Elizabeth II very much.	1 2 3 4 ⑤

1. I think I can express my ideas of feelings through writing in English.
2. I think I can communicate with others through writing in English.
3. I think I can reflect writing in English.
4. I think the process of English writing primarily means 'translation from Chinese into English'.
5. I think a good English composition should be creative.
6. I think a good English composition should be interesting.
7. I think in a good English composition, the sentences flow well.
8. I think a good English composition should have main points supported by examples.
9. I think a good English composition employs good word choice and beautiful sentences.
10. I think a good English composition requires many idioms and proverbs.
11. I think English writing is different from Chinese writing in organisation.
12. I think English writing is different from Chinese writing in format.
13. I think English writing is different from Chinese writing in a sentence structure.
14. I think English writing is different from Chinese writing in rhetoric.
15. I think that writing in English is more difficult than speaking or listening in English.
16. I think that writing in English is more difficult than reading in English.
17. I feel anxious when writing in English.
18. I believe Chinese interferes with my English writing.
19. I believe that logical thinking is the most important in being a good English writer.
20. I believe that a high level of proficiency in English is the most important factor in being a good English writer.
21. I feel confident with my writing ability in English.
22. I believe Chinese aids my English writing.
23. I think English writing is difficult.
24. I like the English writing teacher's teaching style.
25. I have learned a lot from the English writing class(es) here.
26. The English writing instruction here is different from what I expected.
27. What the English writing instruction taught in class is different from what I expected.
28. I am satisfied with the English writing instruction at universities.
29. I like the English writing instruction that I have had at universities.
30. I think outlining when writing in English is very important.
31. I think translating when writing in English is very important.
32. I think reading what I have written when writing in English is very important.

33. I think revising when writing in English is very important.
34. I think editing when writing in English is very important.
35. I think using a dictionary (either electronic or paper) when writing in English is very important.

Section D: About your opinions, perspectives and attitudes

Below are a series of statements about your opinions, perspectives and in relation to English writing. There are no right or wrong answers to these statements. I would like you to tell how much you agree or disagree with the following statements by simply circling a number from 1 to 5. While some of the statements may seem repetitious, take your time and try to be as honest as possible.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	**2**	**3**	**4**	**5**

(Ex.) If you **strongly agree** with the following statement, circle the number like this:

I like Her Majesty the Queen Elizabeth II very much.	1	2	3	4	⑤

1. I avoid writing in English.
2. I have no fear of my writing being evaluated by the teacher and others.
3. I look forward to writing down my ideas in English.
4. I am afraid of writing essays when I know they will be evaluated.
5. I am afraid of writing essays in English when I know they will be assessed.
6. Handing in a composition makes me feel good.
7. My mind seems to go blank when I started to work on composition.
8. Expressing ideas through writing seems to be a waste of time.
9. I like to write my ideas down in English.
10. I feel confident in my ability to clearly express my ideas in writing.
11. I like to have my friends read what I have written in English.
12. I'm nervous about writing in English.
13. People seem to enjoy what I write in English.
14. I enjoy writing in English.
15. I never seem to be able to clearly write down my ideas in English.
16. Writing in English is a lot of fun.
17. I have a terrible time organising my ideas in an English composition course.
18. When I submit my English composition, I know I am going to do poorly.
19. It is easy for me to write good English compositions.
20. I do not think I write in English as well as most other people.
21. I do not like my English compositions to be assessed.
22. I am not good at writing in English.
23. When writing in English, I often worry about making grammatical mistakes.

24. When writing in English, I feel anxious if I cannot come up with anything to write about.
25. Whenever writing in English, I always feel discourage and demotivated to work on.

Section E: Writing task

1. Are you willing to complete the essay task?
   Yes, I would like to write this essay.
   No, I would NOT like to write this essay.
   (If the participants choose Yes, then go to Q2)
2. Would you like to receive feedback?
   Yes.
   No.
   (Either participants choose Yes or No, it will direct to the final essay question)
3. Please enter the email at which you would like to receive feedback (only if participants answer Yes in Q2 above):

   _____
4. Directions: For this part, you are allowed 30 minutes to write a short essay on ***the importance of building trust between teachers and students***. You can cite examples to illustrate your views. You are expected to write at least 200 words but no more than 250 words.

Appendix F: Sample of a participant's essay

Building trust between teachers and students

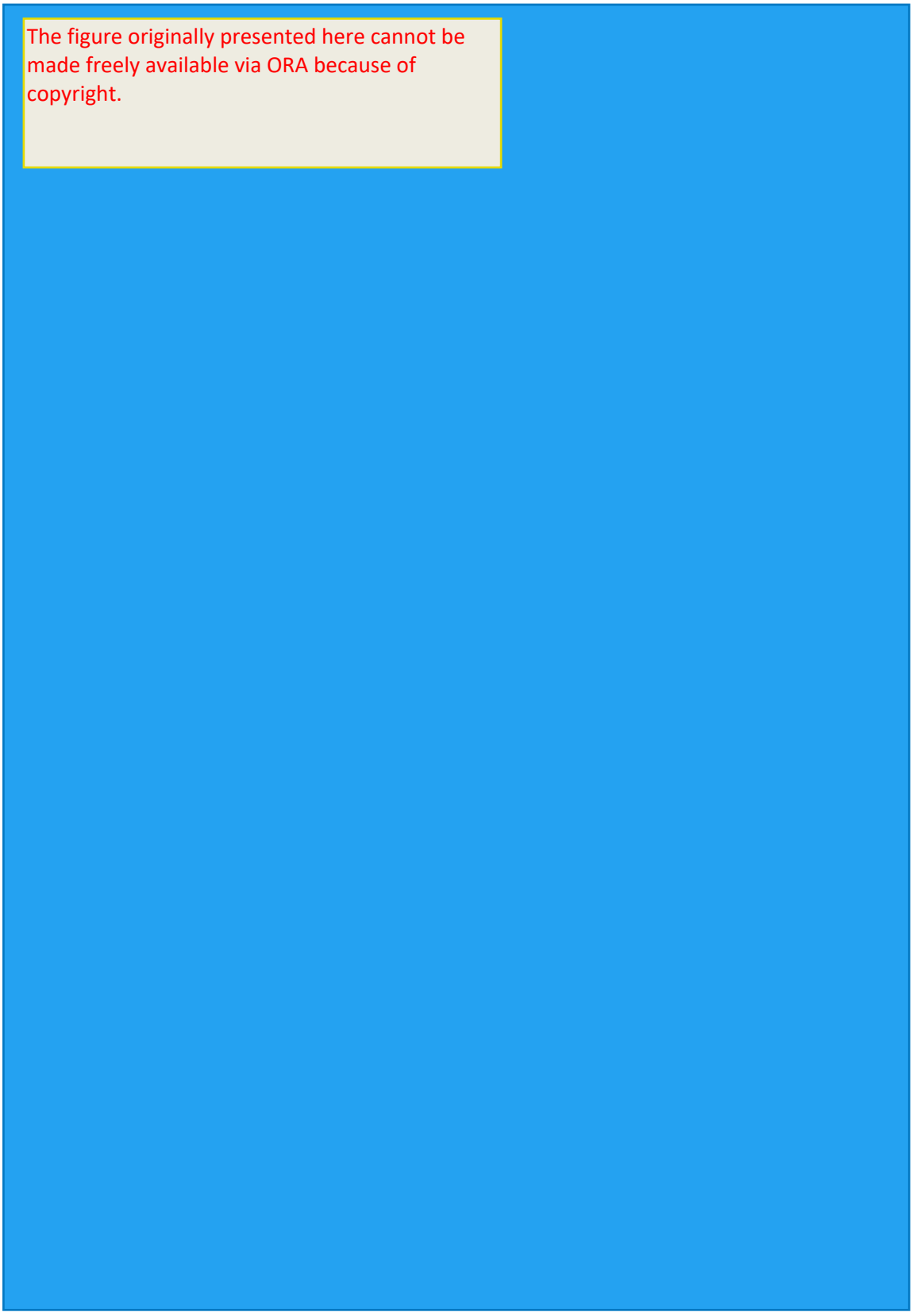
The past few years have witnessed a number of incidents involving the conflict between teachers and students, which more or less resulted in the weakening of trust between the two sides.

A number of factors can account for the problem, but the leading reason is the misbehaviour of either the teacher or the student. On the one hand, some teachers may have taken advantage of their students or infringed upon their rights, which caused the latter to lose trust in the former. On the other hand, some students or their parents might be too picky, which rendered the teacher to be anxious and even fearful.

Whatever the reason is, if the situation is allowed to continue, the consequence will be worrisome. On the one hand, teachers will lose their authority and dignity. On the other hand, students may not progress healthily.

In view of the seriousness of the problem, effective measures must be taken before the situation deteriorates. First, it is imperative that laws and regulations be worked out and enforced to punish those who infringe on others' rights, be they teachers or students. Secondly, both teachers and students should enhance the awareness of mutual understanding and mutual respect. With these measures taken, we have every reason to believe that the problem will be remedied in the near future.

Appendix G: Writing task: Band scores and band descriptors table



Appendix H: Sample of a marker's feedback on a participant's essay (Appendix F)

From: Kunlong Jin (kunlong.jin@education.ox.ac.uk)

Personal data removed

Essay feedback

Dear student,

First of all, thank you for participating in this research study and complete a questionnaire including the final essay. As you voluntarily required, the following feedback is based on your essay written in the online survey you took before. The total number of words of your essay is 219, which satisfied the requirement stated in the instruction. The overall mark of this essay is **7.5**, indicating a relatively high level of writing proficiency.

1.**Task Response**: *Are all parts of the prompt addressed, a position taken and supported and is the response in an essay format?*

All parts of the prompt are addressed and appropriate examples given. Problems described in the first paragraph are closely related to key topic here. The second paragraph analyses two reasons accounting for this problem and the third paragraph pinpoints the two serious consequences if the problem continues. Two solutions are suggested in the last paragraph and a succinct conclusion is given at the end. This is in an appropriate essay format.

2. **Coherence and Cohesion***: Is the response easy to follow because of appropriate paragraphing, range and accuracy of cohesive devices, and referencing?*

There are four paragraphs here. This essay used an 'analyse-solution' structure. The first paragraph serves as an introduction to put forward an issue, the second and third as body paragraphs to analyse the issue, and the last as a conclusion to propose some solutions. The introduction presents the idea of increasing cases of conflict between teachers and students in recent years. The next two paragraphs are well-organized and ideas can easily be followed. The second paragraph begins, "*A number of factors can account for the problem*", then "*On the one hand … "*, then "*On the other hand … "*. The third paragraph, which covers two negative consequences is also easy to follow. "*On the one hand …*", "*on the other hand … "*. The last paragraph introduces two solutions to address the issue: "*Firstly, …*" and "*Secondly, …*". Both overall organization of paragraphs and internal organization is clear and a range of discourse markers is used accurately.

3**. Lexical Resource**: *How wide a range of vocabulary is used and how accurate is usage and spelling?*

There is a wide range of vocabulary here with no error. Less common items are used quite skillfully. Examples: "*weakening of trust*", "*infringed upon their rights*", "*rendered … to be anxious and fearful*", "*lose their authority and dignity*", "*progress healthily*", "*enhance the awareness of mutual understanding and mutual respect*".

4. **Grammatical Range and Accuracy**: *How wide is the range of grammatical structures and how frequent are errors? Is punctuation accurate?*

There is a wide range of grammatical structures here with no error. Punctuation is accurate. Examples: "*The past few years **have witnessed** a number of incidents **involving** the conflict between teachers and students, **which** **more or less resulted in** the weakening of trust between the two sides*.", "***Whatever** the reason is, **if** the situation **is allowed to continue**, the consequence will be worrisome*.", "***it is imperative that** laws and regulations be worked out and enforced to punish **those who** infringe on others rights, be they teachers and students*.", "***With these measures taken**, we have every reason to believe **that** the problem will be remedied in the near future*."

We hope that the feedback, comments and suggestions discussed above are helpful in your future writing tasks. Good luck with your studies.

Regards,

The L2 writing research Assessing Team

Appendix I: Frequency and distribution tables: Participants parents' educational background

Please choose one of the following categories that best describe your father's educational background:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree level or above (bachelors, masters and doctorate)	62	27.1	27.1	27.1
	Senior High school or technical/vocational college	95	41.5	41.5	68.6
	Junior Middle school	45	19.7	19.7	88.2
	Primary school	18	7.9	7.9	96.1
	Other qualifications	7	3.1	3.1	99.1
	Prefer not to say	2	.9	.9	100.0
	Total	229	100.0	100.0	

Please choose one of the following categories that best describe your mother's educational background:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree level or above (bachelors, masters and doctorate)	47	20.5	20.5	20.5
	Senior High school or technical/vocational college	100	43.7	43.7	64.2
	Junior Middle school	50	21.8	21.8	86.0
	Primary school	25	10.9	10.9	96.9
	Other qualifications	4	1.7	1.7	98.7
	No qualification or illiterate	1	.4	.4	99.1
	Prefer not to say	2	.9	.9	100.0
	Total	229	100.0	100.0	

Appendix J: Frequency and distribution tables: Participants' self-report on overall English proficiency and English writing level

Please rate your current overall proficiency in English by selecting one of the following options:

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Mastery or proficiency (**C2**)	7	3.1	3.1	3.1
Effective operational proficiency or advanced (**C1**)	60	26.2	26.2	29.3
Vantage or upper intermediate (**B2**)	80	34.9	34.9	64.2
Threshold or intermediate (**B1**)	53	23.1	23.1	87.3
Waystage or elementary (**A2**)	23	10.0	10.0	97.4
Post-Beginner (**A1**)	1	.4	.4	97.8
Breakthrough or beginner	5	2.2	2.2	100.0
Total	229	100.0	100.0	

How do you rate your proficiency in overall academic English writing ability?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite confident	18	7.9	7.9	7.9
	Sometimes confident	61	26.6	26.6	34.5
	Neutral	72	31.4	31.4	65.9
	Sometimes struggling	37	16.2	16.2	82.1
	Always struggling	41	17.9	17.9	100.0
	Total	229	100.0	100.0	

Appendix K: Normality checks on the dependable variable: writing task scores

As writing scores are marked from 1 to 9 with half marks allowed and the distance (i.e. 0.5) between marks are equal, this dependent variable is a continuous scale because equal intervals on the scale represent equal differences in the property being measured (Field, 2018). Moreover, the dependent variable is normally distributed based on the following tests and statistics (Field, 2018; Muijs, 2011):

1. The skewness and kurtosis data are between -.5 to .5;
2. Significance values are less than .001 in both Kolmogorov-Smirnov and Shapiro-Wilk test (Sig. < .05);
3. Normal curve on histogram shows a 'nice bell curve';
4. The expected quantiles are a straight diagonal line on both P-P plot and Q-Q plot.

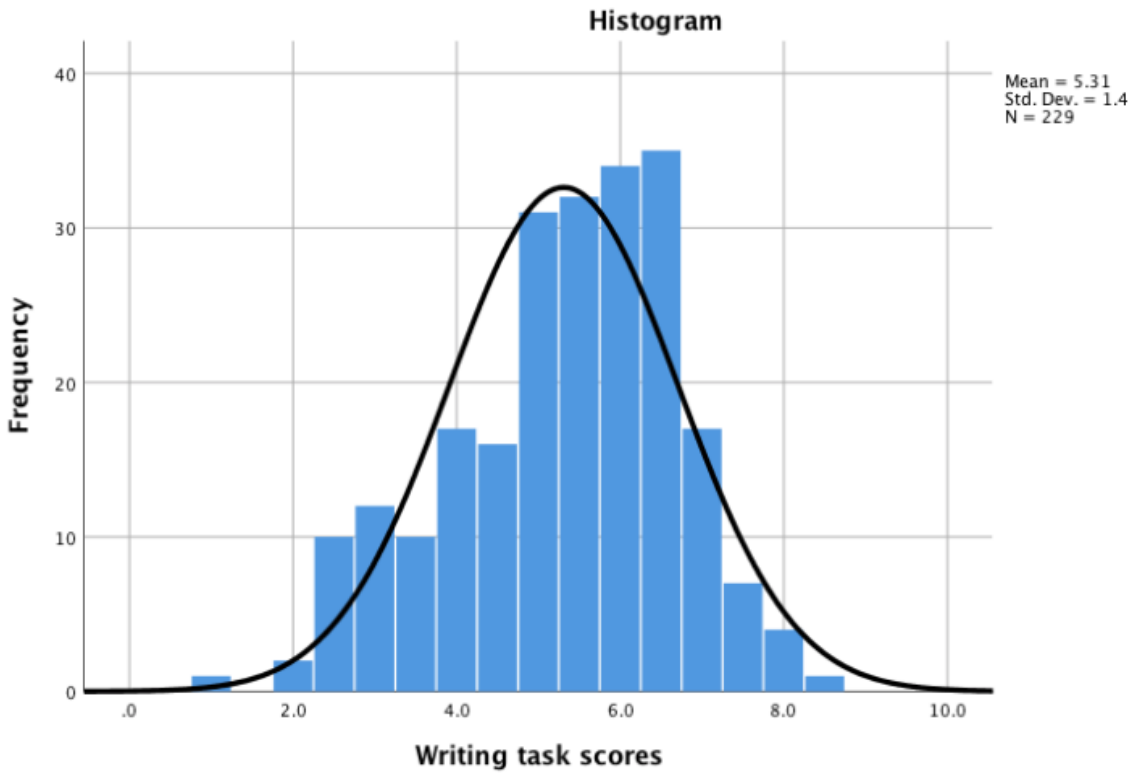
Descriptives

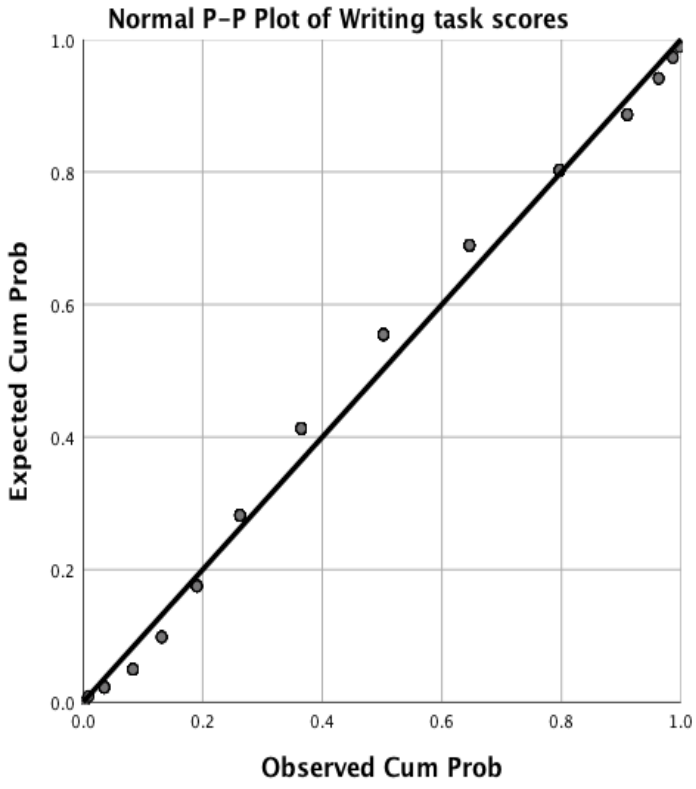
			Statistic	Std. Error
Writing task scores	Mean		5.308	.0925
	95% Confidence Interval for Mean	Lower Bound	5.126	
		Upper Bound	5.490	
	5% Trimmed Mean		5.340	
	Median		5.500	
	Variance		1.961	
	Std. Deviation		1.4003	
	Minimum		1.0	
	Maximum		8.5	
	Range		7.5	
	Interquartile Range		2.0	
	Skewness		-.468	.161
	Kurtosis		-.225	.320

Tests of Normality

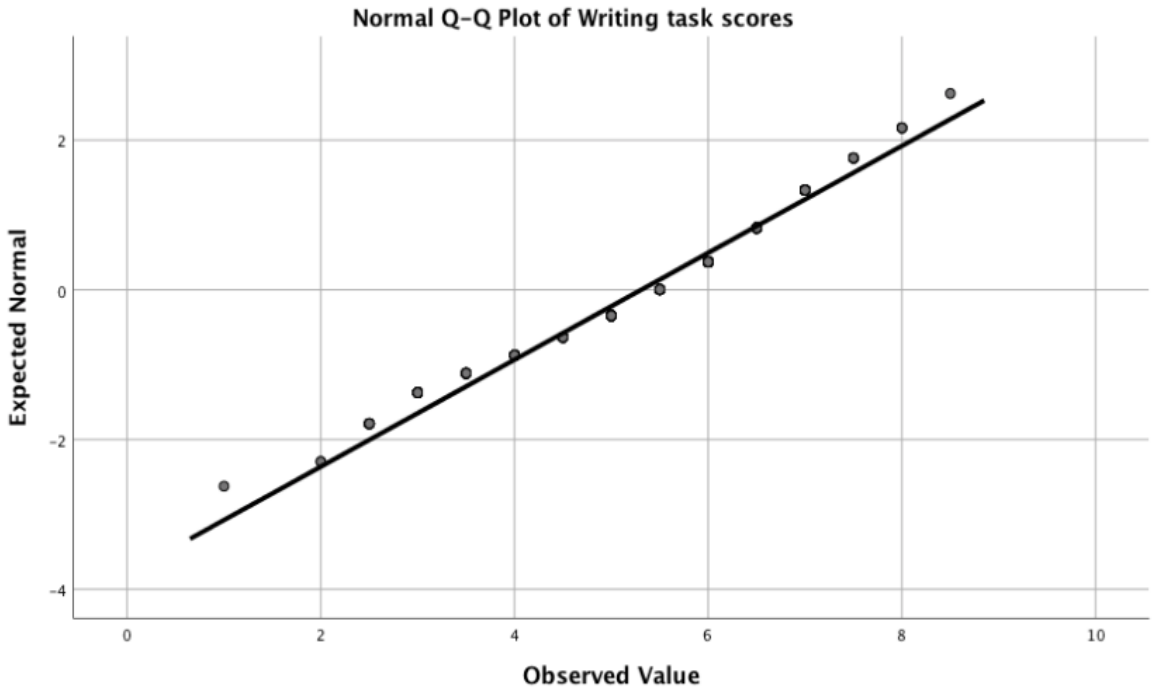
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Writing task scores	.122	229	.000	.966	229	.000

a. Lilliefors Significance Correction


Histogram
Mean = 5.31
Std. Dev. = 1.4
N = 229
Frequency
Writing task scores
0
10
20
30
40
.0
2.0
4.0
6.0
8.0
10.0


Normal P-P Plot of Writing task scores
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

Normal Q-Q Plots



.

Appendix L: Assumptions check for multiple regression: Multi-collinearity

Based on the data from Coefficients tables, no variables' Tolerance value is lower than .20, and each predictor's Variance Inflation Factor (VIF) value is well below 10 (Field, 2018). Hence, no given explanatory variable has a strong relationship with the other explanatory variables.

Individual differences and L2 writing:

	Tolerance	VIF
gender(male)	.733	1.364
year2	.599	1.669
year3	.522	1.916
science division	.468	2.136
medical division	.801	1.249
social science division	.652	1.534
minorities	.702	1.424
degree+(father)	.459	2.178
juniormidsch-(father)	.384	2.601
degree+(mother)	.536	1.867
juniormidsch-(mother)	.514	1.945
English proficiency	.510	1.962
Writing proficiency	.361	2.767

Learning strategies and L2 writing:

	Tolerance	VIF
native teachers (no)	.626	1.598
English-speaking countries (yes)	.659	1.517
writing training (no)	.650	1.538
words & sentences	.530	1.889
idioms & proverbs	.555	1.800
model structure	.747	1.338
outline	.629	1.590
logic	.685	1.459
translation	.605	1.653
editing & proofreading	.635	1.574
use dictionaries	.743	1.346

Socio-psychological factors and L2 writing:

	Tolerance	VIF
writing self-confidence	.338	2.963
writing anxiety	.920	1.087
teaching & learning context	.769	1.300
writing motivation	.336	2.979

Three-block entry analysis and L2 writing:

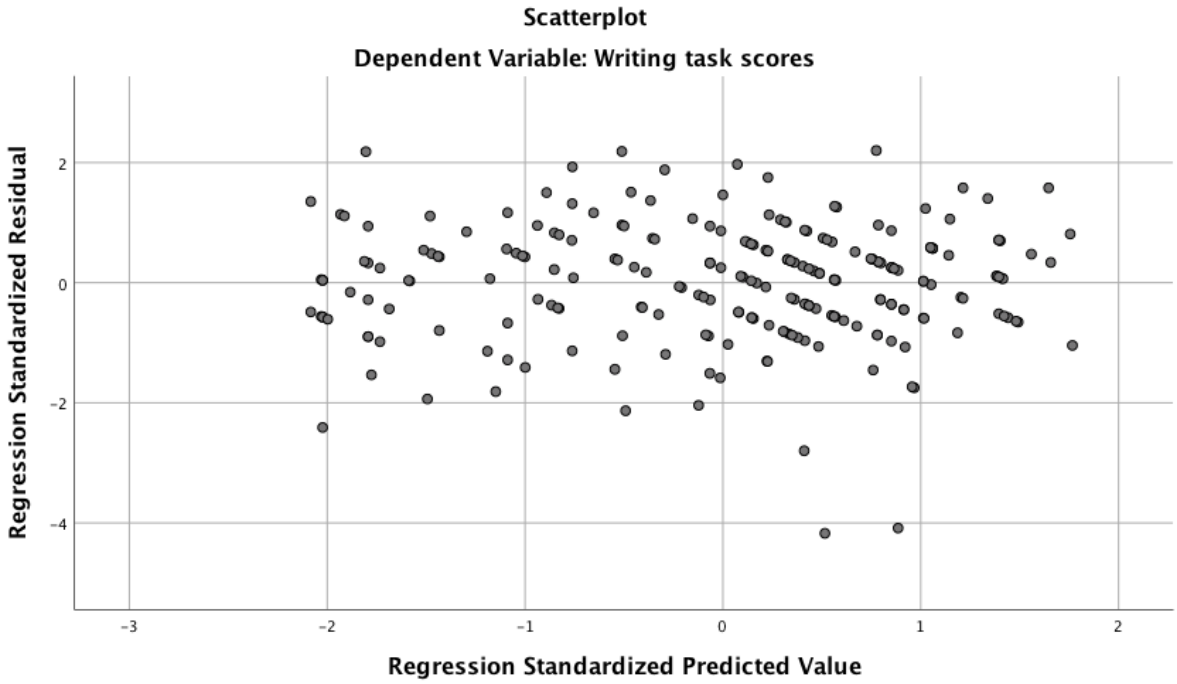
Model 1: Individual differences
Model 2: Individual differences + learning strategies
Model 3: Individual differences + learning strategies + socio-psychological factors

	Tolerance	VIF
year 2	.670	1.492
year 3	.574	1.741
middle school- (mother)	.902	1.109
English proficiency	.543	1.841
writing proficiency	.442	2.263
year 2	.607	1.648
year 3	.559	1.787
middle school- (mother)	.845	1.184
English proficiency	.509	1.965
writing proficiency	.344	2.904
no native teachers	.555	1.802
English-speaking countries (yes)	.608	1.643
no writing training	.615	1.627
logic	.833	1.200
editing & proofreading	.789	1.268
year 2	.596	1.677
year 3	.551	1.815
middle school- (mother)	.833	1.200
English proficiency	.489	2.046
writing proficiency	.257	3.889
no native teachers	.499	2.004
English-speaking countries (yes)	.590	1.696
no writing training	.597	1.676
logic	.681	1.468
editing & proofreading	.772	1.296
writing anxiety	.584	1.712
writing self-confidence	.462	2.166
teaching & learning context	.680	1.470

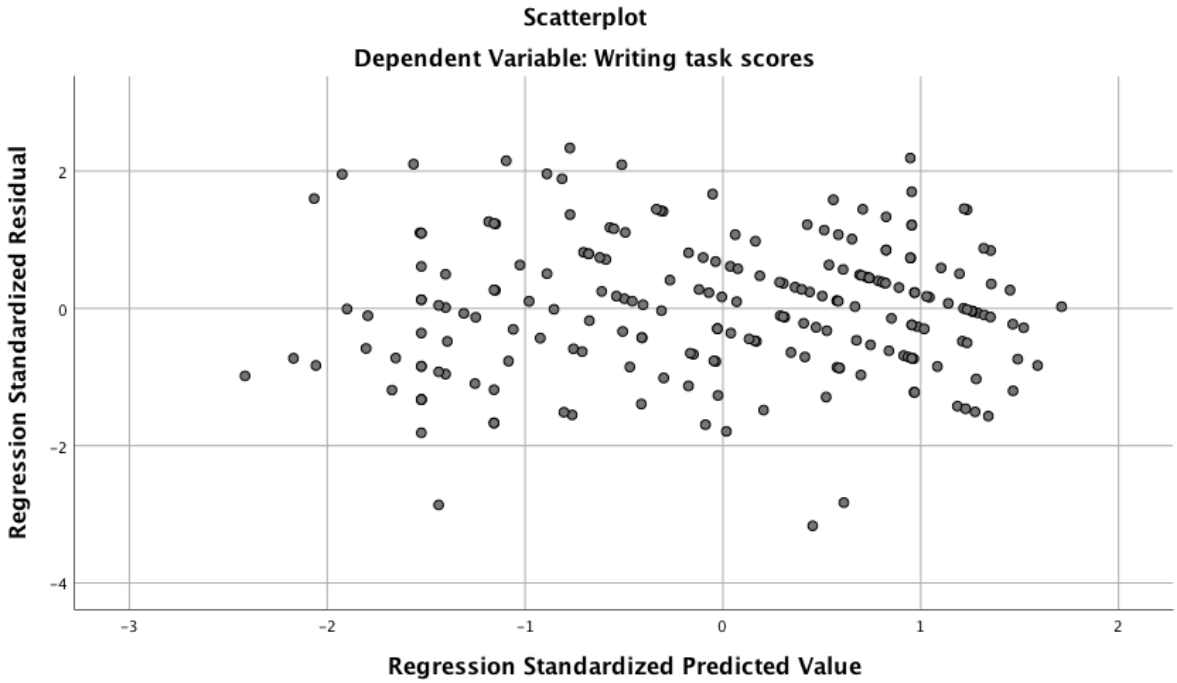
Appendix M: Assumptions check for multiple regression: Homoscedasticity (I)

Tabachnick & Fidell (2013) suggest outliers as cases that have a standardised residual of more than 3.3 or less than -3.3. The Scatterplots clearly demonstrate that outlying residuals are not found here. Therefore, all dependent variables are normally distributed at each explanatory variable, which meets the homoscedasticity of variance.

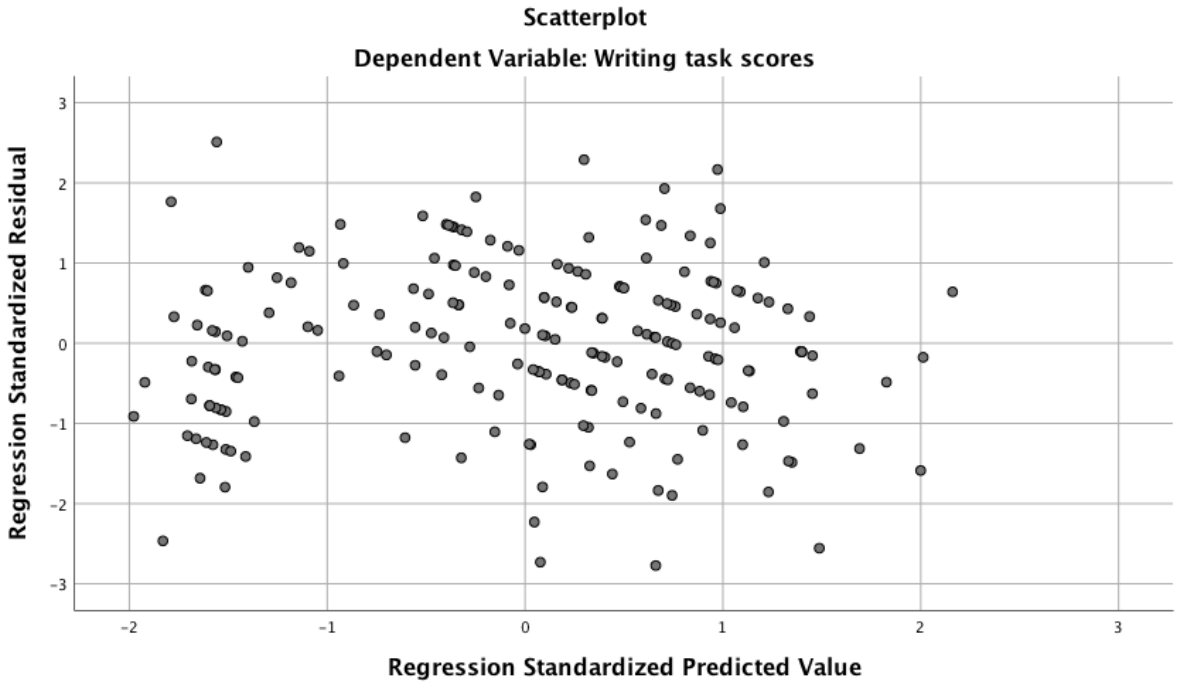
Individual differences and L2 writing:



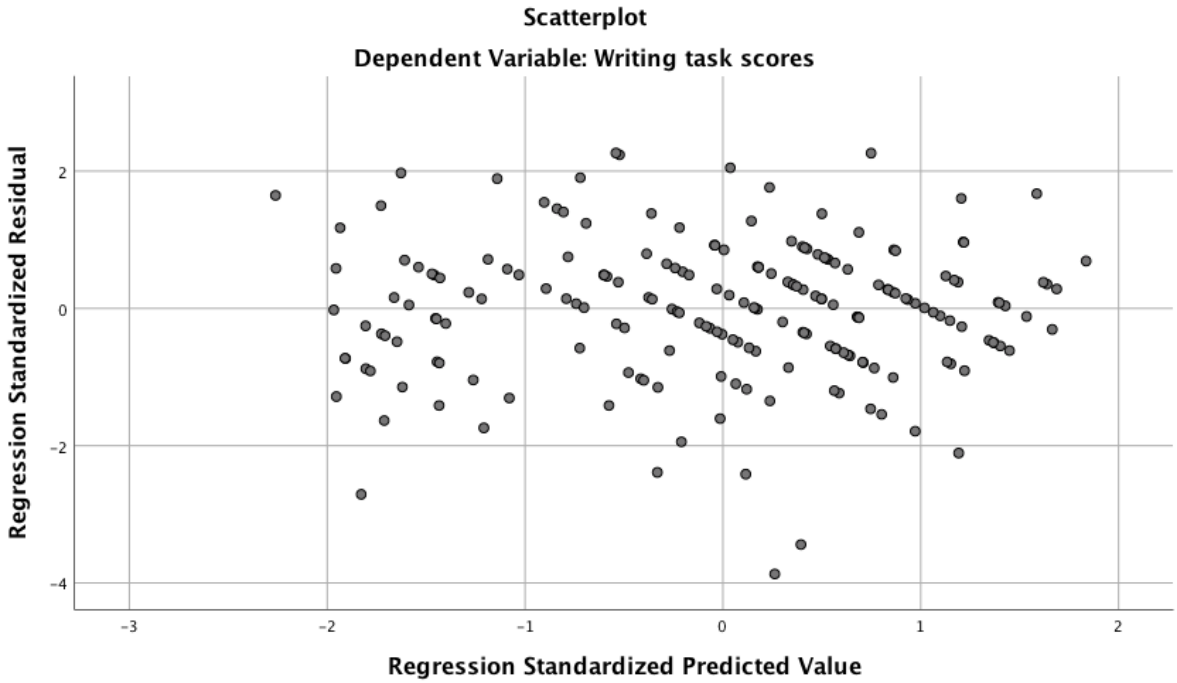
Learning strategies and L2 writing:



Socio-psychological factors and L2 writing:



Three-block entry analysis and L2 writing:



Appendix N: Assumptions check for multiple regression: Homoscedasticity (II)

To further check the Cook's Distance shown in residuals statistics table, it can be confirmed that no strange case is having any undue influence on the results for this model as a whole. It is problematic if this value is larger than 1 (Tabachnick & Fidell, 2013). Nevertheless, the maximum Cook's Distance values, in these cases, are **.105, .059, .124 & .094**, revealing a perfect linear relationship.

Individual differences and L2 writing:

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.897	7.352	5.308	1.1573	229
Std. Predicted Value	-2.083	1.767	.000	1.000	229
Standard Error of Predicted Value	.133	.396	.211	.044	229
Adjusted Predicted Value	2.818	7.404	5.306	1.1620	229
Residual	-3.4042	1.7951	.0000	.7883	229
Std. Residual	-4.174	2.201	.000	.967	229
Stud. Residual	-4.330	2.279	.001	1.005	229
Deleted Residual	-3.6641	1.9401	.0017	.8523	229
Stud. Deleted Residual	-4.524	2.301	-.001	1.015	229
Mahal. Distance	5.033	52.816	14.934	7.188	229
Cook's Distance	.000	.105	.005	.011	229
Centered Leverage Value	.022	.232	.066	.032	229

a. Dependent Variable: Writing task scores

Learning strategies and L2 writing:

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.974	7.019	5.324	.9861	214
Std. Predicted Value	-2.367	1.735	.016	1.000	214
Standard Error of Predicted Value	.129	.471	.233	.064	214
Adjusted Predicted Value	3.070	7.021	5.322	.9936	214
Residual	-3.3320	2.4995	.0079	1.0056	214
Std. Residual	-3.264	2.449	.008	.985	214
Stud. Residual	-3.336	2.487	.009	1.013	214
Deleted Residual	-3.4792	2.5790	.0098	1.0639	214
Stud. Deleted Residual	-3.422	2.519	.008	1.019	214
Mahal. Distance	2.441	45.058	11.093	6.863	214
Cook's Distance	.000	.059	.005	.009	214
Centered Leverage Value	.011	.209	.051	.032	214

a. Dependent Variable: Writing task scores

Socio-psychological factors and L2 writing:

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.462	7.324	5.308	.9331	203
Std. Predicted Value	-1.978	2.161	.001	1.000	203
Standard Error of Predicted Value	.077	.455	.157	.053	203
Adjusted Predicted Value	3.488	7.303	5.307	.9372	203
Residual	-2.9241	2.6465	-.0375	1.0504	203
Std. Residual	-2.773	2.510	-.036	.996	203
Stud. Residual	-2.862	2.538	-.035	1.012	203
Deleted Residual	-3.1151	2.7063	-.0356	1.0840	203
Stud. Deleted Residual	-2.916	2.574	-.035	1.017	203
Mahal. Distance	.091	36.635	3.978	4.027	203
Cook's Distance	.000	.124	.007	.015	203
Centered Leverage Value	.000	.181	.020	.020	203

a. Dependent Variable: Writing task scores

Three-block entry analysis and L2 writing:

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.675	7.445	5.284	1.1429	200
Std. Predicted Value	-2.261	1.836	-.021	.982	200
Standard Error of Predicted Value	.128	.388	.208	.046	200
Adjusted Predicted Value	2.374	7.408	5.279	1.1502	200
Residual	-3.1130	1.8215	-.0086	.7956	200
Std. Residual	-3.870	2.265	-.011	.989	200
Stud. Residual	-4.024	2.428	-.008	1.029	200
Deleted Residual	-3.3659	2.1150	-.0036	.8618	200
Stud. Deleted Residual	-4.199	2.460	-.009	1.040	200
Mahal. Distance	4.051	45.465	13.002	6.718	200
Cook's Distance	.000	.094	.006	.014	200
Centered Leverage Value	.020	.227	.065	.034	200

a. Dependent Variable: Writing task scores

Appendix O: Required socio-psychological variables for factor analysis

1. I think I can express my ideas of feelings through writing in English.
2. I think I can communicate with others through writing in English.
3. I think I can reflect writing in English.
4. I feel anxious when writing in English.
5. I believe Chinese interferes with my English writing.
6. I believe that a high level of proficiency in English is the most important factor in being a good English writer.
7. I feel confident with my writing ability in English.
8. I believe Chinese aids my English writing.
9. I think English writing is difficult.
10. I like the English writing teacher's teaching style.
11. I have learned a lot from the English writing class(es) here.
12. The English writing instruction here is different from what I expected.
13. What the English writing instruction taught in class is different from what I expected.
14. I am satisfied with the English writing instruction at universities.
15. I like the English writing instruction that I have had at universities.
16. I avoid writing in English.
17. I have no fear of my writing being evaluated by the teacher and others.
18. I look forward to writing down my ideas in English.
19. I am afraid of writing essays when I know they will be evaluated.
20. I am afraid of writing essays in English when I know they will be assessed.
21. Handing in a composition makes me feel good.
22. My mind seems to go blank when I started to work on composition.
23. I like to write my ideas down in English.
24. I feel confident in my ability to clearly express my ideas in writing.
25. I'm nervous about writing in English.
26. I enjoy writing in English.
27. I never seem to be able to clearly write down my ideas in English.
28. I have a terrible time organising my ideas in an English composition course.
29. When I submit my English composition, I know I am going to do poorly.
30. It is easy for me to write good English compositions.
31. I do not think I write in English as well as most other people.
32. I do not like my English compositions to be assessed.
33. I am not good at writing in English.
34. When writing in English, I often worry about making grammatical mistakes.
35. When writing in English, I feel anxious if I cannot come up with anything to write about.

Appendix P: Assessment of the suitability of the data for factor analysis

According to Pallant (2016), Barlett's test of sphericity should be significant ($p < .05$) for the factor analysis to be considered appropriate. Moreover, the KMO index ranges from 0 to 1, with .6 indicated as the minimum value for a good factor analysis (Tabachnick & Fidell, 2013). The values in the table below showed that no violations of assumptions for factor analysis:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.934
Bartlett's Test of Sphericity	Approx. Chi-Square	6079.366
	df	595
	Sig.	.000

Appendix Q: Output of Total Variance table in factor analysis: socio-psychological factors

Total Variance Explained

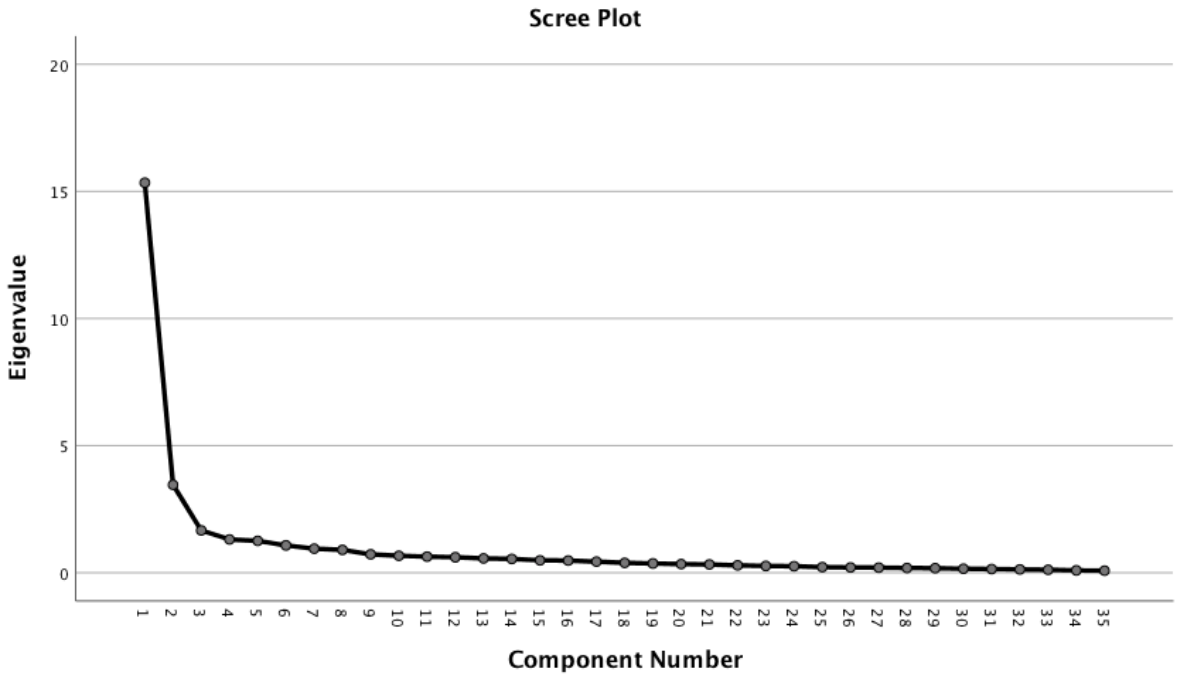
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings [a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	15.340	43.829	43.829	15.340	43.829	43.829	13.275
2	3.457	9.878	53.707	3.457	9.878	53.707	4.690
3	1.664	4.755	58.462	1.664	4.755	58.462	9.589
4	1.309	3.739	62.201				
5	1.254	3.583	65.785				
6	1.076	3.073	68.858				
7	.944	2.696	71.554				
8	.899	2.567	74.121				
9	.720	2.058	76.179				
10	.666	1.903	78.082				
11	.632	1.806	79.888				
12	.606	1.733	81.621				
13	.563	1.607	83.228				
14	.543	1.552	84.780				
15	.487	1.392	86.172				
16	.477	1.362	87.535				
17	.435	1.242	88.776				
18	.389	1.112	89.888				

19	.362	1.035	90.923				
20	.337	.962	91.885				
21	.327	.934	92.819				
22	.288	.823	93.642				
23	.266	.759	94.401				
24	.255	.728	95.129				
25	.219	.624	95.753				
26	.208	.593	96.346				
27	.201	.574	96.920				
28	.185	.529	97.449				
29	.177	.506	97.956				
30	.155	.443	98.399				
31	.145	.416	98.814				
32	.130	.373	99.187				
33	.115	.329	99.516				
34	.091	.260	99.776				
35	.078	.224	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix R: Output of Scree Plot & Component correlation matrix in factor analysis: socio-psychological factors



Component Correlation Matrix

Component	1	2	3
1	1.000	.141	.453
2	.141	1.000	.281
3	.453	.281	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix S: Central University Research Ethics Committee (CUREC) form

CENTRAL UNIVERSITY RESEARCH ETHICS COMMITTEE (CUREC)

Form CUREC 1A Checklist for the Social Sciences and Humanities

The University of Oxford places a high value on the knowledge, expertise, and integrity of its members and their ability to conduct research to high standards of scholarship and ethics. The research ethics clearance procedures have been established to ensure the University is meeting its obligations as a responsible institution. They start from the presumption that all members of the University take their responsibilities and obligations seriously and will ensure that their research involving human participants is conducted according to the established principles and good practice in their fields and in accordance, where appropriate, with legal requirements. Since the requirements of research ethics review will vary from field to field and from project to project, the University accepts that different guidelines and procedures will be appropriate.

- Please check **"Where and how to apply for ethical review"** and the **CUREC flowchart** first to see if you need ethics approval.
- Please complete this form using a word processor and email it, together with your supporting documents, to your **Departmental Research Ethics Committee (DREC)** (**if applicable**). If you don't have a DREC please email this form to **ethics@socsci.ox.ac.uk** using your official **ox.ac.uk email** address. **Only type-written, emailed applications will be accepted.**

SECTION A: Filter for CUREC 2 application This section determines whether your study raises more complex issues requiring the completion of a full application for ethical review, known as the CUREC 2 application. **(Please mark 'X' in the Yes/No column.)**		
1. Are research participants classed as **people whose ability to give free and informed consent is in question**? (This may include under 18s (although see "competent youths"), prisoners, or adults "at risk".) Your attention is drawn to the University's **Safeguarding Code of Practice** and its implications for researchers involving children or adults at risk. This includes the need for the work to be risk assessed and for researchers to undertake related training. (**Note**: If any of your participants are aged 16 or under, answer 'Yes' here **and** also answer question 5 below.)	Yes ☐	No ☒
2. By taking part in the research, will participants be at risk of criminal prosecution (e.g. by providing information on drug abuse or child abuse)?	Yes ☐	No ☒
3. Does the research involve the **deception** of participants?	Yes ☐	No ☒
4. Does your research raise issues relevant to the **Counter-Terrorism and Security Act (the Prevent duty)**, which seeks to prevent people from being drawn into terrorism? Please see advice on this on our **Best Practice Guidance web page**.	Yes ☐	No ☒
If you answered 'No' to all the questions above, go to **Section B**. If you answered 'Yes' to any question above, continue to question 5 below.		
5. Is your project covered by a CUREC **Approved Procedure** (formerly known as "CUREC Protocols")?	Yes ☐	No ☒
If yes, give the specific Approved Procedure number(s):		
If you answered '**Yes'** to **ANY** of questions **1-4**, **and** answered '**No'** to question **5**, **stop completing this checklist and do not submit it for ethical review**. Instead, complete the CUREC 2 application form from the CUREC website, then submit that for ethical review. If you answered '**Yes'** to ANY of questions 1-3, **and** answered '**Yes'** to question 5, go on to **Section B**.		

SECTION B: Contact details and project description	
Contact details:	
1. **Principal investigator** OR supervisor (if student research) (give title and full name)	Dr Ariel Lindorff
2. Name of student (if student research)	Kunlong Jin
3. Degree programme (if student research), e.g. BA, BSc, MSc, MPhil, DPhil	MSc
4. Department or Institute name	Department of Education
5. Address for correspondence (if different from above)	15 Norham Gardens Oxford, OX2 6PY
6. University (**not** private) e-mail address and telephone number	kunlong.jin@education.ox.ac.uk +44 7107 331 546
7. Name and status of others taking part in the project (e.g. third year undergraduate; postdoctoral research assistant)	N/A

Project description:	
8. Title of research project	To what extent do second language (L2) learners' characteristics relate to their English writing performance?
9. List of location(s) where project will be conducted	Shanghai, People's Republic of China
10. If your research involves overseas fieldwork or travel and your department requires a travel risk assessment, will you have completed and returned a risk assessment form beforehand? (This must be approved by your department before you travel. If you are travelling overseas, you are strongly advised to take out University travel insurance.) Please also address any physical or psychological risks for Oxford researchers and local fieldworkers in Section 16 below and discuss with your safety officer.	Yes ☐ No ☐ Not required in this instance ☒
11. Anticipated duration of overall research project	3.5 months or 0 years (maximum 5)
12.a) Anticipated start and end dates of the part of the research project involving human participants and/or personal data	From: (04/05/2020) To: (01/06/2020) **Note**: You will need ethics approval **before** you start your research. CUREC 1As may take up to 30 days to process. **Retrospective ethics approval cannot be granted.**
12. b) In the case of international or collaborative research, will you submit or have you submitted this project for ethical review or consideration elsewhere (e.g. collaborator's/local ethics committee, or other local approval)?	Yes ☐ No ☒ If 'Yes', please attach ethics or other approvals and give more details below. If 'No', please explain your reasons below. Please also refer to the Best Practice Guidance on Ethical Review of social-sciences based research conducted outside

	the UK (BPG 16), which includes an Ethics Issues Checklist for International Research (Appendix A) This research project will not be conducted jointly between two or more institutions. The setting for my research study does not require its own ethics approval and it is prepared to accept approval as long as the relevant committee or body at the University of Oxford approved my ethical application. In terms of my particular research study, it is a minimal-risk, short-term and non-sensitive research project (Best Practice Guide, section 7), so gaining formal additional local ethics review is not necessary. I have also consulted the checklist for ethics issues for international research in Appendix A of BPG16. The prospective participants are all 18 – 24 years old and have full capacity of reading and writing abilities in both Chinese and English. All concerns, complaints and issues raised before, during and after the study will be reported to me and my supervisor for further handling and feedback. Participants won't get any monetary rewards but for those who write the essay and wish to be marked and get feedback, they will get a detailed explanatory report by one of our professionally-trained markers. Despite the non-sensitive topic of my research, I am fully aware of the cultural and societal norms and practices in Shanghai, China. No local legal rights of the population or potential legal issues will be caused by this research.
13. **External** organisation funding the research (if applicable)	N/A
14. a) Title and brief description of **research** (about 150 words) in lay language. When describing the research, include your methodology, how you are applying professional guidelines, and the use to which results/data will be put. **Please also declare any conflicts of interest here.**	
To what extent do second language (L2) learners' characteristics relate to their English writing performance? A questionnaire regarding participants' beliefs, views and identities will be delivered and collected online via Qualtrics and analysed quantitatively via SPSS. The survey will be conducted online at a university in Shanghai. I expect 150 students from different year groups and subject disciplines to participate. Participants will be recruited online via advertisement and the survey will be administered in an intact class session after appropriate informed consent procedures. Writing tasks will be marked by three professionally trained markers, who will provide detailed feedback on writing performance for students who choose to try the essay question and wish to receive marks/feedback via email. Strictly following the BERA ethical guidelines and knowledge obtained from various research methods classes during previous terms, the researcher is fully aware of the ethical procedures for research and will ensure the ethical principles are maintained before, during and after the research. Appropriate procedures for data protection and security will be followed (details below).	

14.b) Description of participants and how you will **obtain informed consent** to take part in the research (about 200 words in total)

1. Description of participants **and** your criteria for inclusion/exclusion

> Ideally, I aim for 150 participants, aged from 18 – 24, in total with 50 each in Year 1, Year 2 & Year 3 in a university based in Shanghai, PRC. Ideally, male and female participants are expected to be evenly distributed in each year group (i.e. 25 each) but that will not be guaranteed. All participants will come from various subject disciplines and they took the College Entrance Examination (CEE) which English is part of mandatory exam subjects before they were enrolled in this university.

2. Your method(s) of recruitment

> Participants come from all subject disciplines in each year group. Email advertisements are distributed via the university central system with the permission of the university and relevant staff from English Department would help to make announcement at various classes as well to notify my questionnaire for research purpose.

3. Your processes for obtaining consent from participants

> Participants will be given written information and encourage them to contact me with questions. Before completing the questionnaire, students are encouraged to read all the terms and conditions as well as raise concerns about the issues on informed consent. Clear and fuller explanations are needed before they sign to start.

Please **attach separate supporting documents (in Word)** if appropriate for your research (English language versions only). Tick those you are submitting below. If appropriate supporting documents are not submitted, you will be asked to provide these separately, which may delay the ethical review process.

- ☒ Recruitment and advertisement material (e.g. a poster, social media recruitment text, or brief invitation letter/ email)
- ☒ Information for participants to read (or hear) before they agree to take part (e.g. written information or, if applicable, an outline oral information script).
- ☒ A document to record informed consent. Templates for written consent forms and/or oral information scripts (in case of an oral consent process) are available from the CUREC website
- ☒ Questions to be asked of participants (e.g. interview questions, or a preliminary scope of questions, or a sample questionnaire)
- ☐ (If relevant) debriefing document after participants have taken part
- ☐ If you feel the above approaches are not appropriate for your study, provide details on how you will obtain consent from participants
- ☐ Please complete section 15 if you cannot obtain informed consent

Please add any further details here.

15. If you cannot obtain informed consent from participants according to CUREC guidelines and good practice in your discipline, please give a brief explanation and justification of this decision below.

N/A

16. What are the ethical issues connected with your research and what steps have you taken to address them? **Please do not answer 'none'.** We need to see evidence that you have identified potential ethical issues with respect to your research and have taken steps to address them. If applicable, please address:

- Participant burdens and/or risks

> The writing task shows participants' ability and worldview of a particular topic or concept. It might involve strong personal opinions, biased views, political and cultural debate in their writing. In this sense, participants are concerned about the exposure of shared personal views to the markers, let alone to the public. It is likely for participants to have uncomfortable and awkward post-reflections after completion of the task. In this regard, participants are given a chance to seek help and feedback from me and my

- Your own physical and psychological safety as a researcher or of fieldworkers you may employ (see the University's and Social Science Division's Safety in Fieldwork guidance)

> As the coronavirus (Covid-19) is spreading quickly across the world this year, I decided to carry out an on-line survey to the target participants in order to minimise my potential health concerns rather than travel to Shanghai to collect data in person.

- Data protection/ confidentiality (also see Section 18).

> All personal information will be anonymised and the data will be accessed by the student researcher the supervisor only. Data will be stored in my personal electronic device for about minimal 3 years until I completely destroy them. All the collected data is encrypted in my personal hardware device, especially to prevent unauthorised access. Data will also be backed up in Microsoft Office OneDrive 365 provided by the University.

For more guidance on ethical issues, please see
http://researchsupport.admin.ox.ac.uk/governance/ethics/resources

Other ethical issues:

Participants may request me to view others' writing tasks including the marks and feedback for the purpose of peer comparison. Showing and sharing others' responses to a particular participant is not allowed unless the participant voluntarily to share his or her writings, feedback and marks to other participants, which is out of the researcher's control. However, after the writing tasks and the release of the results, advice is given by teachers not to do this as writing is private and confidential.

Participants may feel more pressures when conducting the survey in intact classes. In this case, teachers will reassure to them that they will not have any form of academic penalty if they wish to withdraw or decline at any stage of the survey study.

17. Will your research involve discussing sensitive issues? This could be information relating to race or ethnic origin, political opinions, religious beliefs, physical/mental health, trade union membership, sexual life or criminal activities.	Yes ☐	No ☒

If you answered 'Yes', make sure you include some supporting information (as directed in Section 14 b.) above, showing the range of questions covering these issues.

18. Management and handling of personal and other research data	
For the purpose of completing this section, all information provided by participants is considered **research data**. Any research data from which participants can be identified is known as *personal data*; any personal data which is sensitive is considered *special category data*. Management of **personal data** and **special category data** of human participants, either directly or via a third party, must comply with the requirements of the General Data Protection Regulation (GDPR) and the Data Protection Act 2018, as set out in the University's Guidance on Data Protection and Research. In answering the questions below, please also consider the points raised in the Data Protection Checklist. For advice on research data management and security, please consult with the University's Research Data Team (researchdata@ox.ac.uk) and/or your local IT department, and the University's web pages on research data management. a.) **Please mark 'X' against the data you will collect for your research**	
Consent records (written consent forms, audio-recorded consent, assent forms (for research involving minors) including participant name	☐
Online consent (may be anonymous)	☒
Opt-out forms	☐
Contact details for research purposes only (destroyed when no longer needed for this research)	☒
Contact details kept for future studies	☐
Audio recordings (preferably using PIN-protected audio recorder and stored on device's hard drive)	☐
Video recordings	☐
Transcript of audio/video recordings	☐
Photographs	☐
Task results (e.g. paper/online tasks, diary completion)	☒
Questionnaire answers	☒
Field notes	☐
Other (please specify below)	☐

b.) For **each** of the types of data selected above, state how this will be physically transferred from where it is collected to a local secure storage site (and backed up as necessary). This includes paper records and data captured electronically.

All forms including the questionnaire will be delivered and collected electronically via Qualtrics Surveys online for further analysis. The Qualtrics account is private with unique password to access.

c.) How and where will **each type of data** be stored during the research (until the end of all participant involvement)? Describe the arrangements for ensuring confidentiality, i.e. location of storage (e.g. Nexus 365 OneDrive for Business, SharePoint), security arrangements and de-identification of such data. Do not store unencrypted data in freely available cloud services or unprotected USB drives.

Feedback and responses will be accessed by the student researcher only and stored in his personal electronic device. Data and information will also be updated to the personal Microsoft OneDrive system for back up and future research use. Data will also be backed up in Microsoft Office OneDrive 365 provided by the University. Data is only shared by his supervisor on request and all the collected data is encrypted in my personal hardware device, especially to prevent unauthorised access.

d.) Will you use a unique participant number on research data instead of a participant name?

If **yes,** state whether or not you will retain a list of participant names against numbers (i.e. pseudonymisation via a linkage list). Where will the list be stored, and when will it be destroyed?

Yes. All participants' identities will be labelled numerically (1-50 Year 1, 51-100 Year 2 and 101-150 Year 3 students). I will label and input the identity number in SPSS. I will not retain their identities and personal name will not be collected. Only their email address will be provided as long as they voluntarily want their essay to be marked and given feedback report afterwards. The data will be destroyed when the research is completed.

e.) Who will have access to the research data?

The student researcher and the supervisor will be the only access to all data. Three additional markers of the writing tasks will be hired to assess the essays and help me provide the feedback report to participants. There are no identifiable information about participants' identities either in the questionnaire or in their essay.

f.) If research data is to be shared with another organisation, how will it be transferred / disclosed securely?

N/A

g.) When and how will identifiable data (including audio/video recordings & photos) be destroyed or deleted?

Note: Records of consent should be retained for a **minimum of three years after publication or public release**. Some funders may require longer periods (see http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies). If you wish to retain contact details in order to re-approach participants about future studies, you must detail this in information provided to them and obtain specific consent for this.

Data collected used in this research study may provide background information for the researcher's future study, e.g. DPhil. It will be stored for 3-4 years until complete deletion. Complete data will be destroyed when there are no further academic research purposes.

h.) Please confirm that you will store **other research data** safely for at least 3 years after final publication or public release and adhere to any additional research funder policies. For more information about the University policies, please see the University's web pages on research data management.	Yes ☒	No ☐

If '**Yes'**, please give details of who will store the data and on storage format, location and security.
Note that open science is encouraged.

If **'No',** please provide further details below.

I, Kunlong Jin, the student researcher will store the data on my personal electronic device in Word, Excel and SPSS format. All data will also be backed up in Microsoft Office OneDrive 365 provided by

the University. All the collected data is encrypted in my personal hardware device especially to prevent unauthorised access.		
i.) Does your research involve the use of secondary (i.e. previously collected) data? Common sources of secondary data include censuses, information collected by government departments, organisational records and data that was originally collected for other research purposes (If "**No**", please go to section **19**.)	Yes ☐	No ☒
j.) Do you have data access agreements for the use of this secondary data? (If so, please attach these.)	Yes ☐	No ☐
k.) Is your use of this secondary data compatible with what data subjects/participants agreed that their data should be used for?	Yes ☐	No ☐
l.) Could this data be linked back to an individual or individuals? If yes, address how securely any personally identifiable data will be transferred to you, and where and for how long it will be stored during or after the research. Who will have access to it?	Yes ☐	No ☐

19. Publication and dissemination of research data	
How will you disseminate and feedback project outcomes at the end of the research?	The research will be written up as my master dissertation. On successful submission of the thesis, it may be deposited both in print and online in the University archives to facilitate its use in future research. If so, the dissertation will be openly accessible.

SECTION C: Methods and procedures to be used	
Method used: Please ensure you have addressed any potential ethical issues related to these methods in Section 14 and in your Participant Information Sheet	**Please mark 'X'**
1. Analysis of existing records	☐
2. Snowball sampling (recruiting through contacts of existing participants)	☐
3. Use of casual or local workers e.g. interpreters	☐
4. Participant observation	☐
5. Covert observation	☐
6. Observation of specific organisational practices	☐
7. Participant completes questionnaire in hard copy	☐
8. Participant completes online questionnaire or other online task	☒
9. Using social media	☐
10. Participant performs paper and pencil task	☐
11. Participant performs verbal or aural task (e.g. for linguistic study)	☐
12. Focus group	☐
13. Interview	☐
14. Audio recording of participant (you will generally need specific consent from participants for this)	☐
15. Video recording of participant (you will generally need specific consent from participants for this)	☐
16. Photography of participant (you will generally need specific consent from participants for this)	☐
17. Others (please specify below)	☐

SECTION D: Professional guidelines and training		
1. In this section, please mark 'X' against at least one of the following professional guidelines you aim to adhere to. You should use the principles listed in your chosen guideline(s) in conducting your own research. **Note**: this is not an exhaustive list.		**Please mark 'X'**
Research specialism/ methodology	**Association and guidance document**	
Anthropology	Association of Social Anthropologists of the UK and Commonwealth	☐
Computer Sciences	ACM Code of Ethics and Professional Conduct	☐
Criminology	http://www.britsoccrim.org/ethics/	☐
Education	British Educational Research Association Ethical Guidelines for Educational Research	☒
Geography	Association of American Geographers Statement on Professional Ethics	☐
History	Oral History Society of the UK Ethical Guidelines	☐
Internet-based Research	British Psychological Society: Conducting Research on the Internet Association of Internet Researchers Ethics Guide ACM Code of Ethics and Professional Conduct Also see our Best Practice Guidance on internet-based research	☐
Law (Socio-Legal)	Socio-Legal Studies Association: Statement of Principles of Ethical Research	☐
Management	Academy of Management's Professional Code of Ethics	☐
Political Science	American Political Science Association (APSA) Guide to Professional Ethics in Political Science	☐
Politics	Political Studies Association. Guidelines for Good Professional Conduct	☐
Psychology	British Psychological Society Code of Ethics and Conduct	☐
Social Research	Social Research Association: Ethical Guidelines	☒
Sociology	The British Sociological Association: Statement of Ethical Practice	☐
Visual Research	ESRC National Centre for Research Methods Review Paper: Visual Ethics: Ethical Issues in Visual Research	☐
Other professional guidelines. Please specify the other guidelines used here*:*		☐

2. Please indicate what training in research ethics (or research methodology) the researchers involved with this study have received, e.g. the title of the course and date completed (online training available at http://researchsupport.admin.ox.ac.uk/support/training/ethics), or discussions between researchers and supervisors, if applicable.
Foundation of Educational Research 1 (Michaelmas Term, 2019-2020) Philosophy of educational Research (Michaelmas Term, 2019-2020) Foundation of Educational Research 2 (Hilary Term, 2019-2020) Discussion with my supervisor during the supervision meeting

SECTION E: Signatures or email endorsements (The SSH IDREC Secretariat accepts either option below. If you have a DREC, check which signature option it prefers.)

- **Option 1:** Email confirmations from a University of Oxford email address can be accepted. Separate emails should come from each of the relevant signatories as outlined below, indicating acceptance of the relevant responsibilities. **Pasted images of signatures cannot be accepted.**
- **Option 2:** Handwritten (wet-ink) signatures. Please scan them and the rest of the checklist pages to create a single PDF document and email to us.

Please ensure this checklist is signed by:

For staff research:	**For student research**:
1. **Principal investigator**	1. **Principal investigator (project supervisor)**
2. **Head of Department (or nominee)**	2. **Head of Department (or nominee)**
	3. **Student researcher**

1. Principal Investigator signature/supervisor signature (if student research)

I understand my responsibilities as **principal investigator** as outlined in the CUREC glossary and guidance on the CUREC website.

I declare that the answers above accurately describe the research as presently designed, and that a new checklist will be submitted should the research design change in a way which would alter any of the above responses so as to require completion of CUREC 2 (involving full scrutiny by an IDREC). I will inform the relevant IDREC if I cease to be the principal investigator on this project and supply the name and contact details of my successor if appropriate.

Signature (or email endorsement using the above declaration): ……Ariel Lindorff……..

Print name (block capitals): ……ARIEL LINDORFF…….. **Date**: ……15/04/2020……...

2. Departmental endorsement signature

I have read the research project application named above. On the basis of the information available to me, I:

(i) consider the principal investigator to be aware of her/his ethical responsibilities in regard to this research;
(ii) consider that any ethical issues raised have been satisfactorily resolved or are covered by relevant professional guidelines and/or CUREC approved procedures, and that it is appropriate for the research to proceed (noting the principal investigator's obligation to report should the design of the research change in a way which would alter any of the above responses so as to require completion of a CUREC 2 full application);
(iii) am satisfied that: the proposed project design and scientific methodology is sound; the project has been/will be subject to appropriate **peer review**; and is likely to contribute to existing knowledge and/or to the education and training of the researcher(s) and that it is in the **public interest**.

Signed by Head of Department or nominee *(example nominees for student research include the Director of Graduate Studies/ Director of Undergraduate Studies)*:

Signature (or email endorsement using the above declaration): ……

Print name (block capitals): ……ARIEL LINDROFF……..... **Date**: ……15/04/2020……...

3. Student signature (if student research)

I understand the questions and answers that have been entered above describing the research, and I will ensure that my practice in this research complies with these answers, subject to any modifications made by the principal investigator properly authorised by the CUREC system.

Signature by student (or email endorsement using the above declaration)…….

Print name (block capitals): ……KUNLONG JIN……..... **Date**: ……15/04/2020……...

Appendix T: Outputs displaying model fit information and assumption checks (Individual differences)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.683	.661	.8156

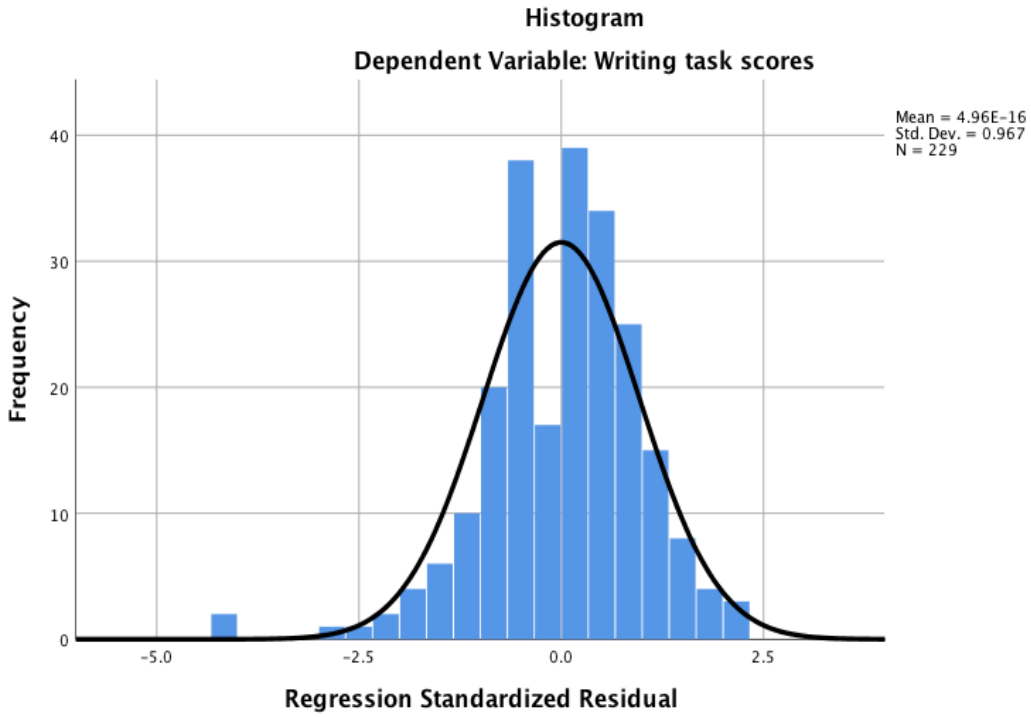
b. Dependent Variable: Writing task scores

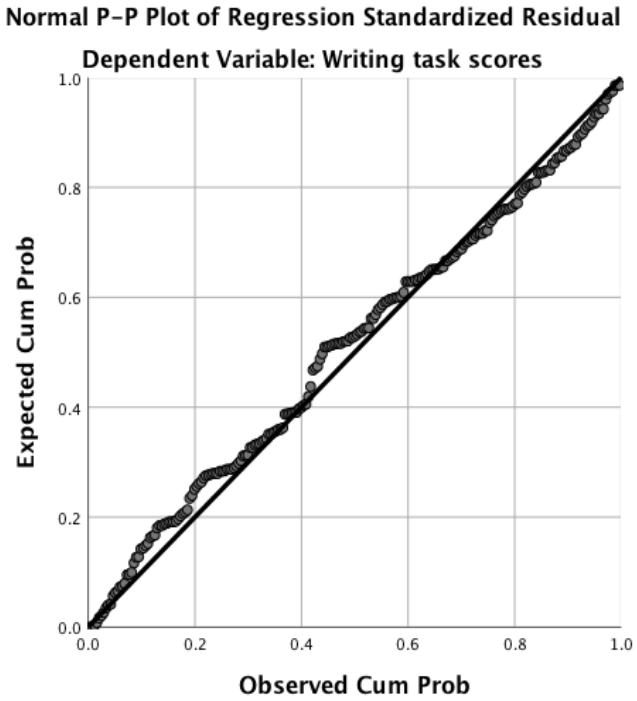
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	305.349	15	20.357	30.600	.000[b]
	Residual	141.696	213	.665		
	Total	447.046	228			

a. Dependent Variable: Writing task scores

Independent variables	t	Sig. (p value)
gender (male)	.102	.919
year 2	3.400	.001
year 3	4.599	.000
science division	-.022	.982
medical division	.520	.604
social science division	1.614	.108
ethnicity (minorities)	-1.964	.051
degree+ (father)	-.070	.944
middle school- (father)	1.057	.292
degree+ (mother)	1.044	.298
middle school- (mother)	-2.654	.009
English proficiency	-5.183	.000
writing proficiency	-5.365	.000


Histogram
Dependent Variable: Writing task scores
Mean = 4.96E-16
Std. Dev. = 0.967
N = 229
Frequency
40
30
20
10
0
-5.0
-2.5
0.0
2.5
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Writing task scores
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob

Appendix U: Outputs displaying model fit information and assumption checks (Learning strategies)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704[a]	.496	.469	1.0208

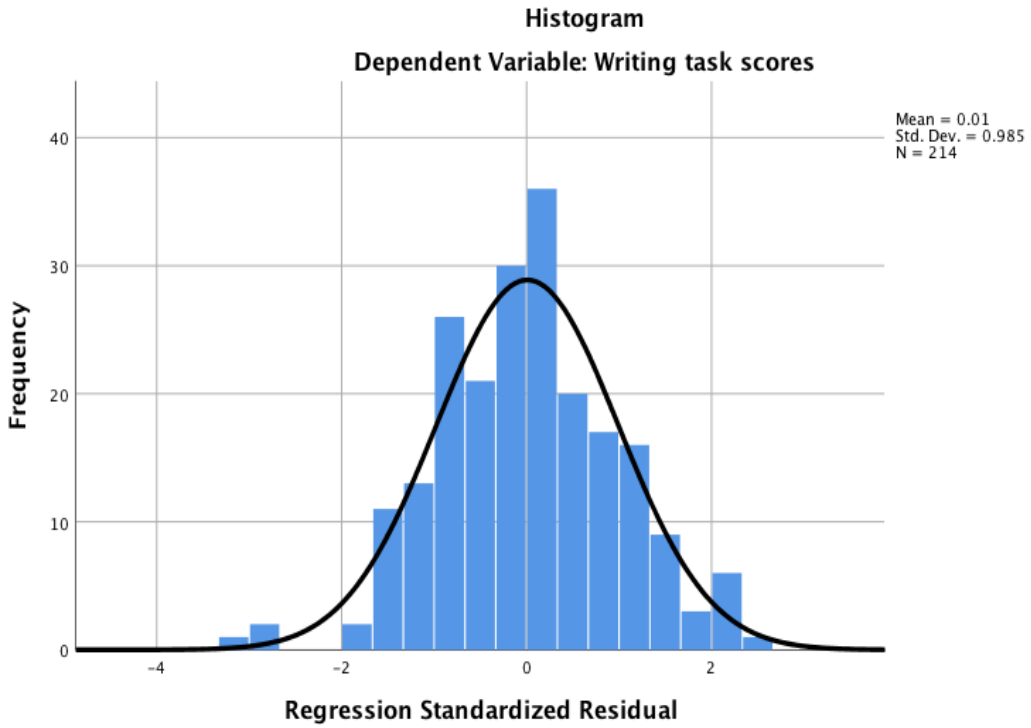
b. Dependent Variable: Writing task scores

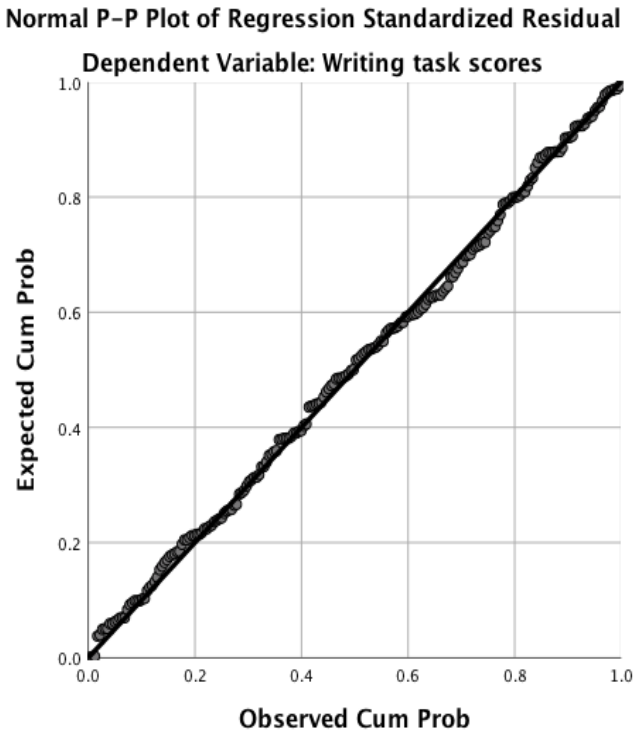
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	209.912	11	19.083	18.314	.000[b]
	Residual	213.605	205	1.042		
	Total	423.517	216			

a. Dependent Variable: Writing task scores

Independent variables	t	Sig. (p value)
no native teachers	-5.691	.000
English-speaking countries (yes)	3.759	.000
no writing training	-2.736	.007
words & sentences	-.089	.929
idioms & proverbs	1.262	.208
model structure	1.716	.088
outline	.017	.986
logic	-2.252	.025
translation	-1.661	.098
editing & proofreading	-3.198	.002
use dictionaries	1.256	.210


Histogram
Dependent Variable: Writing task scores
Mean = 0.01
Std. Dev. = 0.985
N = 214
Frequency
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Writing task scores
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob

Appendix V: Outputs displaying model fit information and assumption checks (Socio-psychological factors)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.666[a]	.444	.433	1.0545

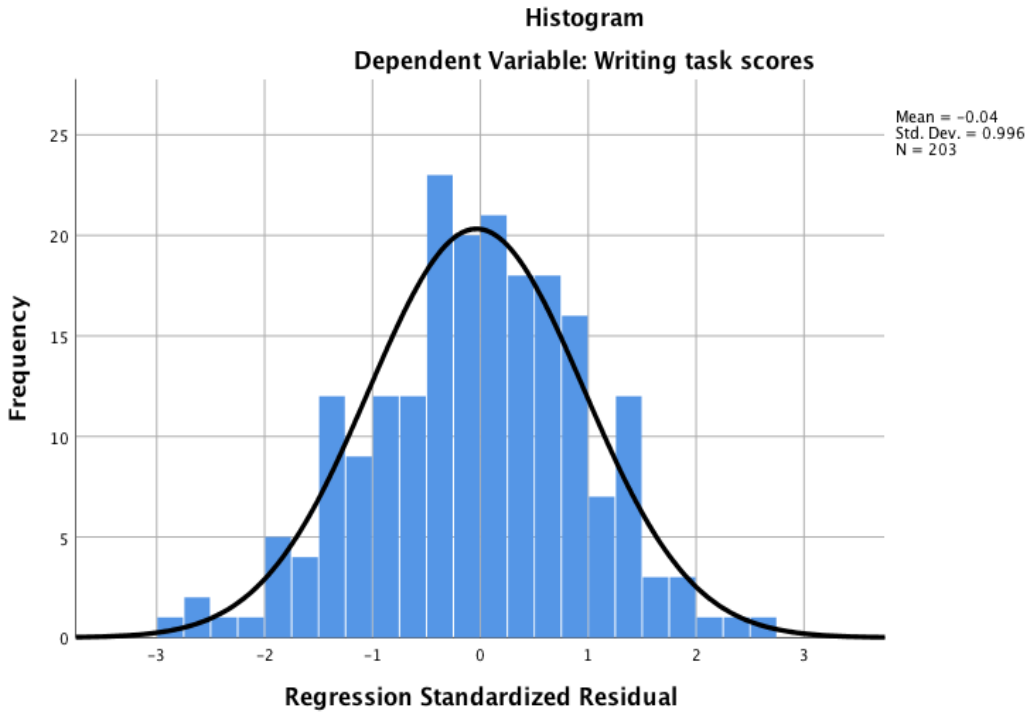
b. Dependent Variable: Writing task scores

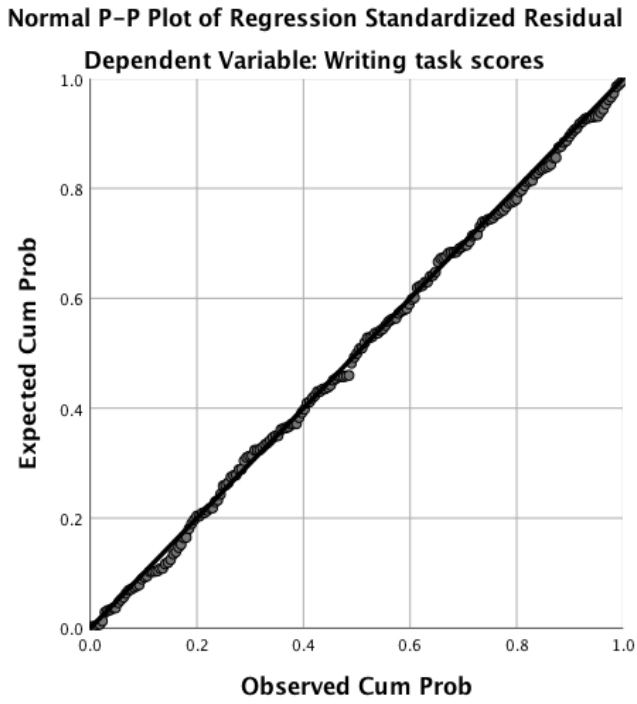
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	175.880	4	43.970	39.539	.000[b]
	Residual	220.187	198	1.112		
	Total	396.067	202			

a. Dependent Variable: Writing task scores

Independent variables	t	Sig. (p value)
writing self-confidence	4.606	.000
writing anxiety	-2.395	.018
teaching & learning context	5.097	.000
writing motivation	.144	.886


Histogram
Dependent Variable: Writing task scores
Mean = -0.04
Std. Dev. = 0.996
N = 203
Frequency
25
20
15
10
5
0
-3
-2
-1
0
1
2
3
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Writing task scores
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob

Appendix W: Outputs displaying model fit information and assumption checks (Block entry analysis)

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	.808[a]	.653	.644	.8355	.653	73.343	5	195	.000
2	.826[b]	.683	.666	.8088	.030	3.626	5	190	.004
3	.832[c]	.691	.670	.8044	.008	1.694	3	187	.170

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	256.011	5	51.202	73.343	.000[b]
	Residual	136.134	195	.698		
	Total	392.145	200			
2	Regression	267.869	10	26.787	40.953	.000[c]
	Residual	124.277	190	.654		
	Total	392.145	200			
3	Regression	271.156	13	20.858	32.238	.000[d]
	Residual	120.989	187	.647		
	Total	392.145	200			

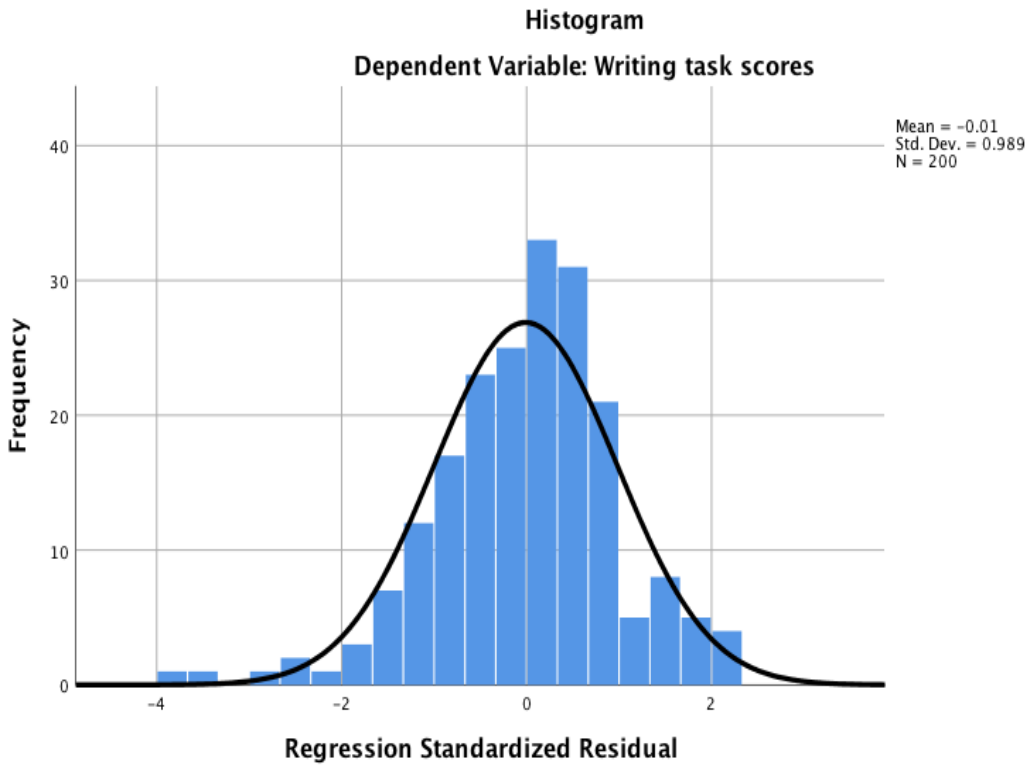
a. Dependent Variable: Writing task scores

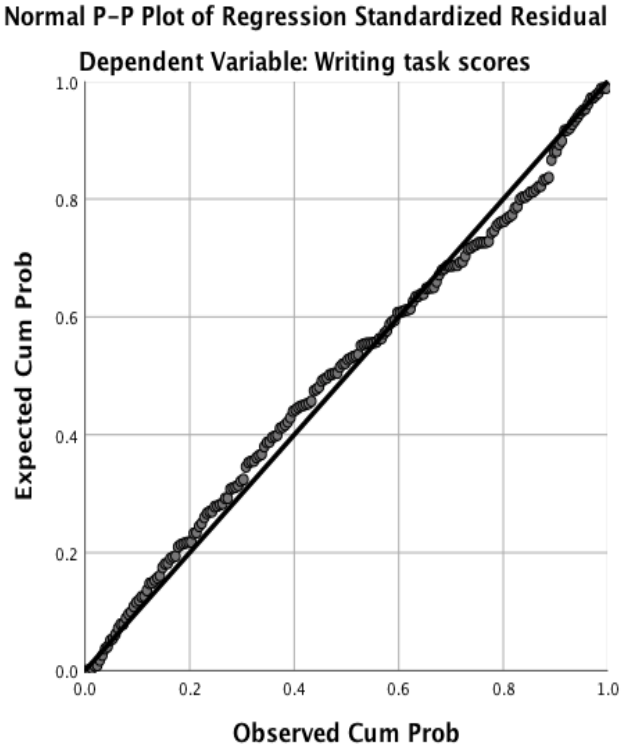
Model 1: Individual differences

Model 2: Individual differences + learning strategies

Model 3: Individual differences + learning strategies + socio-psychological factors

Independent variables	t	Sig. (p value)
year 2	3.610	.000
year 3	5.049	.000
middle school- (mother)	-2.252	.025
English proficiency	5.276	.000
writing proficiency	6.055	.000
year 2	2.800	.006
year 3	4.522	.000
middle school- (mother)	-1.966	.051
English proficiency	4.725	.000
writing proficiency	4.206	.000
no native teachers	-1.573	.117
English-speaking countries (yes)	.866	.388
no writing training	-1.040	.299
logic	.897	.371
editing & proofreading	2.672	.008
year 2	2.721	.007
year 3	4.503	.000
middle school- (mother)	-1.723	.087
English proficiency	4.840	.000
writing proficiency	2.842	.005
no native teachers	-1.130	.260
English-speaking countries (yes)	1.128	.261
no writing training	-.789	.431
logic	.446	.656
editing & proofreading	2.354	.020
writing self-confidence	2.173	.031
writing anxiety	-.461	.645
teaching & learning context	.218	.828


Histogram
Dependent Variable: Writing task scores
Mean = -0.01
Std. Dev. = 0.989
N = 200
Frequency
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Writing task scores
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob

Appendix X: Selected output for simple linear regression (Minorities)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.447[a]	.200	.196	1.2552

a. Predictors: (Constant), minorities
b. Dependent Variable: Writing task scores

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.406	1	89.406	56.748	.000[b]
	Residual	357.640	227	1.576		
	Total	447.046	228			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	5.578	.090		61.734	.000	5.400	5.756
	minorities	-1.717	.228	-.447	-7.533	.000	-2.166	-1.268

a. Dependent Variable: Writing task scores

Appendix Y: Selected output for simple linear regression (Motivation)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502[a]	.252	.249	1.2139

a. Predictors: (Constant), Motivation
b. Dependent Variable: Writing task scores

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.593	1	111.593	75.735	.000[b]
	Residual	331.531	225	1.473		
	Total	443.124	226			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.800	.191		19.885	.000	3.423	4.176
	Motivation	.532	.061	.502	8.703	.000	.411	.652

a. Dependent Variable: Writing task scores