



Exploring Adolescents' Persuasive Essays: Toward Promoting Linguistic and Intercultural Competence

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Exploring Adolescents' Persuasive Essays:

Toward Promoting Linguistic and Intercultural Competence

Qualifying Paper

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Abstract

English academic writing is increasingly becoming a prevalent medium of sophisticated global communication. Previous research has mostly been conducted on university-level English as a second/foreign language (L2) students, with minimal attention paid to adolescents. This study examined language predictors of overall writing quality in 220 persuasive essays written by adolescents from three different first languages/cultures (L1/C1): China, Russia, and the U.S. Essays were coded for lexico-syntactic, text-connectivity and discourse-level elements, and scored for writing quality by raters who were blind to students' L1/C1. Regression analyses revealed that beyond the contribution of length and lexico-syntactic intricacy, presence of a conclusion and diversity of conjunctive adjuncts significantly predicted writing quality. Other discourse components—rhetorical questions, emotional appeals and types of examples—were not related to differences in writing quality. Findings shed light on linguistic elements relevant for the design of L2 assessment tools, and highlight discourse patterns particular to different cultural communities.

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Introduction

Proficiency in academic writing in secondary school is often a contributor to success in adulthood in both academic and professional spheres (Crowhurst 1991; Geiser & Studley, 2001; Light, 2001; Schleppegrell, 2001; Sharp, 2007). In particular, persuasive essays, as a prominent genre of academic writing, require the writer to present his or her view in a logical way by making explicit connections between the different essay components (i.e., thesis, arguments, counterarguments, and supporting examples leading to a conclusion) through various lexical, grammatical, and organizational strategies (Crowhurst, 1991; Schleppegrell, 2001; Uccelli, Dobbs, & Scott, 2013). In the U.S., persuasive essays are introduced as an essential part of writing instruction and assessment in middle school and students are expected to become proficient in this genre of writing by the end of high school (Hillocks, 2002) as college entrance exams, such as the SAT usually include this form of writing (McNamara et al., 2012).

While the task of writing English persuasive essays is challenging for both monolingual and bilingual students, English as a Foreign Language (EFL) students, who are learning English outside of English-speaking countries, face important difficulties. The ability to adapt to different language varieties and registers, such as academic English, is cultivated through participation in various communicative situations (Hymes, 1974). EFL students, however, have limited access to opportunities to learn and practice English writing in authentic communicative settings for different purposes (Connor, 1996; Ferris, 1994; Kroll, 2003). Adolescent writers' past experiences of speaking and writing in their first language (L1) may affect how they argue their viewpoints in a second language (L2), e.g. choosing certain idiomatic expressions and examples to

illustrate their ideas. Previous research has illustrated that EFL learners often fail to include many linguistic and rhetorical features typically expected in academic English to present a written argument (Crossley & McNamara, 2011; Ferris, 1994; Reid, 1992; Scollon & Scollon, 1995; Silva, 1991).

In the increasingly diverse and interconnected world of the 21st century, English academic writing has become a prevalent medium of sophisticated global communication, connecting people of different languages and cultures and thus forming a crucial complement to skills in conversational English. Even in many countries where English has no official status, such as China and Russia, academic written English now plays a significant role in certain official spheres (Crystal, 2003), generating the need to emphasize academic writing skills in EFL pedagogy. Complex communication skills will likely be in even greater demand in the future, including the writing skills that cannot be easily taught or assessed through multiple-choice questions or automated assessment tools on a digital platform and that require a strategic, high-quality curriculum (Schleicher, 2010).

Recognizing the importance of expressing one's perspective in international communication with native and non-native English speakers worldwide, the emphasis in second and foreign language teaching is shifting from a primary focus on achieving grammatical accuracy through set exercises to approaches that encourage meaningful communication skills in both oral and written forms. Following this trend in education, Communicative Language Teaching (CLT), an instructional approach in second and foreign language acquisition, is increasingly being accepted into EFL classrooms around the world for its pedagogical emphasis on promoting students' abilities to clearly

communicate their ideas in the target language (Butler, 2005; Savignon & Wang, 2003; Yu, 2001). The writing strengths and needs of the EFL writers might vary by the particular linguistic and cultural influences experienced by students from different L1/C1 backgrounds in creating and supporting an argument.

In this study, I compared persuasive essays written in response to the same prompt by three groups of adolescents. Two sets of essays were written by native Chinese-speaking and native Russian-speaking EFL learners enrolled in EFL classes in China and Russia, respectively; the third set of essays was written by native English speakers (NEs) in the U.S. The data for this study was collected from students attending the same CLT-based instructional program delivered by the same multinational language institute in two different EFL contexts, China and Russia, and native English-speaking students in the Northeastern U.S.

The theoretical framework for my research was influenced by functional linguistic approaches (Halliday, 2004; Halliday & Matthiessen, 2014; Schleppegrell, 2001, 2004), socio-cognitive pragmatics-based theories of academic writing development (Uccelli et al., 2013), and cross-linguistic research on language-specific modes of thinking (Slobin, 1991, 1996). This framework implies that there is a set of features that characterizes academic written discourse. Persuasive essays require writers to incorporate many features of academic language, such as projecting an authoritative stance, clearly connecting abstract ideas in the text, and structuring the components of argumentative discourse in a logical sequence (Schleppegrell, 2001, 2004; Snow & Uccelli, 2009; Uccelli et al., 2013). Moreover, writers who are competent language users in some social contexts may struggle in others, depending on their past opportunities to practice writing

in particular ways (Heath, 1983; Ochs, 1993). This view also implies that writers' native language influences the way that they think and present their perspectives (Slobin, 1991, 1996).

Theoretical Background of the Study

Mastery of academic writing entails, beyond the mechanics of writing and the conventions of Standard English, the flexible use of a repertoire of later-developed lexico-grammatical and discourse features to effectively organize and convey the writer's intent and stance in various school texts (Ravid & Tolchinsky, 2002; Snow & Uccelli, 2009; Uccelli et al., 2013). Functional linguists view skilled writing as the product of a gradual progress of acquiring proficiency across three genres or types of texts: personal genres (e.g., narratives and recounts); factual genres (e.g., procedures and reports); and analytic genres involving analysis and argumentation (e.g. persuasive/ argumentative essays, explanations) (Martin, 1989; Schleppegrell, 2004). Compared to personal narratives that tend to be well mastered by age 10, fluency with academic writing—consisting of factual and analytic writing—appears later in the development (Berman & Nir-Sagiv, 2004). Research from functional linguistics and pragmatics-based theories has identified some key characteristics of academic writing, including lexical precision (e.g. using diverse and precise vocabulary), dense information packing (e.g. including nominalizations and complex syntax), explicit discourse organization (e.g. using markers to signal text transitions), and academic stance (e.g. using markers that signal the writer's attitude toward a claim) (Schleppegrell, 1994; Snow & Uccelli, 2009; Uccelli et al., 2013).

Within such a framework, various researchers have analyzed the writing of L2 writers in comparison to that of NEs (Ferris, 1994, Hinkel, 2001; Hirokawa, 1986; Patthey-Chavez, 1988; Reid, 1992; Silva, 1993). Previous studies highlight writing characteristics commonly found among L2 writers learning English either in (ESL: English as a Second Language) or outside (EFL: English as a Foreign Language) an English-speaking country that are relevant to this study. Among the constellation of features that characterize English academic writing, prior research has identified some key areas that seem particularly challenging for adult L2 students. In the next section, these areas are reviewed by classifying them according to the level of analysis into: (1) Lexico-syntactic sophistication, and (2) Text connectivity skills; and (3) Discourse structure.

Lexico-Syntactic Sophistication in L2 Writing

Several studies have documented differences at the level of lexico-syntactic sophistication in persuasive essay writing between L2 writers and NEs. Length has been identified as an important factor associated to writing quality. For instance, Ferris (1994), after analyzing 60 persuasive texts written by university freshman composition students, concluded that L2 writers and NEs showed noticeable differences in length. She reported that native students produced longer essays with a greater number of clauses, presumably due to the cognitively less demanding nature of writing in their first language under timed conditions. She also found the overall length of essays—measured by the number of clauses—to be an effective predictor of overall writing quality agreeing with earlier findings by Crowhurst (1991), Hirokawa (1986) and Silva (1993). Prior research also shows that L2 writers typically use more and shorter T units

(written units comprised of main and associated dependent clauses), and fewer but longer clauses than NEs (Silva, 1993). The number of words per clause in writing has also been found to increase with age with a noticeable increase between writing at high school and adult levels (Hunt, 1970).

Similarly to length, syntactic complexity can predict the quality of persuasive (expository) essays. For instance, Beers and Nagy (2011) found that syntactic complexity—measured as words per clause—was positively associated with middle school students' essay quality. The number of words per clause typically indexes the use of some key grammatical structures characteristic of academic writing such as nominalizations, attributive adjectives, nonfinite subordination, passives, conjoining, and prepositional phrases, all of which enable a writer to combine various propositions in a single clause (Chafe & Danielewicz, 1987; Scott, 2004).

Possessing an extensive vocabulary, furthermore, is essential in academic writing, as academic prose typically contains many nominalizations, diverse multisyllabic and/or multimorphemic words (Biber, 1991). From L2 students' own perspective, vocabulary has also been described as the most vital skill in L2 academic writing (Leki & Carson, 1994). High-quality academic persuasive essays typically display advanced academic vocabulary that appears with low frequency in spoken language (Nippold, 1998). A higher degree of lexical diversity has been identified as a feature that distinguishes more skilled writing performances in numerous L1 and L2 studies. To illustrate, Grobe's (1981) study on NE students in 5th, 8th, and 11th graders showed that teachers strongly associated good writing with diversity in vocabulary. Previous studies illustrate the limited lexical scope of L2 writers compared to their NE peers. For instance, Spanish L2

students in Grades 4 and 9 used more pronouns and displayed narrower lexical variety than NEs (McClure, 1991). Similarly, compared to 17-year-old native speakers of English, Swedish learners of English of the same age demonstrated less variation and originality in their use of vocabulary, as well as differences in the use of idioms, collocations, and word frequency (Linnarud, 1986). This confirms findings on the characteristics of undergraduate L2 writers, that they tend to display a limited range of words with frequent repetitions while including few collocations (sequences of words or terms that often co-occur), synonyms, antonyms or superordinates (Connor, 1984; Liu & Braine, 2005). Such findings are aligned with McCarthy's (2005) argument that less repetition of words and fewer referential links result in greater lexical diversity.

Within the L2 group, more proficient L2 writers have been found to use a wider range of words in their writing indicating greater lexical diversity (Crossley & McNamara, 2012; Engber, 1995; Grant & Ginther, 2000; Jarvis, 2002). Correct use of a variety of lexical resources in essays was found to lead to higher scores in Engber's (1995) study on university-level L2 students previously enrolled in Intensive English Program (IEP) and in Jarvis' (2002) study exploring the relationship between lexical diversity and the overall quality of the text in L2. As L2 writers' English proficiency increases, they become able to select precise words from a wider lexical spectrum to most effectively express their ideas, often leading to greater sophistication in vocabulary use (Grant & Ginther, 2000). Moreover, Crossley and McNamara (2012) concluded in their study on graduating Hong Kong high school students that more proficient L2 learners incorporate more infrequent words (Meara & Bell, 2001; Nation, 1988), as well as demonstrating a wider lexical repertoire.

Text Connectivity in L2 Writing

In addition to length, syntactic complexity, and lexical diversity, L2 and NE writers differ in their use of text connectivity devices, i.e., devices to track participants or ideas in a text or to mark logical or temporal relations in a text. In creating referential cohesion, Liu and Braine (2005) found pronouns to be by far the most extensively used type of reference devices followed by definite articles, comparatives, and demonstratives in their study of cohesive features in Chinese undergraduate L2 writers' argumentative writing. In comparing L2 and NE writers' use of pronouns, the higher frequency of pronouns in L2 students' essays suggests that these learners are less familiar with more complex devices to establish referential cohesion in academic writing (Biber, 1986; Reid, 1992). For instance, Reid (1992) examined essays written in English by college students from Arabic, Chinese, Spanish and English language backgrounds, to analyze their use of pronouns. Compared to L2 writers and struggling NE writers, advanced NE writers were found to use noticeably fewer pronouns. A limited use of pronouns is often characteristic of informational, formal and detached discourse, such as academic writing (Biber, 1986). Conversely, personal pronouns are more frequently found in less formal, oral communication (Reid, 1992). The tendency for frequent use of pronouns has been observed not only in L2 writing but also among struggling NE writers, suggesting that the limited use of this cohesive device is a feature of advanced academic writing (Shaughnessy, 1977).

Moreover, preference for the first person plural form *we* over the singular *I* has been associated with a tendency to reflect interdependencies and mark in-group identity in the essays of writers from collectivist Confucian cultures like China (Shen, 1989; Wu

& Rubin, 2000; Young, 1994). For instance, both Shen (1989) and Young (1994) reported that Chinese writers use *we* more often than *I* even in inappropriate contexts such as when trying to express their own ideas. Writers raised in more individualist cultures, conversely, have been found to use the singular *I* more frequently to emphasize independent self (Triandis, 1994).

On the other hand, in creating logical/temporal cohesion through more explicit cohesive devices—connectives (conjunctive adjuncts)— there have been contradictory findings in the frequency of connectives that L2 writers employ in their writing. Some studies have found that higher proficiency L2 writers tend to use more connectives (Connor, 1990; Jin, 2001). Jin (2001) found that advanced Chinese L2 writers in graduate school use connectives more often than do intermediate writers agreeing with Connor's (1990) earlier argument that more proficient L2 writers use more connectives. However, other studies in both L1 and L2 have revealed that advanced writers tend to minimally incorporate connectives in their academic writing. Crossley and McNamara (2012), for instance, found that L2 writers assessed to be highly proficient introduced few cohesive devices aligned with their earlier L1 study (McNamara, Crossley, & McCarthy, 2010). They attributed this phenomenon to a *reverse cohesion effect*. In reading comprehension, whereas cohesive texts are more beneficial for low-knowledge readers, high-knowledge readers benefit more greatly from texts that are less cohesive (McNamara, Kintsch, Songer, & Kintsch, 1996; O'Reilly & McNamara, 2007). Based on this finding in the literature, the researchers argued that more advanced writers, assuming their intended audience to be high-knowledge readers, may be inclined to produce less cohesive compositions.

Other studies that examined the diversity of connectives have demonstrated that L2 writers typically use only a limited variety of strategies for connecting ideas in a text (Ferris, 1994; Hinkel, 2001; Liu & Braine, 2005; Patthey-Chavez, 1988; Silva, 1993). Hinkel (2001), for example, found that L2 writers introduced sentence transitions (conjunctive adjuncts) to create a unified idea flow within their limited syntactic and lexical knowledge, in an investigation of university L2 writers from Japanese, Korean, Indonesian, and Arabic backgrounds. Previous research findings indicate that, compared to NEs, L2 students rely more heavily on coordinate conjunctions (e.g. *and*, *but*, *for*, *or* and *so*), frequently used in informal discourse to connect short clauses, while using fewer subordinate conjunctions (Biber, 1986; Johns, 1984; Reid, 1992; Scarcella, 1984; Silva, 1993; Ventola & Mauranen, 1991). Moreover, Liu and Braine (2005) pointed out that while Chinese undergraduate L2 writers displayed their ability to use a variety of connectives, these were mostly comprised of commonly used coordinate conjunctions. While L2 writers frequently use coordinate conjunctions in their writing, formal informational written texts, such as letters, annual reports, and business and economics texts written by NEs utilize few conjunctions accounting for fewer than 10% of all cohesion items (Johns, 1980). Furthermore, after investigating the use of coordinate conjunctions in writing by NEs in Grades 6, 10, and 12, Crowhurst (1987; 1991) called coordinate conjunctions “immature connectors” that do not appear frequently after elementary school.

In direct contrast to L2 writers whose writing features limited ways of constructing cohesion in the written discourse, NEs have been found to adopt a wider range of strategies, including the use of sophisticated sentence structures, to achieve the

same goal (Patthey-Chavez, 1988). Subordination performs a more varied and complex function than do other forms of cohesion devices, such as coordinate conjunctions. Subordination indicates a level of syntactic maturity and complexity that is more characteristic of writing than oral interactions (Brown & Yule, 1983). Reid's (1992) findings were in support of the theory that more proficient writers in English use a greater number of subordinate conjunctions in their essays. In her study, NEs more frequently used subordinate conjunction openers (e.g. *when, while, which, before, after, because, since, although, even, though, until, unless, and if*) at the beginning of sentences than L2 writers. A large-scale investigation of native English-speaking college freshman prose by Thurry (1988) also illustrated that subordination is a feature of advanced writing skills. It was found more often in the written productions of average writers than in those of remedial writers who opted for coordinate structures or for the two basic subordinate conjunctions, *because* and *when*, that do not require complex clause constructions and are commonly found in speech.

Discourse Measures in L2 Writing

Past research also has indicated that discourse components in students' essays may vary due to both language proficiency and differences in constructing discourse specific to L1/C1. For instance, advanced NE writers adopt a different set of rhetorical strategies from L2 writers of more limited language proficiency in English. Schoonen, Snellings, Stevenson, and van Gelderen (2009) argued that NE writers' automatized lower-level language resources in vocabulary and syntax enable them to devote more attention to discourse organization than L2 writers. Ferris' (1994) research, showing that advanced writers are more likely to include conclusions, is one study that supports this argument.

Berman, Ragnarsdóttir and Stromqvist (2002), on the other hand, created a framework for investigating how writers mark stance expressing personal involvement in the discourse through sender (writer), recipient (reader) or text (exposition) orientation. Related to this framework for exploring personal involvement is a key feature of academic writing—the adoption of a detached, objective and authoritative stance by the author without emotional involvement—as identified by functional linguists (e.g. Schleppegrell, 2001, 2004) and socio-cognitive pragmatic-based theorists (e.g. Snow & Uccelli, 2009; Uccelli et al., 2013).

Furthermore, patterns of discourse structure may vary among writers according to their L1/C1 (Connor, 1996; Ferris, 1994; Kaplan, 1966; Matalene, 1985; Wong, 1988). There has been extremely limited research on Russian learners of English, partly due to Russia's decades of political and cultural isolation from the Western world and its maintenance of its own pedagogical methods in foreign language teaching (Ter-Minasova, 2005). Conversely, numerous studies have been conducted on Chinese L2 writers. For example, following Kaplan's (1966) paradigm of contrastive rhetoric, Chinese-speaking university L2 writers, instead of stating their thesis in the beginning of the essay, have been found to present it later in the text following the traditional Chinese four-part (*qi-cheng-jun-he*) organizational model (Connor, 1996). In this model, "*qi* prepares the reader of the topic, *cheng* introduces and develops the topic, *jun* turns to a seemingly unrelated subject, and *he* sums up the essay." (Connor, 1996, p. 39). To illustrate, Matalene (1985) found that Chinese L2 writers included narration and frequent examples from historical and religious texts, as well as proverbs prior to presenting their argument. The suggestive and indirect style of Chinese writing, with its use of rhetorical

questions and anecdotes to reveal intentions, has also been found in Chinese L2 writers' essays in English (Wong, 1988) reflecting some discursive practices in their L1/C1. Traditional strategies of persuasion in China were developed to meet the needs of a rhetor (usually a subordinate in the royal court or bureaucracy) addressing his superior (Garrett, 1991). Garrett argued that rhetors used persuasive strategies to gain trust from the audience and to touch "a responding chord in their hearts" by carefully choosing words and expressions that evoked a shared cultural knowledge thorough familiar similes, hypothetical examples, historical parallels, and analogies. Consequently, L2 writers from China raised in this tradition have been found to favor emotional appeals to strengthen arguments in expository essays (Ying, 2007) and to frequently include familiar proverbs in their writing (Chen, 1994; Matalene, 1985; Wong, 1992; Wu & Rubin, 2000). Matalene (1985), in particular, argued that typically, skilled writing in Chinese does not involve an emphasis on individuality and creativity but instead on the socially accepted pieces of wisdom as expressed in proverbs, idioms, maxims, literary allusions, and analogues in supporting an argument.

Previous studies show that the level of personal disclosure in writing, such as revealing emotions, autobiographical details and individual accomplishments, may also be determined by discourse practices in L1/C1. North Americans show a higher level of personal disclosure during both in-group and out-group dialogues (Gudykinst, Yoon, & Nishida, 1987; Wheeler, Reis, & Bond, 1989). Likewise, U.S. college students have been found to include a higher frequency of personal anecdotes in their essays than Taiwanese L2 students (Wu & Rubin, 2000), a finding consistent with previous studies comparing

Chinese and North American writers (Bloch & Chi, 1995; Kaplan, 1972; Matalene, 1985; Scollon, 1991; Shen, 1989).

Informed by previous research findings, this study seeks to identify any key differences in lexico-syntactic sophistication, text connectivity, and discourse structure of academic writing between U.S. NEs and L2 writers of Chinese and Russian language backgrounds in secondary school. Prior research on L2 learners has predominantly focused on language features, with less attention to dimensions of discourse. Furthermore, previous studies have mostly been conducted on university-level L2 students, with minimal attention paid to middle and high school students, a gap which the present study will address. The inclusion of adolescent Russian EFLs in this study will additionally shed light on the writing characteristics of this minimally explored English learner population. Two research questions guided this study:

Research Questions

1. Adjusting for length, do persuasive essays written by adolescent Chinese and Russian EFLs, and native English-speaking students differ by first language/culture (L1/C1) in the domains of *lexico-syntactic sophistication*, *text connectivity* and *discourse structure*?
2. Controlling for length, what academic writing features—measured in the domains of *lexico-syntactic sophistication*, *text connectivity* and *discourse structure*—predict the overall quality of persuasive essays written by these three groups?

Methods

Participants

Three groups of adolescents participated in this study: 80 EFL students who attend English Education (EE; pseudonym) schools¹ in Russia, 80 EFL students who attend EE schools in China, and 60 NE students from the U.S. All participants were either middle or high school students who came predominantly from upper-middle class or middle-class family backgrounds. The EFL students from China and Russia had received instruction following the same curriculum at one of the EE language schools in their home countries and had achieved intermediate to upper-intermediate language proficiency in English. The NE group included high school students who were born in North America and had acquired English as their first language. These students were recruited from the study-abroad program that the same EE School leads. The U.S. group was treated as a reference group in this study to indicate how L1 writers in secondary school write. Instead of using a hypothetical performance standard or a single performance level as a criterion for high performance, the U.S. group provided an expected range in performance by native English speakers who are already equipped to produce essays that meet the required standards of academic writing at the college preparatory level. The demographic characteristics of the participants are summarized below in **Table 1**.

¹English Education (EE), founded in 1965 and headquartered in Lucerne, Switzerland, is an international education company that specializes in language training, educational travel, academic degree programs and cultural exchange. With over 400 schools, EE is the largest privately held education provider in the world.

Table 1. Socio-Demographic Characteristics of EFL and NE Students

	China (N=80)	Russia (N=80)	U.S. (N=60)
Gender			
Male	43	31	18
Female	37	49	42
Gender by school level			
Middle school			
-Male	34	19	0
-Female	25	25	1
High school			
-Male	9	12	18
-Female	21	24	41
School level			
Middle school (Gr 6-8)	59	44	1
High school (Gr 9-11)	21	36	59
Average grade in school	7.76	8.34	10.83
Age (years)			
Middle school	12.8 (11-15)	13.5(11-15)	14 (14)
High school	15.4 (14-17)	15.6(14-17)	16.4(14-18)
Total sample	13.6 (11-17)	14.4(11-17)	16.4 (14-18)
English learning (years)			
Starting age of English learning	5.1(1-12)	7.2(3-14)	N/A
Years of English Study	8.53	7.22	(Native speakers)
English usage (In school & at home)			
Frequency (10-point scale) (0=Not at all, 10= A great deal)			
Speaking	6.2 (1-10)	6.1 (0-10)	N/A
Writing	6.3(1-10)	5.3 (1-10)	
Reading	6.1(1-10)	5.5 (1-10)	
English Class per Week			
Less than 3 hours	9	17	
3 – 5 hours	23	45	N/A
5 – 10 hours	34	34	
More than 10 hours	6	6	
Mother's Education Level			
No college degree	13	0	13
College degree	35	21	30
Graduate degree	32	59	14
N/A			3
Father's Education Level			
No college degree	8	1	14
College degree	34	18	17
Graduate degree	30	60	11
N/A			18
Mother's English level			
Do not know English at all.	12	20	

Know a little bit English. Speak English fluently. Native speakers	32 30	42 17	56
Father's English level Do not know English at all. Know a little bit of English. Speak English fluently Native speakers	10 32 31	18 39 23	41
Current Course Level (at EE Language School) Book 5 Book 6 Book 7 Book 8 Book 9 Book 10 Book 11 Book 13 Others	2 6 9 14 31 1 3 5 9	34 46	N/A
Language(s) Spoken (Other than English)	N/A	N/A	31 Monolingual speakers 29 Bilingual speakers
Second Language Level (Other than English) (n=27)	N/A	N/A	8 low 19 medium

Analyses of Variance indicated that the three groups of adolescents differed in their average years of schooling completed. The mean grade level for Chinese students was slightly lower than that of Russian students. U.S. students, on average, tended to be in higher grades. China showed the greatest variability followed by Russia. NEs in the U.S. showed the least variability.

Chinese and Russian EFLs also varied considerably in the numbers of years they had studied English in their native country. Since only native speakers of English, born and raised in the U.S., were selected for the NE group, students in this group were not asked about the length of time they had studied English. There was a statistically significant difference in the length of English studies between the two EFL groups. Chinese EFLs, on average, had received formal English instruction longer prior to their

participation in this study than their Russian counterparts. In addition, the differences in gender ratios were controlled for in the regression analyses.

Data Collection and Transcription

Written compositions by adolescent EFLs and NE students were collected through a digital platform provided by EE. Each participant was asked to write an approximately one-page essay in 40 minutes in response to a persuasive writing prompt selected from topics for Test of English as a Foreign Language (TOEFL) (see *Appendix A*). Essays that did not meet the criteria of length and relevance to the topic were excluded from a larger pool of collected data.

Essays were transcribed, segmented into clauses, coded, and analyzed using the transcription conventions and automated language analysis tools from the CHILDES' CLAN program (MacWhinney, 2007). Then, essays were coded for academic writing features at the levels of text connectivity and discourse structure. The overall quality of essays was measured using the holistic rubric from the TOEFL (see **Appendix B**). Interrater reliability between the researcher and a research assistant on each of the coding categories was estimated following standards in the field (Bakeman & Gottman, 1986).

Lexico-Syntactic Sophistication

First, several measures of length were calculated (e.g., number of words or clauses). Syntactic complexity was measured by the number of words in an essay for each first-language group. Lexical diversity was analyzed by counting the number of different word types and calculating diversity of vocabulary (vocD) in CLAN.

Text Connectivity

The rates of the use of two types of pronouns and the frequency and diversity of conjunctive adjuncts were coded as indicators of text connectivity. Pronouns were classified into two categories as shown in **Table 2**: personal pronouns, such as *I, you, he, she, we, they*; and demonstrative pronouns—deictic words that distinguish entities that the writer is referring to from others—including *this, that, and these*. The total number each of the two types of pronouns in an essay was divided by the total number of words in the same essay. Since the frequencies of the two types of pronouns were counted in CLAN, no inter-rater reliability was calculated for referential cohesion.

Table 2. Referential Cohesion: Two Types of Pronouns

Category	Description	Examples	Code
Pronouns	% of each device obtained by the number of its occurrence divided by the total number of words in a single essay	-Personal (e.g. <i>I, you, he, we</i>) -Demonstrative pronouns (e.g. <i>this that, these</i>)	\$PRO:PER \$PRO:DEM

Conjunctive adjuncts, on the other hand, were coded for both frequency and diversity within Halliday and Matthiessen's (2014) theoretical framework. They were classified into one of the following nine categories as shown in **Table 3**.

Table 3. Logical/Temporal Cohesion: Conjunctive Adjuncts (Halliday & Matthiessen, 2014)

Type	Description	Examples	Code	Inter-rater reliability (K)
Apposition	an element that is re-presented, or restated either by exposition (the 'i.e.' relation) or by example (the 'e.g.' relation).	In other words, that is* , for example, for instance	\$CON:APP	.98
Clarification	an element that is not simply restated by reinstated, summarized, made more precise or in some other way clarified for the purposes of the discourse.	At least, to be more precise, incidentally, in particular, as I was saying, like I mentioned, actually, to sum up, briefly, in short, in my opinion, I mean, if fact, of course	\$CON:CLA	.97
Addition	elements that provide addition	And* , also* , moreover, in addition, on top of that, furthermore, or , nor	\$CON:ADD	.98
Adversative	elements that provide contrast	But* , yet, on the other hand, however	\$CON:ADV	.98
Variation	includes replacive <i>instead</i> , subtractive <i>except</i> and alternative <i>or</i> types.	On the contrary, instead, apart from that, alternatively	\$CON:VAR	.97
Spatio-temporal	place reference that can be used conjunctively within a text.	Then* , next, before that, in the end, lastly, finally, meanwhile, first(ly), first of all, second(ly), third(ly), to start with, at this moment	\$CON:TEM	.97
Manner	conjunctives that create cohesion by comparison or by reference to means.	Likewise, similarly, in a different way, thus, thereby	\$CON:MAN	.95
Causal-conditional	cause expressions that can be general, or relate more specifically to result, reason or purpose	So* , then* , therefore, consequently, as a result, otherwise, nevertheless, despite this, in spite of this, as long as, if, even if, because, provided that	\$CON:CAS	.96
Matter	creation of cohesion through reference to the matter that has gone before.	Here, there, as to that, in that respect, elsewhere	\$CON:MAT	.94
*Colloquial (Additional coding)	connectives frequently found in colloquial speech/writing	That is, and, also, but, then, and so	\$CON:COL	.98

Some conjunctive adjuncts, including *that is*, *and*, *also*, *but*, *then*, and *so*, were additionally coded as **colloquial conjunctive** adjuncts as they appear frequently in informal colloquial speech and writing. Inter-rater reliability in coding conjunctive adjuncts was calculated by the researcher and a research assistant—with a background in language and literacy development, and blind to the students' first language and research questions— on a quarter of entire essays in random order. The two agreed on 94% or more of the cases (Cohen's kappa of .94 or higher) for each category of conjunctive adjuncts. Two measures of conjunctive adjuncts were calculated: their frequency proportional to the number of clauses in the essay and their diversity (the number of different types of conjunctive adjuncts in an essay).

The discourse structure was analyzed by coding thesis statements and conclusions, as well as rhetorical questions, emotional appeals and types of examples to support argument. Thesis statements and conclusions were coded for one of the five categories that depicted a particular form or orientation through a coding manual adapted from Berman, Ragnarsdóttir, and Strömqvist's (2002) model (see **Table 4**). The inter-rater reliability for coding above discourse components was high with Cohen's kappa of .78 or higher for each category.

Discourse Measures

Table 4. Components of Argumentative Discourse

Category	Description	Examples	Code	Inter-rater reliability (K)
Thesis statement & conclusion (Adapted from Berman, Ragnarsdóttir, & Strömqvist, 2002)	- Thesis statement: statement of the writer's opinion on the topic	- Sender (writer) orientation: reflects personal involvement in the content of the text e.g. <i>I think success comes from...</i> -- Recipient (reader) orientation: reflects personal involvement in the content of the text e.g. Life gives <u>you</u> a lot of chances to achieve something in <u>your life</u> -- Text (exposition) orientation: relates the representation of the content to a distanced, impersonal metatextual level of orientation e.g. <i>It seems that in order to be successful...</i> -Null	\$CON:APP	.80
	-Conclusions: writer's conclusions	- Sender orientation e.g. <i>In conclusion I want to say that to be successful in life...</i> - Recipient (reader) orientation e.g. <i>Planning alone is not enough, you should work on it.</i> - Text (exposition) orientation e.g. <i>In conclusion, it is not impossible to succeed...</i> -Null	\$CON:CLA	.78
Rhetorical Questions (Adapted from Wong, 1990)	-Type I: Interrogative: the answer to which introduces new information	- <i>So what is success?</i> - <i>Before you do something, what will happen?</i>	\$CON:ADD	.92
	-Type II: Assertive: a question to which a positive or negative answer is implied	- <i>Should we simply let people do it?</i> - <i>Did he already know what he would issue?</i>	\$CON:ADV	.94
Emotional appeals	Hortatory remarks (Imperatives without a modal verb e.g. <i>should, would</i>)	- <i>If you really want to be successful, take my advice and do it!</i> -... <i>so believe yourself and spread your wings to the future.</i>	\$CON:VAR	.82
Types of examples to	Type I: Examples from personal		\$CON:TEM	.92

support argument	experience/ everyday life			
	Type II: Examples from history/ social events		\$CON:MAN	.94
	Type III: Quotations/ proverbs		\$CON:CAS	.94
			\$CON:MAT	

Ratings of Overall Writing Quality

To assess the overall quality of each essay two native English speakers who had prior experience as English teachers rated all essays using the holistic rubric from the TOEFL, a 6-point scale (0 to 5, with 5 being the highest score). These two raters were blind to students' first language and blind to the study research questions. Essays from all of the three groups of speakers (U.S., Russian, Chinese) were combined and presented to the raters in random order to ensure that the raters were not influenced by the writing standards or characteristics of a particular first language group. The TOEFL rubric is a holistic rubric that guides a rater to consider multiple dimensions of writing quality that inform the process of generating a single score. These dimensions include: effective addressing of the topic; organization and development of ideas with appropriate explanations and examples; unity, progression and coherence; and facility in the use of language, including demonstration of syntactic variety, and appropriate word choices and idiomaticity (correct use of idioms). Every essay was scored by two raters. If the two scores differed by two or more points, discrepancies were resolved through discussion; if the two scores differed by one point, the average of the two was recorded and used in the analysis. The two raters displayed perfect agreement on 96% of the cases ($K = .82$).

Results

Comparisons of Overall Writing Quality, Lexico-Syntactic Measures, and Text Connectivity Measures by First Language/Culture

Analyses of Variance (ANOVA) indicated substantial variability in overall writing quality and in the average rates and diversity of several academic writing (AW) features across adolescent Chinese, Russian, and U.S. students. The tables below summarize differences found among the three groups of students. The post-hoc *Scheffé* test results for the pairwise contrasts are presented separately in **Appendix C**. Differences in AW features were found not only between EFL students and NE students but also between the two EFL groups. As can be observed in **Table 5**, U.S. students displayed, as expected, the highest overall writing quality in their performance, with an average score of 3.64 (out of a possible total score of 5), followed by Russian (3.13) and then Chinese (2.73) students. Interestingly, though, as reflected in the standard deviations, the overall essay quality scores showed similar variability across the three groups. While the U.S. group included the widest range of scores (from 1 to 5), no Chinese student received the highest score of 5 and no Russian student received the lowest score of 1.

Table 5. Comparisons of Overall Writing Quality by First Language/Culture.

Variable	China (N=80)			Russia (N=80)			US (N=60)			ANOVA	
	M	SD	Min- Max	M	SD	Min- Max	M	SD	Min- Max	F (2,218)	p
Overall essay quality	2.73	.90	1-4.5	3.13	.86	2-5	3.64	.90	1-5	18.04	<.001

Lexico-Syntactic Sophistication

Adolescent writers showed variability both within and across L1/C1 groups on lexico-syntactic measures. Not surprisingly, U.S. students on average produced longer essays, with an average of 296 words per essay, than the Russian (227) or Chinese (185) EFL students (see **Table 6**). NE students' essays also showed the highest within-group variability, a range of 62 to 686 words. The EFL groups varied less noticeably, with Russian students' essays ranging from 76 to 459 words and Chinese students' essays ranging from 35 to 327 words. NE students also produced a greater number of clauses per essay than Russian or Chinese EFL students, confirming findings from previous research that adult L2 writers typically produce shorter essays than NEs (Crowhurst, 1991; Ferris, 1994; Hirokawa, 1986; Silva, 1993).

Table 6. Comparisons of Syntactic Complexity by First Language/Culture.

China (N=80) Variable	Russia (N=80)		US (N=60)		ANOVA			
	M	SD	M	SD	F (2,216)	p		
Words	185.16	72.77	227.15	64.69	295.81	109.39	31.21	<.001
Clauses	31.61	11.93	35.99	11.21	48.29	18.50	25.82	<.001
Words per clause	5.96	1.60	6.46	1.61	6.22	.88	2.37	.096

NEs also displayed greater lexical diversity than EFLs, as measured by both the different numbers of word types and diversity of vocabulary (vocD) (see **Table 7**). Such findings confirm those from earlier studies that L2 writers possess less developed lexical sophistication than NEs (Connor, 1984; Linnarud, 1986; McClure, 1991; Silva, 1993).

Table 7. Comparisons of Lexical Diversity by First language/Culture.

Variable	China (N=80)		Russia (N=80)		US (N=60)		ANOVA	
	M	SD	M	SD	M	SD	F (2,218)	P
Word types	97.49	32.87	114.15	27.45	151. 37	45.88	40.68	<.001
Diversity of vocabulary (vocD)	66.3	21.4	75.2	20.0	84.8	17.6	14.57	<.001

Text Connectivity

EFL and NE students' use of AW features contrasted sharply in their creation of logical/temporal cohesion. Surprisingly, EFLs adopted conjunctive adjuncts in their writing in greater variety than NEs, as shown in **Table 8**. Russian students used the widest spectrum of conjunctive adjuncts followed by Chinese and U.S. students. This refutes conclusions from several earlier studies that L2 writers typically use only a limited set of conjunctive adjuncts, such as *first* and *however*, to connect ideas in a text (Liu & Braine, 2005), while NE college students used a wider variety of sophisticated cohesion devices (Ferris, 1994; Hinkel, 2001; Patthey-Chavez, 1988). Furthermore, the two EFL groups displayed the ability to use some of the more complex types of subordinate conjunctions (a subcategory of conjunctive adjuncts), namely **causal-conditional conjunctions**, with greater frequency than NEs and showed minimal difference with the native English-speaking group in using colloquial conjunctive adjuncts, the most elementary connectives often found in everyday speech.

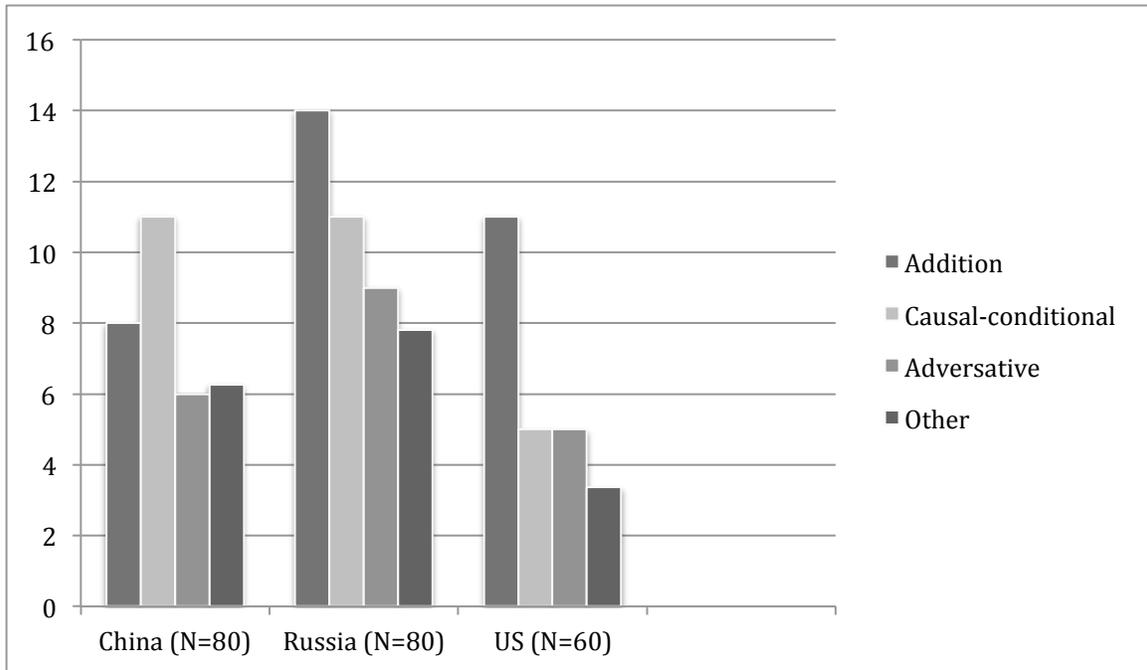
Table 8. Comparisons of Logical/Temporal Cohesion by First Language/Culture.

Variable	China (N=80)		Russia (N=80)		US (N=60)		ANOVA	
	M	SD	M	SD	M	SD	F (2,218)	p
Diversity of conjunctive adjuncts	4.04	1.41	4.66	.97	3.51	.97	17.46	<.001
Frequency of conjunctive adjuncts	33.69	15.36	42.63	12.99	24.04	7.88	35.78	<.001
Colloquial conjunctive adjuncts	16.08	9.09	16.51	13.19	15.97	7.10	.06	.945
Conjunctive adjuncts: <i>Apposition</i>	1.34	4.67	2.39	2.49	.56	1.08	5.54	.005
Clarification	2.10	2.93	1.98	3.04	1.43	2.36	1.02	.361
Addition	8.33	5.93	13.75	6.62	11.42	6.09	15.19	<.001
Adversative	6.45	4.94	8.79	5.11	4.74	3.26	13.49	<.001
Variation	.20	.98			.07	.54	2.10	.125
Spatio-temporal	2.44	4.34	3.37	4.21	.49	1.08	10.45	<.001
Manner	.03	.29			.14	.64	2.34	.099
Causal-conditional	11.35	9.90	10.98	8.77	5.15	3.98	11.47	<.001
Matter	.15	.68	.07	.43	.04	.34	.86	.426

Students also showed considerable differences in their orders of preference for specific conjunctions, as illustrated in **Figure 1**. Although **Addition**, **causal-conditional**, and **adversative** were the top three most frequently used types of conjunctive adjuncts across all students, Chinese students used **causal-conditional** conjunctive adjuncts most frequently, in 11% of all clauses per essay on average, followed by **addition** (8%) and **adversative** (6%) types. Russian students, on the other hand, preferred **addition** (14%), followed by **causal-conditional** (11%) and **adversative** (9%). U.S. students also clearly

preferred **addition** (11%), but compared to EFLs, used **causal-conditional** and **adversative** noticeably less frequently (5%).

Figure 1. Percentages of Conjunctive Adjuncts Relative to the Total Number of Clauses Per Essay by First Language/Culture Group



However, while adolescent EFLs were unexpectedly fluent with adopting a wide range of conjunctive adjuncts, they also more frequently included conjunctive adjuncts than NEs, corresponding to prior findings that less proficient adult L2 writers use a greater number of such devices (Crossley & McNamara, 2012; Ferris, 1994; Hinkel, 2001; Patthey-Chavez, 1988).

In creating referential cohesion through pronouns, furthermore, there was considerable variability across students from different L1/C1 backgrounds. While there was minimal difference in the rates of demonstrative pronouns in an essay, adolescent NE students tended to use fewer personal pronouns than EFL students, confirming results of

several previous studies on university L2 writers (Biber, 1986; Reid, 1992). To take a closer look at how students used first-person singular *I* versus plural *we*, **Table 9** depicts personal pronouns by the two subtypes. While young Chinese EFLs were the most frequent users of both types of personal pronouns, they displayed a particularly strong inclination for including the plural form *we* in their essays in alignment with Shen (1989) and Young (1994)'s prior reports on the profuse use of *we* by older Chinese students.

Table 9. Comparisons of Referential Cohesion by First Language/Culture.

Variable	China (N=80)		Russia (N=80)		US (N=60)		ANOVA	
	M	SD	M	SD	M	SD	F (2,218)	p
Personal pronouns	11.42	4.78	10.91	3.05	6.86	2.98	28.62	.000
1 st singular <i>I</i>	2.49	2.74	2.12	2.15	1.11	1.46	6.69	.002
1 st plural <i>we</i>	1.08	1.74	.27	.51	.41	.81	10.47	<.001
Demonstrative pronouns	1.88	1.46	2.27	1.63	2.21	1.04	1.73	.180

Comparisons of Discourse Measures by First Language/Culture

At the discourse level, Chinese, Russian and U.S. adolescents contrasted substantially in stating and concluding their arguments and in selecting supporting examples but not in their use of rhetorical questions or emotional appeals. As evident in **Table 10**, although all students preferred **sender-orientation** most frequently for thesis statements—approximately three-quarters of all thesis statements in the EFL essays—after sender-orientation, NEs showed a clear predilection for **text-orientation**. While the two EFL groups continued to prefer **sender-orientation** in their conclusions, NEs opted for **text-orientation** over others—in almost half of all conclusions in the U.S. essays, an argument was presented or summarized in a distanced, impersonal metatextual way

without personal pronouns characteristic of academic writing (Schleppegrell, 2001, 2004; Snow & Uccelli, 2009; Uccelli et al., 2013). One other key difference among the three groups was that EFLs' essays more frequently omitted conclusions, while only a small proportion of NEs' essays did not explicitly feature some form of concluding statement.

Table 10. Comparisons of Thesis and Concluding Statements by First Language/Culture Group

Variable	Orientation	First Language/Culture Group						Chi-square value	p
		China (n=80)		Russia (n=80)		U.S. (n=60)			
		<u>N</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>		
Thesis statement	Sender	62	77.5	59	73.8	26	44.1	31.40	<.001***
	Recipient	1	1.3	5	6.3	6	10.2		
	Text	11	13.8	6	7.5	22	37.3		
	Mixed	5	6.3	7	8.8	3	5.1		
	Missing	1	1.3	3	3.8	2	3.4		
Conclusion	Sender	29	36.3	28	35.0	10	17.0	50.76	<.001***
	Recipient	20	25.0	10	12.5	13	22.0		
	Text	14	17.5	10	12.5	29	49.2		
	Mixed	4	5.0	22	27.5	5	6.8		
	Missing	13	16.3	10	12.5	3	5.1		

***p < .001.

There were significant differences across L1/C1 groups in the types of examples that students used to support their arguments, as can be observed in **Table 11**. For all students, **examples from everyday/ personal life**, such as academic achievement at school, parents' financial/professional achievements, and learning to play a musical instrument, were most often mentioned as examples of success, followed by those **from history and social events** (e.g. famous historical or contemporary figures such as Bill Gates, Steve Jobs and Olympic athletes), and **direct quotations and proverbs** (e.g. *The road to success is not always full of flowers.*) as shown in **Figure 2**. Of the three types of examples, those from **everyday life** and **proverbs/quotations** showed significant

differences across students from different L1/C1 backgrounds. Chinese EFLs were far less likely to include instances of success from experiences concerning themselves or those around them, such as family and friends, than Russian or U.S. students, who included such examples at very similar rates. Chinese students, on the other hand, were more frequent users of **proverbs and quotations** to support their argument in an essay than the other groups. Post-hoc *Scheffé* tests (see **Appendix C**) indicated that there were statistically significant differences between the two EFL groups and between China and the U.S. groups in their inclusion of examples from **daily life and personal experience**. For **quotations and proverbs**, the only statistically significant difference was found between the two EFL groups.

Table 11. Comparisons of Discourse Components by First Language/Culture Group

Variable	China (N=80)		Russia (N=80)		US (N=60)		ANOVA	
	M	SD	M	SD	M	SD	F (2,218)	p
Rhetorical Qs: Interrogative	.61	1.71	.86	2.68	.92	2.32	.37	.694
Rhetorical Qs: Assertive	.37	1.48	.17	.78	.18	.61	.92	.400
Emotional appeals	1.29	2.33	.82	2.18	.64	1.70	1.79	.170
Frequency of examples	3.57	2.65	3.94	3.39	4.39	3.30	1.20	.304
Examples from everyday life	1.60	2.28	2.97	2.86	2.78	2.53	6.46	.002
Examples from history/social events	1.20	2.17	.86	2.50	1.04	2.24	.41	.662
Quotations/ Proverbs	.77	1.53	.10	.51	.57	1.27	6.78	.001

Figure 2. Supporting Examples: Examples from Everyday Life, History and Proverbs/Quotations

Examples from Personal Experience/ Everyday Life	Examples from History/Social Events	Proverbs/ Quotations
<ul style="list-style-type: none"> • Learning a musical instrument, • Becoming the best golfer at school • Getting into a good school • Getting excellent grades at school • Parents’ financial/professional success • Promotion at work • Changing someone’s life for the better • Starting your own business • Successfully holding a surprise birthday party for a friend. 	<ul style="list-style-type: none"> • Bill Gates • Steve Jobs • Olympic athletes • Oprah Winfrey • Shawn Achor’s TED talk (American business consultant, psychology researcher) • Guan Zhong (Chinese legalist chancellor in 7th-8th BC) • Valeri Kharlamov (Russian ice-hockey player) • Martin Luther • Nobel Prize-winning doctor (unidentified) 	<ul style="list-style-type: none"> • “The road to success is not always full of flowers.” • “Nothing is impossible to a willing heart.” • “Who does not take a risk, does not drink the champagne.” • “Constant grinding can turn an iron rod into a needle.” • “You have to spend money to make money.” • “Albert Einstein believed it was the <i>pursuit of our curiosity</i>.” • “Abraham Lincoln once said <i>always bear in mind that your own resolution to succeed is more important than any other</i>.”

Correlation of Academic Language Features With Overall Writing Quality

The next step was to investigate how students’ individual features of writing are associated with overall writing quality, using correlations. As presented in **Table 12**, demographic characteristics—gender and grade—were significantly associated with overall writing quality. Girls tended to receive higher essay scores than boys, and higher grades in school were moderately associated with higher essay quality. As expected, also, length variables were significantly associated with writing quality. These significant correlations indicated the need to control for demographic and length variables in the subsequent regression analysis. At the linguistic level, vocD and syntactic complexity showed significant positive correlations with overall essay quality.

Table 12. Pairwise Correlations Among Overall Essay Quality, Student Characteristics, and Features of Lexico-Syntactic Sophistication

Variable	1	2	3	4	5	6	7	8	9
1. Overall essay quality	1								
2. Gender (Female)	.23*	1							
3. Years of study	.11	-.07	1						
4. Grade	.46*	.19*	.37*	1					
5. Words	.65*	.19*	-.05	.48*	1				
6. Clauses	.62*	.24	-.04	.44*	.91*	1			
7. Words per clause	.31*	-.14*	.05	.08	.19*	-.18*	1		
8. Word types	.66*	.24*	.07	.57*	.90*	.87*	.02	1	
9. Diversity of vocabulary (vocD)	.38*	.13	.08	.42*	.35*	.28*	.14*	.61*	1

*p < .05. ** p < .01. ***p < .001

Other than lexical-syntactic measures, a few variables of text connectivity displayed significant relations with writing quality. Diversity of conjunctive adjuncts and frequency of addition adjuncts showed weak yet significant positive associations with essay ratings (see **Table 13**). On the other hand, the essays that included more personal pronouns and/or causal-conditional adjuncts tended to receive lower scores as evident in **Table 14**.

Table 13. Pairwise Correlations Among Overall Essay Quality and Features of Text Connectivity

Variable	1	2	3	4	5	6
1. Overall essay quality	1					
2. Personal pronouns	-.15*	1				
3. Demonstrative pronouns	-.05	.04	1			
4. Diversity of conjunctive adjuncts	.14*	.16*	-.04	1		
5. Frequency of conjunctive adjuncts	-.06	.25*	-.12	.52*	1	
6. Colloquial conjunctive adjuncts	.03	.09	-.04	.08	.38*	1

*p < .05. ** p < .01. ***p < .001

Table 14. Pairwise Correlations Among Overall Essay Quality and Different Types of Conjunctive Adjuncts

Variable	1	2	3	4	5	6	7	8	9	10
1. Overall essay quality	1									
2. Conjunctive adjuncts: <i>Apposition</i>	-.05	1								
3. <i>Clarification</i>	-.06	.18*	1							
4. <i>Addition</i>	.24*	.01	-.01	1						
5. <i>Adversative</i>	-.02	.09	.12	.02	1					
6. <i>Variation</i>	-.01	.08	.10	-.17*	.06	1				
7. <i>Spatio-temporal</i>	-.08	.20*	.06	-.04	-.00	-.06	1			
8. <i>Manner</i>	.07	-.03	.07	-.01	-.03	-.02	-.08	1		
9. <i>Causal-conditional</i>	-.19*	.11	.14*	-.16*	.08	.05	.21*	-.04	1	
10. <i>Matter</i>	.04	-.03	-.02	-.00	.05	-.03	.05	-.02	-.08	1

*p < .05. ** p < .01. ***p < .001

At the discourse level, only thesis statements featuring either text-orientation or mixed-orientation were detected as having significant positive associations with overall writing quality (see **Table 15** and **16**). It is worth noting that many thesis statements categorized as mixed-orientation displayed text-orientation in combination with some other type of non-textual orientation. This suggests that essays with thesis statements that included at least some form of textual orientation was rated more favorably, contrasting with sender-oriented thesis statements or missing conclusions, which showed significant negative relations with writing quality.

Table 15. Pairwise correlations among overall essay quality and thesis statements/conclusions

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Overall essay quality	1										
2 Thesis statement:											
<i>Sender orientation</i>	-.14*	1									
3. <i>Recipient orientation</i>	-.03	-.34*	1								
4. <i>Text orientation</i>	.15*	-.64*		1							
5. <i>Mixed orientation</i>	.13*	-.37	-.06	-.12	1						
6. <i>Missing thesis statement</i>	-.07	-.22*	-.04	-.07	-.04	1					
7. Conclusion: <i>Sender orientation</i>	-.01	.10	-.07	-.05	-.05	-.03	1				
8. <i>Recipient orientation</i>	.10	.01	.08	-.10	.11	.00	-.32*	1			
9. <i>Text orientation</i>	.08	-.13	-.04	.24*	-.06	.06	-.36*	-.28*	1		
10. <i>Mixed orientation</i>	.09	-.02	.01	.01	-.00	-.04	-.11	-.14*	-.16*	1	
11. <i>Missing conclusion</i>	-.24*	.01	.15*	-.06	-.10	.03	-.25*	-.19*	-.21*	-.05	1

*p < .05. ** p < .01. ***p < .001

Table 16. Pairwise Correlations among Overall Essay Quality and Features of Discourse Structure

Variable	1	2	3	4	5	6	7	8
1. Overall essay quality	1							
2. Rhetorical Qs: Interrogative	.10	1						
3. Rhetorical Qs: Assertive	.01	.71*	1					
4. Emotional appeals	-.04	.07	.02	1				
5. Frequency of examples	-.19*	.05	-.01	.40*	1			
6. Examples from personal life	-.11	.03	-.00	.85*	.45*	1		
7. Examples from history/social events	-.06	.10	.02	.15*	.00*	.11	1	
8. Quotations/ Proverbs	-.18*	.03	-.01	.06	.92*	.01	.80*	1

*p < .05. ** p < .01. ***p < .001

Predicting Writing Quality

A set of regression analyses was conducted with overall writing quality as outcome and AW features that showed the strongest and/or statistically significant correlations with essay scores (see **Table 17**) as predictors. Students' demographic characteristics—L1/C1 (EFL or NE), gender (male or female) and grade—explained 23% of the variance in overall writing quality. Inserting length, represented by the total number of clauses per essay, contributed 18% of additional variance. With Model 4 as the baseline model, the additional impact of the lexico-syntactic and text variables was explored. There was a significant main effect for lexical diversity (vocD), which explained an additional 2% of the variance in writing quality while syntactic complexity—measured by the number of words per clause— also contributed an additional 2% of the variance over and above students' L1/C1, gender, grade and length. By inserting the presence of a conclusion, I was able to predict an additional 2% of the variance. After

controlling for students' demographic characteristics and essay length, lexical diversity, syntactic complexity and presence of a conclusion, the final model that includes the diversity of conjunctive adjuncts accounted for almost a half (49%) of the variance in overall writing quality across the three groups.

Interestingly, while ANOVAs initially showed differences on a number of variables across the three groups, after controlling for gender and grade, the coefficient for L1/C1 was no longer found to be significant in the regression analysis from Model 3 onward. This suggests that the average rates and diversity of various AW features in adolescent essays mediate L1/C1 differences. Interaction terms between L1/C1 and AW features were tested and found not to be significant. Furthermore, when the same models were analyzed by group—with only one group at a time—the predictors within each group were found to be different. To illustrate, while for the Russian group, syntactic complexity and the diversity of conjunctive adjuncts were significant indices of overall writing quality after controlling for student demographic characteristics and essay length, these two variables were not found to be significant predictors for the Chinese or the U.S. groups.

Table 17. Regression Models Testing the Effect of Lexical Diversity, Diversity of Conjunctive Adjuncts and Syntactic Complexity on Overall Essay Quality: Controlling for Students' First Language, Gender, Grade, and Essay Length

Parameter Estimates	M1	M2	M3	M4	M5	M6	M7	M8
L1/C1	.71*** (5.22)	.64*** (4.59)	.04 (.24)	-.18 (-1.17)	-.15 (-.98)	-.14 (-.94)	-.12 (-.85)	.02 (.13)
Gender		.32* (2.58)	.28* (2.37)	.14 (1.39)	.11 (1.08)	.15 (1.53)	.15 (1.51)	.17 (1.75)
Grade			.22*** (5.08)	.14*** (3.75)	.10** (2.61)	.09* (2.25)	.07 (1.92)	.08* (2.11)
Length				.03*** (8.68)	.03*** (7.94)	.03*** (8.66)	.03*** (8.51)	.02*** (5.14)
Diversity of vocabulary (voCD)					.01** (3.12)	.01** (2.65)	.01* (2.49)	.01* (2.51)
Syntactic complexity						.11** (3.26)	.12*** (3.57)	.11** (3.31)
Presence of a conclusion							.35* (2.44)	.31* (2.12)
Diversity of conjunctive adjuncts								.03** (2.91)
Goodness of fit: R ²	.11	.14	.23	.41	.43	.45	.47	.49

*p < .05. ** p < .01. ***p < .001

Illustrating Domains of Individual Variability in Adolescent Persuasive Essays:

Examples

Two essays in **Figure 3** were selected to represent of the higher and lower ends of the writing quality continuum for the sample of adolescent persuasive essays analyzed in this study. Essay 1, written by a middle school EFL student, received a score of 2 out of 5 while Essay 2, written by a high school NE student, received the highest score of 5 on the holistic scale.

In Essay 1, the student explores limited ways to create logical and temporal cohesion. *Spatio-temporal* conjunctive adjuncts—*firstly, secondly, last but not least*—repeatedly appear throughout this short essay, together with *and* in an attempt to ensure a logical flow of ideas in the text. However, without sufficient elaboration on the writer’s argument with appropriate examples and consideration for alternative viewpoints and/or comparisons, these conjunctive adjuncts are used to merely list three ways to achieve success. In addition, this essay displays limited syntactic complexity with a small number of words per clause on average and lacks an explicit conclusion. Instead of a clear concluding statement summarizing the writer’s argument at the end, the composition ends abruptly with one of the three proposed methods of achieving success: doing physical exercise.

Figure 3. Adolescent Students' Persuasive Essays: Two Examples.

Essay 1: Low Writing Quality (Score 2) by an EFL Student

I think success is made of ourselves. But we always cannot believe ourselves. All the time we think[,] "We cannot made success! "And we are full of lose, sad, unhappy and intension! This is why we always failed. And we can do a lot of things to make success: Firstly, we can make a success plan paper. Everyday when you get up, you can look at your plan paper, and says, "I can do that!" And you may not make fail. When you want to stop do[ing] it, the success plan paper will hint you: "If you don't want to fail, you must do that until you success!" And it can help you a lot. Secondly, you must diligent. If you can do that, but cannot do it in high-speed, you can't complete anything. You can do many things to diligent. Just like have integrated approach to do the plan quickly and expertise, and this collar should learn to apply an integrated approach to improve work efficiency. Last but not least, we can have some exercise. When you are tired, you may want to fail your plan, this time you can do some relax, just like do some jumping, some exercises or some sports.

Essay 2: High Writing Quality (Score 5) by an NE Student (Selected Fragment)

Success is within the mind of an individual as well as where it comes from. A large portion of one[']s life is spent working to become successful. People are told throughout their childhood to work hard so they can grow up and make lots of money, but success in my opinion takes many different forms and comes from hard work. Different people have different interpretations of what success means and where it comes from. In my personal opinion there are two types of success; personal success and academic or professional success. Personal success deals with the goals we set for ourselves. All individuals have their own definition of personal success because it is their own individual goals they strive and work hard to achieve. For example, my own personal success comes from goals I set for myself that would be different than some of my friends, and someone's personal success might deal with accomplishing their goals in their sports. I did gymnastics for 12 years and I would set personal goals all the time that would require hard work and determination to succeed.

These types of success come[s] from a hard work and dedication that will eventually pay off in the end. In life we work for what we want and no matter the goals one sets for themselves and how one defines success, to attain success it must come from that individual[']s hard work and determination. The hard work and determination will put someone on a path that will lead them to success.

Essay 2, in contrast, features more varied cohesive strategies to present and explain a viewpoint, is more linguistically complex, and includes a conclusion. The adoption of a combination of *apposition* (“for example”), *adversative* (“but”), and *clarification* (“in my opinion”) conjunctive adjuncts enables the writer to compare people’s notions of success with his/her own and the writer uses supporting examples to further develop the argument. Furthermore, compared to Essay 1, this example displays a higher level of syntactic complexity with longer clauses (more words per clause) on average and includes an explicit conclusion (*“In life we work for what we want and no matter the goals one sets for themselves and how one defines success, to attain success it must come from that individual[’s hard work and determination.”*) that recapitulates the author’ perspective on the definition and essential elements of success: people have their own interpretations of success, and hard work and determination are necessary to achieve their goals. Such key features of this essay, as expected, correspond to several predictors of overall essay quality as identified in the regression analysis. By incorporating diverse types of conjunctive adjuncts, using complex syntax, and including an explicit conclusion, the writer of Essay 2 was able to achieve the highest possible score in this study.

Figure 4. An Essay by an Adolescent Chinese EFL Student: Frequent Use of “We”

In my eyes, success comes from careful planning. **We** may have many chances in life or work and sometimes **we** can easily catch them. Then, what do **we** need most to achieve success? Sure, the key to the answer should be careful planning. **We** all complain about something such like “Oh my god, I am so careless.” After falling, **we** regret not being careful enough and also **we** realize that it is so important to plan carefully. **We** are not a kid, **we** should know how to prove **ourselves**. [For] these reason, **we** must know the importance of careful planning. **We** should always think, “I can do this by this way and **we** must think more and how to do.” More importantly, **we** must consider that “can **we** do this by another way.” As **we** all know, everything is changeable. The more plan **we** have, the more success **we** will get. Recently, I watch a Chinese movie, it told me that “Plan B” is necessary. All in all, let **us** think how to do and think if there is other ways to do. As an old saying goes “The road to success is not always full of flowers”. It is hard to get success, but careful planning is really necessary.

Moreover, compared to NEs and Russian EFLs, Chinese students’ essays featured noticeably higher usage of personal pronouns. When further divided into the first person singular *I* and first person plural *we*, Chinese EFLs were far more likely to use the plural *we* in their essays than U.S. or Russian students. **Figure 4** presents a persuasive essay written by an adolescent Chinese EFL student in which the frequent appearance of the plural form *we/us/ourselves* throughout the composition is particularly noticeable. This finding seems aligned with prior studies that document Chinese writers’ tendency to situate themselves first and foremost as a member of society, perhaps as the result of being raised in a culture that emphasizes collectivism (Becker, 1995; Hegel, 1985; Jolliffe, 1992). Several researchers have argued that Chinese writers try to linguistically reflect a sense of collective self—the notion that an individual is immersed in a fabric of society and is mutually depended on others—through their preference for the first person plural *we* over the first person singular *I* (Hegel, 1985; Shen, 1989; Wu & Rubin, 2000; Young, 1994). It is important to highlight, however, that there was considerable individual variability not only across L1/C1 groups but also within groups, with some essays in all

three groups making use of the plural *we*. In fact, in this study, adolescent Chinese writers used the singular *I* more often than the plural *we*; yet, *we* still appeared significantly more often in Chinese students' essays than in Russian or U.S. students' essays.

Discussion

The persuasive essays analyzed in this study illustrated that adolescent writers from different L1/C1 backgrounds displayed both individual variability within groups and some general trends by group in AW features in the domains of lexico-syntactic sophistication, text connectivity and discourse structure. While there was a common repertoire of resources that students across the three groups employed in their writing, the results revealed that several AW features appeared in more pronounced frequencies in some groups. Such salient differences across the three groups were found in vocD, creation of referential cohesion, and logical/temporal cohesion. At the discourse level, there were noticeable differences in the types of thesis statements and conclusions, as well as in the types of supporting examples that the young writers included in their essays.

Furthermore, regression results showed that beyond the contribution of L1/C1, gender, grade and length, several AW features—vocD, syntactic complexity, presence of a conclusion, and diversity of conjunctive adjuncts— significantly predicted the overall quality of adolescent persuasive essays across different L1/C1 groups. This study unpacks some of the implicit linguistic expectations that native English-speaking teachers in the U.S. tend to have for high-quality academic essay writing in middle and high schools to illustrate the standards of English academic writing that EFL learners should

be aiming to achieve at the secondary school level. The findings indicate that while several AW features at the lexico-syntactic and text-connectivity levels may be both critical areas of variability within and across L1/C1 groups and predictive indices of essay ratings, some elements of discourse may vary by group with no association with differences between higher and lower quality persuasive essays. Adoption of contrasting discursive elements by the three groups of students, instead, unravels some of the discourse patterns particular to their cultural communities.

Dimensions of Variability and Predictors of Essay Quality at the Lexico-Syntactic and Text-Connectivity Levels

The adolescent writers in this study displayed considerable differences in various lexico-syntactic and text-connectivity features many of which were found to be predictive indices of overall essay quality. They showed both within- and between-group variability in their strategies to mark logical and temporal cohesion through conjunctive adjuncts. Surprisingly, EFLs' ability to use conjunctive adjuncts in greater variety than NEs contributed positively to overall writing quality. Such a finding counters that from prior research that L2 writers of low proficiency tend to rely more on a narrow scope of basic connectives—coordinate conjunctions—to create textual cohesion, rather than on the more complex subordinate conjunctions (e.g. *when, while, which, before, after, because, since, although, even, though, until, unless, if*) that fulfill a more varied and complex function (Johns, 1984; Scarcella, 1984; Ventola & Mauranen, 1991). Coordinate conjunctions have been called “immature connectors” that develop early and gradually decrease in number after elementary school as writers attain more sophisticated skills of

establishing cohesion (Crowhurst, 1991) and that such conjunctions appear more often in L2 writers' essays that feature characteristics of informal English oral discourse than in L1 writing (Biber, 1986; Reid, 1992). However, the adolescents in this study showed no significant between-group differences in their usage of coordinate conjunctions (coded here as colloquial adjuncts). Instead, EFLs were more likely to adopt some of the more advanced type of conjunctive adjuncts (subordinate conjunctions) in greater variety than the NEs.

Furthermore, adolescent EFLs tended to more frequently incorporate conjunctive adjuncts, presumably due their limited lexico-syntactic resources for creating cohesion. While not a predictive index of essay quality, the frequency of conjunctive adjuncts has been documented as a key aspect of distinction between more proficient and less proficient writers in L1 and between NEs and L2 writers. The significant differences among the Chinese, Russian and U.S. students in the present study are in partial agreement with Uccelli and colleagues' (2013) research on inner-city high school students in the U.S. Their findings indicated that the frequency of organizational markers may both be an important factor of variability across linguistically and ethnically diverse adolescent writers' persuasive essays and a predictor of writing quality. Furthermore, in this study, the higher usage of conjunctive adjuncts by EFLs, who possess lower English proficiency than NEs, counters an argument made by some researchers that more proficient writers would try to mark strong relations between ideas and clauses (Connor, 1984; Crismore, Markkanen, Steffensen, 1993; Jin, 2001; Longo, 1994). Instead, the findings of the current study are in alignment with those from Crossley and McNamara's (2012) L2 research and McNamara and colleagues' (2010) L1 research that more

proficient writers limit their use of cohesive devices, suggesting that beginning adolescent EFL writers attempt to create a unified idea flow in the text within the constraints of their limited lexical and syntactic knowledge through conjunctive adjuncts.

Such results indicate that the use of conjunctive adjuncts may be the most accessible strategy that novice EFL writers in the early stages of academic writing development can adopt to establish cohesion between various ideas in the text to strengthen their argument. EFLs' higher frequency of usage and their competence in exploring diverse types of conjunctive adjuncts suggest that they received targeted direct instruction on using conjunctive adjuncts. To illustrate, the teaching material at EE schools includes explicit lessons on using discourse markers (conjunctive adjuncts). One lesson on grammar explains different functions that discourse markers serve followed by an exercise on listing discourse markers according their functions:

Figure 5. An Example of a Targeted EFL Lesson on Using Discourse Markers

Spoken discourse markers have several different functions. For example: to show the speaker's attitude to sum up and to give examples. They are usually found at the start of a sentence.

Regrettably, we announce...(attitude)

To sum up what I've said...(summing up)

Let's say you write the speeches...(giving an example)

Spoken discourse markers that contrast, talk about outcomes and add information can often be found joining two sentences together.

I voted for him, but **actually** I regret it now (contrast)

We sold the field, **as a result** we saved the school (outcome)

It is cheap, **what is more** it is healthy (adding information)

(Dodds, Harker, Moore, Prokazova, & Zakrzewska, 2012, p.46)

While the use of conjunctive adjuncts by adolescent EFLs revealed some unexpected findings, differences across the three groups in other lexico-syntactic and text connectivity features were overall in alignment with those from prior research on older L2 writers. Besides producing longer essays, adolescent NEs as a group displayed a higher level of syntactic complexity and greater lexical diversity that contributed positively to writing quality over and above length. These findings confirm earlier studies in both L1 and L2 (Beers & Nagy, 2007; Grobe, 1981; Engber, 1995; Jarvis, 2002; McNamara et al., 2010; Nippold, 1998). This discrepancy in syntactic complexity and lexical diversity between adolescent EFLs and NEs that is significantly associated with overall writing quality suggests that lexico-syntactic sophistication is one key area to consider in the assessment and instruction of persuasive essay writing for young EFL students.

As well as lexico-syntactic sophistication, adolescent writers demonstrated significant variability in creating referential and logical/temporal cohesion in a text through various text connectivity devices. Frequent use of pronouns has been described as a notable feature of L2 writers in previous studies as they are not yet equipped with skills to use more complex devices to track participants or ideas (Biber, 1986; Reid, 1992). NEs, on the other hand, are more familiar with key characteristics of informational, formal academic discourse and consequently are more likely to adopt a detached voice and limit the use of pronouns, in particular, personal pronouns that appear typically in informal, oral conversations. Moreover, frequent use of personal pronouns is not only a key characteristic of L2 students but is also found among struggling writers who speak English as their L1 (Shaughnessy, 1977). This suggests that the adolescent

EFLs in the study thus may not only lack linguistic resources in their target language to express their perspectives with adequate sophistication but may also not be familiar with some of the expectations of essay writing in the North American tradition at this early stage in L2 writing development.

Dimensions of Variability and Predictors of Essay Quality at the Discourse Level

At the discourse level, adolescent writers showed both individual and between-group variability in their preferred ways of presenting and summarizing arguments, and in selecting supporting examples. Students' inclusion of an explicit conclusion at the end of an essay was found to be the sole index of overall writing quality in discourse structure indicating that this is a feature of advanced writers (Ferris, 1994). Unlike thesis statements that could be written with reference to the writing prompt that provided two examples of people's different interpretations of *success*, conclusions required the young writers to summarize the essence of their opinions without scaffolding. The findings from this study suggest that NEs, who possess more automated lower-level language resources in syntax and vocabulary in English, may have been able to devote more attention to higher-level metacognitive skills, namely establishing a stepwise argumentation structure in their essays with a clear thesis and conclusion, as suggested by Schoonen and colleagues' (2009)'s research.

Moreover, NEs showed a clear predilection for text-orientation in both thesis statements and conclusions presenting or summarizing an argument in a distanced, impersonal metatextual way without personal pronouns. Although not found to be a predictor of overall essay quality over and above demographic characteristics, length, and

lexico-syntactic complexity, there was a positive significant correlation between text-oriented thesis statements and essay scores. This considerably greater preference for text-orientation by NEs highlights that these students are better acquainted with an essential characteristic of academic language—the adoption of a detached, objective and authoritative stance while minimizing personal involvement (Schleppegrell, 2001, 2004; Snow & Uccelli, 2009; Uccelli et al., 2013).

It is also worth noting that surprisingly, adolescent Chinese EFLs showed the lowest likelihood of omitting a thesis statement. Chinese L2 writers have been found to typically follow the traditional Chinese four-part (*qi-cheng-jun-he*) organizational model in which the writer does not directly state one's thesis in the introduction (Connor, 1996; Matalene, 1985; Scollon, 1991; Shen, 1989). One explanation for this unexpected finding could be that the English instruction that the EFLs in this study received explicitly taught them to identify and state the main argument. For instance, in one lesson, after reading a persuasive article about countries reclaiming their artifacts from major museums around the world, students were asked to identify the main argument in the text. In the subsequent writing task, the teaching material instructed students to include a clear thesis statement to produce a high-quality essay:

“In a persuasive essay, the last sentence of the introduction is called the thesis. It should clearly state your opinion about the topic and briefly describe your evidence. A strong paper must have a strong thesis.” (Dodds et al., 2012, p.56-58)

In addition to differences in thesis and concluding statements, adolescent writers varied significantly in their preferences for particular types of examples to support their own definitions of success, but this feature was not related to differences between higher

and lower essay quality. While three types of examples were found in all L1/C1 groups, adolescent U.S. and Russian students were more inclined to use stories about their own personal achievements in justifying their notions of success. Chinese students, on the other hand, were more inclined to explain the meaning of success by referring to well-recognized collective virtues as previously noted by Wu and Rubin (2000) in their study on Taiwanese college-level EFLs.

Adolescent Chinese EFL students, in particular, tended to more frequently rely on proverbs and quotations by well-known figures to invite authority into their arguments. For instance, one Chinese student used the proverb (*"God always gives the chances to the man who has prepared a lot and he should have a strong-minded of being successful."*) as a justification for his/her opinion of success (*"So in my opinion, success depends on one's hard work."*). Another student displayed a similar strategy in incorporating a proverb (*"Nothing is impossible to a willing heart"*) to foreground the writer's notion of success. The first writer also used a famous quote in recapitulating the main argument of the essay in the conclusion—the importance of hard work in achieving success—supposedly with the intention of using a famous quotation by Edison (*"Genius is one percent inspiration and ninety-nine percent perspiration."*). Although erroneously attributed to Einstein (*"Einstein said that 'Genius uses his 99% work and 1% talent to be successful.'"*), this illustrates how the student attempted to reinforce the logic of his/her view through a quotation by one of the most respected scientists in history. This practice of strengthening one's argument through famous quotations or proverbs is commonly found in Chinese writing. Hu-Chou (2002)'s dissertation, for instance, found that Taiwanese students tend to include proverbs to add gracefulness to their Chinese writing

and suggested that the use of such a rhetorical strategy requires sophisticated skills in their L1.

While the selection of different types of supporting examples appears to be a key dimension of variability across students from the different L1/C1 backgrounds, it was not found to be a predictor of overall writing quality in this study, indicating that preference for a particular persuasive strategy at the discourse level is not related to higher or lower writing proficiency as assessed by English teachers. To illustrate, the aforementioned examples of quotations/proverbs were from two of the most highly rated essays within the Chinese group in this study, with scores of 4. Such differences in the adoption of particular supporting examples by students' L1/C1 shed light on how emerging writers in secondary school tend to construct discourse patterns influenced by certain discourse patterns in their native speech communities. The findings suggest that teachers and students, both NEs and EFLs, may benefit from an exploration of how speakers/writers across different L1/C1 convey certain cultural values through language to equip young writers with a wide range of rhetorical strategies to use depending on the cultural context and audience.

Conclusion and Areas for Future Research

This research was designed to illustrate some AW features that distinguish the persuasive writing of adolescent students from three different L1/C1 backgrounds and identify positive predictors of overall essay quality. Many dimensions of linguistic variability within and across students of different L1s/C1s were related to overall essay quality. The identification of such predictors sheds light on some of the underlying

expectations that native English teachers hold for effective academic writing. However, unlike many AW features at the lexico-syntactic and text-connectivity levels that are predictive indices of overall writing quality, different types of supporting examples reveal some of the discourse patterns specific to the writer's own cultural community with no association with overall writing quality.

The findings from the current study, in addition to extending the existing dialogue on the differences between NEs and EFLs by focusing on the understudied adolescent population, reveal some of the typically invisible differences in elements of discourse by L1/C1 that have received less attention. The results from my research, with its added dimension of exploring language-specific patterns of thinking for speaking/writing (Slobin, 1991, 1996), provide a window into how different speech/cultural communities tend to form and present views on a particular subject using a certain set of persuasive strategies. Based on such findings, we can conceptualize that in learning a foreign language, we are expanding our resources not only at the linguistic level but at the discourse level as well. As EFL students learn how to produce an academic essay in the contemporary lingua franca, English, they are not only acquiring the means for facilitating an exchange of sophisticated thoughts with speakers/writers from different parts of the world, but also comparing and reflecting on a wide spectrum of opinions of interlocutors from diverse speech communities who bring into the international discourse various sociocultural values and points of view. A competent writer/speaker should possess the flexibility and proficiency to appropriately select a combination of forms and functions to convincingly present an argument (Uccelli et al., 2013). In accordance with this view, in the current global milieu of extensive international and intercultural

communications, an apt interlocutor would need to make selections from an extensive linguistic and rhetorical repertoire to most effectively sharpen their meanings, depending on the cultural context and audience, using particular supporting examples, for instance. To nurture such a competent communicator, the results from this research could provide guidelines for designing both L2 writing curriculum and assessment tools that target adolescent EFLs' main areas for improvement in English academic writing. The findings could also encourage students and teachers to engage in cultural awareness at the discourse level to equip emerging writers with a wide range of persuasive strategies to actively participate in global interactions.

Future research could examine additional discourse components that may vary across different L1/C1 groups, to provide further insight into prevalent patterns of constructing discourse by different cultural communities. These could include varying levels of writer/reader involvement and the presence of arguments and counter-arguments by L1/C1. In the field of instruction, a detailed investigation into the impact of exploring different features of discourse in L2 classrooms and providing instructional support to L2 writers focused on the language features that positively predict essay quality would make a valuable contribution to developing competent and resourceful writers of English persuasive essays, a prevalent discourse type in international/intercultural communication.

Limitations and Educational Implications

While this study attempted to compare students of similar age—except for U.S. students who were treated as a reference group to demonstrate the level at which

secondary school EFL students should be aiming to write in L2— and socio-economic status, academic achievement levels in L1 may have varied. It should also be noted that since the EFLs in this study were from relatively affluent families with access to high-quality, private English education at EE language schools, their performance on the writing task may not be representative of average EFL students from China and Russia.

Despite such limitations, the findings of this research could inform the design of more specific and relevant L2 assessment tools and writing curriculum that target EFLs' critical areas for improvement in academic writing in the initial stages of learning formal essay composition in English. This study sheds light on some of the underlying expectations held by native English speakers about the features of successful persuasive essays. Based on the identification of predictors of essay quality, future curriculum developers and teachers could provide explicit instruction on promoting syntactic complexity, diversity of vocabulary, diversity of conjunctive adjuncts and inclusion of a clear conclusion to address secondary school EFL' main areas of weakness in academic writing while reinforcing their strengths. Furthermore, rather than using holistic writing rubrics in L2 writing, more precise tools and assessments may be designed to specifically measure adolescent EFLs' strengths and weaknesses and to monitor their development in these areas.

Furthermore, comparing different ways of constructing discourse across languages/cultures could promote students' cultural awareness at the discourse level, a vital skill in global communication. After identifying some prominent discourse patterns found in the English essays by students from different L1/C1, these features could be presented as rhetorical resources from which students can draw to most effectively

deliver their viewpoint depending on the cultural context and audience. For instance, a Chinese EFL writer may decide that when producing an academic essay in English for an East Asian audience, it would be more effective to incorporate proverbs and well-known quotations to activate collective cultural knowledge but draw examples from the writer's own experience to make the argument more engaging and persuasive for a North American audience. These findings have the potential to offer guidelines for creating a pedagogical foundation for promoting adolescent writers' linguistic and intercultural competence not only in EFL contexts but also in secondary school classrooms in English-speaking countries, such as the United States and Australia that involve linguistically and ethnically diverse adolescent populations.

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Appendix A

Writing Prompt

Some people believe that success in life comes from taking risks or chances. Others believe that success results from careful planning. In your opinion, what does success come from? Use specific reasons and examples to explain your position.

Educational Testing Service (ETS). (2012). Test of English as a Foreign Language (TOEFL)

Sample Writing

Topics. Retrieved from <http://www.ets.org/Media/Tests/TOEFL/pdf/989563wt.pdf>.

Appendix B

TOEFL Writing Rubric

Score	Task Description
5	<p>An essay at this level largely accomplishes all of the following:</p> <ul style="list-style-type: none"> · Effectively addresses the topic and task · Is well organized and well developed, using clearly appropriate explanations, exemplifications, and/or details · Displays unity, progression, and coherence · Displays consistent facility in the use of language, demonstrating syntactic variety, appropriate word choice, and idiomaticity, though it may have minor lexical or grammatical errors
4	<p>An essay at this level largely accomplishes all of the following:</p> <ul style="list-style-type: none"> · Addresses the topic and task well, though some points may not be fully elaborated · Is generally well organized and well developed, using appropriate and sufficient explanations, exemplifications, and/or details · Displays unity, progression, and coherence, though it may contain occasional redundancy, digression, or unclear connections · Displays facility in the use of language, demonstrating syntactic variety and range of vocabulary, though it will probably have occasional noticeable minor errors in structure, word form, or use of idiomatic language that do not interfere with meaning
3	<p>An essay at this level is marked by one or more of the following:</p> <ul style="list-style-type: none"> · Addresses the topic and task using somewhat developed explanations, exemplifications, and/or details · Displays unity, progression, and coherence, though connection of ideas may be occasionally obscured · May demonstrate inconsistent facility in sentence formation and word choice that may result in lack of clarity and occasionally obscure meaning · May display accurate but limited range of syntactic structures and vocabulary
2	<p>An essay at this level may reveal one or more of the following weaknesses:</p> <ul style="list-style-type: none"> · Limited development in response to the topic and task · Inadequate organization or connection of ideas

	<ul style="list-style-type: none"> · Inappropriate or insufficient exemplifications, explanations, or details to support or illustrate generalizations in response to the task · A noticeably inappropriate choice of words or word forms · An accumulation of errors in sentence structure and/or usage
1	<p>An essay at this level is seriously flawed by one or more of the following weaknesses:</p> <ul style="list-style-type: none"> · Serious disorganization or underdevelopment · Little or no detail, or irrelevant specifics, or questionable responsiveness to the task · Serious and frequent errors in sentence structure or usage ·
0	<p>An essay at this level merely copies words from the topic, rejects the topic, or is otherwise not connected to the topic, is written in a foreign language, consists of keystroke characters, or is blank.</p>

Educational Testing Service (ETS). (2004). iBT/Next Generation TOEFL Test Independent Writing Rubrics (Scoring Standards). Retrieved from http://www.ets.org/Media/Tests/TOEFL/pdf/Writing_Rubrics.pdf

Appendix C

Table 18. Descriptive Statistics and Pairwise Comparisons Between First Language/Culture Groups

Variable	China (N=80)	Russia (N=80)	ES	China (N=80)	US (N=60)	ES	Russia (N=80)	US (N=60)	ES
	M (SD)	M (SD)		M(SD)	M(SD)		M(SD)	M(SD)	
Education Factors	7.76 (1.47)	8.34 (1.25)	.43	7.76 (1.47)	10.83 (1.18)	2.27	8.34 (1.25)	10.83 (1.18)	2.04
-Grade									
-Years of English study	8.53 (2.22)	7.23 (2.48)	.55						
Overall essay quality	2.73 (.90)	3.13 (.86)	.45	2.73 (.90)	3.64 (.90)	1.01	3.13 (.86)	3.64 (.90)	.58
Essay Length				31.61 (11.93)	48.29 (18.50)	1.11	35.99 (11.21)	48.29 (18.50)	.83
-Clauses									
-Words	185.16 (72.77)	227.15 (64.69)	.61	185.16 (72.77)	295.81 (109.39)	1.23	227.15 (64.69)	295.81 (109.39)	.79
-Diversity of vocabulary	66.3 (21.4)	75.2 (20.0)		66.3 (21.4)	84.8 (17.6)		75.2 (20.2)	84.8 (17.6)	
Text Connectivity									
-Personal pronouns	11.42 (4.78)	10.91 (3.05)	.13	11.42 (4.78)	6.86 (2.98)	1.11	10.91 (3.05)	6.86 (2.98)	1.34
-Diversity of conjunctive adjuncts	4.04 (1.41)	4.66 (.97)	.51	4.04 (1.41)	3.51 (.97)	.43	4.66 (.97)	3.51 (.97)	1.19
-Frequency of conjunctive adjuncts	33.69 (15.36)	42.63 (12.99)	.63	33.69 (15.36)	24.04 (7.88)	.76	42.63 (12.99)	24.04 (7.88)	1.67
-Conjunctive adjuncts: <i>Apposition</i>							2.39 (2.49)	.56 (1.08)	.91
<i>Addition</i>	8.33 (5.93)	13.75 (6.62)	.86	8.33 (5.93)	11.42 (6.09)	.52			
<i>Adversative</i>	6.45 (4.94)	8.79 (5.11)	.47				8.79 (5.11)	4.74 (3.26)	.92
<i>Spatio-temporal</i>				2.44 (4.34)	.49 (1.08)	.58	3.37 (4.21)	.49 (1.08)	.88
<i>Causal-conditional</i>				11.35 (9.90)	5.15 (3.98)	.78	10.98 (8.77)	5.15 (3.98)	.82
Discourse Components	1.60 (2.28)	2.97 (2.86)	.53	1.60 (2.28)	2.78 (2.53)	.49			
-Everyday examples									
-Quotations/Proverbs	.77 (1.53)	.10 (.51)	.59						