

Analysis of Referential Cohesion in L2 Written Narratives Within an English Immersion Education Context

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This study explored the effects of English immersion education on referential cohesion in L2 writing. To measure the discourse competence arising from a curricular difference, referential use was chosen to be investigated in order to find the effect of English immersion education. Written personal narratives of 29 students in an immersion school and 35 students in regular high schools were examined to compare the two groups' use of reference. The only significant group difference was found in the use of zero anaphora. In order to extend their writing as well as construct cohesion in their writing, the students in the immersion school used zero anaphora more often than those in the regular high school. In addition, the regular high school students showed a tendency to produce more errors with third-person singulars and demonstratives. These differences can be attributed to curriculum differences, and in particular to English immersion education's greater language input, which facilitates textual cohesion in immersion students' writing.

Keywords: narrative, EFL learners, English immersion education, reference, discourse analysis

Introduction

English immersion education has been believed to provide a way to enhance second language (L2) students' proficiency. As taught by the medium of L2, L2 students are expected to build their communicative competence (e.g., Dalton-Puffer, 2009). Accordingly, whether English immersion education effectively increases communicative competence needs to be examined. In order to measure the effect of English immersion education, several approaches are possible; one approach is based on the notion of communicative competence which is what enables us to convey messages appropriately within a given context (Hymes, 1972). Communicative competence is composed of several elements: grammatical competence, discourse competence, sociolinguistic competence, and strategic competence (Canale & Swain, 1980). The first two kinds of competence are related to linguistic knowledge. The last two define the function of communication. As Dalton-Puffer (2011) noted that examining dimensions that reach beyond the sentence level such as cohesion can provide insight on the effect of immersion education. Therefore, the effectiveness of immersion education can be best assessed by analyzing immersion students' discourse competence since L2 learners can demonstrate the ability to combine a series of sentences into a meaningful production.

In order to examine discourse competence, although there are different types of discourse, investigating narrative is most suitable because narrative is the basic genre for telling a story, which is a necessary skill for functioning appropriately in a target language and culture (Kang, 2009). They can narrate a story either in oral or in written form; however, the analysis of students' written discourse is especially useful

in EFL situations due to several characteristics of written discourse that make it more appropriate than oral discourse for detecting students' L2 problems.

As part of learners' discourse competence, cohesion is the relation of meaning that is found within a text (Halliday & Hasan, 1976). Cohesion lies in the systematic use of resources of reference that have cohesive force. L2 learners must be able to use cohesive devices such as reference to achieve discourse cohesion in order to deliver meaning effectively. To create textual cohesion, a variety of linguistic forms, including forms of reference, can be used.

In order to show discourse competence, those who produce narratives require reference management skills, which are the necessary elements of cohesion. Reference management is the ability to distinguish given information and new information (Chafe, 1976). Making appropriate referential choices in various contexts constructs connectivity and coherence among sentences. Referential devices such as definite articles are an important feature of discourse cohesion. The use of reference shows narrators' linguistic and pragmatic competence in discourse by demonstrating how they manage referential continuity and discontinuity, continuously appraise characters' changing relationships to the plot, and use reference forms to index shifts in narrative focus (Hemphill, Picardi, & Tager-Flusberg, 1991).

Even though the analysis of reference could show learners' discourse competence, existing studies of English immersion education have rarely assessed the effectiveness of immersion education by looking at learners' referential use. Many studies have compared immersion and non-immersion students' writing in terms of lexical or morphosyntactic levels; however, it is crucial to investigate discourse level of written language (Dalton-Puffer, 2009). This study addresses this gap in the research by investigating how Korean international high school students in English immersion programs and regular high school students in non-immersion English classes differ in terms of their referential ability by analyzing their English-language narrative discourses. The study further considers how the students' educational environment may be evident in their written English with regards to referential use.

Literature Review

The Value of Immersion Curricula

Immersion programs have been conducted around the world for various reasons, such as meeting the goals of national bilingualism policies (e.g., French immersion in Canada) and supporting the survival of endangered languages (e.g., Mohawk immersion in Quebec) (Alford & Windeyer, 2014; Cammarata & Tedick, 2012; Cho, 2006; Dalton-Puffer, 2011; Hickey & de Mejía, 2014; Kang, Hwang, Nam, & Choi, 2010; Kong, 2008; Lyster & Genesee, 2013; Navés, 2011). In South Korea, the Ministry of Education established several international high schools to institute immersion programs in order to promote English proficiency. The international high school curriculum is based on English immersion education, a method of teaching English in which the target language is adopted as the medium of instruction (Cohen & Swain, 1976). According to Genesee (1987, p. 1), "immersion is a form of bilingual education in which students who speak the language of the majority of the population receive part of their instruction through the medium of a second language and part through their first language." The students are taught by teachers who speak only in English, and they are advised to use only English in school. Immersion students can acquire the foreign language (e.g., English) and the target language's culture unintentionally as they interact in the second language with teachers, peers, and the educational materials designed to expand their understanding of the language and culture.

The use of English immersion has been supported by a number of theories in second language acquisition. In English immersion environments, students can be exposed to large amounts of meaningful and comprehensive input, which many scholars consider to be the essential ingredient for second language acquisition (Krashen, 1985). The students can also develop fluency, functional abilities, and confidence in practicing their second language during subject-matter instruction (Lightbown & Spada,

1993). As noted by Swain (1985), in addition to the ample input, students undoubtedly require many opportunities to produce language in immersion education in order to develop the L2. In addition, English immersion students simply spend more time using English, via content-based instruction, than non-immersion students.

Among research proving the effectiveness of immersion education, some studies have demonstrated that immersion education helps develop learners' writing skills (e.g., San Isidro & Lasagabaster, in press; Vidal & Jarvis, in press). Snow and Brinton (1988) described the benefits of content-based instruction that emphasizes writing in every class for helping learners develop the ability to produce a variety of types of writing. Although some students were aware of their mistakes in grammar and organization, the learners were better able to deal with their writing tasks while they were involved in the program. Chen (2006) also showed the strength of English immersion education for promoting English writing skills. She conducted a qualitative study to explore literacy practices in English immersion schools in Taiwan, and found that the instruction led to extensive use of English. In addition, Navés (2011) confirmed that content and language integrated learning (CLIL) students outperformed non-CLIL students in some domains of writing proficiency (fluency, syntactic complexity, and lexical complexity) because integrating language and content in class provided learners with intensive language practice within a meaningful context. Knoch, Rouhshad, Oon, and Storch (2015) investigated 31 L2 students studying at Australian university and suggested that Studying at English medium university can help L2 learners to improve their fluency. Consequently, the learners were able to develop their literacy skills throughout their English immersion classes, which offered a variety of language experiences to the learners.

Overall, most previous studies of immersion education have tried to assess the effectiveness of immersion education in terms of L2 learners' grammatical competence. Relatively less attention has been paid to L2 learners' discourse competence. In order to gauge the effectiveness of immersion education, learners' discourse competence should also be examined.

Narratives as a Window into Discourse Competence

Although other genres can also be used to examine discourse competence, the narrative genre is especially suitable for measuring L2 learners' discourse management skills. Many English proficiency tests employ narrative writing tasks to evaluate L2 learners' discourse competence, and narrative can be embedded in different genres of writing in authentic communication contexts. For instance, expository discourse such as argumentative essays requires categorical principles of organization, and well-formed expository discourse reflects a categorical mental representation, which is similar to the schema of a well-formed narrative (Berman & Nir-Sagiv, 2007). However, because the expository genre is considered a learned genre, it does not offer rich input for features such as tense and aspect (Ordóñez, 2002).

Narrative is a basic genre that second language (L2) learners need to acquire to function effectively in the target language and its culture; from first to third grade, native English-speaking children are required to start writing narratives, and they can write complex narrative essays by approximately sixth grade (Berman & Nir-Sagiv, 2007). According to Kang (2006), narrative is an excellent genre to assess second language learners' discourse competence and sensitivity to the target language and culture. As L2 learners tell a story, they can integrate different skills such as how to organize a story and how to make the story coherent. They also need to demonstrate linguistic knowledge of definite and indefinite reference and anaphora with pragmatic sensitivity to the listener or reader's needs (Hemphill et al., 1991). L2 learners can also reveal their strengths or weaknesses in their L2 by performing a narrative task, which can be written or oral (Bliss, McCabe, & Miranda, 1998; Kang, 2006). Particularly for L2 learners, it is difficult to acquire the ability to produce narratives, because they often involve stylistic variation and target-culture-specific contents (Bensoussan, 1990).

Most studies dealing with narratives have focused on oral narratives. Nevertheless, written narratives are also effective measures to evaluate students' discourse competence in the target language. When a narrative is written, losing the episodic structure of the narrative is impossible (Peterson & McCabe,

1983). The ability to express oneself through writing is crucial. Writing a continuous text is a difficult task that shows minor problems that might otherwise be ignored (Bishop & Clarkson, 2003). A student's weaknesses can be easily observed when the student must produce a long discourse such as a written narrative. Owing to its rehearsed nature, which allows for editing and planning, written narrative can be a precise indicator of L2 learners' discourse skills as well as linguistic and cultural L2 knowledge (Chafe, 1985; Kang, 2005, 2006). Narrative requires learners to control the content of the text and fully specify the scene, including temporal reference (Bardovi-Harlig, 2000). In this respect, written narratives are useful for evaluating L2 students' competence in the target language.

Reference Management in L2 Development

In order to achieve discourse cohesion, managing references is an important linguistic skill because, as Halliday and Hasan (1976, p. 5) explained, "the potential for cohesion relies on the systematic resources of reference that are built into the language itself." They suggested reference as one of the five linguistic devices that is essential in cohesive texts, and they classified reference into three types: personal reference, demonstrative reference, and comparative reference. A number of previous studies (Abbuhl, 2012; Chafe, 1976; Kang, 2004, 2009, 2012; Peterson & McCabe, 1983; Ryan, 2015; Shapiro & Hudson, 1991) have provided evidence that referential ability is a key cohesive device that shows a speaker or writer's linguistic skills and strategies, and that demonstrating good referential ability is essential to produce a good story. Referential ability can display communication skills as well as language use because the referential relationship of pronouns requires the speaker or writer to use both semantic (person, number, and gender) and syntactic rules (grammatical rules and case assignment) (Gregg & Hoy, 1990). Thus, reference can reveal the narrator's linguistic competence in discourse.

With regard to inter-language development, there are quite a number of studies showing that the acquisition of target-like reference is challenging in an L2. L2 learners tend to overuse nominal expressions in an immediately maintained context, and use few pronouns (Carroll, Murcia-Serra, Watorek, & Bendiscoli, 2000; Hendriks, 2003). L2 learners have difficulty in managing references, and they are usually over-explicit. According to Hendriks (2003), with increasing L2 proficiency, learners become more explicit in maintaining references than native speakers of the target language. She also found that adult L2 learners relied on more explicit linguistic means, such as full noun phrases, than they did in their L1. They also had a tendency to use more explicit linguistic forms than native speakers of the target language because they had not fully acquired the discourse pragmatic rules of the language. In other words, marking and being aware of given/new information in an L2 is demanding for learners. Therefore, irrespective of language proficiency and target language, L2 learners seem to have difficulty in acquiring reference management skills.

Previous studies have shown that L2 learners from different language backgrounds or learning contexts display variations in their choices of referential expressions to achieve cohesion (Carroll et al., 2000; Hüttner & Rieder-Bünemann, 2010; Serratrice, 2007). The manner in which different language experiences filter an L2 can also impact extended discourses, such as narratives. Related to the current study, Hüttner and Rieder-Bünemann (2010) investigated the immersion effect on thematic coherence and linguistic cohesion in children's L2 oral narratives. They suggested that immersion education had the advantage of eliciting more cohesion and coherence in narratives than non-immersion education, though they did not specifically pay attention to cohesive devices, such as reference. Due to their dissimilar language learning contexts, L2 learners can demonstrate different strategies for using reference to achieve cohesion in their writing.

To be specific, some cross-linguistic studies on reference management have demonstrated that English L2 learners may have trouble mastering English reference (Bae, 2001; Kang, 2004, 2005, 2009, 2012; Muñoz, 1995; Serratrice, 2007; Thomas, 1989). Examining patterns of reference use in L2 learners' writing is a way to assess their discourse knowledge in the target language. Kang (2009) compared adult Korean English as a foreign language (EFL) learners' use of reference in written narrative discourse to

that of native English speakers. She demonstrated that most Korean EFL learners did not show a consistent and systematic use of pronominals, and they had trouble alternating noun phrases and pronouns to mark specific discourse units due to a lack of discourse production skills. In this regard, investigating the use of reference in written narratives may be useful to assess L2 learners' linguistic and discourse competence and the acquisition of decontextualized language.

The Present Study

There have been a few studies (Bae, 2001; Cox, Shanahan, & Sulzby, 1990; Crowhurst, 1987; Kang, 2005, 2009) that explored the pattern of cohesive devices in written narratives. However, to my best knowledge, no studies on the effectiveness of English immersion education focus on L2 learners' choice of cohesive devices in written narratives while most of studies on immersion education examined morpho-syntactic features. Such studies are necessary because written narrative can show learners' ability to establish semantic relations with individuals or events in a contextualized discourse. In addition, in EFL settings, L2 learners' narrative discourse competence should be investigated because it can be a challenge for EFL learners to control their English at the discourse level. English immersion education is expected to help learners to develop the proficiency to manage cohesion in their writing, which is related to the overall quality of writing. Their discourse competence should be revealed through their use of reference in their narratives. In addition, different language curricula may influence learners' referential use. Therefore, this study addresses a gap in the literature by examining how international high school students' reference management skills are different from those of regular high school students', and by asking how their educational backgrounds or language curricula may be evident in their use of reference in English. Three research questions were posed:

- 1) What characteristics of referential use are observed in English-language narratives produced by English immersion Korean high school students and non-immersion Korean high school students?
- 2) Which types of reference are more or less salient in the two groups of students' narratives?
- 3) What are the differences in reference errors between the two groups of students' narratives?

The data used in this study were presented in a previous publication (Lee, 2012) regarding Korean EFL immersion and non-immersion students' discourse differences in the use of narrative structural features. The present study adds a new focus on reference management.

Method

Participants

The written narratives analyzed in the study were collected from 29 students (8 males, 21 females) from an international high school in Seoul, Korea and 35 (14 males, 21 females) from three different regular high schools in Seoul, Korea. All students' first language is Korean and learned English as a second language. The international high school students had received English immersion education whereas the regular high school students had experienced non-immersion education. English is the medium of instruction in the international high school for all classes, except Korean and history. Most of the teachers in the international high school are Koreans who speak English fluently. These international schools are approved by the Ministry of Education, and the students attending the schools are Korean nationals, whereas some private international high schools in Korea only accept foreigners or Korean nationals who have resided in foreign countries for at least three years. To increase students' English proficiency, the government-affiliated schools follow a content-based curriculum, and the students who

are in an English immersion environment are expected to achieve better English proficiency than those who are not. The required class hours for the international and regular high schools are the same, as mandated by the Ministry of Education. Both groups of students were in the 11th grade, and their English scores on the Korea Preliminary Scholastic Aptitude Test (KPSAT) administered by the Korean Ministry of Education were within the top four percent for the whole population. Thus, their test scores on the KPSAT identified them as highly advanced EFL learners. With respect to average length of residence in countries where English is used as a first language, there was no difference between the two groups ($t(46) = 1.34, p = .185$). Table 1 summarizes the demographic data of the participants in the experiment.

TABLE 1

Demographic Data of the International High School Students and Regular High School Students

	International high school students ($N = 29$)	Regular high school students ($N = 35$)
Male	8	14
Female	21	21
Grade	11th	11th
KPSAT score	Within top 4%	Within top 4%
Time in Eng.-speaking countries (mean)	16.59 mo. ($SD = 22.25$)	10.11 mo. ($SD = 14.62$)
Immersion	Yes	No

Materials and Data Collection

Among written narrative genres is the firsthand story, or personal narrative. Although the narrative content could feature a personal event or be a retelling of a story outside of the speaker's experience, personal narratives as a genre can manifest the author's special lexical and syntactic choices, topic selection, rhetorical patterns, and their relation to social, cultural, cognitive, and educational issues (Özyıldırım, 2009). Liskin-Gasparro (2000) also found that the narrative of personal experience is a considerably more complex linguistic task than the recounting of a film segment. Moreover, children have been shown to use reference devices when constructing autobiographic narratives (Shiro, 2003). For these reasons, investigating personal narratives is a suitable method for assessing L2 learners' discourse competence.

All of the participants were asked to write a narrative essay in English. Prior to the composition task, the research was explained to both groups of students during class time. Each group of participants was given a written prompt: "my most frightening experience" (Kang, 2005). They were given about 50 minutes to write about their experience. The time students spent on writing the essay ranged from 15 minutes to 45 minutes.

Transcription and Coding

As described in Lee (2012), the written narratives were transcribed verbatim into the Child Language Data Exchange System (CHILDES) (MacWhinney, 2000). Following Berman and Slobin (1994, p. 657), this study's basic unit of analysis is the clause, defined as any unit that contains a unified predicate. Predicates contain finite and nonfinite verbs, and predicative adjectives. Clauses have referential function as well as evaluative function (Peterson & McCabe, 1983). Therefore, each narrative was divided into clauses, and in the present study, the clauses were then analyzed for referential cohesion. Following Halliday and Hasan (1976) and Kang (2009), the references were divided into the following categories:

- (a) full noun phrases (e.g., *My mom* and I started to look for a restaurant.)
- (b) third-person singular pronouns (e.g., Suddenly a man started to giggle. Like my body, I couldn't see *him*.)
- (c) third-person plural pronouns (e.g., Grandmother and Eric were on the way home from shopping. Of course, hearing my voice from after, *they* looked desperately for me.)

- (d) first-person plural pronouns (e.g., There was nobody except for me and my sister in the house. *We* were watching television, waiting for the very famous SF drama, ‘Vector man’ at that time.)
- (e) definites (definite article, *the* + full noun phrase; e.g., During her lecture, a boy constantly made noise and annoyed *the teacher*.)
- (f) demonstratives (*this* or *that* + noun phrase; e.g., If *that stranger* would invade our home, we could not do anything except shouting!!)
- (g) comparative reference (*such*, *same*, or *more*; e.g., My legs started to hurt, and the sun was getting *hotter* and *hotter* above my head.)
- (h) zero anaphora (omission of an overt reference term; e.g., I sat down, and *started* to count the pansies.)
- (i) incorrect uses: all incorrect uses of references in the categories above

Reliability of Coding

A reliability estimate (Cohen’s kappa statistic) for the coding was calculated by having 15 percent of the data coded by an independent rater other than the researcher. The researcher and one trained graduate student independently coded the referential uses of randomly selected samples from both groups of students. The researcher carefully checked all the codings again and resolved any questions with the trained graduate student. All differences between the coders were negotiated until an agreement was reached. Cohen’s kappa (Bakeman & Gottman, 1997), a measure of intercoder agreement that corrects for chance, was 0.81 between the researcher and the other coder; any value greater than .80 is deemed excellent.

Results

Multivariate analysis of variance (MANOVA) was used to compare the two groups in terms of their referential management resources. Cohen’s *d* statistic (Cohen, 1988) was also calculated only for statistically significant variables ($p < .001$) to find effect sizes. Cohen’s *d* index is considered the most appropriate effect size estimate; the effect size can explain the magnitude of an observed difference between two groups in standard deviation units. Cohen (1988) provided a rule of thumb for interpreting Cohen’s *d*: effect sizes of .20 are small, .50 are medium, and .80 are large. There is no maximum possible value, and numbers over 1.0 are usual. For the present study, the effect size calculator developed by Wilson (2001) was used to find Cohen’s *d*.

In order to take differences in the lengths of the participants’ productions into account, the frequencies of each participants’ use of references were counted and converted to a percentage of the total number of clauses in that participant’s essay. Figure 1 shows the mean number of clauses both groups of students produced. On average, the international high school students produced 60.45 clauses ($SD = 17.79$) in their narratives while the regular high school students produced 46.63 clauses ($SD = 12.11$). An independent *t*-test compared the number of narrative clauses that the two groups of students produced; the difference of the mean of the variable was statistically significant ($t = 3.686$, $p < .001$). An effect size for the *t*-test could show the degree of association of the two groups; Cohen’s *d* standardized mean difference effect size was 0.464, and 95% confidence intervals for the following comparisons fell between -0.0346 and 0.9627. According to Cohen’s (1988) rule of thumb, the average effect observed for the number of narrative clauses would be almost medium (.50), which is large enough to be visible to the naked eye.

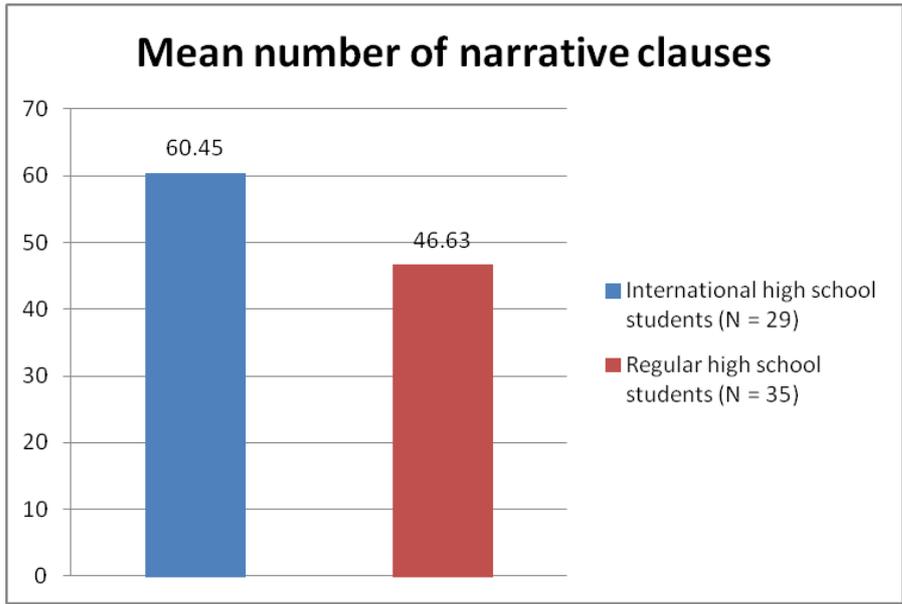


Figure 1. Comparison of mean number of narrative clauses in international high school students' and regular high school students' narrative.

Figure 2 displays the distribution of the referential choices made by each group of participants in the study. The two groups of participants demonstrated similar patterns in their referential choices. The first MANOVA found no significant group differences in the overall use of references, except for the zero anaphora (see Table 2).

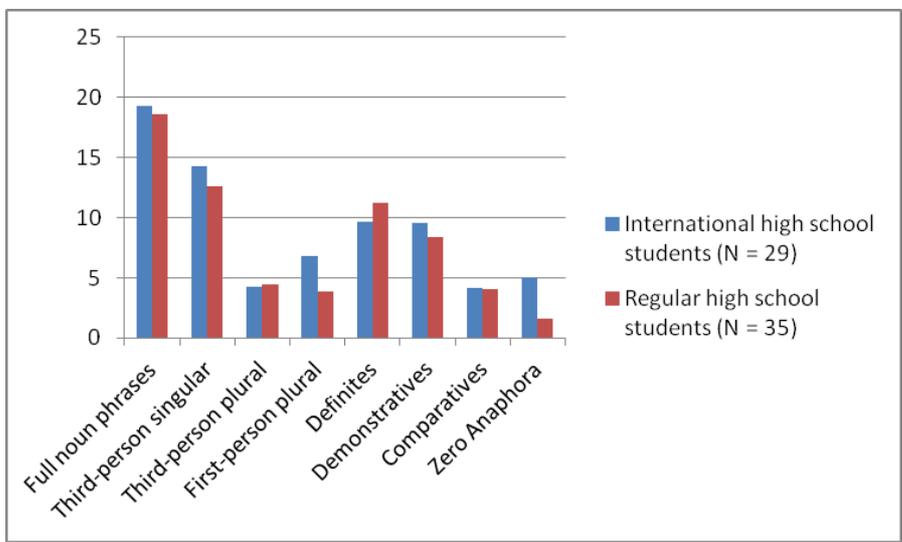


Figure 2. Use of reference: Comparison of international high school students' and regular high school students' narratives.

TABLE 2

Use of Reference: Comparison of International High School Students' and Regular High School Students' Narratives.

Variables	International high school students (<i>N</i> = 29)		Regular high school students (<i>N</i> = 35)		<i>F</i>
	<i>M</i> [%]	<i>SD</i> [%]	<i>M</i> [%]	<i>SD</i> [%]	
Full noun phrases	19.25	10.33	18.6	10.03	0.066
Third-person singular	14.28	7.21	12.63	12.83	0.379
Third-person plural	4.3	8.5	4.5	6.5	0.014
First-person plural	6.8	9.8	3.9	6.8	1.813
Definites	9.7	6.41	11.24	8.26	0.657
Demonstratives	9.57	5.42	8.39	4.39	0.921
Comparatives	4.2	3.1	4.1	2.5	0.027
Zero anaphora	5	4.22	1.62	2.37	16.309***
MANOVA Wilks's lambda					2.497*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

The international high school students tended to produce more referential devices than the regular high school students, but the only significant difference was found in the use of zero anaphora ($F = 16.309$, $p < .001$) even though the raw numbers for zero anaphora seem very low. Cohen's d standardized mean difference effect size for the use of zero anaphora was 1.01, and 95% confidence intervals for the following comparisons fell between 0.4915 and 1.5366. Comparison of effect sizes suggested that English immersion education had a substantial effect on the use of zero anaphora. By and large, both groups of participants depended mostly on noun phrases, with third-person singular as the second most frequent referential device used in their narratives. In particular, the raw number of cases of zero anaphora in both groups was very low compared to other cohesive devices. These patterns may be related to a Korean language tendency to rely on noun phrases, even when referring to information that appeared earlier in a discourse (Kang, 2005).

Figure 3 compares the amounts of the different kinds of errors made by the two groups of students in their writing. Regular high school students tended to make errors with definites, demonstratives, and third-person singulars, whereas international high school students tended to make errors with definites, demonstratives, and comparatives.

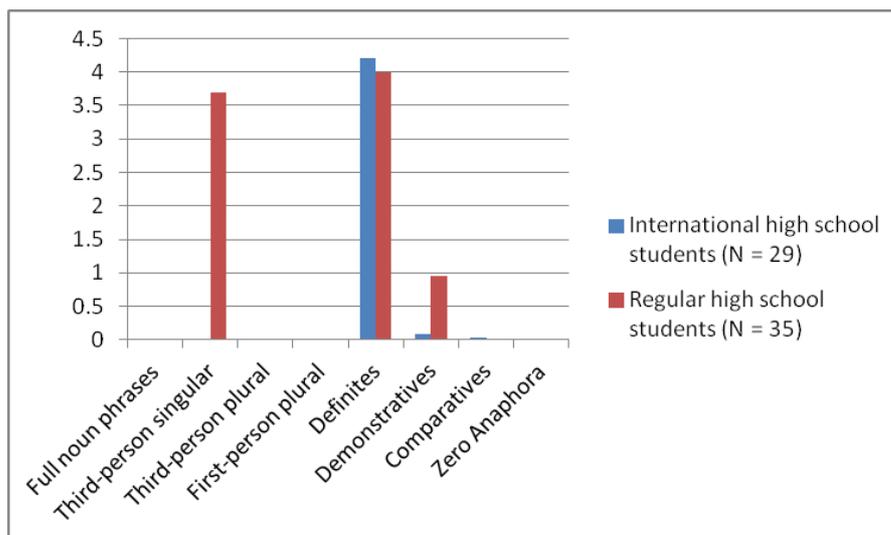


Figure 3. Errors of reference: Comparison of international high school students' and regular high school students' narratives.

Table 3 presents the results of the second MANOVA, which compared international high school students' and regular high school students' errors in their narratives. The analysis showed that there were significant group differences in the use of third-person singulars and demonstratives. Although the raw numbers for any of these error types seem very low (Table 3), the regular high school students made more errors with third-person singulars and demonstratives, which may suggest that it was difficult for them to incorporate these features into their second language writing. In addition, both groups of students produced errors with definite articles with no group difference, even though they relied highly on definites when referring to a character or event that appeared previously in a discourse. This result implies that all of the students may have had difficulty managing definites.

TABLE 3

Errors of Reference: Comparison of International High School Students' and Regular High School Students' Narratives.

Variables	International high school students (<i>N</i> = 29)		Regular high school students (<i>N</i> = 35)		<i>F</i>
	<i>M</i> [%]	<i>SD</i> [%]	<i>M</i> [%]	<i>SD</i> [%]	
Full noun phrases	0	0	0	0	
Third-person singular	0	0	3.7	8.64	5.368*
Third-person plural	0	0	0	0	
First-person plural	0	0	0	0	
Definites	4.2	3.39	4	2.69	0.23
Demonstratives	0.09	0.35	0.96	2.13	4.596*
Comparatives	0.04	0.22	0	0	1.211
Zero anaphora	0	0	0	0	
MANOVA Wilks's lambda					2.664*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

The quantitative analysis revealed the international high school students' and regular high school students' preferences for referential devices in their narratives. Both groups of students relied heavily on full noun phrases in producing an extended discourse in English. The likely reason for their frequent use of this strategy is that the Korean language has a tendency to denote given information by repeating full noun phrases instead of using pronouns. L2 learners tend to use more nominal expressions than necessary for successful communication (Carroll et al., 2000; Hendriks, 2003; Kang, 2009). However, especially in English, it is inappropriate to use nouns repeatedly when pronouns would be expected (Bliss et al., 1998).

Both groups of students tended to use a lot of noun phrases. Especially when they started their stories, they usually introduced characters and events with a full noun phrase. Interestingly, most of them included their motivation for writing about an experience at the beginning of the narrative, and they used a lot of full noun phrases. Some of their explanations were prolix, and some noun phrases were repeated as they explained, which made their writing seem less coherent than if they had used referential devices.

The only significant difference in the use of reference between the two groups of students was with zero anaphora. Zero anaphora do not need to be specified, but are understood from the context. The regular high school students were more cautious in using zero anaphora. They may have avoided using it because they may be more keenly aware of the linguistic differences between the two languages (Kang, 2009; Muñoz, 1995). In other words, they did not use the zero anaphora because they recognize that although Korean and English both allow it, their discourse patterns are distinct. In English, zero anaphora slots could be filled with noun phrases or pronouns. On the other hand, the Korean language has maximal freedom for using zero anaphora for subjects and objects, and the zero anaphora is widely used in Korean discourse (Jung, 2004). Being aware of the differences, L2 learners usually mark the given information by

reiterating noun phrases even when they use English in order to avoid errors. Thus, regular high school students who are not used to using the zero anaphora may avoid it even when they could use it in English.

Another possible explanation for the difference is that the zero anaphora is a sophisticated referential device, which may have been harder for the regular high school students than the international high school students. International high school students used more zero anaphora while also producing more clauses than regular high school students. As proven by previous studies (Chen, 2006; Genesee, 1987; Lee, 2012; Navés, 2011; Snow & Brinton, 1988), immersion learners tend to produce more clauses and have markedly better proficiency in their L2 writing because they have been exposed to a considerable amount of L2 input at school. Such differences in proficiency might explain why regular high school students produced fewer clauses that called for zero anaphora than immersion high school students.

Furthermore, regular high school students used fewer zero anaphora in their writing because the syntactic complexity of their writing was at a lower developmental level than that of international high school students (Navés, 2011). Since they produced fewer clauses, they naturally used fewer zero anaphora in their writings. The acquisition of zero anaphora might occur at a late stage in inter-language development (Kang, 2009). The students also tended to construct their writing with simple sentences rather than compound sentences, which may lead to fewer uses of zero anaphora in writing. Therefore, the regular high school students who did not receive immersion education were not accustomed to using zero anaphora in their writing, while the international high school students who received English immersion education may have developed their L2 further than the regular high school students, as many of them had mastered how to use zero anaphora in an appropriate context.

Non-immersion high school students used separate clauses where zero anaphora were appropriate. They instead supplied noun phrases or pronouns. Thus, the non-immersion students do not seem to have acquired the idiomatic use of zero anaphora in English. On the other hand, many of the international high school students seemed to use zero anaphora appropriately. When they produced long sentences, the students often included zero anaphora.

With respect to errors, neither group of students made many errors with referential markers in their writing. Even though their English proficiency was advanced based on their KPSAT scores, their lack of errors may be due less to high proficiency than to the fact that they did not take many risks in their writing. They may be aware that risk takers can lower the quality of their writing by using difficult words incorrectly (Polio, 2001). Advanced L2 learners have a tendency to rely less on guessing or unclear grammar knowledge (Wen & Johnson, 1997); this may have been the case in the present study, in which both groups of students produced few errors.

Unlike the results that Navés (2011) reported from her study comparing immersion students and non-immersion students, the regular high school students in this study also tended to produce more errors with third-person singulars and demonstratives than the international high school students. The difference between the two study's results might be due to the participants' language learning backgrounds: Korean and Spanish. Her study participants were Spanish speakers learning English. Because the third-person singular is uncommon in the Korean language, the regular high school students might not have fully acquired the linguistic form. The regular high school students also made more errors with demonstratives. They may use their L1 strategies to mark definiteness by using demonstratives (Kang, 2004). The regular high school students' higher rate of reference errors compared to the international high school students may be related to language curriculum differences.

With respect to the common errors that both groups of students produced, their narratives included similar number of errors in definites. These findings seem to agree partially with the results found by Kang (2005, 2009). Both the present study and Kang's (2005, 2009) research suggest that Korean EFL learners may find it difficult to utilize definite articles to mark given referents. The most frequent errors in definites are related to the overgeneralization of definite marking on NPs (Thomas, 1989). Some of both groups of students tended to use definite articles in first-mentioned contexts. Although international high school students may have had more opportunities to produce language than regular high school students, there was no difference between the two groups of students in terms of definite errors.

Conclusion

The present study found that curriculum differences had an effect on the reference use in international high school students' and regular high school students' narratives. Both groups of students showed similar patterns in their use of referential devices, but international high school students demonstrated more sophisticated uses of reference in producing cohesive written narrative discourses because they had developed their English language fluency while receiving English immersion education. Furthermore, regular high school students tended to be more cautious in using zero anaphora than international high school students, perhaps because they had not acquired the more sophisticated forms of language.

The study revealed further differences between the two groups' written language skills. In addition to their greater use of zero anaphora, the international high school students produced more clauses and fewer errors than the regular high school students. Specifically, although both groups of students made similar amounts of errors with definites, the regular high school students produced more errors with third-person singulars and demonstratives. These differences in reference errors may be due to their language learning environments, because the English immersion education offers more language input to the international high school students than the non-immersion curriculum offers to the regular high school students. These findings suggest that English immersion education may help students develop a variety of literacy skills.

Limitations and Future Directions

Although the present study found some initial evidence that English immersion was beneficial by comparing international high school students' and regular high school students' written narratives, it did not explore individual differences. Qualitative analysis could consider how individuals made linguistic choices as they produced their texts, and thus reveal individual differences, if they exist, and shed more light on the research questions of the study. More research on this topic, both quantitative and qualitative, is needed to learn more about curriculum differences, L2 referential strategies, and L2 choices about discourse form and structure. In addition, more elaborate studies, including longitudinal research, are required, and they should consider larger sample sizes categorized by gender, proficiency, and grade level. Nevertheless, in spite of its limitations, this study has taken a significant step toward understanding the effects of immersion education on Korean EFL learners' referential strategies.

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