

# Acquisition of the Non-Generic Definite Article in English: The Influence of Cognitive Style

Suzanne M. Prior (Corresponding author)

Department of Psychology, St. Thomas University

51 Dineen Drive, Fredericton, NB, E3B 5G3, Canada

Tel: 506-452-0497      E-mail: prior@stu.ca

Keiko Fujise

Department of Psychology, St. Thomas University

51 Dineen Drive, Fredericton, NB, E3B 5G3, Canada

E-mail: keiko.fujise@dal.ca

Kimberley D. Fenwick

Department of Psychology, St. Thomas University

51 Dineen Drive, Fredericton, NB, E3B 5G3, Canada

Tel: 506-452-0420      E-mail: fenwick@stu.ca

Received: May 1, 2014      Accepted: May 11, 2014      Published: June 27, 2014

doi:10.5296/ijl.v6i3.5567      URL: <http://dx.doi.org/10.5296/ijl.v6i3.5567>

## Abstract

The study examines the relationship between Japanese students' uses of the English non-generic definite article and the cognitive style of field dependence/independence. According to a model by Liu and Gleason (2002), the non-generic definite article consists of four types: textual, structural, situation, and cultural. We examined whether the first three types, which involve analysis of grammatical rules, may be easier to learn for field independent learners who are more analytical. We also investigated whether cultural use, which is largely based on social convention, may be easier for field dependent individuals

who have a more interpersonal orientation. Twenty-seven Japanese students studying in Canada completed a non-generic definite article test that involves filling in missing obligatory instances of *the*, the Group Embedded Figures Test that measures field dependence/independence, and four batteries of the Woodcock-Munoz Language Survey – Revised that together provide a measure of broad English ability. Textual and structural use were positively associated with a field independent style, over and above broad English ability. Other correlations were non-significant. Results are interpreted according to the type of cognitive learning required by the textual and structural uses of *the* and why these may be facilitated by a field independent orientation.

**Keywords:** Non-generic definite article, Cognitive style, Second language, Field independence, Field dependence, English as a second language

## 1. Introduction

The English article system is complex and difficult for English as a Second Language (ESL) students due to its frequency of use and complexity (Garcia Mayo, 2008). It is especially difficult to acquire for ESL students whose first language does not contain articles (Ekiert, 2004; Master, 1997; Miller, 2005; Thomas, 1989; Yamada & Matsuura, 1982). Japanese is one such language and its native speakers often struggle to learn when to use an article and which one is required. Adding to their challenge is the fact that Japanese lacks three semantic notions that are important when choosing the correct English article to appear with a noun or noun phrase: specific/non-specific, countable/uncountable, and singular/plural (Yamada & Matsuura, 1982).

Of these, the specific/non-specific distinction may pose the most significant problem for Japanese students of English (Hakuta, 1976). This distinction is particularly important for the non-generic definite article *the* which is used when a noun phrase is specific and the hearer/reader has knowledge of it. It is found, for example, in sentences in which a noun is mentioned for the second time (e.g., *I saw a red house downtown. The red house...*). To use it correctly, the speaker/writer must make a referent available to the listener/reader by providing it directly or by implying it through different kinds of known information (Liu & Gleason, 2002). This form of *the* is widely and frequently used and is relatively inflexible; that is, it cannot be replaced by the indefinite article or null case (Rahimi, 2013).

### 1.1 Uses of the Non-Generic Definite Article

Non-native speakers' difficulty in correctly using the non-generic definite article is also attributable to its different uses. Liu and Gleason (2002) describe four categories of use: textual, structural, situation, and cultural. Textual use occurs in utterances in which *the* is used to refer to a previously mentioned noun (e.g., *Anna bought a car yesterday. The car is blue*), or to a noun that is related to the previously mentioned noun (e.g., *I read a book about Toronto. The author, however, was from Alberta*). Structural use pertains to instances in which *the* is used with a first-mentioned noun that is modified (e.g., *Chelsea broke the bag she borrowed from Courtney*). Situation use is required when *the* is used with a first-mentioned noun that can be perceived directly or indirectly by the interlocutors (e.g., *Please pass me the milk*), or when the referent is assumed to be known to the members of a local community (e.g., *Let's meet at the bank* - referring to the only bank in town). Finally, cultural use occurs when *the* is followed by a noun that is unique and well-known in a speech community (e.g., *The Obamas now live in the White House*) (Liu & Gleason, 2002). Cultural use is particularly challenging because the rules are complex and numerous, and it is largely based on social convention. The speaker/writer has to know, assume, and employ shared knowledge of the language community in order to use the cultural form correctly (Liu & Gleason, 2002).

Using the above classification system, Liu and Gleason (2002) devised a test of ESL students' understanding of the uses of the non-generic definite article. The test requires learners to fill in missing obligatory instances of *the* in a number of sentences. The authors examined whether the four types are equally difficult for ESL students at differing levels of

proficiency (beginner, intermediate, advanced) and whether they are learned simultaneously. They found that overall error rates decreased significantly as proficiency level increased. The mean error rates of all four categories in the intermediate group were significantly lower than those of the beginning learners. The comparison between the intermediate and advanced groups was more complex, whereby a significant decrease in errors was only found for the structural and textual uses (Liu & Gleason, 2002). The authors concluded that the acquisition of the non-generic definite article followed a natural order in which situation use was acquired first, followed by structural and textual use, and finally cultural use (Liu & Gleason, 2002). A study using Liu and Gleason's measure also found for a sample of Mandarin Chinese and Malay speakers (whose languages lack an article system) that situation use was easiest for the learners, followed by textual and structural use. Cultural use was the most difficult (Wong & Quek, 2007). This hierarchy of difficulty was also confirmed with a sample of Spanish speakers whose language has an article system (Garcia Mayo, 2008).

### *1.2 Cognitive Style*

Clearly the non-generic definite article is challenging linguistically for ESL students and their acquisition of this grammatical structure varies across the four uses. In the present study, we build on this research by examining whether ESL students' mastery of the uses of the non-generic definite article is also influenced by a non-linguistic factor, namely the learners' cognitive styles. We investigated this relationship in a sample of Japanese students. We focused on Japanese learners because we wished to hold the first language of the participants constant and because Japanese lacks an article system. Thus the non-generic definite article is a particularly challenging grammatical structure to learn. It is an intriguing question whether learners' cognitive styles may influence their mastery of this complex structure and whether the influence is the same across the four uses. The non-generic definite article provides a unique opportunity to examine the influence of cognitive style on second language learning. The acquisition of three of the four uses (situation, structural, textual) may be aided by a propensity that facilitates the analysis of grammatical rules. Acquisition of the cultural use, on the other hand, may be facilitated by a tendency to be sensitive to information conveyed via social interaction. Does a learner's cognitive style lead her/him to be better at learning situation, structural, and textual uses compared to the cultural use (and *vice versa*)?

### *1.3 Field Dependence/Independence (FD/I)*

Cognitive style is an individual's preferred approach to solving a problem and is distinct from intellectual competence (Saracho, 2003; Waber, 1989). Cognitive style captures qualitative differences in the ways that people organize and process information and the sorts of problems that are most compatible with their style (Bialystok, 2001). Field dependence/independence (FD/I) is a cognitive style that addresses how individuals perceive and process information and how they relate themselves to the environment (Chapelle & Green, 1992). It is one of the most widely studied dimensions of cognitive style in both psychological and educational fields, including second language studies and instruction (Evans, Richardson, & Waring, 2013; Khodadady & Zeynali, 2012; Meng et al., 2012). Broadly defined, FD/I 'reflects a difference in the extent to which people perceive entire

fields (field-dependent) or isolated components of a field (field-independent)' (Bialystok & Hakuta, 1994, p. 148).

This mode of processing is particularly evident in situations that contain ambiguous information or ones that elicit cognitive conflict (Johnson, Prior, & Artuso, 2000). In such situations, FD and FI individuals tend to perform differently. FD persons tend to be non-analytical and perform poorly in situations with ambiguous information. They prefer to rely on external sources of content in their approach to solving problems and sometimes this external information can be misleading. They tend to focus on social aspects of situations, are well-attuned to social cues, and favour being with people (Johnson et al., 2000; Saracho, 2003; Witkin, Moore, Goodenough, & Cox, 1977). Thus they have a more external orientation and tend to approach learning from an observer perspective (Saracho, 2003).

In contrast, FI individuals are more analytical and are more apt to perceive one aspect of the environment as discrete from the surrounding environment (Saracho, 2003; Witkin et al., 1977). These tendencies allow them to sort through information and to ignore misleading cues. They are able to analyze and solve a problem independently of external referents, whether those referents are the external perceptual field or other individuals with whom they are interacting (Johnson et al., 2000; Witkin & Goodenough, 1981). FI persons tend to set themselves aside from the environment and have a more impersonal orientation. They tend to approach learning by testing hypotheses (Saracho, 2003).

Individuals are positioned along the FD/I continuum, with FI and FD at the end poles (Saracho, 2003; Khodadady & Zeynali, 2012, Meng et al., 2012). It should be noted that the FD/I dimension is meant to be value-neutral (Chapelle & Green, 1992; Johnson et al., 2000). That is, neither end of the dimension is considered superior to the other. Rather, in some circumstances, one pole may be more advantageous than the other (Witkin & Goodenough, 1981). The difference between the poles can be thought of as the manner in which individuals perceive information, rather than the accuracy with which they perceive it (Chapelle & Green, 1992). FI tends to be more advantageous for perceptual and cognitive tasks that require cognitive restructuring, whereas FD tends to be more adaptive for tasks requiring interpersonal relations or competencies (Chapelle & Green, 1992; Johnson et al., 2000; Saracho, 2003; Witkin & Goodenough, 1981).

The FD/I construct and its measures have been the subject of criticism (Bialystok, 2001; Bialystok & Hakuta, 1994; Griffiths & Sheen, 1992). FD/I is typically assessed with the Embedded Figures Test (EFT) or the Group Embedded Figures Test (GEFT) (Oltman, Raskin, & Witkin, 1971). These tests present a series of complex drawings which contain embedded simple figures. The participant must locate specified simple figures within the complex drawings. In the EFT, the participant's score is calculated as the length of time she/he takes to find the embedded figure. In the GEFT, the score is determined by the number of shapes found within a specified time limit. Maximal performance on the tests is associated with FI and thus critics have argued that the test confounds ability with style (Bialystok, 2001; Bialystok & Hakuta, 1994; Griffiths & Sheen, 1992). In other words, good performance is labelled FI and poor performance or a lack of performance is labelled FD; consequently it is

argued that the EFT and GEFT simply measure ability or high task performance. With respect to second language acquisition, critics also suggest that there is no reason to assume that the act of locating geometric shapes within a complex field would be related to linguistic rule induction (Griffiths & Sheen, 1992).

Proponents of the FD/I construct argue, however, that it has both ability and stylistic components and remains a valid construct that is reflected in performance on the EFT or GEFT (Davis, 1991). Others suggest that the advantage shown for FI in the EFT and GEFT measures is attributable to the processing demands of the tasks, rather than to a confound of ability and style (Johnson et al., 2000). From this perspective, FI individuals are better able to meet the processing demands of tasks like the EFT and GEFT. That is, these tests require participants to ignore the complex drawing or gestalt, divide the drawing into its less salient component parts, and find the appropriate embedded figure. This requires the application of learned executive structures that can be applied to misleading situations. The participant must interrupt the tendency to focus on the whole or gestalt and must focus mental attention on the parts (see Johnson et al., 2000 for an analysis of the processing demands of the EFT and GEFT). Because FI individuals are more analytical and better able to ignore external information, they perform better on the EFT and GEFT (Johnson et al., 2000). Their style is a propensity or mode of processing that gives them an advantage on these tasks, rather than a performance competency (Johnson et al., 2000; Messick, 1994). Moreover, because it is a mode of processing, FD/I applies to diverse situations that require such processing, linguistic or otherwise.

Proponents of the FD/I construct also argue that it is related to different aspects of linguistic competence and to the effectiveness of different teaching strategies and testing methods for second language learners (for reviews, see Chapelle & Green, 1992; Tinajero & Páramo, 1998). For example, evidence suggests that FD is positively related to more communicative measures of second language achievement, such as metaphor fluency and teachers' ratings of learners' communicative skills (Johnson & Rosano, 1993; Johnson et al., 2000). A metaphor fluency test requires individuals to generate as many metaphors as possible in response to ambiguous metaphoric sentences (Johnson & Rosano, 1993; Johnson et al., 2000). FD individuals' interpersonal orientation appears to facilitate the acquisition of these kinds of communicative tasks that reflect functional competence in the second language (Johnson et al., 2000; Khodadady & Zeynali, 2012).

FD has also been found to be related to second language learners' performance on tests that require more holistic processing, such as true-false, outlining, and elicitation tasks (Salmani-Nodoushan, 2007). For example, a study of Iranian English as a Foreign Language (EFL) students found that FD individuals outperformed their FI counterparts on tasks that required them to read passages, gain an overall understanding of the texts, and then to answer questions that preceded or followed the passages. Such tasks are more field-based and do not require analytic skills to find details embedded within the whole (Salmani-Nodoushan, 2007). By contrast, FI students outperformed their FD peers on tasks involving sentence-completion and scanning. These kinds of tests require students to find and isolate specific information within the passages so they can answer questions. The analytic nature of FI participants help

them to find the information embedded within the passages (Salmani-Nodoushan, 2007). These findings show that both FD and FI can be supportive of second language learning, depending on the type of testing employed.

FI has also been found to be positively related to more formal measures of second language achievement, such as scores on the Test of English as a Foreign Language (TOEFL) and on measures of grammatical knowledge (Hansen & Stansfield, 1981; Jamieson, 1992). FI individuals' superior restructuring ability seems to facilitate linguistic analysis that leads to the acquisition of formal competence in the second language which is seen on formal tests and in the classroom (Johnson et al., 2000; Khodadady & Zeynali, 2012).

Taken together, the research on FD/I and second language learning suggests that FD learners perform better on measures of communicative proficiency or on aspects of language that are facilitated by social interaction, as well as tasks that require understanding the whole of a passage or conversation, rather than individual parts. In contrast, FI students show superior performance on academic language proficiency measures or on aspects of language that require more formal learning and analysis of rules or details of passages or conversations (Johnson et al. 2000; Rezaeian, 2012).

## 2. Purpose of the Study

As stated above, the non-generic definite article provides a unique opportunity to examine the potential relationship of FD/I with second language learning as it consists of three uses that may be aided by an analytical approach, and one use that may be facilitated by a more interpersonal orientation. With this in mind, we examined the influence of Japanese students' cognitive style on their acquisition of the four uses of the English non-generic definite article. Because of their externally oriented style, FD individuals should be better at learning the cultural use of *the* because it is largely based on convention. The ability to learn from interpersonal communication with native speakers who are using the conventions may make it easier for FD individuals to acquire the cultural use. Conversely, since FI individuals tend to be more analytical, they should be better at correctly using the textual, structural, and situation forms of *the* as these require analysis of relatively straightforward grammatical rules. To examine these assertions, we obtained participants' scores on the GEFT (Oltman et al., 1971) and on Liu and Gleason's (2002) test of the non-generic definite article. We also obtained participants' scores on a measure of English proficiency that we partialled out of the analyses in order to ensure that English ability was not accounting for the findings. We explored two hypotheses: (1) that there would be a negative correlation between FD/I scores and scores on the cultural use of *the*; and (2) that there would be a positive correlation between FD/I scores and scores for the situation, textual, and structural uses of *the*.

## 3. Method

### 3.1 Participants

Participants were 27 Japanese students (23 women, 4 men;  $M$  age = 21.92 years,  $SD$  = 1.14) studying at two Canadian universities located in New Brunswick. The sample included students in undergraduate degree programmes and in an English Language Program. Japanese

was the first language of all participants. On average, they had been studying English for 9.64 years ( $SD = 1.87$ ) and had been living in an English-speaking environment for 2.31 years ( $SD = 1.46$ ).

### 3.2 Materials and Procedure

#### 3.2.1 Cognitive Style Measure

The Group Embedded Figures Test (GEFT) is a standardized test used to measure FD/I developed by Oltman et al. (1971). It is a group administered, timed pencil-and-paper task in which participants must find and trace simple figures embedded in complex drawings. Participants' scores are calculated by assigning one point for each drawing in which they correctly trace the embedded figure. The maximum score is 18. A higher score is associated with a more FI orientation. In the present study, a sample of 10 completed test booklets was scored independently by two raters. Inter-rater agreement was 100%.

#### 3.2.2 English Ability Measure

The Woodcock-Munoz Language Survey – Revised (WMLS-R) is a standardized, individually administered English proficiency test (Alvarado, Ruef, & Schrank, 2005). It is designed to measure cognitive-academic language proficiency. The test consists of seven batteries measuring students' listening, speaking, reading, and writing abilities. Four test batteries (Picture Vocabulary, Verbal Analogies, Letter-Word Identification, and Dictation) were used in the present study that together provide a Broad English Ability score (Alvarado et al., 2005). The participants' responses were scored by a licensed psychologist with extensive psychometric experience. In the present study, this score was partialled out in the statistical analyses examining the relationship between FD/I and the four uses of the non-generic definite article. This procedure allowed us to examine the relationship between FD/I and non-generic definite article usage over and above general English ability.

#### 3.2.3 Non-Generic Definite Article Measure

A 91-sentence instrument developed by Liu and Gleason (2002) was used to test the participants' use of the four types of the non-generic definite article. It consists of 51 sentences with a total of 60 deleted obligatory uses of *the* (15 per use) and 40 sentences that were distracters or control items in which *the* is not required (Liu & Gleason, 2002). Participants are asked to read the sentences and insert *the* wherever they deemed necessary. Consistent with Liu and Gleason, blanks were not used for the missing obligatory uses of *the* or the distracters. Participants simply inserted *the* wherever they believed it was missing. Their responses were scored as correct/incorrect and an overall score for each participant was computed as a percentage. The instrument has been found to have good reliability with a Kuder-Richardson 20 reliability test score of .843 (Liu & Gleason, 2002). Two raters independently scored 10 randomly selected test booklets. Percentage agreement between the raters was 98.

## 4. Results

The mean percentage of correctly identified missing obligatory items for each of the four uses



of the non-generic definite article was computed (see Table 1). Outliers were identified using SPSS Boxplot and were removed from the analyses. A repeated measures ANOVA indicated a significant difference among the four types,  $F(3, 21) = 15.964$ ,  $p < .001$ , partial  $\eta^2 = .695$ . Pair-wise comparisons ( $p < .001$ ) revealed that scores for the cultural use were significantly lower than those for the other three types. All other differences were non-significant.

Table 1. Mean Percentage of Correct Answers and Standard Deviations for the Four Non-Generic Uses of the Definite Article

<i>Use</i>	<i>Mean</i>	<i>SD</i>
Textual	88	0.09
Situation	90	0.10
Structural	89	0.10
Cultural	57	0.21

Pearson partial correlation coefficients (Broad English Ability partialled out) were computed among the FD/I scores and the scores for each of the four uses of the non-generic definite article. Since there was a prediction of direction, significance was examined with one-tailed tests. As can be seen in Table 2, positive correlations were found between the FD/I scores and the textual use and structural use scores. Textual use and structural use scores were also positively correlated.

Table 2. Pearson Partial Correlation Coefficients Among the FD/I Scores and the Mean Percentage of Correct Answers for each of the Four Uses of the Non-Generic Definite Article

<i>Measures</i>	1	2	3	4	5
<i>1 FD/I</i>					
<i>2 Textual</i>	.49**				
<i>3 Structural</i>	.40*	.48*			
<i>4 Situational</i>	.33	.01	.33		
<i>5 Cultural</i>	.08	.04	.08	.04	

*Note.* Broad English Ability was partialled out

\* $p < .05$ , \*\* $p < .01$

## 5. Discussion

Consistent with previous studies (Garcia Mayo, 2008; Liu & Gleason, 2002; Wong & Quek, 2007), we found that the situation use of the non-generic definite article was easiest for ESL

learners, followed by the structural and textual uses, although the differences among these three types were non-significant. Scores for the cultural use were significantly lower than those for the other types. These findings lend further support to Liu and Gleason's (2002) claims regarding the order of acquisition of the four uses, as well as the particular difficulties that second language learners have in acquiring the cultural use.

The predictions regarding the structural and textual uses and cognitive style were supported. The significant positive correlations indicate that higher scores on the GEFT, indicating a more FI style, were associated with higher scores for these two types of the non-generic definite article. It is important to note that Broad English Ability was partialled out of the analyses and thus superior ability in English does not account for these findings. Contrary to our predictions, situation and cultural uses were not significantly related to the GEFT scores.

Why might the structural and textual uses be related to a more FI style? The type of learning and analysis required to use these forms successfully may account for the findings. According to Liu and Gleason (2002), these uses involve more cognitive learning than the other types. That is, these forms require the analysis of structural and textual information in order to identify the known information that necessitates the use of *the* with the noun in question (Liu & Gleason, 2002; Rahimi, 2013). Such analysis may rely on learned executive structures in order to locate and identify the information and then to insert *the* appropriately. This kind of analysis and use of learned executive structures is a hallmark of the FI style (Johnson et al., 2000). Notably, the textual and structural uses are not only associated with a more FI style; they are also positively correlated. No other correlations among the four types were found. The positive association between the textual and structural uses lends further support to the argument that they involve a distinct kind of learning and processing that are different from the other types.

Looking more closely at the textual use, a previously mentioned noun must be identified, kept in mind, and its relationship to the noun requiring *the* must be understood. Moreover, in some instances, the previously mentioned noun will be preceded by the indefinite article (e.g., *I walked a dog yesterday. The dog was a sheltie*). In such cases, the indefinite article will be perceptually salient and any temptation to repeat this salient article must be suppressed. In other cases, sentences with textual use will be of the associative anaphoric type in which the noun in question is associated with the previously mentioned noun, rather than being the same one (e.g., *I saw a new painting. The artist is Dutch*) (Garcia Mayo, 2008). FI individuals, who are more analytical and able to sort through information and focus on critical aspects of the task, may be better able to meet the requirements of textual use. In other words, they can meet the processing demands of sentences that require textual use by focusing on the parts (the nouns and their relationship), rather than the gestalt (the entirety of the communication and overall meaning, as well as any distracting information such as a preceding indefinite article).

Similarly, the processing demands of the structural use may be best met by a more FI style. For this use, a first-mentioned noun must be identified, as well as a modifier and its relationship to the noun. As with textual use, a propensity to focus on the parts (the noun, the

modifier, and their relationship) may lead FI individuals to identify more readily that *the* is required.

Contrary to predictions, the scores on the GEFT were not positively related to scores for the situation use, even though the mean rate of correctly identifying when situation use was required was similar to the rates for the textual and structural uses. Although this type, like the structural and textual uses, requires analysis of relatively straightforward grammatical rules, it also differs from these types in ways that may make it less influenced by a FI style. Situation use requires the referent associated with the noun to be perceived directly or indirectly by the interlocutors, or to be known to members of a local community (Liu & Gleason, 2002). Liu and Gleason (2002) argue that this use employs the five senses, and requires a more kinesthetic, auditory, tactile, and visual learning, rather than the kind of cognitive learning associated with the structural and textual uses. As a consequence, the FI style may not be as advantageous in identifying situation uses that require *the*. The FD style may also not be particularly helpful in learning this use of the non-generic definite article because this style has a propensity toward more interpersonal or social learning, rather than sensory learning.

As stated above, the participants' performance on the cultural use items was much poorer (only 57% correct) compared to their performance for the other types (ranging from 88-90% correct). Although their difficulty with this use is consistent with findings from previous studies (Garcia Mayo, 2008; Liu & Gleason, 2002; Rahimi, 2013; Wong & Quek, 2007), their poor performance in the present study may also be attributable to the cultural use items in the questionnaire. These items contained references that are commonly known in the United States, but are less familiar and less frequently used in other countries (e.g., *The Mojave Desert, Congress, Lake Michigan*). For Japanese students studying in Canada, these may have been unfamiliar and difficult to answer correctly regardless of the participants' cognitive style. Future studies should adapt the questionnaire to contain references used more frequently in the country in which the ESL students are living (e.g., in Canada: *The Senate, Parliament, Lake Winnipeg*).

Cultural use was found to be unrelated to cognitive style, including a more FD style. This is surprising as cultural use is often conventional and requires shared knowledge of the language community. Moreover, the learner must often simply memorize when *the* is required for cultural use (Liu & Gleason, 2002; Rahimi, 2013). Conventions that need to be memorized are likely best acquired through a propensity to learn through interactions with others in order to have enough opportunities of exposure to different instances of cultural use to support the memorization. Such interactions and the ability to learn from them are more likely to occur with FD individuals who have a more interpersonal orientation. Why then were cultural use scores unrelated to GEFT scores?

One possibility, as stated above, is that the questionnaire was culturally biased with American examples and was simply too difficult for participants, regardless of their cognitive style. It is also possible that the ESL students in the present study had not been in Canada long enough to have had enough exposure or conversations with native speakers to pick up the cultural

uses of the non-generic definite article. FD individuals, who are better at content learning and have a richer repertoire of content-bound and automatized structures (Johnson et al., 2000), still need sufficient exposure to the content (instances of cultural use) in order to develop automatized responses using the non-generic definite article. In future, it would be interesting to extend this research to a sample of ESL speakers who have resided longer in the English speaking country.

### 5.1 Conclusions

In sum, the non-generic definite article and its four uses provided an interesting context in which to examine how cognitive style may influence second language learning. Further research with different samples of ESL or EFL students will shed further light on this relationship. The results of the present study lend support to the claim that FD/I is indeed associated with some aspects of second language acquisition. A FI style was related, over and above Broad English Ability, to the correct usage of two forms of the non-generic definite article (textual and structural) that involve cognitive learning. If FD/I as measured by the GEFT were simply a measure of ability or intellectual competence, then one would expect to see an advantage of FI for all uses of the non-generic definite article, and particularly for the high performance associated with situation use; however, this was not the case. Future research that makes adjustments for the cultural use items as suggested above may find that a FD style is related to cultural use. This would strengthen the evidence in favour of the argument that cognitive style influences some facets of second language acquisition and learning. With respect to the non-generic definite article of English, a variety of activities and tests in the classroom that taken into account both FD and FI styles will likely assist students in mastering this difficult grammatical structure.

### References

- Alvarado, C. G., Ruef, M. L., & Schrank, F.A. (2005). *Woodcock-Munoz language survey – revised*. Itasca, IL: Riverside Publishing.
- Bialystok, E. (2001). *Bilingualism in development: Language, literacy, and cognition*. New York, NY: Cambridge University Press.
- Bialystok, E., & Hakuta, K. (1994). *In other words: The science and psychology of second-language acquisition*. New York, NY: Basic Books.
- Chappelle, C., Green, P. (1992). Field independence/dependence in second language acquisition research. *Language Learning*, 42, 47-83. <http://dx.doi.org/10.1111/j.1467-1770.1992.tb00700.x>
- Davis, J. K. (1991). Educational implications of field dependence–independence. In S. Wapner and J. Demick (eds.), *Field Dependence–Independence: Cognitive Style Across the Life Span* (pp. 149–175). Hillsdale, NJ: Erlbaum.
- Ekiert, M. (2004). Acquisition of the English article system by speakers of Polish in ESL and EFL settings. *Teachers College, Columbia University Working Papers in TESOL & Applied Linguistics*, 4, 1-23.

- Evans, C. E., Richardson, J. T. E., & Waring, M. (2013). Field independence: Reviewing the evidence. *British Journal of Educational Psychology*, 83, 210-224. <http://dx.doi.org/10.1111/bjep.12015>
- Garcia Mayo, M. D. P. (2008). The acquisition of four non-generic uses of the article *the* by Spanish EFL learners. *System*, 36, 550-565. <http://dx.doi.org/10.1016/j.system.2008.08.001>
- Griffiths, R., & Sheen, R. (1992). Disembedded figures in the landscape: A reappraisal of L2 research on field dependence/independence. *Applied Linguistics*, 13, 133-148. <http://dx.doi.org/10.1093/applin/13.2.13>
- Hakuta, K. (1976). A case study of a Japanese child learning English as a second language. *Language Learning*, 26, 321-351. <http://dx.doi.org/10.1111/j.1467-1770.1976.tb00280.x>
- Hansen, J., & Stansfield, C. (1981). The relationship of field dependent-independent cognitive styles to foreign language achievement. *Language Learning*, 31, 349-367. <http://dx.doi.org/10.1111/j.1467-1770.1981.tb01389.x>
- Jamieson, J. (1992). The cognitive styles of reflection/impulsivity and field independence/dependence and ESL success. *The Modern Language Journal*, 76, 491-501. <http://dx.doi.org/10.1111/j.1540-4781.1992.tb05398.x>
- Johnson, J., Prior, S. M., & Artuso, M. (2000). Field dependence as a factor in second language communicative production. *Language Learning*, 50, 529-567. <http://dx.doi.org/10.1111/0023-8333.00137>
- Johnson, J., & Rosano, T. (1993). Relation of cognitive style to metaphor interpretation and second language proficiency. *Applied Psycholinguistics*, 14, 159-175. <http://dx.doi.org/10.1017/S014271640000953X>
- Khodadady, E., & Zeynali, S. (2012). Field-dependence/independence cognitive style and performance on the IELTS listening comprehension. *International Journal of Linguistics*, 4, 622-635. <http://dx.doi.org/10.5296/ijl.v4i3.2389>
- Liu, D., & Gleason, J.L. (2002). Acquisition of the article *the* by nonnative speakers of English: An analysis of four nongeneric uses. *Studies in Second Language Acquisition*, 24, 1-26. [http://dx.doi.org/10.1016/S0346-251X\(97\)00010-9](http://dx.doi.org/10.1016/S0346-251X(97)00010-9)
- Master, P. (1997). The English article system: Acquisition, function, and pedagogy. *System*, 25, 215-232. [http://dx.doi.org/10.1016/S0346-251X\(97\)00010-9](http://dx.doi.org/10.1016/S0346-251X(97)00010-9)
- Meng, X., Mao, W., Sun, W., Zhang, X., Han, C., Lu, C., Huang, Z., & Wang, Y. (2012). Event-related potentials in adolescents with different cognitive styles: Field dependence and field independence. *Experimental Brain Research*, 216, 231-241. <http://dx.doi.org/10.1007/s00221-011-2919-1>
- Messick, S. (1994). The matter of style: Manifestations of personality in cognition, learning, and teaching. *Educational Psychologist*, 29, 121-136. [http://dx.doi.org/10.1207/s15326985ep2903\\_2](http://dx.doi.org/10.1207/s15326985ep2903_2)

- Miller, J. (2005). Most ESL students have trouble with articles. *International Education Journal*, 5, 80-88.
- Oltman, P., Raskin, E., & Witkin, H. (1971). *Group Embedded Figures Test*. Palo Alto: Consulting Psychologists Press.
- Rahimi, H. (2013). Evaluating the effectiveness of deductive and inductive form-focused instruction on implicit and explicit knowledge of non-generic definite article. *Global Journal of Foreign Language Teaching*, 3, 113-131.
- Rezaeian, M. (2012). An investigation into the relationship between field dependence/independence, sex, and age, toward EFL proficiency in Iranian language learners. *The Iranian EFL Journal*, 8, 82-98.
- Salmani-Nodoushan, M. A. (2007). Is field dependence or independence a predictor of EFL reading performance? *TESL Canada Journal*, 24, 82-108.
- Saracho, O. (2003). Matching teachers' and students' cognitive styles. *Early Child Development and Care*, 173, 161-173. <http://dx.doi.org/10.1080/03004430303097>
- Thomas, M. (1989). The acquisition of English articles by first- and second-language learners. *Applied Psycholinguistics*, 10, 335-355. <http://dx.doi.org/10.1017/S0142716400008663>
- Tinajero, C., & Páramo, M.F. (1998). Field dependence–independence cognitive style and academic achievement: A review of research and theory. *European Journal of Psychology of Education*, 13, 227–251.
- Yamada, J., & Matsuura, N. (1982). The use of the English article among Japanese students. *RELC Journal*, 13, 50-63. <http://dx.doi.org/10.1177/003368828201300104>
- Waber, D. (1989). The biological boundaries of cognitive styles: A neuropsychological analysis. In T. Globerson, & T. Zelniker (Eds.), *Cognitive Style and Cognitive Development* (pp.11-35). Norwood, New Jersey: Ablex Publishing Corporation.
- Witkin, H. A., Moore, C. A., Goodenough, D. R., & Cox, P. W. (1977). Field-dependent and field-independent cognitive styles and their educational implications. *Review of Educational Research*, 47, 1-64. <http://dx.doi.org/10.2307/1169967>
- Wong, B. E., & Quek, S. T. (2007). Acquisition of the English definite article by Chinese and Malay ESL learners. *Electronic Journal of Foreign Language Teaching*, 4, 210-234.

### Copyright Disclaimer

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).