Who Can Guess Better? The Relationship Between Word Class and Learners' Style

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Abstract

The present study investigated the relationship between words' part of speech (noun, verb, adjectives), guessing ability, and learners' style of field independence/ dependence. One hundred thirty two subjects participated in the study. The participants were required to guess the meaning of non-sense words belonging to certain word categories. The results of the study showed that a word's part speech will influence the ease with which its meaning is guessed. In addition, the study found that there is a positive relationship between the cognitive style of field independence and the learners' guessing ability.

1.Introduction

When reading a text in English, learners should not be discouraged by the fact that there may be many words that they do not know. It is not necessary for them to stop continually in order to look up meaning of words in a dictionary. One of the most useful strategies for dealing with unknown words encountered while reading is to guess their meaning by using contextual cues. Dycus (1997) states that numerous studies have been done and much research has been gathered on the reading strategies that involve guessing (e.g. Mondria and Bore, 1991; Arden-Close, 1993; Kopeika, 2000; Nation, 2001). Findings indicate that guessing is a popular strategy adopted by numerous educators.

Although it was initially presented as a means of teaching the meaning of unknown words from context to native L1 learners, the "guessing strategy" has been applied to L2 learning as well (Dycus,1997). Justification for applying it to L2 reading has come from cognitive science models of reading and schema theory, which are now widely accepted in ESL/EFL circles. This is especially true of models that emphasize top-down processing, with Goodman's (1967) famous characterization of reading as a psycholinguistic guessing game as probably the most influential (Dycus,1997).

Another claim in support of the guessing strategy is that it involves generalizable skills of interpreting surrounding text,

predicting, and testing predictions while reading, which enhance reading skills as a whole (Coady and Nation, 1988; Liu and Nation, 1985). In addition, guessing has been advocated instead of dictionary use because stopping to use a dictionary interrupts the flow of reading (Brown, 1972). Critchley (1998) for instance, argues that when students turn to a dictionary for every word they do not understand, they lose sight of the meanings within the text as a whole. Teachers and textbook designers have come to understand this, and the result has been a movement toward the explicit instruction of fluency-oriented learning strategies such as guessing from context (Altman, 2002).

A procedure for guessing from context begins with deciding whether the word is important enough (e.g., is part of an important idea and/or is repeated often). Once learners decide that a word is worth guessing, they might follow a five-step procedure like the one proposed by Nation and Coady (1988):

1. Determine the part of speech of the unknown word.

2. Look at the immediate context and simplify it if necessary.

3. Look at the wider context. This entails examining the clause with the unknown word and its relationship to the surrounding clauses and sentences.

4. Guess the meaning of the unknown word.

5. Check that the guess is correct.

Guessing from context is a complex and often difficult strategy to carry out successfully. To guess successfully from context, learners need to know about 19 out of every 20 words (95%) of a text, which requires knowing the 3000 most common words (Liu & Nation, 1985; Nation, 1990; Laufer, 1997). However, even if one knows these words, Kelly (1990) believes that "… there is little chance of guessing the correct meaning" (p. 203). There is always the possibility of failure in guessing the correct meaning of a word or phrase due to some pitfalls such as nonexistent contextual clues, unusable contextual clues, misleading or partial clues, or suppressed clues (Laufer, 1997).

Although some studies highlight the failure potential of specifying the meaning of unknown words by using contextual clues (Liu & Nation, 1985; Laufer, 1997), the strategy of guessing word meanings from context can not be completely discarded since it is impossible to memorize all lexical items in a target language.

Considering the importance of guessing strategy in EFL situation and the contrary views mentioned above, it seems that the studies on the factors affecting the guessing process in context are of great importance. Researchers have stated that a number of factors such as general language proficiency and critical level of vocabulary knowledge (Laufer, 1997), contextual richness (Barnett, 1988), the number of contextual clues (Carton, 1971) etc. might affect lexical guessing process in

context. To this list, Carnine et. al. (1984) added other influencing factors: the ratio of unknown words in texts, the distance between unknown words and contextual clues, and type of the contextual clues.

According to the aforementioned researches on reading strategies, it seems that the contextual factors are the most determining factors in guessing process. However Mondria and Bore (1991, p. 253) indicated that in addition to contextual factors there are two other groups of factors (whose importance should not be underestimated) that remain implicit in much research into the guessing of word meanings , namely word factors and learner factors (the factors that are determined by the person who is guessing).

Hunt (1996), in this regard, refers to part of speech as one of the constraints on inferring word meaning from context. He also considers five steps for guessing the meaning of unknown word in context. Determining the part of speech and comparing the guess to the unknown word's part of speech are among the steps he suggested for inferring word meaning from context.

Among the factors that are determined by the person who is guessing, i.e. the "reader/learner factor" (Mondria and Bore 1991), cognitive style can be considered as one of the learner variables. There are differences in the way different people interact with the world and with the way in which they perceive and organize information. One of the most attractive differences

between individuals is the distinction between 'field dependence' and 'field independence'. 'Field' here means context or surroundings; some people are more, and some are less, influenced by the context when performing a skill or learning (Skehan, 1998; Williams and Burden, 1997).

Moreover, identifying reading processing strategies as they relate to field dependent/independent cognitive style is a new endeavor. There have been only a few studies relating the cognitive styles of FD/FI to reading processing (Provost, 1981; Fehrenbach, 1994). The present investigation was an attempt to look at guessing strategy in the context of FD/FI cognitive style.

In the present study, the researchers wanted to find out whether part of speech of a new word (as word factor) and field dependence/independence cognitive style of the learner (as learner factor) affect the EFL learners' ability to guess word meanings in context. Based on this idea two hypotheses were generated:

1. There is no significant relationship between parts of speech of new words and the EFL learners' ability to guess word meanings in context.

2. There is no significant relationship between FD/FI cognitive style and the EFL learners' ability to guess word meanings in context.

2. Method

One hundred thirty two senior English majors were randomly selected as the subjects of the study. The rational behind selecting senior English majors was to have more proficient subjects so that they would be able to make use of contextual clues to guess the meaning of intended words. Before the inception of data collection, a retired version of Michigan Proficiency Test was administered to make sure that the subjects were homogenous in terms of language proficiency. The subjects whose scores were 70 or more (out of 100) were considered as upper intermediate and advanced; students with low scores on Michigan were excluded from all the analyses. The remaining subjects (90 students) were randomly assigned into three groups. Each group was given a different test based on the parts of speech (noun, verb and adjective) of the underlined words whose meaning the subjects were to guess.

Three tests, one for nouns, one for verbs, and one for adjectives, were prepared for the experiment to measure the EFL learners' guessing ability. Each test was composed of 30 short passages that included some underlined words. The passages were chosen randomly from Barron's Essential Words for TOEFL (Matthiesen, 1999). The tests were presented in a multiple-choice format. The participants were asked to choose the word that had the same or similar meaning as the underlined

word in the passage. Each passage of tests had one original word that was replaced with a non-sense word and whose meaning the subjects were to guess. Laufer (1990) argues that "foreign words are just as meaningless to the FL learner as the non-sense words are to native speakers". The rational behind using non-sense words was to make the situation of the experiment equal for all the subjects and to decrease inter-individual variation as much as possible (because a word which is new for a student may be familiar for the other ones). This technique (i.e. the use of non-sense words) helped the researcher to minimize the risk of students' prior knowledge conflicting with the purpose of the experiment. Since the underlined words were non-sense, the students had to make use of contextual clues to guess the meanings of the unfamiliar words.

The three tests were the same in all aspects. They formed three sets of counterparts, each set was composed of the same passages that varied only in certain controlled dimension, and it was the parts of speech of the underlined words. Then, the tests were analyzed for the readability index. Flesch Reading Ease for the tests of noun, verb and adjective was 47.4, 46.9, and 47.9 respectively. The tests were pretested with 30 advanced students and based on their performance, item analysis was done. As a

result, some of the items were omitted or modified. One of the items of the prepared tests is presented here as an example.

Engineering geologists survey the geology of an area, and then prepare a geological map. One of their main responsibilities is to determine whether the geological structure of a location is **porger** for the building of huge structures like dams.

A. recoverable   B. extensive

C. suitable   D. delicate

Finally, the Group Embedded Figure Test (GEFT) was administered to assess the subjects' degree of field independence. Each item was composed of a complex picture with a specific simple picture embedded in it. The subjects were required to identify these simple figures in a given time (12 minutes). It is supposed that those who tend to rely on external cues are less able to find the simple figures and so are field dependent, and those who rely on internal cues were more able to find figures, hence, field independent (Skehan, 1998).

3. Results

After scoring the test papers, the results were analyzed first to estimate the reliability of the tests. Descriptive analysis was conducted to provide the raw data for KR-21 reliability estimate. The results of descriptive analysis are shown in table 1. As it is shown, the reliability of the tests is moderately high so the

prepared tests can be viewed reliable tests for measuring EFL learners' guessing ability.

Table 1. Descriptive analysis of test results

	Number of subjects	Mean score	Standard deviation	Reliability
Noun	45	18.84	5.14	0.76
Verb	41	18.27	5.31	0.77
Adjective	46	17.24	5.69	0.80
Michigan proficiency	132	79.35	6.68	0.80

In order to investigate the first hypothesis, which dealt with the relationship between part of speech of new words and the guessing ability of the subjects, based on the design of the study, the Statistical Package for Social Science (SPSS) was employed to perform One-Way ANOVA.

Table 2. One-way ANOVA

The learners' guessing ability for different parts of speech

TEST

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	352.956	2	176.478	9.174	.000
Within Groups	1673.533	87	19.236		
Total	2026.489	89			

The above table shows that there is a significant difference in the performance of the three groups on guessing tests. This implies the fact that parts of speech of the new words affect the EFL learners' guessing ability.

A close examination of the data reveals that adjectives differ significantly from both nouns and verbs (see table 3.). In other words, the grammatical category of the word influences guessing difficulty. Considering the mean scores of three groups (table 1), it seems that adjectives are the most difficult to guess; nouns, the easiest; and verbs, somewhere in between.

Post Hoc Tests

Table 3. Multiple Comparisons The learners' guessing ability for different parts of speech. Dependent Variable: TEST Scheffe

(I) speech	(J) speech	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
noun	verb	-.87	1.13	.747	-3.69	1.95
	adjective	-4.57*	1.13	.001	-7.39	-1.75
verb	noun	.87	1.13	.747	-1.95	3.69
	adjective	-3.70*	1.13	.007	-6.52	-.88
adjective	noun	4.57*	1.13	.001	1.75	7.39
	verb	3.70*	1.13	.007	.88	6.52

• The mean difference is significant at the .05 level.

   The second hypothesis was concerned with the question of whether there is any relationship between the subjects' cognitive style of field dependence/independence and their ability to guess new words from the context.

   The cognitive style of the students was determined by Group Embedded Figure Test (GEFT). Based on the number of correct answers given by the students, the scores on GEFT may range from 0 (the most field dependent) to 18 (the most field independent). Degrees of field-dependence or field-independence could be defined as a continuum with field dependence at one end and field independence at the other. In the middle of the continuum is the group termed as "field mixed (FM)" who do not have clear orientation like the group of FD or FI (Witkin et al., 1977). Table 4 summarizes the performance of the subjects on GEFT.

Table 4: GEFT descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Field independence /dependence	132	2	18	10.05	3.84

   Since there was no objective criterion to exactly place the subjects into FD or FI groups and considering FD/FI cognitive style as a continuum, the available data on students' guessing scores (0-30) and their performance on GEFT (0-18) simple regression was used to measure the degree of statistical association between the parts of speech and FD/FI cognitive styles.

Table 5. Coefficients

Regression Analysis of FI Cognitive Style & Guessing Ability

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	16.847	1.307		12.892	.000
	STYLE	.367	.122	.306	3.016	.003

a. Dependent Variable: TEST

The *Beta* value (i.e. 0.306 (table 5) demonstrates the strength of a relationship between two variables, which means that there is a positive relationship between field independence cognitive style and EFL learners' guessing ability and a student with a higher GEFT score (i.e. field independent learner) will have a higher guessing score. In other words, field independent learners are more successful in the use of guessing strategy. The results in table 5 also reveal the fact that this relationship is significant at .05 level.

To see whether the interaction of cognitive style and parts of speech makes any difference in the predictive power of GEFT, regression was run again for each group. The results are shown in table 6. Then a comparison was made between the degree of association of GEFT and guessing words of different grammatical categories (i.e. noun, verb and adjective).

**Table 6.** Coefficients Regression Analysis of FI Cognitive Style & Guessing Ability for three groups

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) noun	15.620	2.314		6.750	.000
	verb	14.766	2.294		6.436	.000
	adj.	20.132	1.672		12.040	.000
	STYLE noun	.304	.215	.258	1.414	.168
	Verb	.492	.219	.391	2.248	.033
	Adj.	.312	.153	.360	2.043	.050

a. **Dependent Variable: TEST**

It can be seen from the above table that the value of t is significant for all the tests except the test of nouns and there is a weak correlation between GEFT and tests of guessing nouns' meaning. In other words, there is no significant relationship between field independent/field dependent cognitive style and guessing the meaning of nouns in context. Since the category of nouns is the easiest to guess than the others (i.e. verbs and adjectives), it seems that both field independents and field dependents can easily guess the meaning of unknown word when it is a noun. Therefore, it may be concluded that the part of speech of the unknown words decreases the predictive power of field independent cognitive style in the category of nouns. The following figure helps to see the findings better.

Figure 1. Edited scatter plot of residuals against predictor scores (i.e. FD/FI cognitive style) with four regression lines for tests of guessing different parts of speech.

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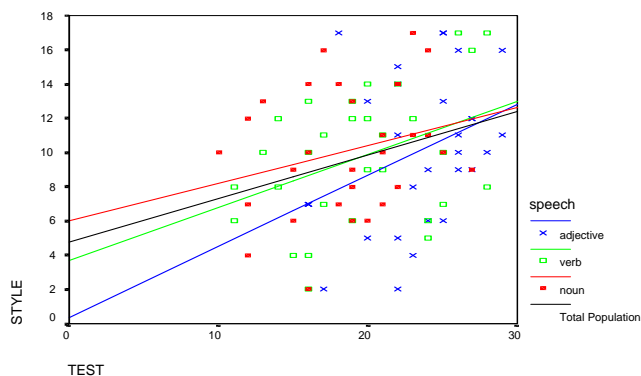
4. Discussion

The results are in line with the Mondria and Bore's (1991) speculation that the features of the unknown word (e.g. part of speech) may influence the guessing process. Not only the findings show that grammatical category of a word affects guessing word meaning from context, but also they provide more evidence for both Zingeser and Berndt (1988) and Miceli et al.'s (1984) statement that the lexicon is organized along word class categories, and that verbs constitute distinct categories from nouns. The results strongly suggest that guessing word meaning is influenced by the categorical organization of the lexicon.

The question now is why the grammatical category of a word should have such an affect on the learners' successful use of guessing strategy. The answer may be found not in linguistic but in conceptual factors. The degree of concreteness or abstractness is not the same among words of different grammatical categories. Gentner (1978) hypothesized that the category of nouns is conceptually simpler than that of verbs (nouns are

usually more concrete, more tangible, and higher in imagery than verbs or adjectives) and suggested that this distinction accounts for the higher number of nouns than verbs in early child language. Concrete words (esp. the category of nouns) are the easiest to learn (Laufer, 1990). This mental lexicon would then be carried over and strengthened into adulthood and would later influence the way in which an L2 is learned (Yeni-Komshian et al., 2001). As it was shown in this research, the category of nouns is the easiest to guess while the category of adjectives is the most difficult, perhaps, because adjectives are more abstract.

The presented data (see Table 5) show a consistent association between field independence and performance on measures of guessing strategy. That is, field-independent subjects score better in guessing the meaning of unknown words in context. This result is in line with Hansen-Strain's (1984) finding that there was a significant positive relationship between field-independence and score on cloze test (if we assume that the nature of guessing word meaning in context is similar to cloze test).

The findings of this study suggest that field independent students may have an advantage over field dependent students in this area of L2 learning and so support Provost's (1981) suggestion that field independents may employ more effective cognitive strategies in reading than field dependents. The

justification for field independent learners' successful use of guessing strategy may be due to the fact that field independents are able to restructure text, whereas field dependents are not (Witkin et al., 1962) and field independents reread significantly more than did field dependents (Fehrenbach, 1994). These abilities enable field independent students to construct a more complete understanding of the context surrounding the unfamiliar word, and improve their ability to guess the meaning of new words. It seems that field independent learners tend to approach context analytically (Skehan, 1998) and are more sensitive to contextual clues and so are better guessers.

However, the interaction of field independence cognitive style and part of speech influences the predictive power of GEFT (a measure for field independence). That is, there is no significant difference between field independence/field dependence cognitive style and guessing the meaning of nouns in context (see table

5).The answer may be found in the fact that field independent individuals are able to analyze abstract information more successfully while field dependents are concrete learners (Skehan, 1998). Since verbs and adjectives are conceptually more abstract than nouns, field independent learners (those who are oriented to abstractions) are more successful in guessing the meaning of verbs and adjectives in context. However, concrete words (esp. in the category of noun) are the easiest to learn (Laufer, 1990) and also they seem to be the easiest to guess. Therefore both field

independents and field dependents can easily guess the meaning of an unknown word when it is a noun.

In the process of guessing there is a distinct interaction between contextual factors, word factors, and reader/learner factors; in this interaction the relative importance of the factors with respect to one another may vary considerably (Mondria and Bore 1991).

5. Conclusion

Developing students' strategies for handling unknown words has always been one of the principal challenges of English reading classes. In many educational contexts, the usual approach to this challenge is to have students only read passages in which every word is known, or else allow them to consult a dictionary or the teacher for the definition of every new word in the passage. Too much dictionary work may kill all interest in reading and even interfere with comprehension (Brown, 1972), because readers become more concerned with individual words and less aware of the context that gives them meaning (Critchley, 1998). It also results in very slow and inefficient reading. Every time students are told the meaning of a word, they lose an opportunity in building their own strategies to cope with unknown vocabularies. The solution, then, is to help less successful students to develop a greater metacognitive awareness of the reading and learning process.

To enhance a contextual way of learning and expanding vocabulary, teachers need to know how to train students in this

skill. Therefore, the knowledge of the influencing factors in the process of the guessing unknown words while reading a text would be a helpful resource. Identifying these factors not only can help the students to use guessing strategy more easily but can remove their anxiety of unfamiliar words and facilitates learning as well (Altman, 2002). According to the literature of reading strategies, it seems that the contextual factors are the most determining factors in guessing process (Mondria and Bore 1991). However, a pregnant context does not necessarily lead to successful guessing (Kelly, 1990; Laufer, 1997). The results of this study showed that word and learner factors significantly influence the EFL learners' guessing ability.

From the results of this study, two main findings emerged. First, it was found that part of speech of the unknown word significantly influences the successful use of the guessing strategy. It seems that some grammatical categories are more difficult to guess than others. Therefore, one of the useful strategies for dealing with unknown words encountered while reading is to examine the grammatical function of the word.

Second, it was confirmed that field independent learners are more successful in guessing strategy. As it can be vividly seen from the data analysis, the results of the present study provide evidence that field independence cognitive style is an advantage to guess correctly the meaning of unknown words encountered while reading. It seems that field dependent learners, in this

regard, need more help. Therefore, language teachers should provide them with some guessing strategy training courses.

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