Lexical Inferencing Strategies of Turkish EFL Learners

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1. INTRODUCTION

Reading is a process which contributes to success in learning a foreign language and good language learners are considered to be good readers (Bialystok, 1983). According to Paribakht and Wesche (1999), a good reader can guess the meanings of some unfamiliar words in a text, and there is a strong relationship between vocabulary knowledge and reading comprehension. Reading ability of second/foreign language learners has been widely investigated and it has been found that they understand more and make more guesses if they participate actively in the reading process by applying strategies. Hosenfeld (1981) proposed the term "reading strategies" that students must utilize in order to comprehend reading passages, and she noted 20 effective reading strategies "an efficient reader reads to identify meaning rather than words, takes chances in order to identify meaning, considers illustrations, evaluates guesses, uses a variety of types of context clues, and follows through with proposed solutions" (cited in Barnett, 1988:110).

It has been observed by the researcher that students learn more and enjoy reading more if they use reading strategies in their classes. They use a wide variety of strategies when they deal with unknown words, but they are often not aware of what strategies they use when they read in English., It was found out that they were often reluctant to engage in the inferencing process as they preferred L1 translations. Thus, the aim of this study was to find if the EFL students used inferencing when they dealt with unknown words in the reading passages in English and if they used inferencing what type of knowledge sources they used. This study was conducted with students from two different levels in order to see if the knowledge sources they used in inferencing differed according to their proficiency levels. The participants of the study were students from low-intermediate and intermediate levels at the Preparation School of Anadolu University.

The research questions of this study were:

1. What inferencing strategies do the learners at intermediate and low-intermediate levels use when they attempt to guess the meaning of unknown words they encounter while reading?

2. Are there any similarities and differences between the students at these two levels?

2. REVIEW OF LITERATURE

2.1. Learning Strategies

As Wenden (1987) states the term "learner/learning strategies" refers to language learning behaviors learners actually engage in to learn and regulate the learning of a second language. For Oxford (1990), learning strategies are important for language learning and they are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations. According to Ahmed (1989; cited in Lawson & Hogben, 1996:106), good learners not only use more strategies, but they also rely more heavily on different strategies than the poor learners.

Learning strategies are classified as metacognitive, cognitive or socioaffective strategies. Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring of learning and self-evaluation of learning; cognitive strategies involve manipulation or transformation of the material to be learned, i.e. the learner interacts directly with what is to be learned; and socioaffective strategies have to do with social-mediating activity and transacting with others (Brown, 1994). Oxford (1990) has put forward a more detailed taxonomy of strategies. She has divided learning strategies into two general classes: direct and indirect, and they are divided into subcategories such as memory, cognitive and compensation (direct) and metacognitive, affective and social (indirect). She claims that direct and indirect strategies are closely connected and have the capability to support each other.

O'Malley (1987) points out that good language learners use a variety of strategies in their learning of a second language and that less competent learners might improve their skills in a L2 through training on strategies. Thus, they can apply strategies to the acquisition of different language skills, and explicit strategy training should be applied to them.

2.2. Reading Strategies

Barnett (1988) points out some procedures of reading strategies such as prereading exercises, in-class skimming to get the gist and scanning for a particular piece of information,

providing background information, helping students inference for word meanings, encouraging guessing, and focusing on global comprehension in postreading exercises.

Carrell (1987) emphasizes the necessity of prereading activities, vocabulary instruction, instruction in how to comprehend conceptually complete authentic texts and materials appropriate to the cultural schemata of the readers.

2.3. Guessing / Inferencing Strategy

According to Oxford (1990) guessing is a compensation strategy which enables learners to use the new language for either comprehension or production despite limitations in knowledge. Haastrup (1991) claim that guessing is a cognitive strategy since cognitive strategies are the steps or operations used in learning or problem solving that require direct analysis, transformation or synthesis of learning materials and it does not automatically lead to learning, although it has the potential for doing so.

As Oxford (1990) states guessing (inferencing) strategies involve using a wide variety of clues -linguistic or nonlinguistic- to guess the meaning when the learner does not know all the words. She adds that good language learners, when confronted with unknown expressions, make educated guesses. On the other hand, less adept language learners often panic, tune out, or grab the dog-eared dictionary and try to look up every unfamiliar word – harmful responses which impede progress toward proficiency.

According to Carter (1987), the more advanced learners are "the more likely they are to benefit from learning words in context" (Carter 1987) (cited in Lawson & Hogben, 1987:106). Carter (1987) notes that learners vary in their propensity to make inferences and in their ability to make valid, rational and reasonable inferences. He provides three kinds of cues used by second language learners: 1. Intra-lingual cues, 2. Inter-lingual cues, 3. Extra-lingual cues.

It has been claimed by some researchers that guessing vocabulary from context is the most frequently used strategy in discovering the meaning of words, and new words can best be learned when presented in texts and when their meaning is inferred from context by learners (Nattinger, 1988; Nation, 1982; Bialystok, 1983; cited in Lawson & Hogben, 1996:105). But some researchers claim that context does not always provide enough information, and learners can make wrong inferences; the inferencing method works well with learners who have good problem-solving skills (Bensoussan and Laufer, 1984; Carnine, Kameenui and Coyle, 1984; Kelly, 1989; Koster, 1985; cited in Hulstijn, 1992:114).

2.4. Some studies on lexical inferencing

Lexical inferencing has been found to be widely used by L2 learners when dealing with unknown words (Paribakht and Wesche , 1997; Paribakht and Wesche, 1999; Nassaji, 2006), and it has been closely associated with incidental vocabulary learning. For Paribakht and Wesche (1999), much - if not most – lexical development in both L1 and L2 appears to occur as learners attempt to comprehend new words they hear or read in context.

Research to date has shown that many factors affect success in lexical inferencing: the nature of the word and the text (Paribakht and Wesche, 1999; Parry, 1993); the learner's attention to the details in the text and his/her preconceptions about the possible meaning of the word (Frantzen, 2003); learners' pre-existing knowledge bases (Nagy, 1997; cited in Nassaji, 2006).

According to Haastrup (1991), lexical inferencing is making "informed guesses" about the meaning of unknown words based on the available linguistic and nonlinguistic cues in the text. Carrying out a study of lexical inferencing, she found out that learners used different strategies such as using the internal structure of the word and using top-down contextual and sentence-level clues. For her, performance was facilitated when participants drew on several levels of inference; more successful students were generally more active in their use of the information made available to them. Her inferencing taxonomy included contextual cues, intralingual cues and interlingual cues.

Hulstijn (1992) carried out a study in order to find if the retention of inferred meaning is higher than when the meaning of words was given to them by applying the multiple-choice procedure. He found out that when L2 readers' aim was to comprehend the content of the passage, they remembered more when they inferred the meaning of unknown words than the meaning was given to them. He added that L2 learners in his study sometimes inferred incorrect meanings for unknown words when there were limited cues in the passages. He claimed that students must be trained on how to guess the meaning of an unknown word by exposing them with some procedures such as synonyms of unknown words, sample sentences or multiple-choice procedures.

Having carried out a study with intermediate ESL learners, Huckin and Bloch (1993) put forward a lexical inferencing model, which includes a knowledge module component and a metalinguistic strategic component. They claim that these strategies help the learner decide when and how to proceed and seek help from context and various sources of knowledge available.

Paribakht and Wesche (1999) carried an introspective study of lexical inferencing with 10 intermediate-level ESL students in order to see the knowledge sources and contextual cues they used when they tried to understand the meaning of unknown words. They used a summary task in which they wanted students to summarize the passage in their own words and a question task in which they wanted students to answer the questions about the passage. The results of their study suggested that inferencing was the most employed strategy (80%), so they decided to find the knowledge sources students used in inferencing. They divided these knowledge sources into two parts such as extralinguistic and linguistic sources (see Figure 1). According to their findings, students mostly used sentence-level grammatical knowledge in both tasks.

Extralinguistic source	Linguistic sources	
	Major	Minor
World knowledge	Sentence-level grammatical	Discourse/text
	Knowledge	Homonymy
	Word morphology	Word associations
	Punctuation	Cognates

Figure 1 Knowledge sources used in inferencing (Paribakht&Wesche, 1999:2)

Having examined the relationship between ESL learners' depth of vocabulary knowledge, their lexical inferencing strategy use and their success in deriving word meaning from context, Nassaji (2006) states that there is a significant relationship between the depth of vocabulary knowledge and the degree and the type of strategy use and success. The results of his study indicate that the students who had stronger depth of vocabulary knowledge used certain strategies more frequently than those who had weaker depth of vocabulary knowledge; stronger students made more effective use of certain types lexical inferencing strategies than their weaker counterparts; and depth of vocabulary knowledge made a significant contribution to inferential success over and above the contribution made by the learners' degree of strategy use.

3. METHODOLOGY
3.1. Subjects

Fifty one students attending Preparatory School of Anadolu University, Eskişehir participated in the study. Twenty six intermediate level students (12 female, 14 male) and 25 lower-intermediate level students (9 female, 16 male) served as the subjects of this study. Their ages ranged between 18 and 22.

3.2. Materials

In order to find the type of inferencing strategies used by EFL learners, four authentic reading passages were chosen for the study. All the passages were taken from a weekly magazine (Reader's Digest); two of them were in the form of jokes, and two of them were in the form of advertisements. These short reading passages were read in their usual class hours one at a time by the students, and their usual teachers assisted them in class.

3.3. Data Collection

Data were collected in four weeks. Every week in one usual class hour, the students were asked first to scan the passages and underline unknown words, then to guess the meaning of unknown words. After carrying out these steps, they wrote about how they guessed the meaning of unknown words and what strategies they used in guessing. They were reminded that they could use their native language.

At the end of the four-week period, all the data were checked and categorized according to Paribakht and Wesche's (1999) classification.

3.4. Data Analysis

In analyzing the data, grammatical class of the underlined words was not taken into consideration as the focus of this study was to find the lexical inferencing strategies used by the EFL learners. All inferences gathered from intermediate and low-intermediate level students, either correct or incorrect, were counted and categorized for each level to have an overall idea of the inferences. Then the correct inferences were counted and their percentages were taken, and the sources used by the students at intermediate and lower-intermediate levels were compared.

The data were analyzed according to Paribakht and Wesche's classification with one modification. The punctuation category was not included since it was not used by the students who participated in this study. The categorization was as follows:

1. Homonymy: As Paribakht & Wesche, 1999:209) state learners use their knowledge of sound relationships or the phonetic similarity between the target word and another word in the learners' mental lexicon to guess the meaning of an unknown word. The association may be with an L1 word or another L2 word and is often misleading.

2. Morphology: This category includes knowledge of derivations and grammatical inflections.

3. Word associations: They include paradigmatic relations (e.g. synonyms or antonyms), syntagmatic relations (e.g. words in the same category), members of the same taxonomy (superordinates, subordinates, coordinates). Sentence-level grammatical knowledge: This category includes knowledge of relationships in the sentence such as word-class information and syntactic category of the word.

4. Discourse knowledge: It includes using information from beyond sentence boundaries such as the knowledge of cohesive devices and establishing semantic links.

5. Cognates: As Richards et.al (1985) states "cognates are words in one language which is similar in form and meaning to a word in another language" (Richards et.al., 1985:43).

6. World knowledge: This category is related to the familiarity of theme and topic of the text to the learner.

4. RESULTS

For the first reading passage, the students at lower-intermediate level made a total of 92 inferences (61 of them were correct, 67%) whereas the students at intermediate level made a total of 83 inferences (46 of them were correct, 73%). The students at both levels used mostly discourse knowledge (43 inferences at low-intermediate level and 38 inferences at intermediate level).

For the second reading passage, the students at low-intermediate level made a total of 111 inferences (68 of them were correct, 57%) and the students at intermediate level made 99 inferences (68 of them were correct, 69%).

For the third passage, the students at low-intermediate level made a total of 72 inferences (44 of them were correct, 61%) and the students at intermediate level made 26 inferences (21 of them were correct, 81%). It is interesting to note that there were 4 students at intermediate class who knew all the words in that passage.

For the fourth passage, the students at low-intermediate level made a total of 66 inferences (20 of them were correct, 30%) and the students at intermediate level made a total of 79 inferences (61 of them were correct, 77%). A significant difference was observed for that paragraph between the two groups.

Since passages 2 and 3 were advertisements, 8 students at low-intermediate level and 5 students at intermediate level wrote that they used the picture to guess the meaning of some words such as 'dandruff, anti-dandruff, dishwasher'.

In terms of 'homonymy' category, it is seen that the students at low-intermediate level tried to use more sound relations between words in L2, and all their guesses were incorrect. This finding is consistent with the claim that students with low proficiency in L2 often try to associate new words by using phonetic similarities. For the first reading passage, two students at low-intermediate level made wrong guesses using homonymys such as 'promise' for the word 'premise', 'fruit' for the word 'furious'. The students at intermediate level did not employ this strategy except one student who wrote 'smoke' for the word 'soothing'.

The 'morphology' category accounted for 8 of 92 cases in passage 1 (3 correct guesses), 14 of 111 cases in passage 2 (13 correct guesses), 4 of 72 cases in passage 3 (3 correct guesses) and 1 of 66 cases in passage 4 (no correct guesses) at low-intermediate level data. When we look at the results obtained from the students at intermediate level, this category accounted for 1 of 63 cases in passage 1 (no correct guesses), 11 of 99 cases in passage 2 (7 correct guesses), 3 of 26 cases in passage 3 (no correct guesses) and 1 of 79 cases in passage 4 (1 correct guess). It can be said that the students at low-intermediate level tried to infer the meanings of words by looking at their inflections, derivations, i.e. morphological relationships between words, and they were successful in using this inferencing strategy.

The students at low-intermediate level tried to guess the meanings of unknown words by establishing associations between the words but their associations were mostly incorrect. On the other hand, the students at intermediate level did not use word associations to make inferences in passages 1 and 3, but they used word associations in passage 2 (13 of 99 cases, 10 correct inferences) and in passage 4 (8 of 79 cases, 7 correct inferences).This finding is consistent with the research in this area. It is suggested in literature that more proficient L2 learners make more word associations than less proficient learners.

In terms of 'sentence-level grammatical knowledge' category, it is seen that the students at low-intermediate level tried make inferences by looking at the grammatical category of words: 18 of 92 cases in passage 1 (8 correct guesses), 12 of 111 cases in passage

2 (4 correct guesses), 3 of 72 cases in passage 3 (1 correct guess) and 3 of 66 cases in passage 4 (no correct guesses). However, the students at intermediate level used this category 16 of 63 cases in passage 1 (6 correct guesses), 5 of 99 cases in passage 2 (4 correct guesses), 2 of 26 cases in passage 3 (2 correct guesses) and 2 of 79 cases in passage 4 (2 correct guesses).

The 'discourse knowledge' category was the one which was mostly used by the students either at low-intermediate level or at intermediate level. But the percentage of correct guesses at intermediate level was higher than the percentage of low-intermediate level. The students at low-intermediate level employed this category 43 of 92 cases in passage 1 (88% of them were correct), 48 of 111 cases in passage 2 (73% of them were correct), 35 of 72 cases in passage 3 (51% of them were correct), 37 of 66 cases in passage 4 (14% of them were correct). The students at intermediate level, on the other hand, employed this category 38 of 63 cases in passage 1 (92% of them were correct), 45 of 99 cases in passage 2 (71% of them were correct), 12 of 26 cases in passage 3 (92% of them were correct) and 52 of 79 cases in passage 4 (67% of them were correct). It can be said that students at both levels used their knowledge of cohesive devices to link the words in the texts but the students at intermediate level were more successful in using their knowledge of discourse. This finding was more salient in passage 4 because the students at low-intermediate level made 5 correct guesses whereas the students at intermediate level made 35 correct guesses.

In terms of 'cognates' the students at both levels did not use any cognates for passage 1. For passages 2 and 3 all the cognates used by the students at low-intermediate level to guess the meanings of unknown words were true and for passage 4, 6 inferences out of 7 were correct while students at intermediate level made 2 wrong guesses for passage 2 and for passages 3 and 4, all their guesses were correct (The words they chose can be called "borrowings" such as grease-gres yağı, menthol-mentol, barrier-bariyer, congragation-kongre).

The 'world knowledge' category was another category which was used mostly by the students at the two levels. For passage 1, the students at low-intermediate level made 16 guesses (11 of them were correct), whereas the students at intermediate level made 8 guesses (5 of them were correct). For passage 2, the students at low-intermediate level made 22 guesses (13 of them were correct), while the students at intermediate level made 22 guesses (15 of them were correct). For passage 3, the students at low-intermediate level made 11 guesses (4 of them were correct), whereas the students at intermediate level made 4 guesses (3 of them were correct). For passage 4, the students at low-intermediate level made 11 guesses

(7 of them were correct), while the students at intermediate level made 15 guesses (14 of them were correct) (see Tables 1, 2, 3 and 4).

5. CONCLUSION

When all the inferences are taken into account, it can be said that the students at intermediate level were more successful than the students at low-intermediate level in their guesses of the meaning of unknown words. After examining the data, it was found that the students at low-intermediate level concentrated more on the words when they read a passage due to the number of unknown words in the reading passages. While gathering the data in the class, it was observed that when they encountered an unknown word, they stopped reading the rest of the passage and tried to find the meaning of the word. Understanding a passage meant knowing all the words in the passage. But the students at intermediate level tried to understand the whole passage by looking at the context and getting the general idea of the passage; they did not spend most of their time on trying to guess the meanings of unknown words. Instead, they used their discourse, world, grammatical knowledge and word association knowledge in order to guess. It is suggested in literature that competent students find associations more easily and establish a network of associations when they see or hear a word than low-ability students (Kess, 1992; Richards, 1991). As Kern (1989 states more advanced learners use context in order to decide the meaning of an unknown word, try to make guesses on the basis of what is familiar to them and they are more successful than low ability learners. Nassaji (2006) claims that those learners who possess a deeper lexical knowledge have better access to the knowledge sources and, hence, can construct a more accurate semantic representation of the unknown word during lexical inferencing than those who do not.

It can be said that students at the two levels tried to use a wide variety of inferencing strategies. However, the percentage of correct inferences was higher at intermediate level than low-intermediate level. This can be due to the students' level and the degree of risk-taking. As Rubin (1975; cited in Beebe, 1983:46) states, guessing is part of risk-taking, and he defines risk-taking as making a decision when the outcome is uncertain and the prospect of failure is there. The students at intermediate level might be said to be high risk takers. Beebe (1983) claims that effective readers test out hypotheses, eliminate some of the alternative interpretations with information from the printed page, and they are eager to tolerate vagueness.

The students at low-intermediate level are not very eager to test hypotheses as the students at intermediate level. This can be due to their fear of making mistakes. They tried to associate the unknown words with the words they already knew and some of their guesses were wrong.

As Levin et.al (1979) (cited in Lawson & Hogben, 1996) state foreign language learners who are quite early in their foreign language studies, acquire vocabulary using keyword mnemonic techniques or strategies which involve cognates and phoneme correspondences. The data gathered from low-intermediate level supports their findings since they tried to guess the meanings of unknown words by establishing sound relationships between the words they knew and the words they tried to guess (e.g. promise-premise, fruit-furious) or finding cognates of unknown words in their native language (grease-gres yağı).

6. IMPLICATIONS FOR TEACHING

Since the students at intermediate level were found to use more correct inferencing strategies than the students at low-intermediate level, students at low-intermediate level can be trained to infer the meanings of unknown words. They can be provided reading strategy training, which was found to have a positive effect on their ability to infer the meanings of unknown words. They can be trained to make word derivations and word associations. According to Kern (1989), middle and high ability readers are more able than low ability readers in inferring the meaning of unfamiliar words, and it is better to teach them word derivations and contextual inference than to teach them long lists of vocabulary items.

A thorough vocabulary learning program that integrates extensive exposure to language and learning vocabulary from context with direct and systematic vocabulary instruction , particularly in the early stages L2 acquisition can be established (Nassaji, 2006).

As Walters (2006) states, strategy instruction results in the improved ability to infer from context, and both context clue and strategy instruction result in improved reading comprehension. Such instruction is more effective when contextualized and incorporated into regular language teaching (Oxford, 1993).

Students may be exposed to different types of authentic reading materials and they may be encouraged to guess the meanings of unknown words in these texts. Students can be trained to make word derivations and word associations. Students, especially low level learners, can be encouraged to read without dictionary. They can also be encouraged to use web based reference systems such as EAT - The Edinburgh Associative Thesaurus (EAT) and WordNet®.

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