The Role of Initial Proficiency in Lexical Attrition/Retention of Iranian EFL Learners: Is the Productive or the Receptive Word Knowledge of Acquired Nouns More Likely to Be Lost?

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Abstract

This paper describes a study of EFL lexical attrition/retention among Iranian learners after three months of disuse. Specifically, the present study examined the impact of initial proficiency level on the attrition/retention of receptive vs. productive word knowledge of the acquired nouns. The participants were 60 freshmen majoring in English translation or literature. Through the end of spring semester, their initial proficiency as well as their acquisition of the nouns, which were covered in their Reading Comprehension course they have just taken, was assessed. Both receptive and productive word knowledge of these nouns were tested through a receptive/productive test modeled on Vocabulary Levels Test (Nation, 1983, 1990; Laufer and Nation, 1995). After summer interval and at the beginning of fall semester, this very test was administered to them again to measure their retention/attrition of acquired nouns over this interval. It was found out that, on the whole, receptive word knowledge is more resistant to loss than productive word knowledge in all proficiency

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groups. It was also revealed that, irrespective of receptive/productive dichotomy, the students with higher level of proficiency retain acquired nouns more than others did. However, the research did not end in any significant effect of the initial proficiency level on the attrition/retention of receptive vs. productive word knowledge.

Keywords: language proficiency, productive vocabulary, receptive vocabulary, language attrition, language retention

Introduction

Second/foreign language learners spend a lot of time and energy acquiring a new language, but unfortunately when the instruction is over and/or out of class opportunity of practicing this newly acquired language diminishes, in the long run there is a risk of forgetting what has been acquired. If they do not use their language over summer, they will notice a significant drop in ability by fall. If they do not use their language for three or four years, they will lose almost everything. Their ability to group words together into a sentence without thinking will go. They will be able to maintain some vocabulary for a longer time, but eventually that will mostly be also lost. Once they begin to suffer from attrition, they will go through a period over which their speaking is severely impaired. Eventually, their comprehension will decline as well. In other words, the phenomenon of L2 attrition –decline in the school-learned L2 – occurs to them.

The "language attrition" is the individual, intragenerational language loss; the information may still exist in memory but becomes inaccessible; "retrieval failure" occurs (Weltens and Grendel, 1993). It is different from "language loss" which refers to all processes of the decline of linguistic knowledge (language change, shift, and death in bilingual communities) and is the actual disappearance of information from memory (De Bot, 1999). Language retention is often used when the focus is on the linguistic skills which remain intact after a period of disuse (Murtagh, 2003). Some researchers like Oxford (1982) emphasize the role of initial level of L2 skill in L2 attrition. Referring to typology provided by de Bot and Weltens (1995,

cited in Weltens, 1987), what we mean by L2 attrition – the focus of this paper – is the attrition of L2 in an L1 environment or decline in school-learned L2. In the next section, the related theoretical and empirical literature of FL/L2 attrition will be briefly discussed.

Literature Review

The native language (L1) attrition may occur in the immigrants mostly speaking the dominant language of their new country, while second language (L2) attrition may happen in students learning an L2 in school, but not using it after instruction is over (Ross, 2002). There are different theories of language attrition, the most widely known of which is "Regression Hypothesis;" it is originally ascribed to Jackobson (1941, cited in Weltens, 1987) and states that "attrition is the mirror image of acquisition or learning." That is, items learned most completely are less likely to be forgotten. Some researchers (Godsall-Myers 1981; Hansen 1980; and Cohen 1975, cited in ibid) found this hypothesis to be partly true in their FL attrition studies.

Schmid (2005) asserts that level of achievement is more important in the study of L2 attrition than for adult L1 attrition. Interestingly, numerous further studies have found the level of initial proficiency (i.e., proficiency at the time when instruction in or exposure to the L2 ceases) to be the best predictor of language loss or retention (Reetz-Kurashige, 1999, cited in Schmid, 2005). It has thus often been suggested that a higher proficiency in L2 is a good safeguard against attrition.

Also some researchers like Weltens et al. (1993, cited in Al-Hazemi, 2000) argue that lexical knowledge is more vulnerable to attrition than other aspects of language system. Murtagh (2003) states that receptive skills precede productive skills in acquisition, then based on "Regression Hypothesis" the case in attrition should be reversed. She goes further and cites Bahrick's (1984) study to show more attrition in recall tasks than in recognition tasks, which can also include receptive/productive nouns.

Bahrick (1984, cited in Murtagh and Van der Silk 2004) first carried out a large-scale study of L2 attrition and assessed attrition in

Spanish (L2) skills of more than 500 individuals whose instruction in the language had occurred from one to 50 years before the time of test. Much of the acquired content survived for "50 years or longer." He called L2 knowledge with a life span of over 25 years "permastore-content." Bahrick also found that "the total amount of content" forgotten during the first five years following training was relatively constant for individuals at different levels of training (proficiency), but the amount lost became a proportionately smaller with higher levels of training (proficiency). His study has also shown that attrition affects smaller amounts of recognition vocabulary than of recall vocabulary.

Cohen (1989, cited in Weltens and Grendel, 1993; Murtagh, 2003) studied the attrition of productive vocabulary in two English-Hebrew learners of Portuguese who had spent one year in a Portuguese-speaking environment (Brazil). The participants performed a storytelling task as a productive vocabulary measure. They also completed an oral recognition task, receptively testing the words that they had used in the stories. The results revealed the attrition of productive vocabulary, especially nouns, but no attrition of receptive words.

Verkaik and Van der Wijst (1986; cited in Weltens and Grendel 1993) conducted a lexical decision experiment with two groups. Both groups had four years of French training; one had just finished this training, and the other two years before. They should have decided whether the letters presented on the computer screen was a French word or not (a pseudoword). The mean reaction time has been increased significantly after two years of disuse, especially in the case of low-frequency noncognates. This category also showed higher error rates.

Olshtain (1989, cited in Murtagh 2003), examining the attrition of productive vocabulary in Hebrew-speaking of English, found similar results to those of Bahrick (1984). Olshtain used the same storytelling task used by Cohen (1989) to elicit spontaneous speech data. On the whole, English disuse resulted in lexical attrition or less access to lexical items. It seemed that L2 productive skills (including

lexicon) suffer more from attrition than L2 receptive skills (including lexicon).

Grendel (1993, cited in Weltens and Grendel 1993) also investigated the lexical attrition in Dutch learners of French using the lexical decision paradigm. Grendel focused on orthographic and semantic aspects of lexical knowledge. She used a lexical decision paradigm to assess vocabulary loss among participants. The orthographic aspect of word knowledge was operationalized as "the knowledge of the written form of word;" and its semantic aspect as "the knowledge of word association," (ibid). No attrition (decline in reaction times) was found in subjects' sensitivity to the French orthographic rule system or in use of semantic knowledge.

Method

This study aimed to investigate if initial level of EFL proficiency is a determining factor in the amount of attrition/retention of English acquired nouns in general, and in the amount of attrition/retention of receptive and productive knowledge of acquired nouns, in particular. Accordingly, these research questions were formulated:

1. Does the initial level of EFL proficiency (high, mid, low) of Iranian learners before the summer vacation result in different amount of attrition/retention of acquired nouns after that period of English disuse?
2. Which one – receptive or productive word knowledge of acquired nouns – is more prone to attrition after English disuse by Iranian learners during summer vacation?
3. Does the initial EFL proficiency level (high, mid, low) before the summer vacation have any effect on the amount of attrition/retention of productive vs. receptive word knowledge of acquired nouns after that period of English disuse by Iranian learners?

Participants

The participants were 60 female and male Iranian freshmen with the age range of 18-27, majoring in English translation or English lit-

erature in Islamic Azad University, Qom branch, who were selected intact. In Time 1 administration, the tests were given to 82 students, but in Time 2 the researcher had access to only 65 students who had participated in Time 1 test. Finally, only 60 students constituted the participants. They responded to both receptive and productive subtests in Time 1 and Time 2 administrations, enjoyed approximately the same language background, and had not taken part in summer English classes in the study – based on their answers to the questions in Language Background Survey. The participants had just studied the textbook Reading through Interaction (2) (Hartmen and Kim, 2001) in their Reading Comprehension course (2). All of them were in the second semester of the academic year 1384-85.

Instruments

To gauge the initial proficiency level of participants, Nelson English Language Test (Fowler and Norman 1976, Book 3: Advanced; Test 350A) was administered. It is an accurate measure of general Standard English and all its items have been carefully pre-tested. Some questions about the participants' language background and their possible exposure to English during the summer vacation were also added to its end. A teacher-made receptive/productive vocabulary test was also administered to reveal the attrition of receptive vs. productive word knowledge of acquired English nouns among the participants (see Appendix). This test was modeled on The Vocabulary Levels Tests (Nation 1983, 1990; Laufer and Nation 1995). It covered the nouns acquired in their textbook Reading Through Interaction 2.

The Vocabulary Levels Test (Nation, 1983, 1990) for passive vocabulary size consists of words from 5 word-frequency levels (2000, 3000, 5000 words, the university word list, and 10000 words). Each frequency level of the test has 6 sections and each section contains 6 words and 3 definitions. The test comprises 90 items (18 in each level) and assesses the target words out of context, since it may provide clues to the word meanings (the definitions in the test do not provide

such clues). Words in each level of the test represent all the words at that level (Laufer 1998). The testees should match the target words with their corresponding definitions, as in this example:

1.	*original*	
2.	*private*	*.....6... complete*
3.	*royal*	
4.	*slow*	*.....1... first*
5.	*sorry*	
6.	*total*	*.....2... not public*

Controlled Active Vocabulary Test (Laufer and Nation, 1995) makes use of the same frequency levels and the same items, eliciting the words in the short sentences. The items first few letters are provided to eliminate the possibility of eliciting other words than target items. The testees should provide the missing word in each sentence, as in this example:

The garden was full of fra..... flowers. (fragrant)

The Vocabulary Levels Test has been found to be a valid test of vocabulary size. The reliability of the passive test was .88, using K-R 21 formula, and the reliability of the controlled active test was .82 (Laufer, 1998). The independent validation data have been reported for items in the Levels Test. The Receptive version of the Levels Test has been used in numerous concurrent validity studies (Schmitt, 1996). More importantly, only the Levels Test studies have been followed up either by the original authors or others (Waring, 1999).

Hence, in a pilot study, the Vocabulary Levels Test for passive vocabulary size (Nation, 1983, 1990) and the Vocabulary Levels Test for active vocabulary size (Laufer and Nation, 1995) together with the devised receptive/productive test were administered to four students in an English institute. These students were approximately at the same level of EFL proficiency as the target sample. K-R 21 formula (Hatch and Farhady, 1982) was used to find the reliability of the devised receptive/productive test. Moreover, the Pearson

Product-Moment correlation formula (ibid) was used to find the correlation coefficient between the Vocabulary Levels Test and the devised receptive/productive test as a measure of criterion-related (concurrent) validity of the latter. The reliability and validity of the subtests (receptive and productive) were found independently. The reliability of receptive subtest was 0.86, and the reliability of productive subtest was 0.82. As for validity, the correlation coefficient between the passive version of the Vocabulary Levels Test and the receptive subtest of the devised test was 0.8, showing there is 64% variance overlap between these two tests. And the correlation coefficient between the active version of the Vocabulary Levels Test and the productive subtest of the devised test was 0.6, showing that there is 36% variance overlap between these two tests.

Procedure

In Time 1 administration and just before summer vacation (in May), the Nelson English Language Test was given to 82 participants to determine their level of proficiency and classify them into three high, middle, and low groups of proficiency level according to their scores on the test. The participants, informed of no penalty for wrong answer, answered it in one hour. Some questions about their language background and their possible exposure to English during the summer vacation were also added to the end of this test for two purposes: first, to make sure all enjoy approximately the same language background; second, to exclude those who may take part in English classes or would be exposed to English intensively during summer from the study.

Then, the devised test of receptive/productive vocabulary, modeled on The Vocabulary Levels Test was administered to the same participants to measure their acquisition of nouns covered in their Reading Comprehension book. They were told how to answer the two subtests; to complete the mutilated words in the productive subtest and to match the three words in the left column with their synonyms or definitions in the right column in the receptive subtest. It should be mentioned that the productive subtest preceded the

receptive one. However, the participants were not informed of being tested on two totally different forms of vocabulary test (receptive and productive) as well as the sameness of items in both receptive and productive versions, so that it did not interfere with their performance. The researcher also tried to discard the possible grammatical clues to the answers in the productive tests.

In order to measure the amount of lexical attrition due to a period of disuse during summer, at the beginning of the 3rd semester and in September the same receptive/productive vocabulary test (Time 2 test) was administered to only 65 participants because the researcher did not have access to all the participants in Time 1. The manner of administration of receptive/productive test was the same as Time 1.

Results

A repeated measures ANOVA was run to probe all three research questions. As displayed in Table 1, the participants were placed into three proficiency levels based on their scores on Nelson English Language test. Those scoring equal or above 55.80 (66.66 percentile rank, about half a standard deviation above the mean) pointed for the High proficiency group. The subjects who scored 45.60 or below (33.33 percentile rank, or about half a standard deviation below the mean) formed the Low proficiency group. Those scoring between these two points formed the Mid proficiency group.

Table 1: Proficiency Levels of the Participants (Groups)

High	55.80 and over
Mid	Between 55.79 and 45.59
Low	45.60 and below

Investigating the First Research Question

Table 2 displays the Means of the total vocabulary test for the three proficiency groups. On the total vocabulary test, the HG (Mean = 59.29) outperformed the MG (M =48.69) and LG (M = 42.55), and MG over-scored the LG.

Table 2: Means of the Total Vocabulary Test for the Three Proficiency Groups

Proficiency	Mean	Std. Error
High	59.295	2.999
Mid	48.694	3.316
Low	42.550	3.146

The F-observed value for the effect of the proficiency level of the participants was 7.64 (Table 3). This amount of F at 2 and 57 degrees of freedom was higher than the critical value of F; that is, 3.16. Based on these results, it can be concluded that irrespective of the productive/receptive dichotomy, the proficiency level of the Iranian EFL learners HAD a significant effect on their performance on the vocabulary tests.

Table 3: Tests of Between-Subjects Effects: Proficiency Levels

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Proficiency	12098.337	2	6049.169	7.642	.001
Error	45120.396	57	791.586		

Having proved that there was a significant difference among the mean scores of the High, Mid and Low proficiency groups on the overall score of the vocabulary tests (irrespective of their types), the post-hoc Scheffe's tests (Table 4) were run to locate the exact places of the differences among the means.

Table 4: Post-hoc Scheffe's Tests: Proficiency Levels

(I) Proficiency	(J) Proficiency	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High	Mid	10.6010	4.47097	.069	-.636821	.8388
	Low	16.7455(*)	4.34628	.001	5.821127	.6698
Mid	Low	6.1444	4.57046	.411	-5.343417	.6323

Based on observed means.
* The mean difference is significant at the .05 level.

The results indicated that:

1. There was not any significant difference between the mean scores of the High (Mean = 59.29) and the Mid (Mean =48.69) groups on the overall vocabulary tests.
2. There was a significant difference between the mean scores of the High (Mean = 59.29) and the Low (Mean =42.55) groups on the overall vocabulary tests.
3. There was not any significant difference between the mean scores of the Mid (Mean = 48.69) and the Low (Mean =42.55) groups on the overall vocabulary tests.

Investigating the Second Research Question

Table 5 displays the Means of receptive and productive subtests. The participants performed better on the receptive test (M = 51.90) than in productive subtest (M =48.53).

Table 5: Means of Overall Mean Scores: Receptive and Productive

Type	Mean	Std. Error
Receptive	51.907	1.752
Productive	48.453	2.161

The F-observed value for the effect of the type of the two sets of tests (receptive and productive) was 5.42 (Table 6). This amount of F-value at 1 and 57 degrees of freedom was higher than the critical value of F; that is, 4.01. It can be claimed that there was a significant difference between the productive and receptive mean scores and all participants lost productive word knowledge more than receptive one after summer.

Table 6: Repeated Measures ANOVA: Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Type	710.897	1	710.897	5.429	.023
Error(type)	7464.028	57	130.948		

Investigating the Third Research Question

Table 7 displays the Means for the three-way interaction between the time of the tests (before and after summer), type of the tests (productive and receptive) and the proficiency levels (High, Mid, Low) of the participants.

Table 7: Means of the Three-way Interaction Time by Type of Tests by Proficiency

7. Proficiency * time * type Measure: Measures_1				
Proficiency	Time	Type	Mean	Std. Error
High	Before Summer(T1)	Productive	75.500	3.634
		Receptive	51.000	3.643
	After Summer(T2)	Productive	47.091	3.672
		Receptive	63.591	4.593
Mid	Before Summer(T1)	Productive	69.778	4.018
		Receptive	44.111	4.027
	After Summer(T2)	Productive	31.222	4.059
		Receptive	49.667	5.078
Low	Before Summer(T1)	Productive	61.900	3.812
		Receptive	38.150	3.820
	After Summer(T2)	Productive	25.950	3.851
		Receptive	44.200	4.817

Nevertheless, as we can see in Table 8, the F-observed value for the three-way interaction between the proficiency level of the participants, time of the tests and the type of the vocabulary tests (productive vs. receptive) was .064, which at 2 and 57 degrees of freedom was lower than the critical value of F; that is, 3.16. In other words, there was no significant difference between the amounts of attrition/ retention of receptive vs. productive word knowledge of acquired nouns over summer vacation as affected by the initial proficiency level (High, Mid, Low) before it.

Table 8: Three-way Interaction: Time by Type of Tests by Proficiency

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Time * Type * Proficiency	24.489	2	12.244	.064	.938
Error (time*type)	10852.444	57	190.394		

Discussion

It was found that regardless of receptive/productive dichotomy of word knowledge, the High group (of proficiency level) lost nouns less after summer vacation in comparison with Mid and Low groups, Mid group also lost nouns less than Low group did. However, only the mean difference between High and Low groups was statistically significant. Some like Reetz-Kurashige (1999, cited in Schmid, 2005), Godsall-Myers (1981, cited in Weltens, 1987), and Bahrick's (1984a, cited in Murtagh, 2003) also found evidence for the role of initial proficiency level in the amount of attrition. Bahrick, for example, proposed that those with higher levels of proficiency retain more (e.g. vocabulary) even after fifty years of disuse. Neisser (1984, cited in Ross, 2002) also hypothesized that the more proficient students retain a great deal of information because they had learned a schema, or structured system of relationships, for L2 vocabulary. In the present study, the role of proficiency level was reaffirmed about the EFL lexical (noun) attrition. Of course, it was revealed that the difference of proficiency level must be remarkable to have effect, if any, on the L2 lexical retention. Nevertheless, this finding was in contrast with the results of some other studies (Smythe et al., 1973; Weltens, 1989), which showed that the amount of lost knowledge seems to be independent of the original level of proficiency. In most of these studies, the proficiency level was described in terms of years of studying the attriting language, which is a rough measure. (Weltens

and Grendel, 1993).

Another conclusion was that all participants – irrespective of their initial proficiency level – retained receptive word knowledge more than productive word knowledge after summer vacation. Schmid (2005) talked about some researchers (Grendel, 1993; Weltens, 1988) who found that receptive vocabulary was less attrited. A possible cause of superior performance with receptive tasks – whether it is a delayed one or not – is the availability of receptive words compared to productive ones. Also given the less consolidated memory trace, comprehension tasks are easier to perform than productive ones (De Groot and Keijzer, 2000). In addition, as productive testing requires the production of an unfamiliar pattern, the performance on receptive tasks was superior (Ellis and Beaton, 1993).De Groot and Keijzer (2000) have also found that words that are easiest to learn are better retrained, confirming the results of Bahrick and Phelps' (1987) study. These researchers found that retention over an eight-year interval was best for the Spanish words that had been learned the most easily. And obviously the receptive learning is highly easier than productive one (Mondria and Wiersma, 2004).

The greater degree of difficulty of productive learning and retaining can also be explained in still two other ways. First, using a word productively needs more precise knowledge of the word form. Second, for a beginner a new L2 word has only a receptive link to the L1 equivalent, but no links with other L2 words (Ellis and Beaton, 1993). Moreover, productive knowledge attrited faster than receptive knowledge because there was a more rigorous criterion set in productive test. A low level of receptive knowledge is enough for success on receptive test; however, a low level productive knowledge does not suffice for success on productive test (Mondria and Weirsma, 2004).

Interestingly, no significant interaction effect was found between these three variables: proficiency level, type of word knowledge (receptive/productive), and three months of disuse (time). In other words, participants did not differ significantly in terms of attrition of the productive vs. receptive word knowledge of the acquired nouns

as far as their proficiency levels were concerned. It seems that while each of these variables (proficiency level and receptive/productive word knowledge) plays a role in EFL lexical attrition individually, they are not interrelated. In other words, we cannot infer less or more EFL lexical attrition resulting from their interaction. According to Aitchison (1994, cited in Laufer and Paribakht, 1998) and Channell (1988, cited in ibid), it has been unknown whether different levels of L2 general proficiency have any effect on the nature of the relationship of receptive and productive vocabulary.

This may also be due to some gain on receptive subtest after summer vacation (Time 2) which was made by all proficiency groups (based on their Means), a result similar to the gain found in receptive skills by Weltens (1989, cited in Murtagh and Van der Silk 2004). No attrition or even gain can be attributed to the 'critical threshold' hypothesis, based on which linguistic knowledge reaching this threshold (procedural stage) would be firmly established and not attrite (Bahrick 1984a, cited in De Bot 1999). Here, it seems that receptive word knowledge has reached this threshold compared with productive one.

Scherer (1957, cited in Weltens, 1987) also put emphasis on the students' mental activity after the course finishes, resulting in gain. Smythe et al. (1973, cited in Oxford 1982) found that those students tested after summer vacation showed improvement, but those with the longer period of disuse showed poorer performance. They referred to the facilitating effect of summer vacation as well as the fresh students doing well on tests after it.

This study can have some pedagogical implications for L2 teaching and learning. First, the teachers should provide a rich environment to make exposure to and use of the L2 possible during training to prevent subsequent attrition. Second, they had better assess productive as well as receptive aspects of word knowledge using, for example, the test format used in the present study. Third, the students should be encouraged not to quit exposing to EFL during summer; the continuous involvement in L2 learning process. Last, the teachers can employ learning tasks in the classroom (e.g., summarizing,

paraphrasing, and discussion in reading courses) which may boost retention of both the productive and the receptive word knowledge. Moreover, somewhat unequivocal evidence is provided for more attrition of productive than that of receptive vocabulary, in which case there is disagreement (Weltens 1987; Schneider et al., 2002, cited in Mondria and Wiersma, 2004).

Since the field of L2 attrition is relatively a new one in Applied Linguistics, more studies are needed to be carried out to investigate its under-researched issues. Hence, the following areas of further research are suggested: probing into the possible effects of various L2 vocabulary teaching methods on its long-term retention; looking at the other possible variables – including cognitive style variables, motivation for and attitudes about L2, L2 skills of the teacher– which may influence the amount and rate of L2 attrition; considering attrition of different elements of L2 lexicon including dichotomies such as specific vs. general words, abstract vs. concrete words, frequent vs. infrequent words, cognates vs. noncognates, and verbs vs. nouns; and embarking on the investigation of attrition in other aspects of L2 linguistic knowledge such as phonology, and syntax.

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Appendix

(The Receptive/Productive Vocabulary Test with Answers)

First name: Family name:

Part A. Complete the bold, incomplete words. Some words are ***PLURAL.*** The number of hyphens (-) equals the number of omitted letters. The first one has been done for you.

Example: The soldier's ***cor - - -*** could not be recognized. ***(corpse)***

1. She found herself in **con - - - - -** with her parents over her future career. (conflict)
2. I will meet you at the main **en - - - - - -** of university. (entrance)
3. She never lost her **enthu - - - - -** for teaching. (enthusiasm)

4. They have had several **disag** - - - - - - - - with their neighbors. (disagreement)
5. My father has made a full **reco** - - - - from operation. (recovery)
6. We should try to omit **che** - - - - - - from the process of our lives. (chemicals)
7. He filed a **law** - - - - against his record company. (lawsuit)
8. They were reunited after a **sepa** - - - - - - of more than 20 years. (separation)
9. The child was locked in his room as a **pu** - - - - - - - - -. (punishment)
10. There was no hope of **es** - - - - from her disastrous marriage. (escape)
11. The **deve** - - - - - - - - of vaccine against disease has given many people a new life. (development)
12. There was a party in **cele** - - - - - - - of their first wedding anniversary. (celebration)
13. Scientists have established a **co** - - - - - - - - between cholesterol levels and heart attack. (connection)
14. We expect to see more **im** - - - - - - - - - in our business over the coming years. (improvement)
15. Are you taking any **medi** - - - - - - right now? (medication)
16. There was a general **expec** - - - - - - that he would win. (expectation)
17. There is a strong **evi** - - - - - of a link between exposure to sun and skin cancer.(evidence)
18. He will require **sur** - - - - on his left knee. (surgery)
19. Reading this book requires a great deal of **con** - - - - - - - - - -. (concentration)
20. They are waiting for doctor's **diag** - - - - -. (diagnosis)
21. The bacteria were examined under a **mic** - - - - - - -. (microscope)
22. She is responding well to the medical **treat** - - - -. (treatment)
23. It is difficult to make a **com** - - - - - - - with her previous book-they are totally different. (comparison)
24. He was deep in **medi** - - - - - - and did not see me come in.

(meditation)

25. There are ten **de** - - - - - - - - - in this university; for example, chemistry and physics ones. (departments)
26. The government has adopted new policies in **agri** - - - - - - -. (agriculture)
27. The **majo** - - - - of people interviewed prefer TV to radio. (majority)
28. The **equip** - - - - of the photographic studio was expensive. (equipment)
29. There were over 500 **appli** - - - - - for the job. (applicants)
30. He cannot understand the basic **con** - - - - - of mathematics. (concepts)
31. This role is the biggest **cha** - - - - - - of his career. (challenge)
32. She suffered from serious **dep** - - - - - - - after losing his job. (depression)
33. Their **qua** - - - - of life improved when they moved to France. (quality)
34. Are there any **sug** - - - - - - - about how to solve the problem? (suggestion)
35. Iran is located in the northern **hemis** - - - - - of the globe. (hemisphere)
36. The company is trying to improve customer **satis** - - - - - - -. (satisfaction)
37. She went through an **iden** - - - - crisis during her teens. (identity)
38. Some steps were taken to reduce levels of environmental **po**- - - -. (pollution)
39. Most of the buildings in the town are modern, but the mosque is an **ex** - - - - - - -. (exception)
40. Personal **hy** - - - - - is very important in preventing disease. (hygiene)
41. There are clear **indi** - - - - - - - that the economy is improving. (indications)
42. The new management techniques aim to improve **per** - - - - - - - - of company. (performance)

43. Pakistan came into **exis** - - - - - as an independent country after war. (existence)
44. Remember to bring clothes that provide adequate **pro** - - - - - - - against wind and rain. (protection)
45. Our luggage was checked all the way through to our final **des** - - -. (destination)
46. **Crea** - - - - - - and originality are more important than technical skills. (creativity)
47. They object to the **de** - - - - - - - of horrible scenes in the movie. (depiction)
48. The decision was made in my **ab** - - - - -. (absence)
49. The team has been training hard in **pre** - - - - - - - - for the big game. (preparation)
50. We need to improve an open **ex** - - - - - - of ideas and information.
(exchange)
51. They intend to question the **lega** - - - - of his claim in the courts. (legality)
52. One major **disad** - - - - - - - of area is the lack of public transportation. (disadvantage)
53. You should drink one **spoon** - - - of this syrup every eight hour. (spoonful)
54. He has been an active **par** - - - - - - - - in the discussion. (participant)
55. Oxford attracts large number of visitors and **sight** - - - - -. (sightseers)
56. You will be paid by direct cre - - - into your bank account. (credit)
57. The **ag** - - - - - - - was signed during a meeting at the UN. (agreement)
58. The mountain gorilla is on the verge of **ex** - - - - - - - -. (extinction)
59. She kept her **pro** - - - - to visit her aunt regularly. (promise)
60. This university has a high **drop** - - -**rate**. (dropout)
61. There is a need for greater **di** - - - - - - - and choice in education. (diversity)
62. The police still haven't found the murder **wea** - - -. (weapon)

63. It is a **cus - - -** in that country for women to marry young. (custom)
64. The tanker began to spill its car - - of oil. (cargo)
65. Only a small **mi - - - - - -** of students are interested in politics these days. (minority)
66. This job is suitable for someone with business **back - - - - - -.** (background)
67. You will have the **oppor - - - - - -** to ask any question at the end. (opportunity)
68. We provide help to families in **cri - - -** situation. (crisis)
69. The **natio - - - - - -** of students is not important for the college. (nationality)
70. She felt nothing but **hat - - -** for her attacker. (hatred)
71. The **ex - - - - -** of this country are sugar and fruit. (export)
72. In 1999, their marriage ended in **di - - - - -.** (divorce)
73. You are under no **com - - - - - - -** to pay immediately. (compulsion)
74. There is a proven **asso - - - - - -**-between this syndrome and frequent coughing. (association)
75. He is a senior **offi - - - -** in the State Department. (official)
76. His treatment was a **combi - - - - - -** of surgery, radiation, and drugs. (combination)
77. We would like to see close **coo - - - - - - - -** between colleges and schools in developing computer use. (cooperation)
78. Her designer clothes were from the pages of a fashion **maga - - -.** (magazine)
79. Put an **adver - - - - - - -** in the local paper to sell your car. (advertisement)
80. The **rea - - - -** is that there is not enough money to pay for this project. (reality)
81. There is now intense **compe - - - - - -** between schools to attract students. (competition)
82. The **pur - - - -** of the book is to provide a complete guide to university. (purpose)
83. She was the innocent **vic - - -** of a violent attack. (victim)
84. They have done some **lab - - - - - - -** researches to find out the

cause of this strange disease. (laboratory)
85. The hotel has a friendly **at - - - - - - - -** and personal services. (atmosphere)
86. After her mother's death, she became acutely aware of her **mor - - - - - -**. (mortality)
87. I heard the sounds of **gun - - - - -** out in the street. (gunshots)
88. She wrote about her **ad - - - - - - -** traveling in Africa. (adventures)
89. Recently, the public **atti - - - -** to marriage have changed. (attitude)
90. He is able to trace his **an - - - - - -** back to 1000 years. (ancestry)

Part B. Match ***THREE*** words in the left column with their synonyms/definitions in the right column. Write the numbers in front of synonyms.

(1)

1. courthouse	....3..... deep thought
2. celebration	
3. meditation	.....2... party to praise
4. basis	
5. mattress	.....6... who a person is
6. identity	

(2)

1. performance	.....3.... spoon capacity
2. deterrent	
3. spoonful	.....1..... functioning
4. representative	
5. orthodontist	.....6.... innovation
6. creativity	

(3)

1. compulsion	.....3..... objective
2. polygamy	
3. purpose	.....5..... goods in ship
4. respirator	
5. cargo	.....1..... pressure
6. pyramid	

(4)

1. legality ....6.....farming
2. cave
3. cancer ....1.... being lawful
4. monument
5. destination .....5.... end of journey
6. agriculture

(5)

1. conflict .....1..... argument
2. escape
3. operation .....2..... getting free
4. institute
5. expectation .....5..... anticipation
6. balance

(6)

1. applicant .....3..... sad feeling
2. basis
3. depression .....1..... candidate
4. minister
5. psychiatrist .....6..... cleanliness
6. hygiene

(7)

1. exorcism .....6..... disease identification
2. trance
3. placebo .....5..... getting well after illness
4. punishment
5. recovery .....4..... treating sb roughly for a fault
6. diagnosis

(8)

1. tranquilizer .....6..... degree of goodness
2. approach
3. comparison .....3..... analogy
4. enthusiasm
5. astrology .....4..... great interest
6. quality

(9)

1. improvement ……3….. medical curing
2. stomachache
3. treatment ……5….. facilities
4. amulets
5. equipment ……1….. advance
6. physician

(10)

1. extinction …..5…. dislike
2. weapon
3. virus ……1…. destruction for ever
4. priest
5. hatred ……2….. sth to fight with
6. telemeter

(11)

1. criminal ……2….. contest
2. competition
3. polytheist ……4….. casualty
4. victim
5. ulcer ……6….. exciting experience
6. adventure

(12)

1. insomnia ……5….. half of the Earth
2. justice
3. morals ……4….. drug
4. medication
5. hemisphere ……6….. teamwork
6. cooperation

(13)

1. evidence ……6…… unnatural material
2. theft
3. conception …..5…… door
4. discipline
5. entrance ……1….. proof
6. chemical

(14)

1. miniature	……4…… being away
2. participant	
3. protection	……2…… one who takes part
4. absence	
5. stressfulness	……3…… keeping safe
6. cheating	

(15)

1. dropout	……2…… relationship
2. association	
3. advertisement	…3…… notice of sth wanted or for sale
4. statement	
5. conductivity	……1…… one who quits school
6. polygraph	

(16)

1. mortality	……1…… death
2. worship	
3. laboratory	……3…… a place for scientific experiment
4. loneliness	
5. failure	……6…… readiness
6. preparation	

(17)

1. majority	……5…… showing
2. dominance	
3. insight	……1…… greater number
4. department	
5. depiction	……..4…… college division
6. requirement	

(18)

1. challenge	……3…… way of thinking or behaving
2. institute	
3. attitude	……1…. difficult or demanding task
4. indication	
5. migration	……4…. clue
6. expression	

(19)

1. gunshot	……1…… shot fired from a gun
2. credit	
3. yardwork	……4…… agent
4. official	
5. suburbs	……2…… sum of money
6. entertainer	

(20)

1. opportunity	……2…….. tradition
2. custom	
3. reality	……3…….. fact
4. musician	
5. floss	……1…….. chance
6. plumpness	

(21)

1. tattoo	……5…….. a journal
2. decoration	
3. sacrifice	…….4…… being from a country
4. nationality	
5. magazine	……6…… joining or mixing together
6. combination	

(22)

1. plan	……5…… difference of opinion
2. lawsuit	
3. packaging	……4…… production
4. development	
5. disagreement	……2…… a case in law court
6. reflection	

(23)

1. surgery	……2….. coming apart
2. separation	
3. judgment	…..1… medical operation
4. clientele	
5. denim	……6….. link
6. connection	

(24)

1. figure ……6…… general idea
2. longevity
3. spear ……5…… close attention
4. microscope
5. concentration …4…… instrument making things look larger
6. concept

(25)

1. palace ……4…… feeling of pleasure
2. statue
3. suggestion ……3…… hint
4. satisfaction
5. exception ……5…… a special case
6. reservation

(26)

1. ancestry ……6…… making dirty
2. success
3. membership ……1…… forefathers
4. plain
5. existence ……5…… being real & living
6. pollution

(27)

1. sightseer ……2…… giving & receiving in return
2. exchange
3. coast ……6…… weak point
4. wagon
5. hayride ……1…… visitor of interesting places
6. disadvantage

(28)

1. promise ……2…… contract
2. agreement
3. harvest ……1…… statement (not) to do sth
4. marshmallow
5. diversity ……5…… variety
6. maple

(29)

1. minority	.....1..... smaller number
2. battle	
3. background	.....3..... past experience
4. sap	
5. pickle	.....6..... time of difficulty & danger
6. crisis	

(30)

1. divorce	.....5..... sending goods abroad
2. version	
3. feather	.....4..... general feeling of a place
4. atmosphere	
5. export	.....1..... marriage break-up
6. nomad	