Word Knowledge & Reading Comprehension

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Words are the basic units of the language without them one cannot communicate effectively. Having a limited vocabulary is a barrier that prevents students from learning a foreign language. To do this study, sixty university students of English Translation were selected randomely from Bandar Abass Azad University. Participants were of two groups included thirty freshmen and thirty seniors. Two instruments (affixation test and reading comprehension test) were designed and used. Pearson correlation and Independent T-test were run to analyze the relevant data. Findings of the study revealed a significant positive relationship between the students' word knowledge and their word prediction as well as their reading comprehension. This research has pedagogical implications for EFL students, English language teachers and curriculum developers.

1. Introduction

Until recently, vocabulary learning was seen as peripheral to language acquisition, both theoretically and practically. Theoretically, it now seems likely that language acquisition begins with word learning rather than syntax triggering, with words gradually "grammaticalized" through experience on a largely associative basis. Practically, studies throughout the 1980s and 1990s showed that vocabulary skill and knowledge are the precondition for most other language abilities and, in addition, the main source of variance in the final state of such abilities. It now seems clear that vocabulary acquisition does not happen by itself to any satisfactory degree, particularly as needed for first language literacy or a second language generally. Lexical growth must therefore be provisioned in language instruction. It is widely accepted that vocabulary plays an important part in language learning and should be at the centre of language teaching. By using successful techniques and strategies to teach new vocabulary, students will find words easier to learn, to remember and to be more motivated in class. Without a sufficient vocabulary, one cannot communicate effectively or express ideas. Having a limited vocabulary is also a barrier that prevents students from learning a foreign language. If learners do not know how to expand their vocabulary, they gradually lose interest in learning.

Morphology is the branch of linguistics that studies words; it is concerned with the internal structure of words as well as the formal relationships that exist among the words of a language. The basic building blocks in morphology are Morphemes. They are defined as the smallest unit in language to which a meaning may be assigned or, alternatively, as the minimal unit of grammatical analysis. A basic distinction is the one between bound and free morphs. A free morph may form a word on its own, e.g., the morph *door*. Bound morphs, on the other hand, occur only in combination with other forms. All affixes are bound morphs. Most common types of affixes are prefixes and suffixes. Many languages have only these two types of affixes. Among them is English (at least under standard morphological analyses). A prefix is an affix that is attached in front of a stem. An example is the English negative marker *un-* attached to adjectives. A suffix is an affix that is attached after a stem. Take, e.g., the English plural marker *- s.*

Across languages, suffixation is far more frequent than prefixation. In addition, certain kinds of morphological information are never expressed via prefixes, e.g., nominal case marking. Many computational systems for morphological analysis and generation assume a model of

morphology based on prefixation and suffixation only. In recent years some promising guidelines has been suggested for teaching the meanings of prefixes, suffixes, and word roots as well as for the ways in which knowledge of these meaningful word parts may be applied (Templeton, 2004). In-depth knowledge of word meanings can help students understand what they are hearing or reading. It also can help them use words accurately in speaking or writing. Nation (1990) asserts that attending to prefixes, suffixes and roots are like mnemonics and operate on a similar principle. As they are meaningful units, the ability to recognize these parts of the words and elaborating on them might facilitate successful recall of the vocabulary. Knowing prefixes, suffixes and roots help students in a very important way, which makes it easier for them to remember the definitions of new words. In other words, knowing prefix, suffix and root meanings is a memory aid in the process of language learning.

Understanding morphemes and developing morphological skills the ability to recognize and use morphemes to comprehend words and the relationships between words (and sentences and paragraphs) are important skills for students. Morphological affixes also give the reader information about the word's place in the syntax of the sentence—its part of speech. This grammatical information works both ways; not only can the student tell from the sentence's syntax which part of speech a word should be, he or she can use the grammatical aspects of a word to confirm the word's part of speech, which the syntax of the sentence has already indicated. As Henry (1997) stated, the greatest benefit from instructional time spent on word study can be gained from exploring roots, prefixes, suffixes, and networks of related words.

2. Background

Research on reading comprehension in Iran, and specifically on vocabulary, is quite young (cf. Nemati, Salmani Nodoushan & Ashrafzadeh, 2010; Salmani Nodoushan, 2003; 2006a,b; 2007a,b,c; 2008; 2009; 2010a,b). The research on morphological processing began with Taft and Forster's (1975, 1976) papers in which it was proposed that prefixed words are analyzed into their constituent morphemes before lexical access occurs, and polysyllabic words are accessed via their first syllable. Moreover words related by affixation (both prefixed words and inflected words) are stored together. Mochizuki and Aizawa (2000); Schmitt and Meara (1997) suggested that knowledge of morphology can contribute to expanding and elaborating learners' vocabulary knowledge; indeed, learners who are familiar with English morphology are able to recognize more of the words that they encounter in reading passages.

Word parts include affixes (prefixes and suffixes) and roots or stems. Knowing some common affixes and roots can help students learn the meaning of many new words. For example, if students learn just the four most common prefixes in English (*un-, re-, in-, dis-*), they will have important clues about the meaning of about two thirds of all English words that have prefixes (Nation, 2001). Schmitt and Meara (1997) mentioned that explicit training is required for learners to expand their knowledge of morphology, as EFL learners who know a base form (e.g., *simple*) do not necessarily acquire other forms of the word (e.g., *simplify*). Observations indicates that for the majority of poor readers the basic source of their difficulty is failure to develop accurate and efficient (i.e., automatic) word recognition skills (Stanovich, 1986, 1992). Poor decoding skills may, in turn, place comprehension processes at risk, due in part to the fact that poor readers devote so much attention to the decoding task that there are not enough cognitive resources left for construction of meaning (Näslund, & Samuels, 1992; Stanovich, 1986, 1992). Furthermore, children who fail to develop good word recognition skills in the early grades begin to dislike reading and hence avoid reading wherever possible. This lack of practice could delay the development of vocabulary, syntactic knowledge, and general knowledge that are fostered by good reading. This in turn further inhibits growth in reading (Juel, 1988; Stanovich, 1986, 1992).

One of the central cognitive processes in reading comprehension is inferencing (R.C. Anderson & Pearson, 1984; Graesser & Bower, 1990; Kintsch, 1998; Monzo & Calvo, 2002; Nassaji,

2002, 2003a, 2003b; Whitney, 1987). Inferencing has been defined as the connections that people establish when they try to interpret texts (G. Brown & Yule, 1983). Lexical inferencing has also been found to be closely associated with incidental vocabulary learning that is, learning vocabulary through reading natural texts (Huckin & Coady, 1999; Nagy, 1997). Thus, Wesche and Paribakht (1999) argue that 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. Many factors have been shown to affect success in lexical inferencing, including the nature of the word and the text that contains the word (Paribakht & Wesche, 1999; Parry, 1993). These factors include, the degree of textual information available in the surrounding context, the learner's ability to make use of extra-textual cues, the importance of the word to comprehension of the text, the degree of cognitive and mental effort involved in the task, and the learner's attention to the details in the text as well as his or her preconceptions about the possible meaning of the word (Frantzen, 2003). In a discussion of the factors involved in lexical inferring, Nagy (1997) considers the role of learners' pre-existing knowledge bases and how these knowledge bases influence learners' strategy use and success. a vocabulary threshold of about 3000 word families or 5000 words is essential to effectively transfer L1 strategies to L2 reading. Indeed, a large sight vocabulary has been shown to enhance guessing from context. Clearly, this evidence supports active teaching of vocabulary. Although direct vocabulary teaching has been out of favor recently, there is definitely reason to reassess arguments against it and to look for effective ways to balance vocabulary learning through direct instruction and incidental exposure (Laufer, 1996).

In fact, about 100 words make up 50% of the words that are used in daily conversation. As you add to your knowledge of English, it could be good to expand your mastery of the basic vocabulary and the specialized terms of your field of study. Since there are so many words, and the long-term memory is rather slow in picking them up outside a natural English-speaking setting, a little semantics is great help. Thus, if you find "common factors" involved in many words, it helps understanding of words, and understanding helps remembering better. Some words consist of "building blocks" that are fit together. Affixes are among those common factors. They are major building blocks of words that have variants, and divergent meanings, but a general understanding of them helps a better grasp of the language. Apart from this, we often need fit or particularly fit words to make points clear without rudeness. We may need our essential information to shine clearly. If so, we may go for crisp and clear words as is fit, we may learn to strike out useless words and go for "telling" ones. Unfortunately, in Iran we can see that although there are some English courses during the seven years of schooling in secondary school, high school and more English courses for EFL learners at the university, still learners confront with major pitfalls in comprehending English texts or they can hardly speak fluently. These problems originate from the shortcomings in our schools and universities English curriculum in a way that there is no comprehensive course to deal with these kinds of problems. Furthermore, the method of teaching vocabulary which being used nowadays is just memorization along with some mechanical drills and there is no or less attention to the morphology or building blocks of words. In the present study, the importance of morphology and its relationship with prediction and realization of words as well as comprehending English texts is investigated. Hope that in a near future we can have more comprehensive English vocabulary teaching courses in our schools and universities.

3. Method

3.1. Subjects

Sixty university students of English Translation participated in this study, who were selected randomely from English Trasnlation students of Bandar Abass Azad University. They were mostly between 19 to 29 years of age whose first language was Farsi. Participants were of two different groups. The first group included thirty freshmen students (21 females and 9 males) who were assumed not to have any or enough knowledge of affixes and morphology except for

their own background knowledge. The second group included thirty senior students (20 females and 10 males) who had some knowledge of affixation and morphology from courses such as Study Skills or Word Formation.

3.2. Instruments

To do this research, two instruments were designed and used to measure the participants' word knowledge (knowledge of affixes), power of word prediction and reading comprehension ability.

Affixation Test: This test was designed to measure both the participants' word knowledge (knowledge of affixes) as well as their power of word prediction. The test consisted of sixty items and was administered to the participants of both groups. The test included the following parts:

1. Ten multiple-choice questions for guessing the meaning of prefixes according to the words containing those prefixes in the example sentences (each item had one point and the total score for this section was ten points)

2. Ten multiple-choice questions for guessing the meaning of suffixes according to the words containing those suffixes in the example sentences (each item had one point and the total score for this section was ten points)

3. Ten multiple-choice questions for guessing the meaning of roots according to the words containing those roots in the example sentences (each item had one point and the total score for this section was ten points)

4. The last part of the test consisted of thirty items in which the participants were asked to divide the words into their prefixes, suffixes, and roots and to guess the meaning of the words according to the given example sentences (each item of this section had one point too and the total score for this section was thirty points)

The scores of parts 1, 2 and 3 of the test were added up to obtain the total score (30 points) for the students' Word Knowledge. Also, students' score on part 4 (30 points) was used for their Word Prediction. In order to measure the reliability of the test, In order to measure the reliability and internal consistency of the test, the Cronbach's Alpha was computed.

Table 1
Reliability of Affixation Test

	Inter-Item Correlation	Cronbach's Alpha
Word knowledge	.560	.689
Word Prediction	.507	.570

Table1 shows that the Cronbach's Alpha for Word Knowledge test is .68 and for word prediction is .57.As they are between 0 and 1 so it is concluded that the tests enjoy a moderate reliability.

Reading Comprehension Test: The second test designed and used in the present study was a reading comprehension test in which there were six passages and thirty multiple-choice questions to measure students' ability of comprehending the texts. Each item had one point and the total score of the test was thirty. Since the Cronbach's Alpha demonstrated in Table 2 is .69, which is close to +1, the test is reliable.

Table 2
Reliability of Reading Comprehension Test

	Inter-Item Correlation	Cronbach's Alpha
Reading	.568	.695

Comprehension

Since there were two instruments to be administered, the process of data collection took place in two phases. First, the Affixation test was administered and on the next day, the reading test was applied. They were both administered in the classrooms located in Bandar Abbas Azad University. Forty minutes were allotted to each test. The purpose of the study was explained to the students and they were asked to perform as accurately as possible on the test. To take away any pressure, they were notified that the test scores did not have any effect on their regular class performance.

3.3. Procedures

Ex post facto design was used for the present research given the fact that variables were attributive, i.e., participants with their present knowledge of affixes and their level of proficiency were used.

4. Data analysis

The following analyses were carried out on students' scores resulted from the above mentioned tests.

1. The scores for prefixes, suffixes, and roots were added up to make a score of 30 for students' word knowledge.

2. Descriptive Statistics was run on all the scores of both groups.

3. Pearson correlation was run on students' total scores on Word Knowledge and their scores on word Prediction to see if there is any significant relationship between these two variables.

4. To see if students' word knowledge helps them in their reading comprehension, Pearson correlation was run between students' total scores on Word Knowledge and their scores on Reading Comprehension.

5. Pearson correlation was run between students' total scores on Word Prediction and their scores on Reading Comprehension to see how much they are related to each other.

6. Independent T-test was run between senior and freshmen students' scores on Word Knowledge to see if there is any significant difference between these two groups.

7. Independent T-test was run between senior and freshmen students' scores on Word Prediction to see if they are different in this regard.

8. Independent T-test was run between senior and freshmen students' scores on Reading comprehension to find out about any difference between them.

The analyses were done on SPSS program version 13.

5. Results and Discussion

The results are presented as follows:

a) Students' word knowledge score which included the scores on prefixes, suffixes, and roots (the first three parts of the affixation test) had a total score of 30. The forth part of affixation test, which included parsing of words and guessing the words' meaning, was considered as the students' Word Prediction score and had a total score of 30.

Table 3 presents the mean and standard deviation of both freshmen and senior students' scores.

Table 3
Descriptive Statistics of the Students' Scores on Word Knowledge, Word Prediction and Reading Comprehension

	N	Minimum	Maximum	Mean	SD
Freshmen's scores on Word Prediction	30	11	26	18.8333	4.29180
Freshmen's scores on Reading Comprehension	30	12	26	20.8000	3.56612
Freshmen's scores on Word Knowledge	30	13	25	21.4333	3.09263
Seniors' scores on Word Prediction	30	15	30	25.7667	3.49071
Seniors' scores on Reading Comprehension	30	19	30	26.9667	2.48420
Seniors' scores on Word Knowledge	30	20	30	27.9667	2.15732
Valid N (list wise)	30				

The freshmen's minimum score on word prediction is 11 and the seniors' minimum score is 15. The freshmen's maximum score of the same test is 26 and the seniors' maximum score is 30. The mean score is 18.83 and 25.76 for the freshmen and senior groups respectively. The freshmen's lowest score on reading comprehension is 12 and the seniors' lowest score is 19. The freshmen's highest score is 26 and the seniors' highest one is 30. The mean score is 20.80 and 26.96 for the freshmen and senior groups respectively. Moreover, on word knowledge, the freshmen's minimum score is 13, the maximum score is 25 and the mean score is 21.43 on the other hand the seniors' lowest score is 20, the highest score is 30 and the mean score is 27.96.

Table 4 presents the correlation between students' total scores.

Table 4
Correlation between Students' Total Scores

	Pearson Correlation				
Correlation between Students' total scores on Word Knowledge and Students' total scores on Word Prediction	.890	Correlation between Students' total scores on Word Knowledge and Students' total scores on Reading Comprehension	.981	Correlation between Students' total scores on Word Prediction and Students' total scores on Reading Comprehension	.899

As it is shown in the Table 4, the Pearson correlations are .890, .981 and .899 which are close to +1 and it shows that there is a significant linear positive relationship between students' Word

knowledge (Affixation) and their Word prediction, students' Word knowledge (Affixation) and their Reading comprehension, students' Word prediction and their Reading comprehension. Since there were two independent groups of participants, seniors and freshmen, the Independent T-tests were used in the following way.

    a) An Independent T-test was run between seniors and freshmen students' scores on Word Knowledge. Table 5 presents the results of the t-test.

Table 5
Independent T.Test between Students' Total Scores on Word Knowledge

Domain	N	Mean	Mean Difference	Std. Deviation	t	Sig.
Freshmen	30	21.4667	6.50000	3.13746	-9.350	.044
Seniors	30	27.9667		2.15732		

As it is illustrated in Table5, the seniors' mean score is greater than that of the freshmen's, which indicates that the former outperformed the latter on this test. Because of this mean difference, an independent T-test was run between the freshmen and seniors' word knowledge scores. T-test results showed a t-value of -9.350 and the Sig. value of .044, which is less than 0.05 that indicates a significant difference between the students' performance on Word knowledge test.

    b) An Independent T-test was run between senior and freshmen students' scores on Word Prediction. Table 6 presents the results.

Table 6
Independent T-test between Students' Total Scores on Word Prediction

Domain	N	Mean	Mean Difference	Std. Deviation	t	Sig.
Freshmen	30	18.8333	6.93333	4.29180	-6.865	.044
Seniors	30	25.7667		3.49071		

Table 6 indicates that the mean of freshman students on word prediction is 18.83 and the mean of senior ones is 25.76, which represents that the seniors' performance on this test was better than the freshmen's performance. As there is a mean difference of 6.93, an independent T-test was run which resulted in a t-value of -6.865 and a sig. value of .044, which is less than 0.05. This shows a significant difference between the students' performance on Word prediction test.

    c) An Independent T-test was run between senior and freshmen students' scores on Reading comprehension.

Table 7 presents the results of this t-test.

Table 7
Independent T.Test between Students' Total Scores on Reading Comprehension

Domain	N	Mean	Mean Difference	Std. Deviation	t	Sig.
Freshmen	30	20.8000	6.16667	3.56612	-7.772	.022
Seniors	30	26.9667		2.48420		

Table 7 indicates that freshmen's mean score on Reading comprehension is 20.80 and seniors' mean score on the same test is 26.96. The mean difference is 6.16. A T-test was run and the Sig. value is .022, which is less than 0.05 that indicates a significant difference between the students' performance on the Reading comprehension test. According to the obtained results, the two null

hypotheses were rejected because there were a positive relationship between students' Word knowledge and Word prediction as well as their reading comprehension.

6. Conclusion

As it is aforementioned, we can interprete the findings of the present study in the following way:

- Those students who had the stronger command of word knowledge, seniors, were able to predict more word's meanings.

- Those students who had less knowledge about words, freshmen, were able to predict less word's meanings.

- Those students who had the stronger command of word knowledge, seniors, had the greater ability to understand reading comprehension texts.

- Those students who had less knowledge about words, freshmen, had less ability to understand reading comprehension texts.

- Those students who showed the greater ability for word prediction, seniors, had the greater ability to understand reading comprehension texts too.

- Those students who showed less ability for word prediction, freshmen, had less ability to understand reading comprehension texts as well.

Therefore, it is concluded that there is a linear positive significant correlation between the students' Word knowledge and their Word prediction, the students' Word knowledge and their Reading comprehension and the students' Word prediction and their Reading comprehension. In addition, the T-tests illustrated that there is a significant relationship between the students' performance and their Word knowledge, a significant relationship between the students' performance and their Word prediction and a significant relationship between the students' performance and their Reading comprehension.

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Appendix A: AFFIXATION TEST

Full Name: ………….   Age: …………..   Male☐   Female☐
Freshman ☐ Senior ☐   Time: 40 minutes
Please tick any of the following morphology courses that you have passed before.
  ➢   Study Skills   ☐
  ➢   Word Formation   ☐
  ➢   None of the above   ☐

Here is a brief description of affixes (prefixes, suffixes, roots or stems). Please read this part, and then answer the following questions.

Prefix:Prefixes [pre (before) + fix (fasten) = fasten before] are groups of letters placed before words or roots. Prefixes modify or extend the meanings of words and roots.

  ▪ Example: *ab* = away from, off………….<u>ab</u> + <u>rupt</u>

  ▪ abrupt (adjective): unexpected change

Suffix:Suffixes are groups of letters attached to the ends of roots, words, and word groups. Suffixes serve a grammatical function. A suffix can indicate what part of speech (<u>noun</u>, <u>verb</u>, <u>adjective</u>, <u>adverb</u>) to which the word belongs. Suffixes can also modify and extend meaning.

Example: *-acy* = state or quality………….. priv + <u>acy</u>

Privacy (noun): the state of being alone

Root:A *root* is the basic part of a word, and it is the foundation on which the meaning of a word is built. Many roots are real words on their own: *graph* (a diagram) and *term* (a fixed time or date). . Most roots, however, do need other elements. For example, the roots *ology* (study) and *dox* (opinion or belief) need to be combined with other word elements, like prefixes, suffixes, or even other roots.

   Example: *ology*, (meaning study of)]…………bio+<u>logy</u>

    Biology: The study of life [from the prefix *bio-* (meaning life) and *ology*, (meaning study of)].

Now go to the next part and answer the questions.

A: CIRCLE THE CORRECT MEANING OF EACH <u>PREFIX</u>.

1-ante *as in* ⟶ This event antedates the discovery of America by several centuries.

a-before   b- against   c-self

2-anti   *as in* ⟶   The trip itself was a bit of an anticlimax after all the excitement of planning it.

a-against   b-around   c-in

3-auto   *as in* ⟶   A more detailed account of the incident is given in her autobiography.

 a-between   b- self   c-one

4-bi   *as in* ⟶   He is bilingual; he can speak French and Spanish.

 a-first   b-two   c-alone

5-co   *as in* ⟶   He is the co-producer of that film.

a-together b-wrong c-after

6-inter *as in*   Perfume interacts with the skin natural chemicals.

a-between b-behind c-from

7-micro *as in* ⟶ The school playground is a microcosm of the world at large.

 a-small   b-large   c-among

8-macro *as in* ⟶ Macroeconomics is the study of economic factors on a large scale.

a- small   b-large   c-among

9-pre *as in*   We attended a preview of the winter fashion collection.

 a-after   b-first   c-one

10-ir *as in* ⟶ I was shocked by his irrational behavior.

 a- beyond   b- for   c- not

B: CIRCLE THE CORRECT MEANING OF EACH <u>SUFFIX</u>.

1-_ible *as in* ⟶ It was sensible of you to lock the door.

a-state   b-capable of being c-full of

2-_ation *as in* ⟶ There is no relation between these two persons.

a-condition   b-receiver of the action c-like

3-_ee *as in* ⟶ He has been the employee of this company for many years.

a-pertaining to b-quality c- receiver of the action

4-_en *as in* ⟶ This is a golden opportunity to enjoy the holiday of a lifetime.

a-of the nature of b- full of   c- without

5-_er *as in* ⟶ There were lots of astronomers in that meeting.

a-state   b- the one who…... c- not

6-_ful *as in* ⟶ It's so peaceful out here in the country.

a-after   b- without   c-characterized by

7-_ic *as in* ⟶ Your feelings are absolutely poetic.

a-pertaining to b-loose from c- act of

8-_ish *as in*   She is a foolish interfering old woman.

a-belonging to b-capable   c-skill

9-_less *as in* ⟶ It's better to keep quite than saying a meaningless word.

 a-quality   b-without   c- one who …

10-_ly *as in* ⟶ Children playing happily on the beach.

a-under   b- the object c- like

C: CIRCLE THE CORRECT MEANING OF EACH <u>WORD STEMS OR ROOTS</u> .

1-anthro as *in* ⟶ Anthropologists found some new human races.

 a-self b- time c-mankind

2-volve as *in* ⟶ The earth revolves around the sun.

a-order   b- roll   c-hand

3-bibl *as in* ⟶ There is a useful bibliography at the end of each chapter

a-color   b- time   c- book

4-cosm *as in* ⟶ He has studied cosmology and has great knowledge about the universe.

 a-circle   b- same   c- world

5-geo *as in* ⟶ He passed his geology course.

a-world   b- earth   c-same

6-hetero *as in* ⟶ The heterogeneous population of the USA consists of many different races.

a-same   b-different c-middle

7-homo *as in* ⟶ These three words are homophone.

a-same   b-different c-middle

8-mater *as in* ⟶ She feels very maternal towards him.

a-mother   b-many   c-other

9-pathy *as in* ⟶ She showed no sympathy when I told her I was in trouble.

a-feeling   b-like   c-far

10-vers *as in* ⟶ Few cooking ingredients are as versatile as eggs.

 a-draw   b-turn   c-call

D: Please divide the following words into their prefixes, roots and suffixes then try to predict the meaning of the words according to the example sentences.

NO	WORD	PREFIX	ROOT	SUFFIX	WORD MEANING
1	attend I was unable to *attend* his funeral.				
2	audible Your voice is barely *audible* over the sound of the train whistle.				
3	cognate German and Dutch are *cognate* languages.				
4	convenient We must arrange a *convenient* time and place for the meeting.				

5	extraordinary A child born in an *extraordinary* circumstances.				
6	Foretell No one could have *foretold* such strange events.				
7	Combination It is the *combination* of wit and political analysis that makes his article so readable.				
8	Consequential She was injured and suffered a *consequential* loss of earnings.				
9	Contractor Who were the *contractors* for the new motorway?				
10	Deported He was convicted of drug offences and was *deported*.				
11	Proclaimed After its independence India was *proclaimed* a republic.				
12	illegible He had an *illegible* signature.				
13	malfunction They had many problems due to technical *malfunction*.				
14	Revived After spending a day in the sun, I was *revived* by a glass of water.				
15	Audible 				

	Your voice is barely *audible.*				
16	Induced If a child swallows poison, it is suggested that vomiting should be *induced*.				
17	Influence It was John's success as a musician that *influenced* my decision to take guitar lessons.				
18	semiannual This is a *semiannual* conference which is held in Geneva.				
19	synchronous Those two events are *synchronous*.				
20	unceasing In order to be successful you should have *unceasing* effort.				
21	Amicable The two neighbors came to an *amicable* decision about the fence.				
22	Induct Mindy was *inducted* into the army last month.				
23	Influence Your attitude *influenced* him.				
24	Unison The two singers sang in *unison*.				
25	Prevent Lamont *prevented* a disastrous fire.				
26	Evolution Darwin has developed theories of *evolution*.				
27	Terminal Margaret has been diagnosed with a *terminal* disease.				
28	Content I can't tell what the *content* of this can is.				

29	Invent Alexander Graham Bell *invented* the telephone.				
30	Revolve The earth *revolves* around the sun.				

APPENDIX B:READING TEST

Full Name: ………….   Age: …………..   Male☐   Female☐
Freshman ☐   Senior ☐   Time: 40 minutes
Please tick any of the following morphology courses that you have passed before.
➢   Study Skills   ☐
➢   Word Formation   ☐
➢   None of the above   ☐

In this section, you will read several passages, each followed by some questions about the reading material. You are to choose the one best answer marked A, B, C, or D

PASSAGE (1)

Agriculture in the West and South of the United States has traditionally been supported by migrant workers who migrate or move from area to area according to the crops that need harvesting. Many Chinese, Filipino, and Mexican immigrants became migrant workers when they first arrived in the United States. Often they had problems with the English language or no skills that they could immediately use in the new country.

A person looking objectively at the living conditions of these workers might say that their way of life was little better than slavery. They were housed in substandard conditions, received wages far below the minimum, and had no medical or insurance benefits. The migrant workers had no labor unions that could bargain for better wages, better hours, or improved working conditions. They had no money and no power with which to bargain with their employers. Employers were making fortunes by the sweat of their workers' brows. It took an idealistic, determined young man named Cesar Chavez to change the plight of the migrant worker forever.

1. Which of the following correctly describes migrant workers?

(A) Only Mexicans were permitted to work on crops.
(B) Living and working conditions were generally poor.
(C) The workers usually stayed in one place for many years.
(D) All the workers were fluent in English.

2. It can be inferred from the final sentence of the passage that

(A) The conditions described are still the same today
(B) Migrant workers will always live like slaves
(C) Conditions for migrant workers are better now than before the work of Cesar Chavez
(D) There is no longer any need for migrant workers

3. The next paragraph of this passage will probably be

(A) a history of agriculture in the United States
(B) a listing of the countries migrant workers come from
(C) a lesson in English as a foreign language
(D) the change brought about by Cesar Chavez

4. Which of the following describes the work done by migrant workers?

 (A) It required skilled labor.
(B) It could only be done by native-born Americans.
(C) It was closely supervised by national labor unions.
(D) It was low paid, and working conditions were poor.

5. What was the first problem of migrant workers?

(A)They had no labor unions.
(B)They didn't know the English language.
(C)They had no money or power.
(D)They had no medical or insurance benefits.

PASSAGE (2)

Sound travels in waves through the air like waves through the water; the higher the wave, the greater its power. The waves are alternate rings of compressed and rarefied air moving away from a central source at a constant speed. As each wave of first compression and then rarefication encounters an object, it exerts a force-a push and then a pull-on the object. That is why sound can break a glass or cause a screen to vibrate.

The greater the number of waves a sound has, the greater its frequency is. The strength or intensity of sound, sound level is measured in decibels (dB). The decibel unit is named after Alexander Graham Bell, the inventor of the telephone and an important researcher into the nature of sound. Because hearing varies widely, what may seem loud to one person may not to another. Although loudness is a personal judgment, precise measurement of sound is made possible by use of the decibel scale. This scale of Sound Levels and Human Response measures sound pressure or energy according to international standards.

6. It can be inferred from the passage that a sound measured at 100 decibels is louder than

(A) any other sound ever measured
(B) a sound measured at 110 decibels
(C) a sound measured at 80 decibels
(D) the machine measuring it

7. It can be concluded from the passage that

(A) sound waves can be measured scientifically
(B) sound has no physical effect on any object
(C) everyone judges loudness the same way
(D) the decibel scale is a purely subjective device

8. Sound waves move outward from a central point at

(A) varying speeds
(B) a speed of 1,181 kilometers per hour
(C) greater and greater speeds
(D) a steady, continuous speed

9. During a loud thunderstorm, a window may rattle because

(A) lightning strikes the glass with force
(B) the sound of the rain is heard through the glass
(C) the air is colder on one side of the glass than on the other
(Dl the claps of thunder create powerful sound waves that exert
pressure on the glass

10. The term decibel comes from

(A) the intensity of twelve bells
(B) the inventor of the telephone
(C) the inventor of the hearing aid
(D) a term for rarefied air

PASSAGE (3)

Students should note that there is no known cure for the common cold, or "flu." Antibiotics such as penicillin will not cure a cold or the flu. The university infirmary suggests that if you show symptoms of the flu, you should follow this advice:

1. Get lots of rest if you have fever, feel tired, or ache all over. Return to your normal activities when your fever has been 99° or below for twenty-four hours.

2. Take aspirin. Take two adult-sized aspirin every four hours for relief of fever or aches and pains. If you cannot take aspirin, use an aspirin substitute.

3. Drink fluids. It is extremely important that you drink at least one large glass of liquid every hour that you are awake. This keeps your membranes moist and replaces the fluids lost by sweating.

4. Use a cool mist humidifier or vaporizer for relief of head and chest congestion.

5. Gargle with salt water. Mix ½ teaspoon salt in cup warm water. Gargle four times a day for sore throat. This will relieve pain and swelling of the throat.

6. If you smoke, don't__at least during your cold and flu condition.

11. To relieve fever or aches and pain, you should

(A) drink at least one glass of liquid every hour
 (B) use a mist vaporizer
(C) use an antibiotic' such as penicillin .
(D) take two aspirin every four hours

12. What is the source of the information in the notice?

(A) the World Health Organization
 (B) a United States government agency
(C) the school doctor-or nurse
(D) the collective wisdom of people who have had the flu ?

13. The general theme of the notice

(A) a description of the common cold
(B) treatment of the flu
(C) the aftereffects of the common cold or flu
(D) a scientific inquiry into the causes of the flu

14. It can be inferred from the passage that a person with a high fever is in danger of

(A)Dehydration
(B) Extreme weight loss.
(C) Sleeplessness
(D) loss of memory

15.What is the primary action to cure the sore throat?

(A)Using a cool mist humidifier
(B)Quitting smoking
(C) Gargling with salt water
(D)Taking aspirin

PASSAGE (4)

The prevailing method of growing rice in California is to plow the land in early spring to a depth of four to six inches and to allow the soil to dry for seven to ten days. A satisfactory seedbed can then be prepared by harrowing twice and floating once with a heavy plank drag. The field levees are then put up, the floodgates put in place, and the field flooded to a depth of

about six inches. Seed that has been soaked for thirty-six to forty-eight hours is then sown from an airplane at the rate of 135 pounds of seed an acre. The field is kept submerged to a depth of five to seven inches until the rice is ready to harvest; then it is drained. Preparing the seedbed when the soil is dry gives better control of some of the aquatic weeds and grasses that cannot be controlled by flooding and retards the growth of algae (green scum) on the surface of the water.

16. In California, rice seed is planted

(A) by hand .
(B) by floodgates.
(C) from the air
(D) by flotation

17. After the seed is planted, the field is

(A) under water until harvest time
(B) filled with green scum
(C) never under water
(D) dried for a week and a half

18. When everything is in readiness for the planting, the field is

flooded to a depth
(A) of 135 pounds an acre
(B) of seven to ten days
(C) equal to a heavy plank drag
(D) about equal to the depth to which the land has been plowed

19. What is the first action to grow rice?

(A) Preparing a satisfactory seed bed.
(B) Plowing the land.
(C) Flooding the field.
(D)Growing algae.

20. Which sentence is not mentioned in the reading?

(A) The field levees are put up after floating the seed bed.
(B) Dry seed bed gives better control of aquatic weeds .
(C) Plowing the land in summer is better than spring.
(D)Seeds are soaked for thirty six hours and more.

PASSAGE (5)

Making soap is a chemical process. When lye and fat are brought together under the right conditions, they react to make entirely different products. Fat and lye produce soap and glycerin in a process called saponification. It may take several weeks for complete saponification to take place. When soap is saponified, it never separates into fat and lye again. In homemade soap, the glycerin is left in. In commercial soap, it is separated and sold as glycerin.

21. Saponification is a process that produces

(A) fat and lye from soap and glycerine
(B) fat and lye under the right conditions
(C) chemicals
(D) soap and glycerine from fat and lye

22. What happens to the glycerine in homemade soap?

(A) It separates back into fat and lye.
(B) It is left in the soap.

(C) It is sold separately.
(D) It cannot be removed commercially.

23.What does *it* refer to in line 5?

(A)Lye
(B)Soap
(C) Fat
(D)Glycerin

24. Which sentence is true:

(A)Saponification takes place in no time.
(B)You can easily separate soap into fat and lye.
(C) Glycerin plus fat is homemade soap.
(D)In commercial soap glycerin can be separated.
25. The best topic for this reading is :
(A)Commercial soap and homemade soap.
(B)The process of making soap.
(C) Natural process of making soap.
(D)Separating soap into its content.

PASSAGE (6)

Human beings have adapted to the physical world not by changing their physical nature but by adjusting their society. Animals and plants have made adjustments, over long periods, by the development of radical changes in their very organisms. Hereditary differences meet needs of various environments. But among humans, differences in head form and in other physical features are not, in most cases, clearly adaptive Nor is it clear that mental capacities of races are different. As far as we know, the races are equally intelligent and equally capable of solving their problems of living together. The varying ways of life, it seems, are social and learned differences, not physical or inherited differences. It stands to reason, therefore, that man's adjustment to his surroundings should be studied in custom and institution, not in anatomy and neural structure.

26. According to the passage, anyone who wanted to study human

adaptation to environment should do so through the field of :

(A) physics
(B) sociology
(C) archaeology
(D) medicine

27. Over the centuries of human development, adaptation to the

physical world has been accomplished through

(A) radical change in the organism .
(B) changes similar to those accomplished by plants"
(C) dramatically different head sizes
(D) cultural adjustments in the customs of society

28.The varying ways of life among humans are

(A) learned and social
(B) caused by heredity and physical variation
(C) due to different mental capacities.
(D) similar to the varying ways of plants .

29 . Animals adjust themselves :

(A) over long periods, by the development of radical changes in their very organisms.
(B) In short period, by the development of radical changes in their very organisms.
(C) in custom and institution, not in anatomy and neural structure.
(D) not by changing their physical nature but by adjusting their society.

30. The best topic for this passage is:

(A) Hereditary differences
(B) anatomy and surroundings
(C) adaption to the physical world
(D) physical features