

The Effect of Visually-Supported Vocabulary Instruction on Beginner EFL Learners' Vocabulary Gain¹

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Abstract

This study investigated the vocabulary learning gains of beginner EFL learners in the Iran Language Institute (Urmia branch) using the application of visual aids and the traditional technique of definition. The proposed hypothesis predicted no significant difference between the two methods. The participants (N=44, within the age range of 10-16 and all males) were chosen using an intact group design sampling procedure. Instruments included Remedial Tests of the institute, serving both as a pre-test and a post-test with vocabulary as the main focus. The study lasted for three months, during which the experimental group was taught using visual aids and the control group, using traditional definition. The analysis of data using independent t-test indicated the experimental group outperformed significantly better than the control group in the post-test. The results offer a wealth of opportunity for teachers to experience the visual-supported approach to teaching vocabulary.

Resumen

Este estudio investigó las mejorías en aprendizaje de principiantes en cursos de inglés para extranjeros en el Instituto de Idiomas de Iran (Urmia) utilizando ayudas visuales y la técnica tradicional de usar definiciones. La hipótesis predijo ninguna diferencia significativa entre los dos métodos. Los participantes (N=44, dentro del rango de edad de 10-16 años y hombres todos) se escogieron mediante un procedimiento de diseño de grupos por muestreo. Los instrumentos incluyeron exámenes de regularización del Instituto que sirvieron como una prueba preliminar y posterior con el vocabulario como punto principal. El estudio tuvo una duración de tres meses, durante los cuales se enseñó al grupo experimental por medio de ayudas visuales y el grupo de control utilizando definiciones tradicionales. El análisis de los datos, hecho usando una prueba independiente de prueba-t, indicó que el grupo experimental superó significativamente al grupo de control en el prueba posterior. Los resultados ofrecen una amplia oportunidad para que los maestros experimenten el método de la enseñanza de vocabulario por medio del usos de ayudas visuales.

Introduction

As human beings, we are so immersed in our daily lives that often we take for granted the routines of fulfilling successful communication. Quite often, the question of "how can we communicate the way we do?" occurs to those who strive to make successful communication with their interactants. Communication calls for the integration of many skills and one of which is vocabulary build-up. As such, vocabulary is an essential component of language, and one's vocabulary repertoire can have a direct link with the success of communication.

Before going further, I shall offer a definition of vocabulary. The term is coupled with difficulties and lack of consensus (Meara, 1990; Nation, 2000). Generically speaking, vocabulary is the knowledge of the meanings of the words (Hiebert & Kamil, 2005). This definition is complicated by the fact that words come in at least two forms: oral (words whose meanings we know when we read or speak orally) and print (word meanings known when we read or write silently). Knowledge of words also incorporates two forms: receptive, that we can understand or

¹ This is a refereed article

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recognize, and productive, that we can write or speak (ibid). The above mentioned points are all-pervasive in the case of a native speaker of a language. If there is no difference between first and second language, there is no need to differentiate between teaching approaches for those students seeking to develop their first and only language from those whose education requires development of additional languages (Boers & Lindstromberg, 2008). However, since acquiring a first language is in principle different from learning a second language, an undeniably distinct path would be followed by a second language learner. It goes without saying that the foreign language learner is to have a relatively wide vocabulary repertoire of the language in order to be able to communicate satisfactorily. It is worth mentioning that most of the research on vocabulary centers around the broad context of English Language Teaching (Meara, 1990; Nation, 2000).

A vast portion of English language education is devoted to teaching vocabulary. Indeed, a lack of mastery of enough vocabulary can be regarded as an obstacle towards a learner's linguistic competence, a phenomenon which Corson (1995) termed "lexical bar or barrier". To be considered as an educated English speaker means having enough number of words at one's disposal. Due to the lack of circumstances conducive to learning one's own native language at the time of foreign language learning, like constant exposure to rich language and an ever-present target language context, vocabulary teaching demands deliberate attention. Having said this, the way of achieving the foreign language mastery, i.e., the teaching approach adopted, is of utmost importance. Needless to say, the traditional methods put a do-it-all-yourself burden on the students' shoulders, with the teachers' roles being minimized to only giving the meanings of the words, and the rest is to be done by the students themselves.

A number of word learning strategies have been proposed including word part, context, and definition based strategies. In one sense, the third strategy is said to have an upper hand over the rest, with the first two providing only partial and sometimes misleading information about the meanings of words. Definitions, however, are not without their own shortcomings for the following reasons (Stahl & Nagy, 2006, p. 182):

1. The meaning of a word is to some extent dependent on the context in which it occurs,
2. Definitions do not impart information regarding how the words are used, and
3. Children have trouble understanding the definitions.

Through the passage of time new approaches of teaching vocabulary have come about. With the emergence of new approaches to teaching vocabulary, the role played by traditional methods in the classrooms was de-emphasized, and a need was felt for vocabulary teaching methods to be accompanied by new procedures. Teachers' roles have changed in order to develop learners' independence in learning. They will frequently turn to explanation which allows for the adaptation of different strategies. Examples of these strategies are a physical demonstration, a synonym, translation, pointing to objects, or using visual aids like magazine pictures (Hedge, 2000, p. 126). According to Weatherford (1990) there are techniques which include rote rehearsal (memorization by repetition), the use of visual aids, role-playing, vocabulary learning in a specific cultural context, vocabulary learning through art activities, the root-word approach, mnemonic learning (such as the key word approach, in which a new word is associated with a similar-sounding familiar word, or keyword and a mental image is then formed linking the unfamiliar word to the key word), two types of vocabulary learning through music and methodologies such as Suggestopedia and Total Physical Response instruction. Locating vocabularies in a dictionary and learning through definition is another, yet a slow process, adding to one's word power only. Learning through context is one more, just as we learn through listening and reading. Raimes (1983) states that pictures are helpful for both teachers

and learners while learning vocabulary. In fact, they can help students imagine the real object; as a mental representation of mind, they can facilitate learning.

Given that the participants of this research are young people (10-16 years old), teaching, in itself, leans towards a more delicate approach. Since the more readily sensible point for them to start with is vocabulary, it is of utmost importance to make them feel progress. There is evidence that children learn words earlier than learning any other aspects of the language. Biemiller and Slonim (2001) found that children share a common order of vocabulary acquisition, with high correlations in word knowledge. This appears to be due to the fact that words grow in complexity, and without encountering the simpler words, children cannot learn the more complex ones. The way that teachers interact with children has been shown to highly impact their vocabulary growth (Biemiller 1999; Dickinson & Smith, 1994; Dickinson & Tabors, 2001). The quality of teacher-student interactions and the nature of the language used are of a lot of importance.

Wherever resources allow, it can be of considerable value to set up different resources for vocabulary teaching, such as dictionaries, puzzles, crosswords, and visual aids (Hedge, 2000). Of the suggested resources, a resounding "yes" would be heard in favor of the use of pictures, in contrast with the traditional methods of resorting only to definition which makes the word inevitably out of context. Motivation plays an important role in vocabulary learning, as it does in any other kind of learning. In the context of this study (Iran) an unrelenting teaching technique for words through definition, mainly translated into Farsi, is widely used in schools. A shift has been made to incorporate visual aids in teaching vocabulary to children, but it is not yet fully recognized and adopted. Following this visually aided mode of teaching, students would be more motivated to learn than when only presented printed materials in the class. Even sophisticated vocabularies could be taught to children simply by making them fun; thus, an indispensable element of teaching this age group is 'adding fun'. Allen (1983) states that in many English language classes, even where teachers have devoted much time to vocabulary teaching, the results have been disappointing. Sometimes, after months or even years of English, many of the words most needed have never been learned. Especially in countries where English is not the main language of communication, many teachers seek help with vocabulary instruction. Most of the words a person learns come from seeing or hearing them in context. The more language exposure, the more unknown words the child will encounter, and the more words are learnt. We, therefore, need to find a remedy for deficit vocabulary knowledge of young EFL learners. Accordingly, the present study aims at shedding light on a more productive way of teaching vocabulary to young people. The proposed research question was as follows:

Is there any difference in vocabulary learning gains of Iranian elementary EFL learners through traditional technique of definition as opposed to a visually-supported procedure?

Literature Review

We live in the 'age of accountability'. Part of the professional role of a language teacher is to make good instructional decisions and to be able to explain and to justify the foundations for that decision-making in the light of evidence from both practice and research. Language education is a field within which vocabulary learning is an issue and whose significance has been widely recognized by almost all practitioners. As far as vocabulary teaching and learning methods are concerned, there does not seem to be a consensus of what constitutes the best methods of teaching vocabulary. In the mid 1960s, however, new methodological aids came into vogue, which were consequently greeted with euphoria in almost all language classrooms, one of which has been a contextually embedded approach (Beck & McKeown, 2007).

Although choosing to teach vocabulary in context has many reasons, the real value of context lies in its authenticity. The benefits are three different kinds (Yoshii, 2006). First of all, assessing

the meaning of a word in context obliges students to develop strategies such as anticipating and inferring, which become highly beneficial as learning progresses. Secondly, systematically meeting new vocabulary items in context emphasizes the fact that the words are actually used in discourse for purposes of communication. And last but not least, all the factors mentioned above can be said to contribute to an L2 learner's autonomy and to facilitate the transfer of knowledge that accompanies it. Moreover, the three points just mentioned underscore the fact that the mental representation of a word's meaning improves together with successive encounters in different contexts.

Deep word knowledge is based on multiple, varied, and rich experiences with words and its underlying concepts. As learners obtain increasingly deep knowledge of a word, their conceptual framework for that word grows and changes to reflect their understanding of the ways in which the word is related to other words. As far as vocabulary learning is concerned, pictorial cues will help learners make associations between pictures and words, and learning will be facilitated accordingly. Information would be, therefore, better remembered when it is dually rather than singly coded, because when one memory trace is lost, the other is accessible. Moreover, pictures are more easily remembered as compared to words since pictures are more likely to activate the image-to-word referential connections. Therefore, we remember words better if they are associated with images (Milton, 2009).

The possibility of the creation of conceptual representations for L2 words in a child population, even after only one session of learning of L2 vocabulary, was the focus of Comesa, Perea, Pioeiro, and Fraga's (2009) investigation. They examined the applicability of two different L2 learning methods: L2-L1 association learning versus L2-picture association learning. A translation recognition task was also employed to test whether there was a difference between a semantically related pair and an unrelated pair. Results showed a significant semantic interference effect (a conceptual effect) in children after just one vocabulary learning session. Importantly, the L2-picture method produced a greater semantic interference effect than the L2-L1 method.

Beliefs about the how of vocabulary instruction can be classified according to the theories the practitioners adhere to. Zarei and Khazaie (2011), for example, proposed to discover how Iranian learners of the English language learn L2 vocabulary through laptop based delivery of multimodal items. The learners were accordingly placed into four different short-term memory ability groups, using the Visual and Verbal Short Term Memory Test. Upon treatment, they were evaluated on their recognition and recall of the vocabulary items. The results indicated that except for low visual and low verbal group, the other three groups, treated with vocabulary items through pictorial or written annotations, performed significantly better on the tests.

Another study of vocabulary learning considered was that of Barani, Mazandarani and Seyyed Rezaie (2011). This study included two classes (experimental and control groups) using a University of Cambridge exam (Starter) as a pre-test in the first session of the course. This vocabulary pre-test also served as the post-test in the last session of the semester. The experimental group went through vocabulary learning using audiovisual aids, i.e., watching and listening, watching and copying, listening and drawing, looking and drawing, and so on. The results indicated that there was a significant difference between the means of pre-test and post-test of the experimental group.

Arkan and Taraf (2010) made an attempt to examine the effectiveness of authentic animated cartoons in teaching English to young Turkish learners. The study, assuming a pre-test and post-test design, compared the instruction effects based essentially on traditional grammar and vocabulary teaching and the one on authentic animated cartoons pursuing the same purpose. The control group (N=15) followed a traditional grammar-based syllabus for four weeks, while the experimental one (N=15) featured *The Simpsons* as classroom material. Results pointed out

to the experimental group's outperformance in learning target grammar points and vocabulary items.

Chih-cheng (2009) set out to investigate whether either dynamic animation annotations or static graphics annotations would facilitate the learning of motion verbs better. Three eighth-grade classes were randomly assigned to a dynamic animation group, a static graphics group, and a text-only group. Making use of ANalysis Of VAriance (ANOVA), their learning of twenty target words in two reading passages was assessed by production and recognition tests using a pre-test and two post-tests. Although the two visual groups outperformed the text-only group, differences between the dynamic animation group and the static graphics group were not detected. The findings support visual-aided vocabulary learning and suggest that dynamic animations may be more useful to illustrate unfamiliar, culture-specific concepts in vocabulary lessons.

The study by Çiftçi and Üster (2009) aimed at testing a hypothesis of different ways of teaching vocabulary and their possible effectiveness on teaching vocabulary to two classes of the Department of Foreign Languages of TOBB University of Economics and Technology in Turkey. These classes were instructed via two different techniques: one being through discourse and contextual clues and the other through providing only the word definitions. A constructed vocabulary test was applied before and after the instruction serving both as a pre-test and as a post-test. Data analysis found no statistically significant difference in post-test scores of the two groups. As a result, presenting the target vocabulary items in context and by definitions did not make a remarkable difference in terms of overall performance.

The meaning of a word depends on the context in which it is used. Stahl and Nagy (2006) make reference to the importance of implicit learning and teaching words in context. Moreover, words have multiple meanings that differ from one context to another, and teaching them out of context and individually may be time consuming and arduous work. This result may not be satisfactory. That is why dictionaries try to tackle this problem by listing multiple meanings for words, but in most cases, they do not provide the context. So, giving a definition for a word is useful if we use the word in context and if we know how the word is used in a specific situation because, as mentioned earlier, teaching all the meanings of a word is a cumbersome task. Having reviewed the literature of vocabulary learning, we will now describe how our research was carried out.

Method

Participants

The participants were young male English students of a class names Race Two (ten classes) in the Iran Language Institute (ILI) of the Urmia branch in Iran. The study was carried out during the summer of 2010. Race Two is the sixth level of the beginner levels at the ILI. The classes were randomly divided into two halves, as 'experimental' and 'control' groups. After giving the pre-test, those who scored below the passing criteria of ILI were included in the study and those getting a higher score were not included in the study. The number of the candidates at this level turned out to be 19 in the experimental group and 23 in the control group. To apply a sense of equality to both groups, two students in the latter group were added to the former, making the number 21 in each group. The participants were similarly distributed in terms of their native language, being Turkish, and their ages ranging from 10 to 16. They attended English classes two sessions per week, each for an hour and a half. Care was exercised to ensure the groups' homogeneity in terms of language proficiency. This was further checked through the application of a pre-test adapted from Remedial Tests in the elementary book of adult learners which is at the same as level as Race Two in young students' school.

Materials and procedures

Language proficiency of the candidates was initially determined through the application of a remedial test (see Appendix 1) at the start of the study. As these tests are written by experts in language testing, they have a high validity. The complexity of the Race Two level equals the complexity of Elementary Two level of the adult section; therefore, the tests for that level were selected for the purpose of the research. The use of this test helped ensure the comparability of the groups prior to research. The remedial tests were adapted in order to serve the purpose of the study. The revision process included choosing test items out of three remedial tests available so that they incorporated the relevant vocabulary. The new vocabulary test was piloted on a similar group of learners, yielding the reliability of 0.6 (A reliability index of 0.6 and higher is usually regarded as an acceptable reliability index for language test). The design of the study was a pre-test/post-test experimental design.

The teachers were requested to teach respective vocabulary items for half an hour during one of the sessions each week. The students' attendance at these sessions was counted as a bonus for their class participation. The instruction lasted for ten sessions. During that time, while in the control group, the preselected vocabulary items were taught, utilizing the traditional method of the teacher providing definition of the words only. The experimental group was taught the same vocabulary items using visual aids and pictures. Pictures were illustrative enough so that no definition was needed. Simply pointing to a particular item in the picture was enough to make its meaning clear. The students were supposed to describe the scenes in which the vocabulary of focus was present. The teacher added to their descriptions by pointing and saying the vocabulary items. This was followed by whole class and individual repetition after the teacher, a procedure common in ILI for teaching new vocabulary. Thereafter, the written forms of the words were written on the board and the students were asked to make sentences with them for the next session. The words were exactly the same for both groups. The only point making a difference was the approach taken to teach them. Another point of similarity was the number of words taught each session, namely ten words during each session. After the instruction period, two weeks passed and then the students were given a test initially used as the pre-test, in order to make sure how much learning took place. A comparison of the students' scores on both tests served as an indicator of the possible effects of the treatment, with the results analyzed utilizing Statistical Package for Social Sciences (SPSS).

Results and discussions

An independent t-test was run to compare the means of the two groups and specify which group outperformed the other. Due to convenience in analyzing the data, the scores were processed using SPSS software.

In order to check whether the difference between the two groups was not significant before the treatment, the students' mean scores were compared using an independent t-test. The results are represented in Tables 1 and 2.

		N	Mean	Std. Deviation	Std. Error Mean
EXP	1.00	22	29.4545	12.96783	2.76475
CONT	2.00	22	32.2727	14.79762	3.15486

Note: EXP=experimental group; CONT =control group

Table 1: Pre-Test Descriptive Statistics

As Table 2 indicates the mean difference between the experimental and the control groups was not statically significant at a 0.05 probability level. This observation means that both groups

were of similar language knowledge (as far as vocabulary is concerned) at the beginning of the study and were homogeneous.

Leven's Test for Equality of Variances		t-test Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95 per cent Confidence Interval of the Difference	
							Lower	Upper
809	.373	-672	42	.505	-2.81818	4.19488	-11.28379	5.64743
		-672	41.289	.505	-2.81818	4.19488	-11.28811	5.65175

Table 2: Pre-Test Mean Differences (Independent t-test)

Table 3 shows that the mean score of the experimental group was higher than that of the control group. To check whether this difference is statistically meaningful, an independent t-test was used. As Table 4 indicates, there is a statistically significant (sig.=0.001) between the control and the experimental group of the study, implying that the treatment experimental group outperformed the control group.

The research question (Is there any difference in vocabulary learning gains of Iranian elementary EFL learners through traditional technique of definition as opposed to visually-supported procedure?) is answered that there is statistical evidence in that visually supported learning leads to better performance.

		N	Mean	Std. Deviation	Std. Error Mean
EXP	1.00	22	55.0455	18.60486	3.96657
CONT	2.00	22	37.1364	13.42101	2.86137

Note: EXP=experimental group; CONT=control group

Table 3: Post-Test Descriptive Statistics

Leven's Test for Equality of Variances		t-test Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95 per cent Confidence Interval of the Difference	
							Lower	Upper
1.090	.302	3.662	42	.001	17.90909	4.89092	8.03882	27.77937
		3.662	38.199	.001	17.90909	4.89092	8.00963	27.80855

Table 4: Post-Test Mean Differences (Independent t-test)

The experimental group in which pictures were used as a means of clarifying the meanings of the words outperformed the control group where definitions were only used. This shows that teaching vocabulary through visual aids helps learners gain more in vocabulary learning. The proposed null hypothesis was rejected in the confidence interval level of 95% and instead, it was

concluded that there is a difference in vocabulary learning gains of Iranian elementary EFL learners through traditional technique of definition as opposed to visually supported procedure. Definition alone is helpful when the context is known or for possible future exposure to words in context. Providing some sort of context is seen as necessary since people are likely to make different interpretations of the words presented to them. Various techniques have been proposed such as repetition, activating background knowledge, implicit teaching, etc. All of these techniques provide exposure to the language. The results of this study are in line with that of those who advocate providing context in vocabulary teaching so that the students are helped as to how interpret the meanings of the words (Carter and Nunan, 2001; Ellis, 1995; Grains and Redman, 1998; Sinclair, 1996). For them, children pick up information about what words mean and how the words are used as they repeatedly encounter them in context. Even for words that are explicitly taught, much of students' knowledge of them ultimately comes from further encounters with those words in text.

Of course, it should be noted that the visually supported technique of vocabulary is more suitable for elementary level learners since as students grow in proficiency, they have to meet more abstract level words whose meaning may not be properly conveyed using visual aids. However, it is our strong belief that whenever there is a choice available or an option to use visuals, teachers should seize the opportunity as our study showed this is worthwhile.

5. Conclusion

This brief study, although not without its limitations and faults, emphasizes the necessity to adopt a visually aided approach to teaching vocabulary to young people learning English as a foreign language in order to jump-start student achievement. The results reported here can shed light on the practicality of the method, and at least in our country in which the second language is not English, the institutes can make improvements if they take the results into account. Similarly, material writers and course designers can take advantage to provide that the materials align with the approach favored in this study. This may also lead teachers off the conventionalized method toward more appealing approaches available.

The current findings are, however, open for confirmation by further research and we recommend our fellow researchers to use this as the basis to start other aspects of vocabulary teaching as well as teaching other aspects of EFL in a variety of proficiency level and classroom context. Although different learners may prefer different learning styles, what can be learned from this small-scale research study is that supplementing traditional teaching techniques with some sort of visual aid, whether it be paper-based or screen-based, has the potential to help learners better internalize the input they receive, be it vocabulary or any other language skill or sub-skill. The implication is that combining various teaching techniques and adopting a visual-based eclectic method can facilitate the learning process to a great extent, although right combinational conditions for various activities at various levels may require further research to be revealed.

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Appendix 1 Vocabulary Test

Read the following sentences and choose the best answer. Answer the questions on the questionnaire, please.

- 1) William is a good ----- . I watched one of his movies last night.
a) monitor b) actor c) butcher d) real estate agent
- 2) The ----- is very quiet because the students are in their hometowns.
a) city hall b) airport c) dormitory d) temple
- 3) It is very bad to ----- at a person when he is upset.
a) go b) laugh c) move d) pull
- 4) A ----- is an animal which is like man in its body parts.
a) monkey b) lion c) tiger d) giraffe
- 5) We are all ----- about your father's health.
a) punctual b) funny c) anxious d) intelligent
- 6) "What is Reza doing?"
"He is ----- his prayers."
a) saying b) telling c) speaking d) talking
- 7) The weather is nice and we can have a ----- in my garden today.
a) barbecue b) souvenir c) collection d) museum
- 8) Who ----- the dishes in your house, you or your husband?
a) puts b) makes c) does d) picks
- 9) Marry looked at the----- and ordered the roast beef.
a) novel b) matter c) history d) menu
- 10) Sheila ----- a bag with a few things and went out.
a) continued b) packed c) suggested d) joined
- 11) Many Iranians usually ----- in the afternoon after lunch.
a) take a nap b) get used to c) have a seat d) stay up
- 12) "Why are you in a -----?"
"I am late for work."
a) future b) subject c) hurry d) fiction
- 13) Mr. Evans is a(n)----- . He sells meat to people.
a) monitor b) actor c) mayor d) butcher
- 14) A ----- is an animal with a long neck.
a) monkey b) giraffe c) lion d) snake
- 15) The weather is very ----- . We can't go out today.
a) painful b) upset c) great d) awful
- 16) The problem is that my father can't pay my school----- this year.
a) tuition b) playing c) studying d) security
- 17) Your father is very ----- . He has to go on a diet.
a) thin b) tall c) fat d) short
- 18) Nancy collects ----- of famous tennis players.
a) sweets b) computers c) autographs d) menus
- 19) Dracula is a name of a famous ----- film.
a) comic b) horror c) historical d) action
- 20) That man is a ----- . Let's ask him where he is from.

- a) engineer b) foreigner c) doctor d) not new
- 21) Fred was badly hurt in the car ----- . He is in the hospital now.
a) accident b) rent c) statement d) occasion
- 22) John packed his ----- and went mountain climbing.
a) sofa b) backpack c) brake d) windbreaker
- 23) The man who is in charge of a town or city is called a(n) ----- .
a) poet b) butcher c) actor d) mayor
- 24) "What is she doing?"
"She is ----- a shower."
a) taking b) talking c) getting d) making
- 25) My mother ----- the furniture before the guests arrived.
a) tried b) failed c) dusted d) packed
- 26) A ----- is an animal which walks very slowly.
a) lion b) tiger c) monkey d) turtle
- 27) Sheila didn't ----- the waiter because she didn't like the service.
a) tip b) ring c) care d) mean
- 28) We asked them to come to the party but they declined the ----- .
a) try b) ring c) invitation d) poem
- 29) He is going to get a ----- because he wants to travel abroad.
a) passport b) modem c) watch d) paper
- 30) Angela has to wear ----- or she can't see.
a) shirts b) shorts c) glasses d) skirts