

Recognition of Linguistic and Extralinguistic Ambiguity By Iraqi EFL Learners

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1.0 Introduction

Communication is the basic function of language and it is one of the prerequisites of successful language instructions. Thus, it becomes a central issue to guarantee successful communication at all levels. Nevertheless, not all sentences or utterances are successfully understood. One common phenomenon of this communication failure takes place when a particular expression tends to have more than one single interpretation or meaning. Technically, this phenomenon is termed ambiguity (henceforth amb). Consider the following example:

(1) They can fish.

Under one interpretation 'can' acts as the auxiliary class of verbs or as a lexical verb. Under the other interpretation, 'fish' may be realized either as a noun or as a verb. The sentence can be interpreted as follows:

- (2) a. They are able to fish.
b. They put fish in cans.

Generally, in English, there are two kinds of amb: linguistic amb and extra-linguistic amb. Linguistic amb, on the one hand, is not restricted to one particular level of language. A sentence might be lexically, syntactically, semantically or phonetically ambiguous. Lexical amb is that one which occurs due to lexical factors. In countless cases more than one sense is attached to the same word, as in example (1) above. Syntactic amb occurs when certain linguistic signals are lacking or when it is difficult to decide which element in a sentence goes with which.

(3) My father kept the car in the garage.

One reading of the above example involves taking 'in the garage' as a modifier of the 'the car' and implicates that it was the car in the garage which they had decided to keep. The second reading is that it was in the garage that they kept the car.

Phonetic amb results, in spoken language, from the phonetic structure of the sentence. Since the acoustic unit of connected speech is the breath-group, not the individual words, it may happen that two breath-groups made up of different words become homonymous and thus potentially ambiguous. For example:

- (4) a. an aim
b. a name

Extra-linguistic amb, on the other hand, refers to amb arising from factors other than those pertaining to phonology, morphology, syntax, or lexicon. amb of this

sort is attributed either to context (Pragmatic amb) or to the referentiality of certain words (referential amb). Referential amb refers to amb of proper names, personal and demonstrative pronouns, or definite descriptions.

(5) He goes to work early.

The above example is ambiguous because the exact preferentiality or identity of the personal pronoun 'he' is not determined.

In this paper it is hypothesized that:

1. Iraqi EFL learners find difficulty in distinguishing ambiguous sentences from those which are non-ambiguous even if they are told that the sentences are ambiguous.
2. Linguistic amb is easier to recognize than extra-linguistic amb.
3. Lexical amb is more difficult to recognize than structural amb.

2.0 Methodology

The present work will be carried out into two dimensions: theoretical and empirical. The theoretical part will include defining amb and specifying its types. It will also include a survey of the models of interpreting ambiguous sentences. The empirical part will include a three-task test designed to measure the validity of the hypotheses mentioned above.

The study aims at measuring Iraqi EFL learners' ability to recognize ambiguous structures. It also aims at finding out the degree of difficulty in recognizing the different types of linguistic and extralinguistic amb.

The study is restricted to the treatment of the linguistic amb which includes (lexical, grouping, functional, categorial, and elliptical amb, except the phonetic amb which is not included for reasons of practicality) and extralinguistic amb which includes (referential and pragmatic amb).

The subjects of the study are (54) Iraqi 4th year college students in the Department of English, College of Arts, University of Baghdad, for the academic year 2012-2013. They were given (22) sentences which are ambiguous and non-ambiguous and were asked to examine the given sentences and decide whether each sentence is ambiguous or non-ambiguous. They were also asked to figure out the ambiguity of the ambiguous sentences and try to find out how many interpretations they can make for each one.

3.0 Theoretical Background

3.1 Amb and Other Similar Concepts

Amb refers to a word or sentence that has more than one interpretation (Crystal, 2003: 21). This suggests that one can mean different things by what one says. But there are

many ways to do this and amb is one such way. These ways include: vagueness, relativity, indexicality, nonliterality, indirection and multiplicity of linguistic meaning (Bach, 2006).

3.1.1 Vagueness

Vagueness means that the form has a quite open number of possible interpretations (Hudson, 2000:313). Sometimes, it refers to ‘generality and indeterminacy of meaning’ (Crystal, 2003: 22). Vague sentences are unclear because they lack details or precision (Kempson, 1977: 124). For instance:

(6) I bought a dog.

The above example is vague because the dog could be male or female, brown or white, big or small, St Brenard or Chihuahua, etc. But in the following sentence:

(7) Can you see the [bi:tʃ]?

[bi:tʃ] has two meanings. It either means ‘the beech’ or the ‘beach’. Only the context would clarify which meaning is meant; the former is in the forest and the latter is at the shore.

Another difference is that in amb, each of the meanings of the required form is a different sense and the context will cause one of the senses to be selected. In any given context one of the readings is likely to fit the context to be automatically selected by the participants. Those participants might not be aware of the meanings that they would normally prefer in other contexts. But in examples of vagueness, the context can add information which is not specified in the sense. However, the vagueness of terms like “‘bald’, ‘heavy’ and ‘old’ is explained by the fact that they apply to items on fuzzy regions of a scale” (Bach:2006).

3.1.2 Relativity

Relativity is expressed by words such as ‘heavy’ and ‘old’ (ibid). These words are not only vague, they are also relative because heavy people are lighter than non-heavy elephants, and old cats can be younger than some young people. Another kind of relativity can be seen in sentences such as:

- (8) a. Jane is finished.
b. John will be late

of course, no one can be finished or late but only finished with something or late for something. Sentences (8 a and 8 b) above are semantically underterminate. It must be used to mean more than what the sentence means.

3.1.3 Indexical Terms

Indexical terms or deictic expressions “determine the structure and interpretation of utterances in relation to the time and place of their occurrence” (Lyons, 1981: 170). They have fixed meanings but variable references such as ‘you’, ‘here’, and ‘tomorrow’. For instance, the meaning of the word ‘tomorrow’ does not change from one day to the next, yet, its reference certainly does and consequently will not be clear.

3.1.4 Nonliterality, Indirection, and Inexplicitness and Multiplicity of Meanings

These are ways in which a speaker means more than what she/he says. For example:

- (9) a. You’re the icing on my cake.
b. I wish you could sing longer and louder.
c. Nothing is on TV tonight.

The above instances are not cases of linguistic amb but may be confused with it because usually speakers are said to be ambiguous.

3.2 Types of Amb

Many writers distinguish two types of amb: lexical and syntactic or structural amb. Others distinguish three kinds: lexical, grouping, and semantic amb; and some others distinguish five types by adding functional and pragmatic amb (cf. Yule, 1995:103), (Crystal, 2003: 21-22), (Lyons, 1981: 164), and (Hudson, 2000:314). In this study, amb is divided into two main types: linguistic and extralinguistic and these types, in turn, are divided into subtypes.

3.2.1 Linguistic Amb

3.2.1.1. Lexical Amb

Ambiguity that does not occur due to the grammatical analysis of a sentence is called lexical amb (Crystal, 2003: 22). It is amb in the form of a morpheme or word, and results when that form has different meanings. For example:

- (10) I found the table fascinating.

‘table’ in the above example , might be an object of furniture or table of figures. So lexical amb results from homonyms, cases where a single form has two or more meanings. It includes the following types:

- A. Homophones refers to a single pronunciation with two or more meanings such as *threw/through* and *rode/rowed* (ibid).
- B. Homographs refers to words that have the same spelling with two or more meanings. Consider the verb 'charged' in the following examples:

- (11) a. the battery was charged with jump leads. (Electrical)
- b. the thief was charged by PC Smith. (Legal)
- c. the lecturer was charged with student recruitment. (Responsibility)

C. Homonymy VS. Polysemy

Palmer (1981:101) distinguishes homonymy from polysemy. Homonymy refers to “several words with the same shape” (ibid). It occurs when different meanings are suggested by the form of a word. But all these meanings are related by semantic extension. For example 'drive' as 'drive animals' and 'drive a car'. While polysemy refers to (one word with several meanings) (ibid).

Homonymy and polysemy are not very much distinct, for instance 'cool' [kul] either refers to 'low interpretation' or 'calm in mind/ demeanor'. Historically 'cool' is an instance of polysemy, but recently some consider it as homonymy because the meanings reflected are so different (Hudson, 2000:313).

In other cases one meaning of a word is derived from another. For instance, the cognitive sense of the verb 'see' is derived from its visual sense. Similarly, the transitive senses of 'burn', 'fly' and 'walk' are derived from their intransitive senses. In each of these cases, the visual sense and the intransitive sense are not considered as others meanings of the word but are certainly, the result of a lexical operation on the underived sense. Such systematic phenomena are identified by lexical semantics which is also concerned with explaining the rich and subtle semantic behavior of words that are common and highly flexible such as 'do' and 'put' and the prepositions like 'at', 'in' and 'to'. Each of these words has numerous uses; however, they are often described as 'polysemous' rather than 'ambiguous'. (Bach, 2006)

3.2.1.3. Structural Amb

Structural amb occurs when a phrase or a sentence can be parsed in more than one way (Yule, 1996:103) ; i.e. a phrase or a sentence having two or more meanings because of the structure which is either amb of grouping or amb of function (grammatical relations). But Hirst (1987:131-162) considers structural amb to be an amb of word order such as referential amb and prepositional phrase attachment. Another classification of structural amb is suggested by Hudson (2000: 313ff) who divides structural amb into three subtypes: grouping amb, functional amb, and categorial amb. But Saeed (1977:100) considers grouping amb and functional amb as major types of structural amb in addition to lexical amb. In this study, structural amb is divided into four types: elliptical, categorial, grouping, and functional amb.

3.2.1.2. Elliptical Amb

Most of the sentences in everyday conversation are not full sentences but they are elliptical. When there is an unclear missing item in an incomplete sentence, elliptical amb occurs (cf. Lyons, 1981: 164). For example:

(12) The dog chased the mouse, the cat too.

Because of ellipting part of the sentence above, the sentence is ambiguous and it either means that the dog and the cat are both chasing the mouse or that the dog chased both the mouse and the cat.

3.2.1.3.1 Categorical Amb

In this type of amb, a word may have more than one terminal symbol. For example, the word 'time' can be a noun as in (13 a), a verb as in (13 b), and an adjective as in (13 c) below.

- (13) a. Time is money.
b. Time me on the last lap.
c. Time travel is not likely in my life time.

Categorical amb occurs when a substring can be parsed in several ways but has one interpretation only (ibid). For instance:

(14) The soup pot covers are missing.

'soup', 'pot' are either nouns or adjectives and 'covers' is either a verb or 'soup pot covers' is a noun phrase. Therefore, in such type of amb, the sentence is syntactically ambiguous in part but not semantically ambiguous in the whole.

3.2.1.3.2 Grouping Amb

In this type of amb, one surface structure would have two different underlying interpretations that would be represented differently in the deep structure (Yule, 1995:103). Consider the following example:

(15) Annie whacked a man with an umbrella.

The above sentence is structurally ambiguous since it has two underlying interpretations. The first interpretation would be that 'Annie had an umbrella and she whacked a man with it' or that 'Annie whacked a man and the man happened to be carrying an umbrella'. Not only sentences could be ambiguous but phrases can also be structurally ambiguous. The phrase 'peas and beans or carrots' could be interpreted in two ways as in (16a and b) below:

(16) a. [peas] and [beans or carrots]

- b. [peas and beans] or [carrots]

Saeed (1997:97) believes that our ability to recognize ambiguities like these in a phrase or a sentence may be understood as our awareness of the different possibilities for grouping in a syntactic structure.

3.2.1.3.3 Functional Amb

Functional amb is not as common as the grouping amb. It occurs when a word or a phrase 'potentially fulfills two or more grammatical relations, but the word meanings and groupings are the same in both' (Hudson, 2000:314). For example:

(17) The shooting of the hunters...

The above phrase is a noun phrase which can be understood in two ways depending on the type of grammatical relations concerned. It either means (18a) or (18b) below:

(18)a. The hunters are shot by someone.

b. the hunters who shoot...

In (18a) 'the hunters' is the object of the verb 'shoot', but in (18b) 'the hunters' is the subject of the verb. In this case, there are no homonyms and the grouping is the same in both interpretations. Consider the following figure

People acquire their knowledge of abstract functions as a necessary part of learning their language, long before they go to school. This knowledge can be shown in many ways. For instance: speakers of English show knowledge of:

a. Subjects

Speakers make present tense verbs and verb 'be' in the past, agree with the subject. For instance: 'robins are' But ' a robin is...' and 'city buses were....but not ' a city bus was...'

b. Head and Modifier

When one says ' the weather in the mountains is...' is singular related to weather which is the head of this phrase.

c. Parts of Speech

English speakers use determiners with nouns and not with verbs, and auxiliary verbs with verbs not with nouns, by saying 'the robin', but not 'the go', and 'might go' but not 'might robin'.

The above are three ways of knowledge of functions which are apparent in the speakers' recognition of functional amb.

3.2.2 Extra-Linguistic Amb

3.2.2.1 Referential Amb

In referential amb more than one object is being referred to by a noun phrase. For instance:

(19) The director fired the worker. He was known to be aggressive.

'He', in the above example, may refer to either 'the director' or 'the worker'. Sometimes, the reference is not present in the text and in this case referential amb occurs because of anaphoric expressions as in the following example:

(20) a. Why are you wearing that?

b. It is not going to work.

'It' and 'that' can refer to anything, they do not refer to an individual object (cf. Crystal, 2003: 24)

3.2.2.2 Pragmatic Amb

Though amb is basically a property of linguistic expressions, people can also be ambiguous on occasions, in how they use language. Even when the words they use are unambiguous, their words do not make what they mean uniquely determinable. Mey (1997:7) believes that in real life, i.e., among language users, there is no such thing as amb, except in certain, somewhat special situations, on which one tries to deceive one's partner, or 'keep a door open'. It also occurs when two persons who are communicating do not "share the same context".

If there is no user who tells us what he or she means, we might speculate until the 'end of our days on the unsaid meaning of utterances that are never brought to bear on a concrete situation, with real language users involved i.e., context" (ibid:8). 'Amb exists only in the abstract'. In fact, Mey (ibid) agrees with Sperber and Wilson (1986: 205) who state that everything is possibly ambiguous when taken by itself, 'but nothing is strictly ambiguous in its proper, cognitive environment'.

Hudson (2000:306), on the other hand, does not mention pragmatic amb explicitly but he mentions what he calls 'Directness and Literalness' which he does not call amb. I believe that these are related to pragmatic amb because being not being direct or literal will cause pragmatic amb. For instance:

(21) I wonder if you have some aspirin.

The above example is a literal indirect request. But example (22) below is a non-literal (hyperbolic) indirect promise.

(22) I wouldn't miss it for the world.

Pragmatic amb occurs when the speaker and the listener do not agree on the same principles of co-operative communication. For instance:

(23) I 'll meet you next Friday.

The speaker in the above example, may mean this Friday coming up but the listener may think it is the following Friday.

4.0 Analysis of Data

4.1 Preliminaries

To investigate the rate of difficulty faced by Iraqi EFL learners in recognizing the seven types of amb selected in this study, chi-square test is used to compare the observed data with the expected data according to a null hypothesis which states that there is no significant difference among Iraqi EFL learners in the rate of difficulty with respect to:

- a. recognizing ambiguous sentences from those which are non-ambiguous ones,
- b. recognizing linguistic from extralinguistic amb,
- c. recognizing lexical from structural amb.

To achieve this aim, a chi-square test is used represented by the following formula:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

O_i O_i = the observed data

E_i E_i = the expected data

\sum = the sum

Below is the discussion of the results of the analysis according to the above null hypotheses.

4.1.1 Ambiguous and Non-ambiguous Sentences

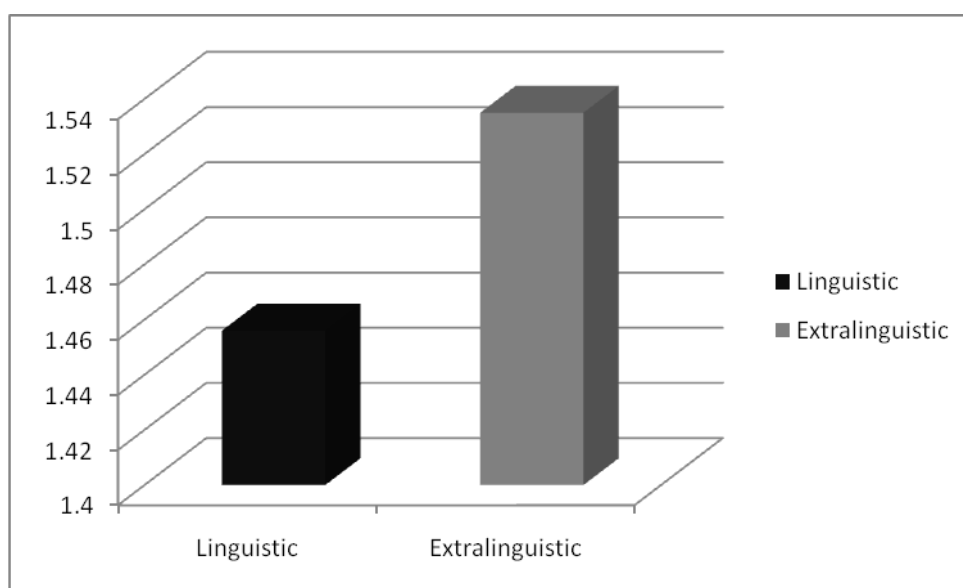
As far as the above mentioned null hypothesis (a) is concerned, the chi-square test has shown that there is a significant difference among Iraqi EFL learners in the rate of recognizing ambiguous sentences from non-ambiguous ones in favor of the non-ambiguous sentences since the observed chi-square value of the non-ambiguous sentences is higher than the critical value which is (3.84). See Table (1) below. This does not validate the null hypothesis(a).

Table (1) Chi-Square Results Showing Iraqi EFL Learners' Recognition of Non-ambiguous Sentences.

Types of Sentences	Correct Responses	Wrong Responses	X ²		Degree of Freedom
			Calculated	Tabulated	
Non-ambiguous Sentences	125	36	49.198	3.84	1

4.1.2 Linguistic and Extralinguistic Amb

Concerning the above null hypothesis (b) the chi-square test shows no significant difference in the rate of difficulty in recognizing linguistic and extralinguistic amb by Iraqi EFL learners. Both types score almost similar rates: (1.456) for the linguistic amb and (1.535) for the extralinguistic amb which are less than the critical value (3.841). Therefore, chi-square test validates the null hypothesis (b). See Figure (1) below.



Figure(1) Chi-Square Results Showing the Rate of Difficulty In Recognizing Linguistic and Extralinguistic Ambiguity

4.1.3 Lexical and Structural Amb

The chi-square test also validates the null hypothesis(c) above concerning the rate of difficulty faced by Iraqi EFL learners' in recognizing lexical amb from structural amb since the calculated chi-square scores are less than the critical value (12.592). See figure (2) below which illustrates the statistical means of the rates of difficulty faced by Iraqi EFL learners in recognizing all the seven types of amb.

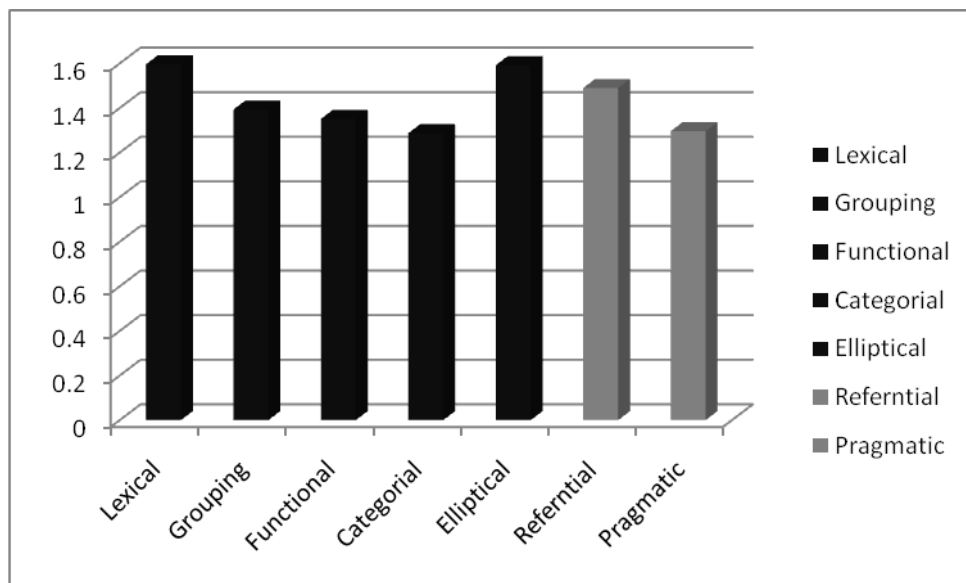


Figure (2) Chi-Square Results Showing the Rate of Difficulty in Recognizing the Seven Types of Ambiguity

5.0 Conclusions and Recommendations

The present paper has analyzed Iraqi EFL learners' ability in recognizing seven types of amb. The results of the analysis have provided evidence in support of Iraqi EFL learners' inability to recognize ambiguous sentences from non-ambiguous ones.

These results validate hypothesis (1) of the present study. Iraqi EFL learners recognize most of the sentences in the test as non-ambiguous even when they are told that there are ambiguous ones. Students fail to recognize the ambiguous sentences. This might be due to the lack of sufficient information about English language on both the linguistic and extralinguistic levels.

The statistical results do not validate hypotheses (2) and (3) of the study which state that linguistic amb is easier to recognize than the extralinguistic amb and lexical amb is more difficult to recognize than the structural amb. Iraqi EFL learners face almost the same rate of difficulty in recognizing linguistic from extralinguistic amb. None of the amb types whether linguistic or extralinguistic / lexical or structural is much more difficult or easier to recognize than the other types of amb since the differences in the rates are not significant as shown in the statistical chi-square analysis. Iraqi EFL learners failed to recognize the seven types of amb at very high percentages. They even failed to give explanations to the sentences they considered ambiguous as shown in tables (2) and (3) below

Table (2) Breakdown of the Percentages of Students' Failure in Recognizing the Seven Types of Amb

Type of Amb	Percentage of Failure
Elliptical	79.62%
Lexical	78.47%
Referential	74.53%
Grouping	69.67%
Functional	67.59%

Pragmatic	64.81%
Categorial	64.35%

Table (3) Breakdown of the Percentages of Students' Failure in Recognizing the Linguistic and Extralinguistic Amb

Type of Ambiguity	Mean	Percentile
Linguistic	1.456	72.80%
Extralinguistic	1.535	76.78%

Iraqi EFL learners need to be trained on ambiguous sentences by exposing them to sentences which accept more than one interpretation. It is advisable that while instructing the students about any level of language whether linguistic or extralinguistic, teachers need to devote specific sections for amb that might be on that level of language being explained.

Bibliography

- Crystal, D. (2003) A Dictionary of Linguistics and Phonetics. Oxford: Blackwell Publishing.
- Hudson, G. (2000) Essential Introductory Linguistics. Massachusetts: Blackwell.

Hirst, G. (1987) *Semantic Interpretation and the Resolution of Ambiguity*.

Cambridge: Cambridge University Press.

Kempson, R.M. (1977) *Semantic Theory*. Cambridge: Cambridge University Press.

Lyons, J.(1981) *Language and Linguistics: An Introduction*.

Cambridge:

Cambridge University Press.

Mey,J.L. (1993) *Pragmatics. An Introduction*. Oxford: Blackwell.

Palmer,F.R.(1981) *Semantics*. Cambridge: Cambridge University Press.

Saeed,J.I. (1997) *Semantics*. Massachusetts: Blackwell.

Sperber, D. and Wilson, D. (1986) *Relevance: Communication and Cognition*. Oxford: Blackwell.

Yule, G.(1996) *The Study of Language*. Cambridge: Cambridge University Press.

Internet References

Bach, K. (2006) 'Ambiguity' Routledge Encyclopedia of Philosophy/ Retrieve in <http://www.online.sfsu.edu/kbach/ambiguity.htm>

Questionnaire

Examine the following list of ambiguous and non-ambiguous items and then do the following:

- If the item is ambiguous, write (Amb); if not, write (Non-Amb)
- Figure out the ambiguity of each sentence and try to find out how many interpretations you can make for each.

1. Fine for parking here.
2. I am prepared to give the sum of one million dollars to you and your husband.
3. I found a smoldering cigarette left by a horse.
4. John bought a new bicycle on his birthday the first of May 1999.
5. The old men and women left the room.
6. Students hate annoying professors.
7. Yoko Ono will talk about her husband John Lennon who was killed in an interview with Barbara Walters.
8. The chickens are ready to eat.
9. Sitting in the sun is good for health
- 10.Mary gave her dog meat.
- 11.Happily they left.
- 12.What goes wetter the more it dries?
- 13.I will bring my bike tomorrow if it looks nice in the morning.
- 14.The dog chased the mouse. The cat too.
- 15.Why are you wearing that?
- 16.The director fired the worker. He was known to be aggressive.

17. It is not going to work
18. I wonder if you have some aspirin.
19. People go to school to learn.
20. Teacher strikes idle kids.
21. May I try on that dress in the window?
22. Everything is cool.