

## A Psycholinguistic Study of the Dyslexic Cognitive Features in Selected Humorous Texts

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### Abstract:

Dyslexia is a learning difficulty which primarily affects reading and writing skills. The present study investigates the dyslexic cognitive features in some selected texts. The sample of the study is selected from the first stage, department of English , college of basic education, Diyala university. The sample includes a hundred students from both genders (50 males and 50 females). The researchers design a list of humor texts and a suitable questionnaire to check the differences of cognition between boys and girls when they are related to humoristic texts and to figure out dyslexic problems. It is found that most of the students didn't recognize that these texts are jokes or overwhelmed by sense of humor. Furthermore, Students have some problems in cognition and reading these humorous texts. in addition , most of the percentages of the result of the questions related to dyslexia are positive and some of them are negative , and this is an indication that some of the students have a problem of dyslexia.

**Keywords** : (Psycholinguistics , Dyslexia , Cognition , Humor) .

## دراسة نفسية لغوية في السمات المعرفية لعسر القراءة في نصوص فكاهية مختارة

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### الملخص:

عسر القراءة هو صعوبة في التعلم تؤثر في المقام الأول في مهارات القراءة والكتابة. تبحث الدراسة الحالية في السمات المعرفية لعسر القراءة في بعض النصوص المختارة. تم اختيار عينة الدراسة من المرحلة الاولى، قسم اللغة الانكليزية، كلية التربية الاساسية، جامعة ديالى. ضمت عينة الدراسة (مائة) طالب وطالبة من كلا الجنسين (٥٠ ذكر و٥٠ إناث) ، اذ قام الباحثان بتصميم قائمة بالنصوص الفكاهية واستبيان مناسب للتحقق من الاختلافات في الإدراك بين الذكور والاناث عندما تكون مرتبطة بالنصوص الفكاهية ومعرفة مشاكل عسر القراءة. يضم مائة طالب من كلا الجنسين (٥٠ ذكر و٥٠ أنثى). صمم الباحثان قائمة بنصوص الفكاهة واستبياناً مناسباً للتحقق من الاختلافات في الإدراك بين الأولاد والبنات عندما تتعلق بالنصوص الفكاهية بالإضافة الى معرفة مشاكل عسر القراءة. وجدت الدراسة ان معظم الطلاب لم يدركوا أن هذه النصوص هي نكات أو طغت عليها روح الدعابة . فضلاً عن ذلك ، فان معظم الطلاب يعانون من بعض المشاكل في الإدراك وقراءة هذه النصوص الفكاهية. أضف الى ذلك ، إن معظم النسب المؤيية لنتيجة الأسئلة المتعلقة بعسر القراءة بعضها إيجابية وبعضها الآخر سلبي ، وهذا مؤشر على أن بعض الطلاب يعانون من مشكلة عسر القراءة.

الكلمات المفتاحية : (علم اللغة النفسي ، عسر القراءة ، الإدراك ، الفكاهة) .

## **1.Introduction:**

The study of the cognitive features of the English people's jokes is hoped to clarify the dyslexic perspective especially to the foreign learners of English language . Cognition refers to thinking in the sensory interpretation of the words or phrases. Sometimes foreigner learners of the second language and even native speakers have dyslexia when they read English jokes. The term 'Dyslexia' refers to a trouble in reading in spite of normal intelligence, it is known as reading disorder . The things that we deal with in our practical life are usually so complicated to be represented by neat ,compact expressions . Especially when it comes to understand minds ,we still know so little that we cannot be sure whether our ideas about psychology are even aimed in the right directions. In any case , one must not be mistaken in the defining of things in order to know what they are" (Minsky ,1986) . Since the current study is concerned with the foreigner learners of English language, it is important to come across several notions such as speech perception and cognition. So, it is important to be known that what are the problems of cognition faced by non-native speakers of English language?, and what are the kinds and characteristics of dyslexia ? and is it easy for non native readers to comprehend whether a written text is a joke or not ?

### **1.1 Aim and scope :**

The aim of this study is to analyze the cognitive features and dyslexic problems in a group of student from the first stage in Diyala university college of Basic Education in reading some English people's jokes and ask them some questions to measure their cognition , also to identify whether they are suffering from dyslexia or not .

### **1.2 Material and method:**

The essential material is collected through a questionnaire designed by the researchers about the dyslexic problems directed for students from the college of basic Education\English department in Diyala university students were mixed boys and girls from the first stage. The total number was one hundred, fifty boys and fifty girls , in order to check the differences of cognition between boys and girls when they are related to humoristic texts and to figure out dyslexic problems . The results will show the cognitive ability of these students and will show the estimated quantity of the students that have Dyslexia.

## **2. Theoretical Framework**

In this section of the study , a considerable amount of information about cognition and dyslexia is going to be presented.

### **2.1 cognition :**

The term 'cognition' refers to all the activities , products , and processes of the mind .All the brain activities that lead to knowledge , including all means and mechanisms of acquiring information is called cognitive functions. Cognitive functions include reasoning , memory , attention , and language and lead directly to the attainment of information conscious brain activities : the activities of thinking , understanding , learning , and remembering disabilities affecting cognition and judgment(See: Just 1977) .There has been increasing attention in the last few years to the cognitive processes involved in the comprehension of discourse. Whereas psycholinguistics and experimental psychology were originally interested mainly in the cognitive processing of words, phrases and sentences, first from a syntactic and later from a semantic point of view. Cognitive science considers the human mind as an information-processing device which processes spatial information, linguistic information, motoric information, etc. (Posner 1989; Wilson and Keil 1999). Cognitive represents the view that principles of linguistic structure should reflect what is known about human cognition from other disciplines, particularly the other

cognitive sciences (philosophy, psychology, artificial intelligence and neuroscience).(see: Boroditsky 2001 ).

## 2.2 The notion of Dyslexia :

Dyslexia, classified as a reading disorder, refers to difficulties in comprehending and reading textual content. It is a specific learning disability stemming from neurological factors, distinct from low intelligence or limited educational potential. It is unrelated to one's race or social background and can coexist with conditions like dyspraxia, attention deficit disorder (with or without hyperactivity), and dysphasia. During childhood, its effects might be wrongly associated with emotional or behavioral disorders. However, by adulthood, many individuals with dyslexia have devised sophisticated strategies that effectively mask their challenges (Beech, 1997). People afflicted by dyslexia often face challenges in their phonemic awareness development. Within dyslexia, individuals tend to mix up letters and word sequences, resulting in interference with their learning process due to the brain's difficulty in language processing. Even individuals with average or above-average intelligence may struggle considerably with reading. The term "dyslexia" encompasses a range of disorders, many of which involve struggles in connecting sounds to letters (Eadon, 2000). While speech sounds and presumed phonemes do not consistently align with the rules of spelling, phonemes, viewed as linguistic abstractions, correspond sufficiently well with alphabetic writing systems to foster belief in their existence (Port, in press). Exploring dyslexia through statistical approaches that extract redundant attributes from a lexical space could shed light on understanding its dynamics. (Dodds, 1996)

Dyslexia can be categorized into two main types:

**a) Developmental phonological dyslexia:** In this type, individuals encounter challenges in reading non-words, wherein the initial and middle letters of words are changed. For instance, "mana" becomes "mama" and "aufo" turns into "auto".

**b) Developmental surface dyslexia:** This type involves difficulty reading irregular words like "sew," "bowl," and "pretty" (Castle et al., 1999)

Signs of dyslexia include messy handwriting, organizational difficulties, poor decoding and spelling skills, struggles in spoken language, limited short-term memory, and difficulties in learning foreign languages.

### **2.3 Characteristics of dyslexia:**

Raid (2005) claims that there are several kinds of dyslexia's characteristics. They are as follows:

**1.Hearing :** : The ear plays a significant role in auditory processing, particularly in the development of phonological awareness. This ability to discern between sounds, especially similar ones, and recognize them in words is crucial in understanding dyslexia. Dyslexic children often struggle with these aspects, making it challenging for them. (Raid, 2005:5)

**2.Sight :** Some dyslexic children encounter visual difficulties while reading, leading to issues like blurred text, merging words, and even skipping lines. Certain interventions such as colored overlays, using colored backgrounds for text, adjusting font characteristics, and font size have shown success in addressing these challenges (Raid, 2005:5)

**3.Connections:** : Dyslexia's neurological foundation is illustrated through its impact on various connections in the brain. These connections are vital for integrating skills like visual-motor coordination, such as copying. Research highlights the role of neurological pathways between hemispheres, cerebellum, and the magnocellular visual system in dyslexia, affecting processing speed, accuracy, and coordination. (Raid, 2005:6)

**4.Motor skills :** The cerebellum is implicated in motor difficulties often seen in dyslexic children, leading to challenges in fine and gross motor skills. This can manifest as poor handwriting and clumsiness (Raid, 2005:6)

**5.The core difficulties :** Dyslexia primarily affects reading, spelling, and writing skills, which are typically associated with the left hemisphere. Dyslexic children often struggle with phonics, accuracy, sequencing, and memory due to weaknesses in the left hemisphere, making these tasks more demanding and exhausting for them (Raid, 2005:6)

**6.Interaction:** : Interaction with teachers is crucial for dyslexic children to receive appropriate cues, structure, and connections to previous learning. Without this interaction, understanding underlying concepts becomes difficult, and information lacks meaning. This interaction fosters metacognition, encouraging students to question their thinking process (Raid, 2005:6)

**7.School ethos :** : Establishing a welcoming and positive school environment is vital for dyslexic children, as school may be associated with past failures. Creating a comfortable atmosphere can help reshape their perception and contribute positively to their learning experience (Raid, 2005:7)

**8.Diet:** : Diet's significance in learning is highlighted, especially for dyslexic children. Adequate nutrition, including essential fatty acids like Omega 3 and Omega 6, is crucial for effective learning. Many dyslexic children lack these essential fatty acids, which impacts their learning efficiency (Raid, 2005:7)

### **3. Practical Framework:**

In this section the researchers are going to apply the practical side of the study. So, a questionnaire has been designed to be given to a sample of a one hundred students from the department of English in the college of basic education\ Diyala university. It is worth mentioning that those students are in the first stage and they are mixed, i.e. fifty boys and fifty girls. They were asked about the following questionnaire:

### **Questionnaire**

Read the following texts carefully and underline the words that you find it difficult to pronounce and then answer the questions :

1- A man asks a farmer near a field, "Sorry sir, would you mind if I crossed your field instead of going around it? You see, I have to catch the 4:23 train."

The farmer says, "Sure, go right ahead. And if my bull sees you, you'll even catch the 4:11 one."

2- A: Why are you crying?

B: The elephant is dead.

A: Was he your pet?

B: No, but I'm the one who must dig his grave.

3- Pupil: "would you punish me for something I didn't do ?"

Teacher: " of course not."

Pupil : "Good, because I haven't done my homework."

4-Teacher: which one is closer ,Sun or Africa?

Johnny: sun

Teacher: Why?

Johnny :We can see the sun all the time , but can't see Africa .

5- A girl asks a boy : "peter , how much do you love me ?" The boy looks her in the eyes, "Look up at the stars, that's how much I love you." The girl is confused, "But it's morning, there are no stars?"

Boy nods , "exactly

6- I saw a poster today, somebody was asking "Have you seen my cat?" So I called the number and said that I didn't. I like to help where I can

7-A wife hangs up after about a half-hour on the phone. The husband is surprised, "Wow, that was quick - usually you women are at it for two hours at least!" "Yeah, well, it was a wrong number."

8-What can I eat in the evening in front of the TV that wouldn't make me fat?

Your fingernails

9- Waiter, I am outraged. There is one hair in my soup.

And what do you expect for this price? A whole wig

10-Two friends are talking, one says: “Man, I fell off a thirty-foot long ladder yesterday.”  
 “Oh no, dude, are you alright?!” inquires the other one, shocked.  
 “Yeah, I’m OK, I was only on the second rung then

Tick the right choice of the following questions :

1.What is the kind of the above texts?

Tales  Short stories  Jokes  Riddles

2.What is the sense of your cognition when you read these texts?

Sense of tragedy  Sense of advice

Sense of humor  Sense of grief

3. Do you understand the whole texts easily ?

Yes  No

To some extent  Can't read them either

4.What are the meanings of the following words :

A. Crossed: ( 1. Jumped out 2. Pass through 3. Walking 4. Times out)

B. grave (1. Lay down 2. A small house 3. Tomb 4. Fast )

C. punish (1. Show off 2. Strafe 3.finish 4. Bullet )

D. closer (1. Nearer 2. Shutter 3. Stronger 4. Ladder )

E. confused (1. Dismissed 2. rejected 3. comfort 4.puzzled )

F. called (1. Cell phone 2. Phoned 3. Seemed 4. Cooked )

G. hang up ( 1. Overhead 2. Wake up 3. Ring off 4. give up )

H. fat (1. Bat 2. Hot 3. Fleshy 4. Thin )

I. outraged (1. Calm 2. Starve 3. anger 4. Steal )

J. Ladder (1. Claim 2. Stair 3. Corner 4.ocean )

5.Is your spelling poor ?

Yes  No

6.do you dislike reading heavy books ?

Yes  No

7.do you dislike reading aloud ?

Easy  Difficult

Some of them are easy and others are difficult

8.Do you take longer than you should to read a page of a book ?

Yes  No

9.How do you find the above texts ?

Easy  Difficult

Some of them are easy and others are difficult

And now the researchers are going to analyze the results of the above questionnaire in order to test the validity of the theoretical background of the current study. And this can be achieved in the following sub-sections:

### 3.1 Explanation of the selected jokes:

In this sub-section the researchers are going to clarify the cognitive meanings that lead readers to laugh after guessing that these are texts of jokes. These are as follows:

1. A man asks a farmer near a field, "Sorry sir, would you mind if I crossed your field instead of going around it? You see, I have to catch the 4:23 train." The farmer says, "Sure, go right ahead. And if my bull sees you, you'll even catch the 4:11 one."

In this joke a man has to catch the 4:23 train so he wants to hurry up so he should walk in the shortest route , in his way there was a farm. He asked the farmer if he can walk through his farm in order to shorten his way, the farmer accepted and told him if the ox sees you will reach faster .

2. A: Why are you crying?

B: The elephant is dead.

A: Was he your pet?

B: No, but I'm the one who must dig his grave.

In this joke one person is crying , the other one asks the first one "why are you crying ?" the first says "the elephant is dead" the second one thinks that he is crying because the elephant is his pet and he is sad because he lost it ,but the realty was he was crying because he is going to dig a huge grave for the big elephant and he was lazy to do this.

3. Pupil: "would you punish me for something I didn't do ?"

Teacher:" of course not."

Pupil : "Good, because I haven`t done my homework."

In this joke one pupil asks his teacher that would you punish me for something that I didn't do the teacher reply of course not , the pupil said that he did not do his homework .

4. Teacher: which one is closer ,Sun or Africa?

Johnny: sun

Teacher: Why?

Johnny :We can see the sun all the time , but can't see Africa .

In this joke a teacher asks Johnny which is closer the sun or Africa. Johnny said that the sun is closer because he can see it from his place but can't see Africa .

5. A girl asks a boy : "peter , how much do you love me ?" The boy looks her in the eyes, "Look up at the stars, that's how much I love you." The girl is confused, "But it's morning, there are no stars?"

Boy nods , "exactly

In this joke a girl asked her boyfriend how much does he love her. He answered her "look up the stars, that's how much I love you" but it was morning so there wasn't any stars in the sky that is mean he doesn't love her.

6. I saw a poster today, somebody was asking "Have you seen my cat?" So I called the number and said that I didn't. I like to help where I can.

The meaning of this joke is that someone said that someone lost his cat and he saw a poster was written on it "Have you seen my cat?" in the poster there was a number for someone if know something about the cat to call , but the man called the number and told them that he didn't see the cat just to participate .

7. A wife hangs up after about a half-hour on the phone. The husband is surprised, "Wow, that was quick - usually you women are at it for two hours at least!" "Yeah, well, it was a wrong number.". The meaning of this joke is that women always speak long time in the phone may be for two hours so one day a women ring off the phone call after half an hour so her husband surprised that phone call was relatively short and he asked her and she told him it was a call from a wrong number so that it was for 30 minutes .

8. What can I eat in the evening in front of the TV that wouldn't make me fat? Your fingernails.The meaning of this joke is someone asks what can he eat in front of TV and

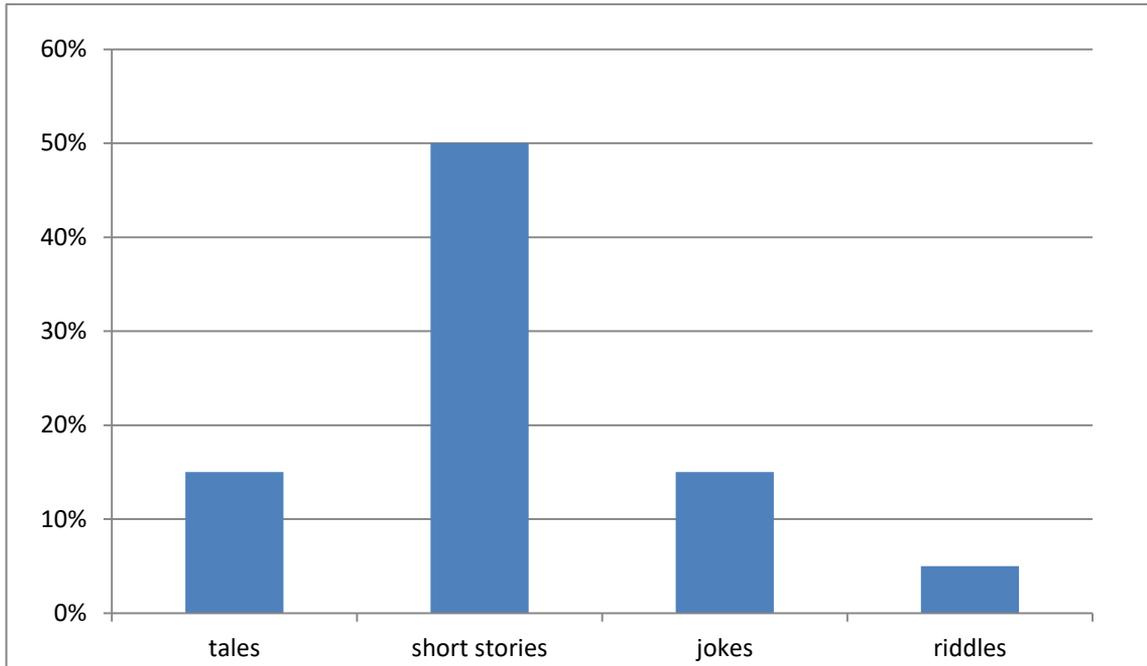
wouldn't get weight? The answer is your fingernails that is mean that if you eat your fingernails you don't get fat..the answer is the funny thing in this joke .

9.Waiter, I am outraged. There is one hair in my soup. And what do you expect for this price? A whole wig. The meaning of this joke someone in a restaurant and he finds a hair in his soup so he became angry and shouted on the waiter so the waiter answered: what do you expect for this poor price ? a whole wig not only one hair .

10. Two friends are talking, one says: “Man, I fell off a thirty-foot long Ladder yesterday .” “Oh no, dude, are you alright?!” inquires the other one, shocked. “Yeah, I’m OK, I was only on the second rung then. The explanation of this joke is that someone talking to his friend and told him that he fell off from a thirty-foot long stair his friend surprised and asked are you ok the first reply that (I was on the second rung then) and this is the funny thing in this joke .

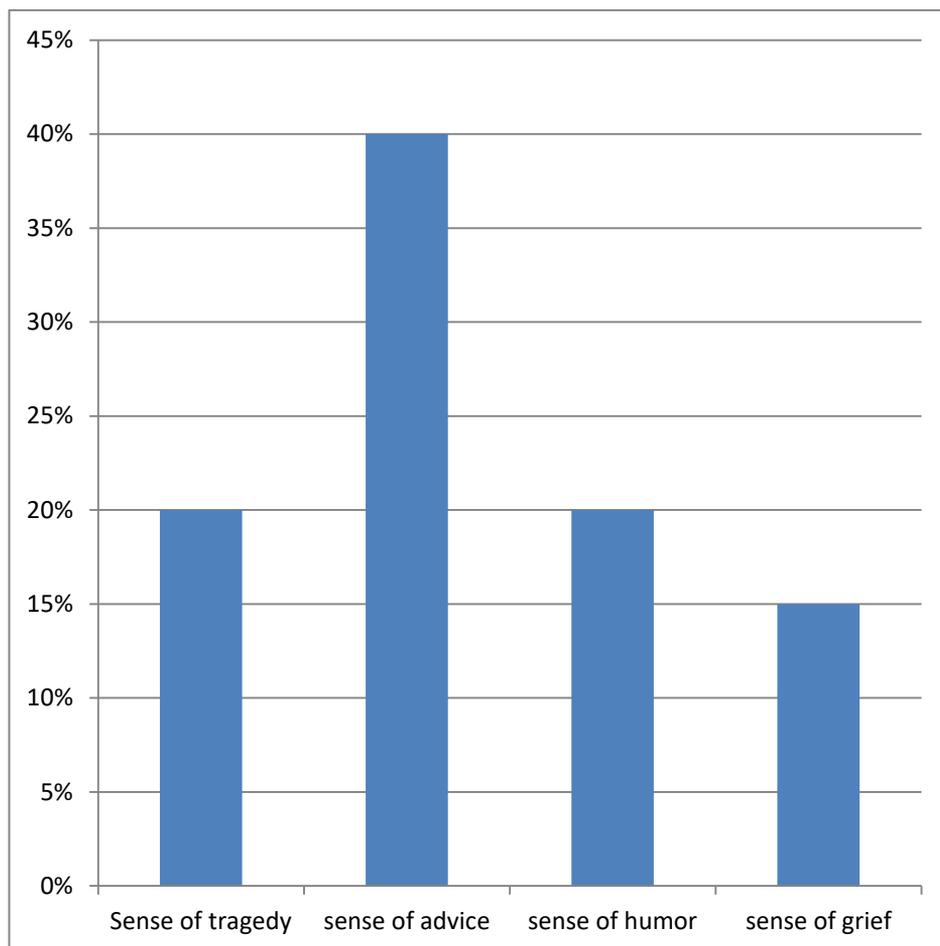
### **3.2 Students' cognition of the texts:**

The researchers depend on the questionnaire to measure the students' cognition to the texts. The questions (1 , 2 , 3 , 4 ) in the questionnaire clarify the approximate percentages of students' cognition in the first question 30% of the students choose the right choice and the rest choose the wrong choice the following figure clarify the percentages of the students' answers:



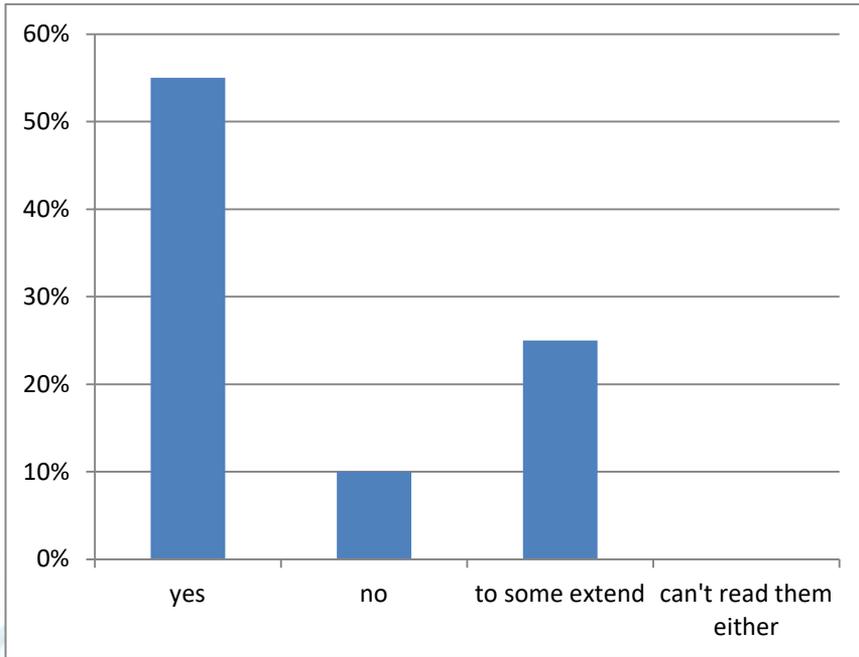
**Fig. ( 1 ) the percentages of the answers of the first question**

In the second question 20% of the students guess the right choice but the others choose wrong answers. The following figure will represent the percentages of students answers in the second question:



**Fig.(2) The percentages of the answers of the second question**

Question three clarify the percentages of students who understand the texts the results show that 55% of students understand the texts and the following figure shows the percentages :



**Fig. (3) the percentages of students' answers on question three**

The results of Question four which examine the cognition of the students show that most of the students have problems in cognition. They are also have problems in understanding some of words. 10% of the students choose the right choice for all the points in this question , but 90% of the students have some wrong answers.

### **3.3 students' dyslexic difficulties in reading texts:**

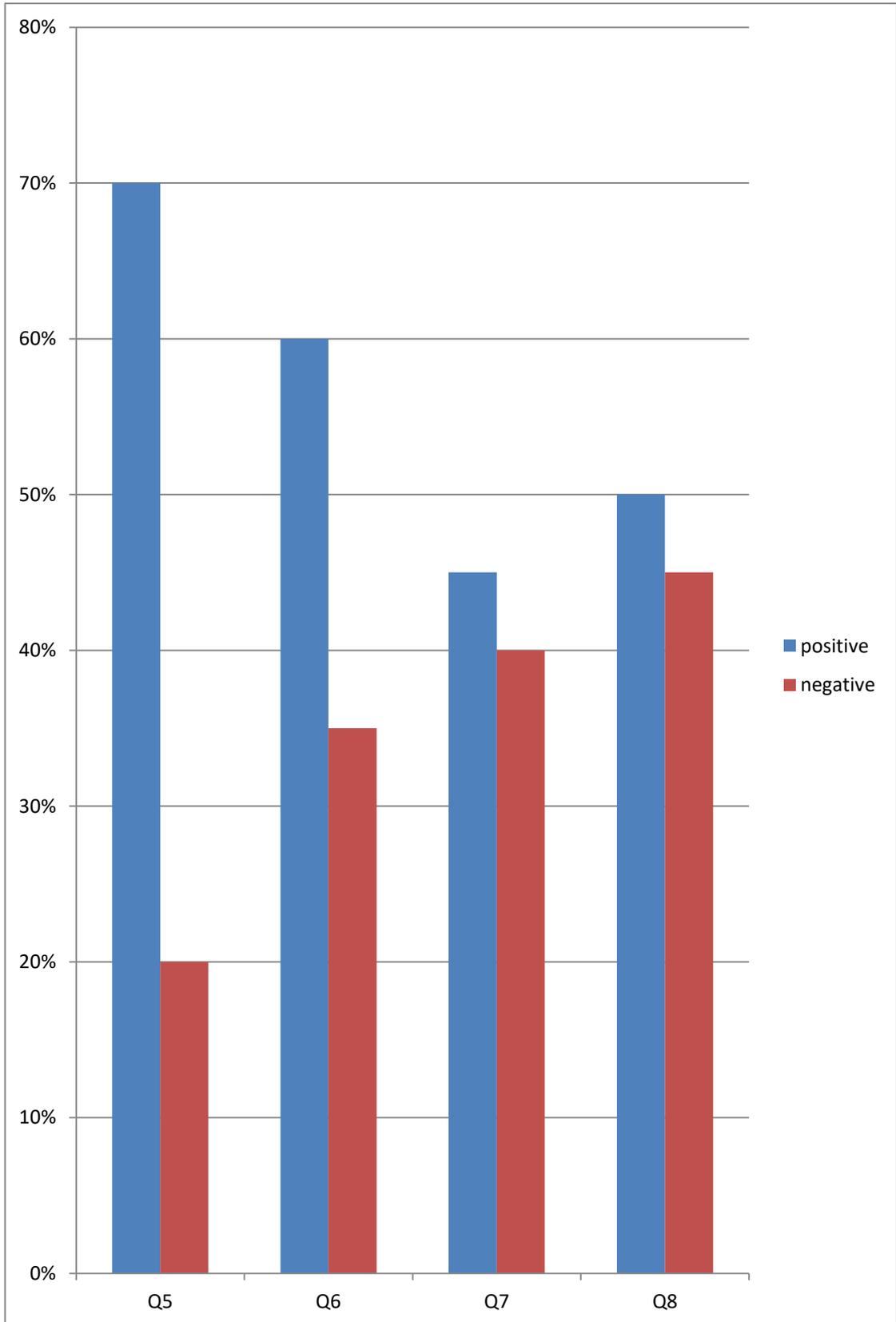
In the questionnaire the researchers assign five questions ,in order to measure the dyslexia in the students from their answers to the questions .Question five" is your spelling poor ? " 25 % of the result was negative , and 70 % of the result was positive ,these results mean that the spelling of the students is not poor . so there is only 25% of the students their spelling are poor so they are suffering from dyslexia.

The other question which examine the dyslexia in the students states , "Do you dislike reading long books ?" . 35% of the students choose the negative choice ,and 60% choose the positive choice .The students who dislike reading heavy books may be because they have dyslexic problems so they dislike reading heavy books.

The next question is "Do you dislike reading aloud?" in this question the results was approximately close . The students whose answer are the negative choice are 40% and the students whose answer is positive are 45% .the students who dislike reading in aloud may have dyslexia so that they don't like to read loudly .

In question number eight which states "Do you take longer than you should to read a page of a book?" the results is 45% choose the negative choice and 50% choose the positive choice .according to the results 45% of the student's take longer time than they should to read apage of a book so they have dyslexia ,because they may find it difficult to read some words that is the reason why they take longer time in reading .

The final question ia about the texts of jokes that the students read in the questionnaire the question states "How do you find the above texts?" 40% of the students find it easy ,20% of them find it difficult , and 35% of the students find some of them are easy and others are difficult .And this can be clarified in the following figure:



**Fig. (4) the negative and positive results in questions(5,6,7,8)**

## Conclusions

### **Conclusions and Findings:**

This study has reached to the following conclusions. They are as follows:

1. The results of the questionnaire shows that Most of the students didn't recognize that these texts are jokes or overwhelmed by sense of humor .
2. Only 30% of the students recognize that the texts are jokes.
3. Only 20% guess that the texts are overwhelmed by sense of humor.
4. A contrastive percentage happened in question three 55% of the students' answers are positive. So this clarify that most of the students didn't understand the texts.
5. Students have some problems in cognition and reading.
6. Most of the percentages of the result of the questions related to dyslexia are positive and some of them are negative , and this is an indication that some of the students have a problem of dyslexia.
7. The term 'cognition' refers to all the activities , products , and processes of the mind .All the brain activities that lead to knowledge , including all means and mechanisms of acquiring information is called cognitive functions.
8. Dyslexia is a reading disorder is when one has difficulty in reading or understanding material within a reading .
9. Dyslexia can be divided into two types, i.e. developmental phonological dyslexia and developmental phonological dyslexia.
10. With dyslexia the person mixes up letters and word sequences so he has interference in his or her learning as the brain has a problem processing language .

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