

## ***Gender differences in reading comprehension achievement in English as a foreign language in Compulsory Secondary Education***

### ***Diferencias de género en los resultados de la comprensión lectora en inglés como lengua extranjera en Educación Secundaria Obligatoria***

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**Abstract:** The present article is an empirical research on the differences of girls' and boys' achievement in reading comprehension in English as a foreign language at the end of their Spanish Compulsory Secondary Education (4<sup>th</sup> year of CSE). It aims to analyse both the global and the specific objectives of reading comprehension development in this subject in relation to the students' gender. Finally, we describe the average females and males students' level in reading comprehension in English.

The results allow us to conclude that females students obtain better global results than their males partners. They also get better marks in the specific objectives: getting specific information, getting general information, understanding textual structure and deducing meaning from the context.

**Key word:** gender, English, reading, comprehension, achievement, education.

**Resumen:** Este artículo presenta una investigación empírica sobre las diferencias de resultados entre chicas y chicos en comprensión lectora en inglés como lengua extranjera al final de su Educación Secundaria Obligatoria (4<sup>o</sup> de ESO). Nos proponemos analizar tanto los objetivos globales como específicos del desarrollo de la comprensión lectora en esta asignatura en relación con el género del alumnado. Finalmente, describimos el perfil medio en comprensión lectora de las alumnas y los alumnos.

Los resultados nos permiten concluir que las alumnas obtienen mejores resultados globales que sus compañeros. También consiguen mejores calificaciones en los objetivos específicos: extraer información específica, extraer información global, comprender la estructura del texto y deducir el significado del contexto.

**Palabras clave:** género, inglés, lectura, comprensiva, resultados, educación.

# 1.- Introduction: sex and gender differences

It has been sought to identify and differentiate the terms of *sex* and *gender* by many researchers. The aim of this is to understand the impact of biology and other factors on human behaviour, “[The term sex refers to] the biological and physiological characteristics that define men and women (WORLD HEALTH ORGANIZATION, 2009).

The term gender refers to the economic, social, political and cultural attributes and opportunities, associated with being male and female. In most societies, men and women differ in the activities they undertake, in access to and control of resources, and in participation in decision-making. And in most societies, women as a group have less access than men to resources, opportunities and decision-making (DESPREZ-BOUANDCHAUD *ET AL.*, 1987: 20-21).

According to WEINER (2009), there have been two positions regarding educational gender or sex differences in Europe historically. A conservative approach considers men and women different biologically. Women were thought to be inferior. For instance, males and females were expected to accomplish different roles in society during the nineteenth century. Thus men devoted themselves to public sphere but women were confined to private domain. This perspective has extended during the twentieth century. For instance, women and men are regarded to have different behaviour because of their innate biological differences. Men are physically stronger and they are better at spatial, numerical and mechanical abilities. Furthermore, men see the world in terms of objects, ideas and theories. Differently, women reach physical and psychological maturity earlier and they develop a higher and more precocious verbal skills. They tend to see the world in personal, aesthetic and moral terms. This conservative perspective on sex differences influence education since this is considered to be a means of socialising and education boys and girls into their “natural” roles as men and women. Men are led to be breadwinners, work-oriented and heads of the family. On the other hand, women are prepared to be nurturers, carers and family-oriented.

A progressive approach, however, takes men and women’s social roles molded by influences from history, culture and society. Frequent changes in men and women perception are constant and parallel to the progress of society itself. Women’s inferior role is explained because Western and other societies are patriarchal. RILEY (1988), SCOTT (1988) and HILL-COLLINS (1990) agree that men have power over women and therefore are in a position to interpret their differences in stereotyped ways. The outstanding idea of this perspective is that gender or sex difference is a cultural phenomenon rooted in a particular era or culture. This perspective considers education

as an instrument to explain sex differences, to encourage greater equality between the sexes and to challenge stereotyped assumptions in order to promote equal opportunities.

As a result of this last approach, concepts of equal opportunities have been developed. Differences between gender equality and gender equity have arisen. UNESCO offers a slight differentiation between the two:

*Gender equality, equality between men and women, entails the concept that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices [...]. Gender equity means fairness of treatment for women and men, according to their respective needs (UNESCO, 2000: 5).*

## **2.- Educational research on sex differences**

Most studies on sex differences in education compare male and female characteristics and attainment. MACCOBY and JACKLIN (1974) affirmed that females are superior in verbal skills and males get better results at mathematical skills, though, in their opinion, it is difficult to untangle the influence of stereotyping on individuals' perceptions and to separate innate or learned behaviours that underpin the development or behavioural or cognitive sex differences. The value of this research lies in the analysis of the responses from people when confronted by test situations.

The validity of tests related to sex differences predicting performance or future capacity to learn. A gender bias is produced by a particular test itself or the differential responses to it from males and females. The tests predict what researchers believe to be a particular capacity to learn instead of the capacity required by the school curriculum.

WILLIAM (2000) affirms that sex differences in cognition are small and traditional differences in some subjects have narrowed. Very few of the tests show a standard mean difference in favour of either males or females of more than 0,4 which means that less than 4% of the variation in individuals' test scores is related to sex differences.

WEINER (2010) summarizes the different theories on gender differences by affirming that sex differences need to be treated with caution since the studies may themselves be stereotyped or biased towards one sex or the other. As a matter of fact, some of them may not test the most relevant skills and knowledge and even some may not be predictive of future academic performance.

### 3.- Gender differences in academic achievement

This section is devoted to the gender differences in mathematics, sciences and, especially, reading achievement. Gender patterns in these subject sphere are essential to understand women and men's choices in employment. An example is that women are underrepresented in fields related to mathematics, science and technology in Europe, though there are fewer men than women in education and health fields. There exists a parallelism between children's performance at school and their motivation and attitudes towards particular subjects. Male underachievement in reading explains why there are relatively few men in the fields of education and humanities. Similarly, gender differences in mathematics and science achievement at school are useful in understanding female underrepresentation in these spheres at upper education.

As for mathematics, PISA 2000 reported that fifteen-year-old student males scored better than females in half of the European countries, while there were no differences in the rest (OECD, 2001). Curiously enough, much of the male advantage was due to more males performing exceptionally well. There were not a relative absence of males among poor performers. The proportion of females and males who performed poorly<sup>11</sup> was roughly equal.

PISA 2003 reasearch showed less differences as for sexes are concerned since females performed at similar levels as males. However, the first showed less interest and enjoyment when dealing with mathematics. Consequently, their level of self-concept and confidence was lower than their male partners. In general, female students were more anxious to face mathematics. The PISA 2006 assessment found significant male advantage in average mathematics achievement in approximately half European countries.

In science, PISA 2000 of fifteen-year-old student's achievement did not report significant gender differences. Neither did PISA 2003 find male advantage in most countries except for Denmark, Greece, Luxembourg, Poland, Slovakia and Liechtenstein.

PISA 2006 results reported small difference in science, therefore there were no gender gap in most countries. Interestingly, females tend to have a lower level of belief than males in science though their results are almost the same.

Regarding reading, all recent international studies agree that girls have a higher reading achievement than their partners. This sex gap appears when students are in their fourth year of school and it is important up to they are fifteen.

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<sup>11</sup> By performed poorly, it is considered those students typically not able to complete a single processing step consisting of reproducing Basic mathematical facts or processes or applying simple computational skills.

PIRLS 2006 research data showed that at their fourth year of schooling, girls had significantly higher reading achievement than boys in all countries except in Spain and Luxembourg. In these two countries the difference between sexes were not significant (MULLIS *ET AL.*, 2007). This study showed some other interesting gender differences concerning reading domains. Female students have a higher achievement in literary reading in all European countries. However, there is little difference in reading for information in French community of Belgium, Spain, Italy, Luxembourg and Hungary.

Girls affirm that they spend more time reading books and magazines than boys in all countries except for Spain. In many countries boys report more time than girls spent reading on the Internet.

In all PISA surveys of fifteen-year-olds, there are significant differences in favour of females in all European countries. Bulgaria, Greece, Lithuania, Slovenia and Finland were the countries with the largest gender difference in PISA 2006, while Denmark, the Netherlands and the United Kingdom had the smallest gender differences in reading achievement. Evidently, females perform better than males in reading and this fact is widespread and significant. However, we must consider that large gender differences do not imply poor male achievement in reading. In Finland, which is the leading European country on average reading score, it is not that males do poorly in reading, their scores are above the international average and the highest among males in Europe, but rather that females score exceptionally well.

The PISA surveys also report some other interesting facts. Girls read more diverse material and use libraries more often than males. The majority of these only read to get the information they need. There are some differences between sexes when they read for pleasure. Females prefer more demanding texts such as fiction, whereas males were more likely to read comics and newspapers.

PISA 2009 reasearch showed that girls obtain better results in reading in all countries. In Spain, there is a small distance in reading achievement between boys and girls. Males students have the same average marks, 466, in digital reading and print reading, while females students get worse marks in digital reading (495 in print reading and 485 in digital reading). Girls also worsen their marks in digital reading in the rest of the OECD countries. As a result, the distance between genders in digital reading cuts down, though girls get better scores.

#### 4.- Research characteristics

##### 4. 1.- Objectives.

The objectives of this research are:

- A. To know the level of girls' and boys' achievement in reading comprehension in English as a foreign language at last year of CSE (aged 16).
- B. To know the level of girls' and boys' achievement in specific items related to reading comprehension in English: *getting specific information, getting general information, understanding textual structure and deducing meaning from the context.*

##### 4. 2. Participants.

One hundred and forty-one students took part in this research, seventy-two girls and sixty-nine boys. All of them were in their last year of their Compulsory Secondary Education.

##### 4. 3. Data collecting instruments.

As for the data collecting instruments, we took some reading texts from different textbooks used for learning English at this level. See appendix 1.

##### 4. 4. Statistical Processing.

As far as statistical processing is concerned, we have used SPSS 16.0 (Statistical Package for the Social Science) for Windows.

##### 4. 5. Validity and Reliability.

The validity was endorsed by some experts' judgement. In this process, the teachers of the English Department took part. To determine the degree of reliability, we used Cronbach's Alpha proof.

Cronbach's Alpha	Items
.890	30

Figure 1: Summary of cases' processing. Value  $\alpha = 0,890$  is a high reliability

## 5.- Results

### 5. 1. Global Results.

Student females have a higher level in reading comprehension in English. In fact, girls' average score is 2.7 in a rising scale from one to five, where number three indicates pass (C). Their boys classmates' global results are lower. They got 2.34 as an average mark. The difference between boys' and girls' global achievement in reading comprehension in English as a foreign language is 0.36 for the female students.

<b>GENDER</b>		<b>READING COMPREHENSION</b>
<i>BOYS</i>	Average	2.3457
	N	69
	Typ. Des.	.91793
<i>GIRLS</i>	Average	2.7037
	N	72
	Typ. Des.	.93978
<b>TOTAL</b>	Average	2.7614
	N	141
	Typ. Des.	.97846

Figure 2: Global Results

### 5. 2. Specific Results.

Regarding specific data, student females get better results in all the analysed parameters related to reading comprehension in English. They obtain the highest differences in *deducing meaning from the context*, 0,4991. This difference in achievement between males and females is significant. *Understanding textual structure* also gets a pronounced gender gap in achievement. The difference is reduced to 0,3457 for the girls.

Though the differences between genders are not so outstanding in *getting specific information* and *getting general information*, the differences are 0,3092 and 0,278 respectively for the girls (see figure 3).

Considering these data, we can affirm that gender gaps are more pronounced when the information is implicit in the text as in *deducing meaning from the context*. However, distances between genders' achievement are reduced when the information is explicit in the text, for example in *getting specific information* and *getting general information*.

GENDER		Getting specific information	Getting general information	Understanding textual structure	Deducing the meaning from the context
BOYS	Average	2.3297	2.4928	2.5386	2.0217
	N	69	69	69	69
	Typ. Dev.	.73744	.90742	.70691	.91733
GIRLS	Average	2.6389	2.7708	2.8843	2.5208
	N	72	72	72	72
	Typ.Dev.	.71899	.94570	.66618	1.02200
TOTAL	Average	2.4876	2.6348	2.7151	2.2766
	N	141	141	141	141
	Typ. Dev.	.74063	.93270	.70447	.99897

Figure 3: Specific Results

## 6.- Conclusion

In sum, student females get better outcomes in reading comprehension in English than their males partners at the end of the Spanish Compulsory Secondary Education, when students are approximately sixteen years old. Both global and specific scores show that girls' achievement is higher in reading comprehension in English as a foreign language.

In a rising scale from one to five, girls' global results are 2.7037, while boys get 2.3457. The difference is 0.358 for the girls. This distance is even higher when dealing with the specific parameter, *deducing meaning from context*. Then it reaches almost half a point, 0.4991 for the girls. *Understanding textual structure* obtains a difference of 0.3457. The smallest gender differences in English reading comprehension are in the following parameters *getting specific information* (0.3092 for the girls) and *getting general information* (0.278 for the girls).

Clearly, gender differences tend to be bigger when the information is implicit in the text and tend to be smaller when the information is explicit in the text. It seems that boys have serious difficulties to find implicit information.

The average student female understands part of the text, enough to appreciate the general idea and some details without too many difficulties. She can understand



textual structure quite easily and has slight problems to deduce meaning from the context.

The average student male can understand textual structure and gets general information with some problems. He misunderstands some specific information and has serious problems to deduce meaning from the context.

## 7.- References

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## 8. APPENDIX 1

### 1. Read the text and answer the questions.

#### American and British English

American English developed differently to British English partly because of the influence of the different nationalities that emigrated to the US and also because new words had to be invented to describe a new country and new sights. Sometimes they borrowed native Indian words like cowboy or gave old words as new meaning.

As a result although the British and the Americans speak the same language the vocabulary they use is sometimes very different. There are about 4000 differences. Sometimes they use the same word but with a very different meaning. *Pants* in the USA are trousers but in Britain men wear their pants under their trousers!

The strong influence of American films and television series means that British people understand most American words and expressions and in fact many American words have been adopted by the British- *living room*, *babysitter*, *teenager*, *typewriter*, *department-store* were all originally American words that the British now use.

Strangely, some of the words that we think of as being “American” are in fact old English words that aren’t used in Britain any more. For example, the British used to say *fall* instead of *autumn*.

1. What differences are there between American English and British English?

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2. Why do you think American English is different to British English?

\_\_\_\_\_

3. Has American English influenced British English?

\_\_\_\_\_

## 2. Read the text.

The passengers were sitting in their seat on the aeroplane.

"The plane is leaving in a few minutes," said the stewardess. "Enjoy your flight."

Time passed quickly. But near the end of the flight, trouble began.

"I think one of the engines is failing," the pilot said.

"Will we reach London?" asked the co-pilot.

"We're going to try," answered the pilot.

Soon the passengers realised there was a problem. "What's the matter?" they shouted. "What will happen? Will we die?"

The stewardess talked to the passengers. "Don't be nervous," she said.

"We're having a little trouble, but we're going to try an emergency landing in Manchester."

After a few frightening minutes, the aeroplane landed safely.

One man turned to the person next to him. "Were you frightened?" he asked.

"Don't be silly," the man answered. "That engine was on the other side of the plane."

### Match the beginning of each sentence with its end.

- |  |  |
|--|--|
| 1) The trouble began                               | a) the pilot was trying to land the plane        |
| 2) The pilot noticed that London                   | b) they could reach                              |
| 3) The co-pilot hoped that                         | c) the engine was on the other side of the plane |
| 4) The passengers almost over                      | d) when the flight was                           |
| 5) The stewardess told the passengers that         | e) he was scared                                 |
| 6) One man asked the person next to him if problem | f) found out about the                           |
| 7) The man was calm because                        | g) an engine was failing                         |

**3. Read the following text and answer the questions.**

**The story of money**

When we think of money, we usually think of coins and notes, but money wasn't always like that.

The earliest form of money was cows. Salt and shells were also used, but people eventually decided that gold and silver coins were best. They are rare, they last a long time, and people can carry them easily.

In the 18<sup>th</sup> century, people started to leave their coins at banks. They were much safer there. In return, the bank gave them a "bank note" which they could use to get their money back. Bank notes were much easier to carry than coins, and they eventually became the paper money we use today.

1. What was the earliest form of money?

\_\_\_\_\_

2. Why did people start leaving their coins at banks?

\_\_\_\_\_

3. Why did the banks give people "bank notes"?

\_\_\_\_\_

**4. Read the text and answer the questions.**

**The Lake District**

The Lake District is situated in the north-west of England. It's one of the most beautiful areas of Britain. There are lots of mountains, wonderful rivers and, of course, spectacular lakes!

Come prepared! This area of Britain is also famous for the weather. It isn't always very good - in fact, it rains quite a lot. However, if you've got a jacket and some boots, you'll have a good time.

The Lake District is perfect for adventure sports - canoeing, windsurfing and waterskiing are some of the activities you can do on the lakes. If you prefer the mountains, you'll have lots of places to go walking or climbing.

1. What kind of text is this one? Explain.

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2. What geographical features are there in The Lake District?

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3. What's the weather like?

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4. What outdoor activities can you do?

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5. What kind of outdoors would you like to do in the Lake District? Why?

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**5. Read the first lines of the song "I'll be there for you" and answer the question.**

**I'll be there for you**

So no one told you life was gonna be this way.  
Your job's a joke, you're broke,  
Your love life's gone away.  
It's like you're always stuck in second gear,  
When it hasn't been your day, your week,  
Your month, or even your year.

*Can you describe the life of the main character?*

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**6. Read the text and answer the questions.**

**The English secondary school system**

School is from Monday to Friday- we don't go to school on Saturdays. Lessons start at nine o'clock and finish at half past three. There's usually a fifteen-minute break in the morning and a one-hour break for lunch.

We study ten subjects. Maths, English, Science, Technology, Physical Education, and one foreign language are compulsory. After school, some of us do extra activities, such as Sport, Music or Art.

1. What time do lessons start and finish?

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2. Which subject are compulsory?

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3. Compare the English and Spanish secondary school system.

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**7. Read the text about Australia and answer the questions.**

**Australia**

The most popular tourist destination in Queensland is the Great Barrier Reef. It's 2,000 kilometres long. You can dive on the reef and see wonderful fish and coral.

In Sydney, the capital of New south Wales, you can visit the beautiful opera house, and go surfing on Bondi Beach.

Western Australia is the biggest state in Australia. Many of Australia's Aboriginal people live here. The 12,500 kilometre coast is almost one long beach!

1. What sort of activity can you do in the Great Barrier Reef?

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2. Where do most aboriginal people live?

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3. Do you think this is a good place to visit? Why?

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8. Read this text and answer the questions.

**Infant joy (William Blake 1757-1827)**

“I have no name,  
I am but two days old.”  
What shall I call thee?  
“I happy am,  
Joy is my name.”  
Sweet joy befall thee!

Pretty joy!  
Sweet joy but two days old,  
Sweet joy I call thee;  
Thou dost smile,  
I sing the while\_  
Sweet joy befall thee.

1. What kind of text is this one? Explain.

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2. What is the text about?

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3. Can you find any literary figure? Which ones?

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4. What does **thee** mean?

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5. How do you think the author's mood is?

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