

#### **4. Chapter four: The Data – Analysis of Results**

The presentation and analysis of results will begin with the instruments related to the reading texts in Political Science. The first time that the researcher met with the participants she began by presenting them with three materials that are commonly used when reading academic texts. The tools were highlighters, pens, and monolingual and bilingual dictionaries. Eight out of the ten students who participated in the research used at least one of these instruments when reading the first two texts.

##### **4.1. Analysis of the Results of the Instruments from the Text *La Ciencia Política en México: Papel y Desafíos***

The eight participants who did use at least one of the materials given used the highlighter while reading this first text. Then, participants 1, 3, and 7 used the pen. At last, the monolingual Spanish dictionary was only used one time throughout the entire reading of the text by participants 3, 4, 6, 9, and 10.

##### **4.1.1. Observed strategies in the text.**

A table showing the most recurring situations observed during the reading of the Spanish text on Political Science is presented below:

Table 4.1. Observed Strategies in *La Ciencia Política en México: Papel y Desafíos*

Strategy	Underlines key phrases/ideas	Underlines entire paragraphs	Makes notes	Draws brackets/asterisks/arrows
Participant 1			✓	
Participant 2	✓	✓		
Participant 3	✓	✓	✓	✓
Participant 4	✓	✓		
Participant 6	✓			
Participant 7	✓		✓	✓
Participant 8	✓	✓		
Participant 10	✓	✓	✓	✓

As can be seen in Table 4.1 participants 5 and 9 are not included because they did not use any of the materials. A total of fifteen situations occurred: 1) ‘Underlines titles and subtitles,’ 2) ‘underlines key words,’ 3) ‘underlines key phrases or ideas,’ 4) ‘underlines proper names,’ 5) ‘underlines entire paragraphs,’ 6) ‘underlines with a pen,’ 7) ‘makes notes,’ 8) ‘makes notes with a highlighter,’ 9) ‘circles words with a highlighter,’ 10) ‘circles words with a pen,’ 11) ‘draws exclamation marks,’ 12) ‘draws brackets or asterisks or arrows,’ 13) ‘writes numbers,’ 14) ‘draws separation lines between sentences or paragraphs,’ and 15) ‘writes questions.’

Only four out of the fifteen above-mentioned events were present in three or more reading texts. The remaining situations were visible in two or only one text. Regarding the most recurring situations, seven of the participants underlined the phrases they considered to be the main ideas. Half (5) of the readers underlined entire paragraphs throughout all the text. Four students made notes while reading. The notes were related to information already read in a paragraph, to their prior knowledge of the topic, or to information perceived as contradictory in the text. Finally, only three participants drew brackets, asterisks or arrows

next to a paragraph. This was done to signal the importance of a sentence or to connect ideas.

Upon analyzing the larger observed strategies table for the first Spanish reading, two of the ten participants were involved in almost the same situations. Participant 3 used seven of the strategies, while participant 7 used a total of six. Both participants coincided in five of these situations; they are shown in Table 4.2.

Table 4.2. Coincidence of Strategy Use between Participants 3 and 7

Strategy	Participant 3	Participant 7
<b>Underlines key phrases/ideas</b>	✓	✓
<b>Underlines entire paragraphs</b>	✓	
<b>Underlines with a pen</b>	✓	✓
<b>Makes notes</b>	✓	✓
<b>Circles words with a pen</b>	✓	✓
<b>Draws brackets/asterisks/arrows</b>	✓	✓
<b>Writes numbers</b>		✓
<b>Writes questions</b>	✓	

Both participants 3 and 7 used most of these strategies. The strategies that participant 3 used that participant 7 did not are ‘underlines entire paragraphs’ and ‘writes questions,’ while participant 7 also used ‘writes numbers.’ As seen in Table 4.2, both participants used the provided materials given at the beginning, the highlighter and the pen. However, only participant 3 used the monolingual Spanish dictionary while reading.

#### **4.1.2. Systematic observation rubric results from the text.**

To complement Table 4.1, a second table related to the researcher’s observations during the first Spanish reading is presented below:

Table 4.3. Systematic Observation Rubric of *La Ciencia Política en México: Papel y Desafíos*

Observation	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Asks for a monolingual Spanish dictionary			<sup>1</sup> (p. 68)	<sup>1</sup> (p.67)		<sup>1</sup> (p. 67)			<sup>1</sup> (p.67)	<sup>1</sup> (p.67)
Asks for a highlighter	✓	✓	✓	✓		✓	✓	✓		✓
Wanders away while reading	D=7	D=1		D=3		D=3				
Wanders away while answering	D=6	D=2	D=1	D=2	D=5	D=5 W=2	D=7 W=1	D=2	D=1	
Time taken to read Spanish text	<u>22 min</u>	16 min	18 min	16 min	12 min	14 min	17 min	18 min	15 min	16 min
Time taken to answer Spanish questionnaire	24 min	<u>27 min</u>	<u>30 min</u>	25 min	18 min	23 min	<u>32 min</u>	<u>27 min</u>	<u>30 min</u>	25 min

<sup>1</sup>= times used    D= distracted    W= wanders away

Besides the observations in Table 4.3, the systematic observation rubric included two more strategies: 'asks for help' and 'strategy used after having heard options.' However, they are not shown as no participant asked for help during the 20 minutes of reading. As stated before, eight out of the ten participants constantly used the highlighter. All of them took the highlighter before starting to read and began using it within the first few paragraphs. Also, the readers did not put the highlighter down when not using it.

Participants 3, 4, 6, 9, and 10 used the monolingual Spanish dictionary once. Almost all of them searched for a word or words while reading the same page (page 67 or 68). Participant 10 was the only reader who read the entire text first and searched for the word after reading. Table 4.3 also included the observation: 'wanders away while reading' but no participant did it. Nevertheless, participants 1, 2, 4, and 6 got occasionally distracted when somebody else talked or walked near them. In contrast, participants 3, 5, 7, 8, 9, and 10 did not get distracted by any noise or voice they heard.

The behavior 'wanders away while answering' was observed in participants 6 and 7. At the beginning they started answering the questionnaire very actively but suddenly they just looked away for several minutes before continuing to answer again. A second time, the participants became distracted while answering the questionnaire when someone talked too loudly or walked near them. These participants included students from 1 through 9. In Table 4.3, the digit that appears after the "d" for distracted and the "w" for wanders away is the number of times that readers turned their heads to see the people approaching or talking.

The time limit to read the first Spanish text was 20 minutes. However, as Table 4.3 shows, participant 1 took two more minutes to finish reading the text. Even though the

researcher told the participants that she would interrupt them when the 20 minutes were over, she let them finish anyway to observe their normal reading process.

The same situation occurred when answering the questionnaire. The time limit to answer the questions was 25 minutes. Participants 2, 3, 7, 8, and 9 took from 2 to 7 longer minutes to complete this task. One of the main reasons was that these students looked for the answers to the first questions in the last pages and they could not find the information right away. Another reason was that the participants searched the text for almost all the answers before choosing the correct option. In addition, students took longer to answer the thematic questions as they kept thinking about what to write.

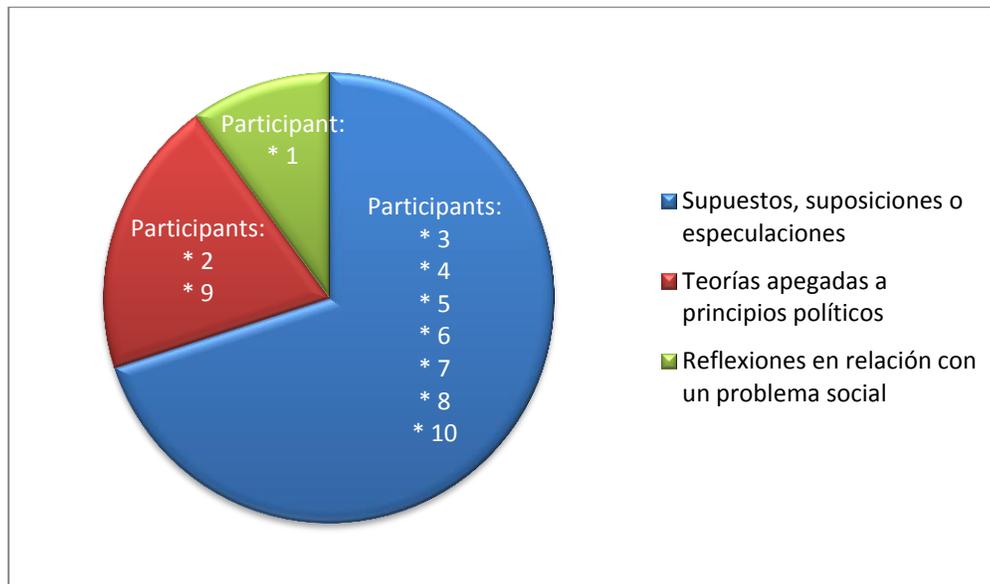
The systematic observation rubric also included an 'other observations' section where the researcher reported extra important information observed while participants were reading. For example, participants 2, 5, and 8 checked the length of the text before reading, while the remaining participants started reading immediately. Participants 1, 2, 4, 7, 8, 9, and 10 read slowly but at a steady rate, while participants 3, 5, and 6 read a little bit more quickly. Finally, participants 1, 4, and 10 counted how many pages they had left to read while still reading.

#### **4.1.3. Comprehension questionnaire results.**

IAs mentioned in chapter three, all the questionnaires included four types of questions: linguistic, textual, evaluative, and personal response questions. The Political Science questionnaire in Spanish consisted of twelve interrogative sentences. There was one linguistic question, seven textual questions, and four thematic questions: two evaluative and two personal responses. To see this first comprehension questionnaire go to Appendix V.

We shall start by analyzing the one linguistic question. Readers had to state what the words ‘elucubraciones teóricas’ mean. These were the participants’ responses:

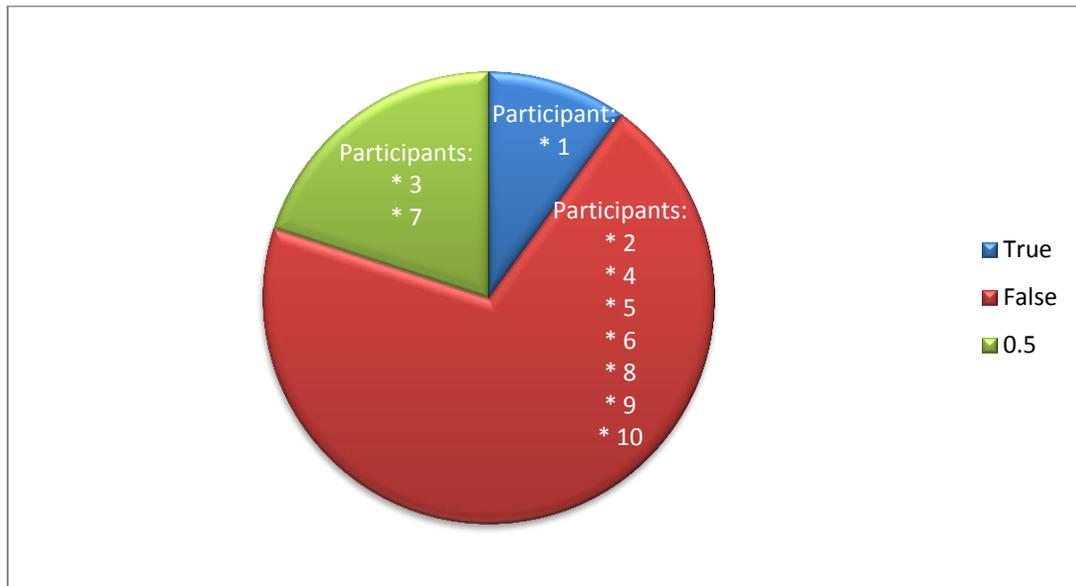
Chart 4.1. Question 3: Meaning of ‘elucubraciones teóricas’



The correct answer for the words ‘elucubraciones teóricas’ was: “Supuestos, suposiciones, especulaciones teóricas que realmente son divagaciones con apariencia de profundidad” (answer in blue). As seen in Chart 4.1, 70% of the participants answered the question correctly, while three of them got it wrong.

Out of the seven textual questions, the two with the most interesting results will be analyzed in this section. First, question 6 was a ‘true or false’ question. Readers had to recall the information from this statement; however, most of them searched for it in the text. The question was, “Cierto o Falso: Las preocupaciones mencionadas en los trabajos de investigación de Cristina Buci-Glucksman, Ma. Antonieta Macciocchi y Etienne Balibar son las mismas que pasaban en México.” The answers were as follows:

Chart 4.2. Question 6: True or False

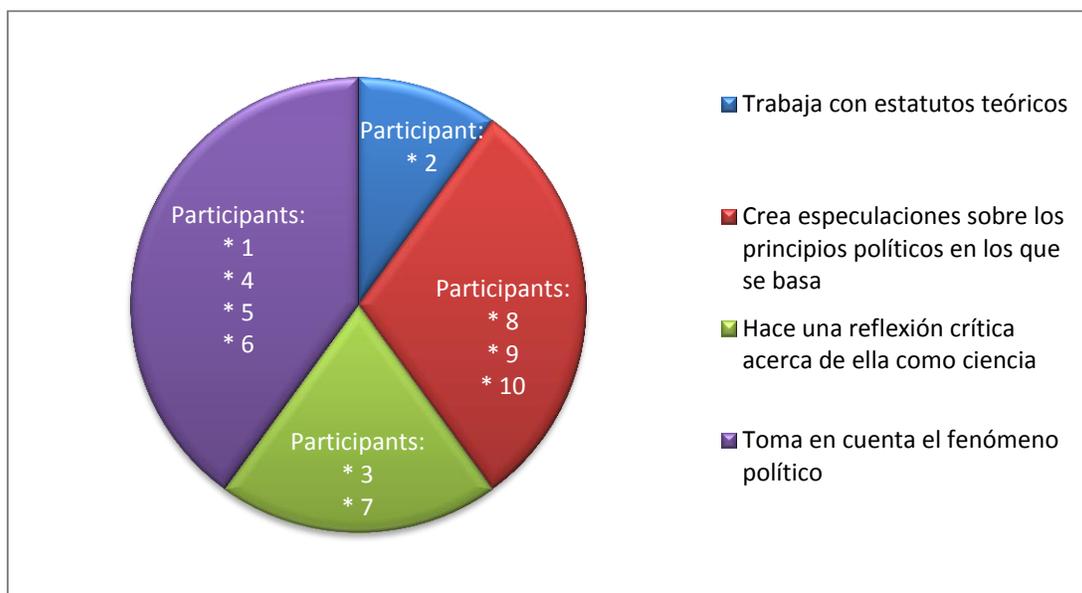


The correct answer to this statement was: “False, these foreign texts were taken by Mexicans and they reproduced the same concerns in Mexico, however, Mexico had different political and social problems” (answer in red). As seen in Chart 4.2, 70% of the participants answered the two parts of the question correctly, this is, both the false answer and the justification. Only participant 1 got both parts of the answer wrong.

Participants 3 and 7 answered half of the question correctly. They chose the false option correctly but the justification was not correct. Participant 3 wrote that those foreign concerns were not Mexican but could be related to Mexico’s situation, ultimately generating the same concerns. In the same way, participant 7 wrote that foreign writers ended up reproducing their concerns even though they wanted to talk about the Mexican situation. Nonetheless, question number 6 was the best answered statement with 9 people answering it correctly.

Question number 4 states: “Carlos Sirvent menciona ciertas características que debería tener la Ciencia Política como disciplina académica. Una de las opciones que aparecen abajo NO es una de ellas, ¿cuál es?” Participants answered like this:

Chart 4.3. Question 4: Multiple Choice



The number of participants answering this question correctly was very low. Only three participants did it right; participants 8, 9, and 10. The answer to this statement was: “Crea especulaciones sobre los principios políticos en los que se basa” (answer in red). As seen in Chart 4.3, 70% of readers got the answer wrong even though it was a multiple choice question that could be found literally in the text. This was the most incorrectly answered textual question in the Spanish questionnaire.

Table 4.4 below shows the results of the textual questions:

Table 4.4. Results for Textual Questions

Question no.	1	2	4	5	6	8	11	No. of right answers
Participant 1		✓				✓	✓	3
Participant 2	✓				✓	✓		3
Participant 3					0.5		✓	1.5
Participant 4		✓		✓	✓	✓	✓	5
Participant 5	✓	✓		✓	✓	✓	✓	6
Participant 6	✓	✓		✓	✓	✓	✓	6
Participant 7		✓		✓	0.5		✓	3.5
Participant 8	✓	✓	✓	✓	✓	✓	✓	7
Participant 9		✓	✓	✓	✓	✓		5
Participant 10	✓	✓	✓	✓	✓	✓	✓	7

As seen in Table 4.4, participants in general did not do so badly when answering the textual questions. Only four of the participants had half or less of the textual answers correct, while the rest of the participants (60%) outperformed with five or more correct responses. Adding students' responses to the linguistic question we can see that exactly 50% of the students had most of the answers right. With a total of eight questions, participants needed six to pass the test.

Regarding the thematic questions, these could not be graded as their answers required critical thinking on the part of the participants and were open questions. This first questionnaire included four thematic questions. However, only question 10 will be analyzed here due to length considerations and due to the importance and interest of the statement. Question number 10 said: "Con base en lo que leíste en el texto y si estuviera en tus manos, ¿qué harías para mejorar la calidad de la Ciencia Política como disciplina académica en México?"

All participants in general provided similar responses. Their answers went from saying that in order to improve Political Science as an academic discipline in Mexico it

needed to be more noteworthy, dynamic, and people should give it more importance on a general basis. Then, participants agreed that all society should get involved to help develop theories concerning Mexico's problems in order to obtain a benefit in both political and private areas. Finally, students said that more research studies in Political Science should be conducted with clarity and taking into consideration Mexico's history.

To conclude the thematic question analysis, it is worth noting that in this first questionnaire, students did follow the instructions that asked them to write their answers in a maximum of five lines. Participants provided clear, concise, and insightful answers taking firstly into consideration their prior knowledge and then, the information they learned from the text.

#### **4.2. Analysis of the Results of the Instruments from the Text *Political Science in Canada***

The number of participants who used a highlighter increased in this English text because participant 5 used it too. Participants 3 and 7 used the pen. The monolingual English dictionary was used twice by participant 4, while the bilingual dictionary was used once by participant 10 and twice by participant 8.

##### **4.2.1. Observed strategies in the text.**

Table 4.5, with the most recurring situations that happened during the reading of the English text on Political Science, is presented below:

Table 4.5. Observed Strategies in *Political Science in Canada*

Strategy	Underlines key words	Underlines key phrases/ideas	Underlines proper names
Participant 1	✓		✓
Participant 2		✓	✓
Participant 3		✓	
Participant 4	✓	✓	✓
Participant 5	✓	✓	
Participant 6		✓	
Participant 7		✓	
Participant 8		✓	
Participant 10		✓	

Participant 9 did not perform any pertinent actions and therefore was not included in Table 4.5 since she did not use any of the materials. The same fifteen situations as in the Spanish text occurred now in the English text. However, the following three events had more occurrences. As seen in Table 4.5, the most used strategy during the English reading was ‘underlines key phrases or ideas,’ which was used by eight students. The following two strategies, used by three people, were ‘underline key words’ and ‘underline proper names.’ This category was taken into consideration when participants highlighted isolated words and just the names of authors, writers or authorities.

Again, in this English text participants 3 and 7 were involved in almost the same situations as in the Spanish text. Participant 3 used five of the strategies, while participant 7 used four. Both participants coincided in four of the situations; they are shown below in Table 4.6.

Table 4.6. Coincidence of Strategy Use between Participants 3 and 7

<b>Strategy</b>	<b>Participant 3</b>	<b>Participant 7</b>
<b>Underlines key phrases/ideas</b>	✓	✓
<b>Underlines with a pen</b>	✓	✓
<b>Makes notes</b>	✓	
<b>Circles words with a pen</b>	✓	✓
<b>Draws brackets/asterisks/arrows</b>	✓	✓
<b>Writes questions</b>	✓	

As in the Spanish text, participants 3 and 7 used more strategies when reading. The rest of the participants used three or fewer of them. The two strategies used by participant 3 but not by participant 7 are ‘makes notes’ and ‘writes questions.’ Also, these two participants made use of two of the materials provided before reading, namely, they both used the highlighter and the pen. Neither of them used the monolingual English dictionary nor the bilingual dictionary.

#### **4.2.2. Systematic observation rubric results from the text.**

To complement Table 4.5, a second table related to the researcher’s observations during the English reading is presented below:

Table 4.7. Systematic Observation Rubric of *Political Science in Canada*

Observation	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Asks for a monolingual English dictionary				<sup>1</sup> (p. 176) <sup>2</sup> (p. 176)						
Asks for a bilingual dictionary								<sup>1</sup> (p. 175) <sup>2</sup> (p. 176)		<sup>1</sup> (p. 176)
Asks for a highlighter	✓	✓	✓	✓	✓	✓	✓	✓		✓
Wanders away while reading	D=12	D=2			D=3	D=8 W=1	D=2		D=1	D=2
Wanders away while answering	D=3				D=2		D=4		D=1	
Time taken to read English text	<u>37 min</u>	<u>27 min</u>	<u>27 min</u>	<u>30 min</u>	<u>28 min</u>	<u>30 min</u>	<u>23 min</u>	<u>29 min</u>	<u>22 min</u>	<u>23 min</u>
Time taken to answer English questionnaire	15 min	13 min	15 min	21 min	15 min	15 min	21 min	21 min	10 min	25 min

<sup>1</sup>= times used    D= distracted    W= wanders away

While reading the English text, participants did not ask the observer any questions, therefore, neither of the observation statements ‘asks for help’ and ‘strategy used after having heard options’ was included in Table 4.7. In this reading, not all participants took the highlighter from the beginning; however, none of them put the highlighter down when not using it.

Participant 4 used the monolingual English dictionary. She used it twice to search for different words on the same page (page 176). In contrast, participants 8 and 10 used the bilingual dictionary. Participant 10 used it once on page 176 and participant 8 used it twice on pages 175 and 176. Participants 1, 2, 5, 6, 7, 9, and 10 got occasionally distracted while reading when somebody else was talking or walking by. Only participants 3, 4, and 8 did not get distracted at any moment.

The participant who wandered away was participant 6. She only did it once while reading. Now, while answering the English questionnaire, participants 1, 5, 7, and 9 got distracted occasionally due to people talking or because of their cellphones ringing. Table 4.7 shows how many times participants got distracted while reading or answering. Yet, all the questionnaires were answered in time. Participant 9 was the fastest in answering the questions in just 10 minutes while participant 10 was the one who took more time answering exactly in the 25 minutes given.

In the ‘other observations’ section from the systematic observation rubric the researcher also noted that participants 1 and 5 checked the length of the text before reading; the rest of the participants started reading immediately. Then, participants 1, 2, 3, 4, 5, 8, and 10 read slowly but at a steady rate. The rest of the participants read more quickly. In

the same way, all the participants except for number 8 counted how many pages they still need to read in the middle of reading the text. Finally, three participants, this is, students 2, 6, and 7 occasionally read the text out loud in a soft voice.

**4.2.3. Comprehension questionnaire results**

The comprehension instrument for the English text consisted of twelve questions, same as the Spanish assessment. There were three linguistic, six textual, and three thematic questions: two evaluative questions and a personal response. To see this second comprehension questionnaire go to Appendix VI.

This analysis will explore the responses to the linguistic questions. Readers had to state what the words ‘languished,’ ‘blight,’ and ‘undermanned’ mean in context. These were the participants’ responses:

Chart 4.4. Question 3: Meaning of ‘languished’

Chart 4.5. Question 8: Meaning of ‘blight’

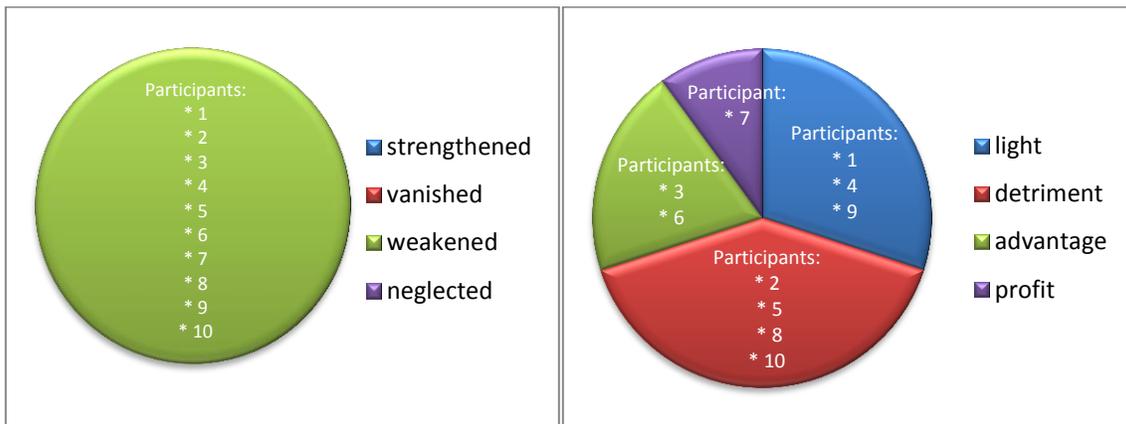
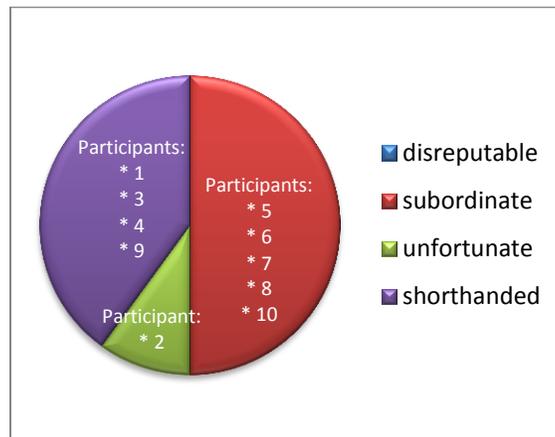


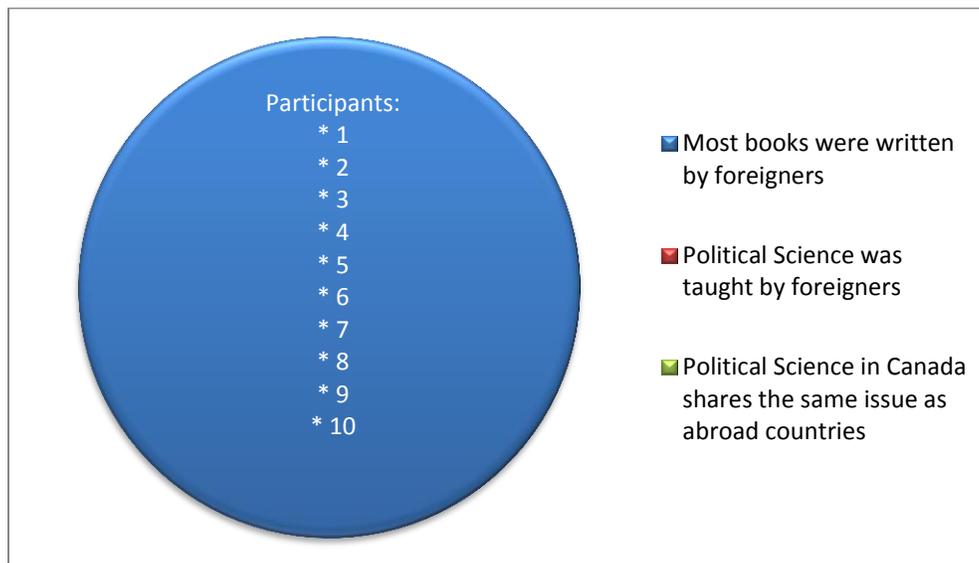
Chart 4.6. Question 11: Meaning of 'undermanned'



We begin by analyzing question 3. For the word 'languished,' the correct answer was 'weakened' (answer in green). As seen in Chart 4.4, 100% of the participants answered the question correctly. The correct answer for the word 'blight' was 'detriment' (answer in red). Chart 4.5 shows us that only four students got the answer right, the remaining 60% chose different incorrect answers. Finally, for the word 'undermanned' the correct answer was 'shorthanded' (answer in purple). Again, only four readers answered correctly. Most of the participants thought that the correct answer was 'subordinate.'

From the six textual questions in the English questionnaire only the two with the most interesting results will be analyzed in this section. First, question 6 was a multiple choice question. Readers could find the answer literally in the text. The question was: "Why did Political Science in Canada, as an academic discipline, begin to be very influenced by foreigners?" The answers to this question were:

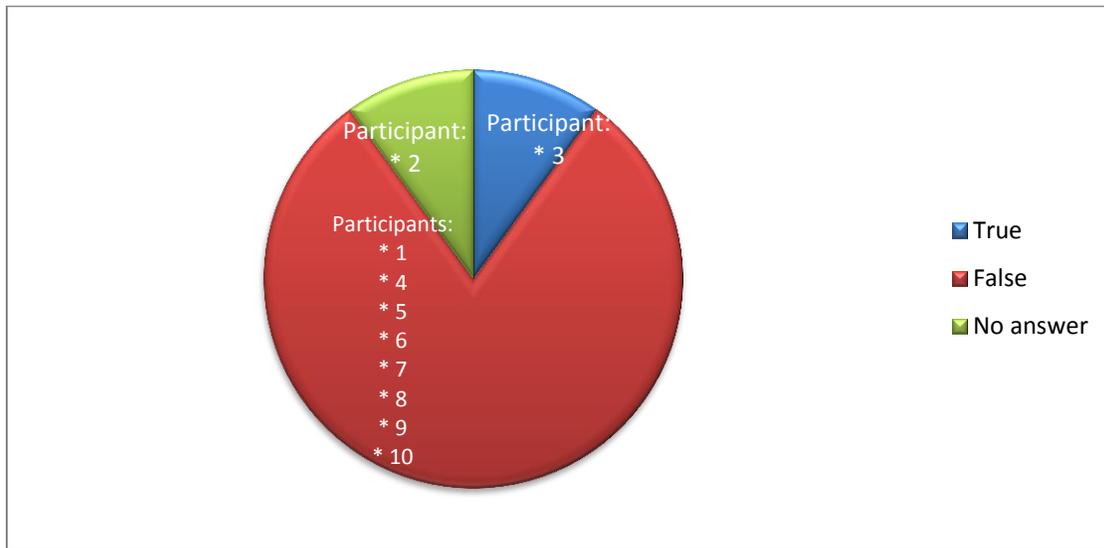
Chart 4.7. Question 6: Multiple Choice



The answer to this question was: “Because most of the books used to teach Political Science were written by foreigners” (answer in blue). As seen in Chart 4.7, all participants answered the question correctly. Question number 6 was the best answered textual question.

For question 10, which was a true or false question, participants mainly got this answer wrong. The question was: “According to the text, is it likely that most Political Science students remain in Canada to work?” Students should have recalled this information, however, all of them looked it up in the text. While answering this question, the researcher could observe that some participants got frustrated that they could not find the right answer. Participants’ answers were:

Chart 4.8. Question 10: True or False



The correct answer was: “True, most students will remain in Canada for work, only the better qualified will be attracted to the United States” (answer in blue). As seen in Chart 4.8, only one participant answered correctly. The justification for her answer was that as there are not many experts in the field of Political Science, and students will have greater opportunities to find jobs in Canada.

Eighty percent of the students did not answer correctly. Their justification to say ‘false’ was that students move abroad to study and to have better job opportunities because they do not have opportunities in Canada. Participant 2 did not answer this question. She finished answering the rest of the questions and then asked the researcher if she could leave that statement unanswered. Question number 10 was the worst answered textual question.

Table 4.8, below, shows all the results of the textual questions:

Table 4.8. Results for Textual Questions

Question no.	1	4	5	6	9	10	No. of right answers
Participant 1	✓	✓		✓	✓		4
Participant 2	✓			✓		no	2
Participant 3	✓	✓	✓	✓	✓	✓	6
Participant 4	✓	✓		✓	✓		4
Participant 5	✓	✓		✓	✓		4
Participant 6	✓	✓	✓	✓	✓		5
Participant 7	✓			✓	✓		3
Participant 8	✓	✓		✓	✓		4
Participant 9	✓		✓	✓	✓		4
Participant 10	✓	✓	✓	✓			4

As seen in Table 4.8, in general participants only had one to two questions wrong. Only two participants answered half or fewer of the answers correctly. Together with the answers from the linguistic questions, we can see that only one participant had eight questions right out of the total of nine while 60% of the participants had only six questions right. Finally, the remaining three students answered five or fewer questions correctly.

As stated before, thematic statements could not be graded as the answers required critical thinking, evaluation, and they were open questions. The English questionnaire included three thematic questions. However, only question 7 will be analyzed in this section. This question provided the most interesting answers from the participants. The question asked: “After reading about the lack of students enrolled in Political Science programs in the 50s in Canada, what do you think that this academic discipline needed at the time in order to attract more learners into studying it?”

In general, participants gave similar suggestions to the question. Students suggested that in 1950 what Political Science in Canada needed was to be separated from Economics and to flourish on its own. They also mentioned that Political Science should have been as

important as any other science and should have had national recognition. This field should have been more attractive to students and finally, it should have had a better structured department with more qualified teachers and with books related to Canada's issues.

### 4.3. Transfer of Observed Strategies in the Political Science Texts

As we finish analyzing all the corresponding instruments of the Political Science readings, it is time to compare the observed strategies used in the Spanish reading and the strategies used in the English text. As not all fifteen situations occurred in both texts, thus only the transferred strategies will appear in the following table:

Table 4.9. Transfer of Strategies in the Political Science Texts

Strategy	Participant 1	Participant 2	Participant 3	Participant 4	Participant 6	Participant 7	Participant 8	Participant 10
Underlines key words	✓			✓				
Underlines key phrases/ideas		✓	✓	✓	✓	✓	✓	
Underlines proper names	✓	✓						
Underlines entire paragraphs		✓						✓
Underlines with a pen			✓			✓		
Makes notes			✓					
Circles words with a pen			✓			✓		
Draws brackets /asterisks /arrows			✓			✓		
Writes questions			✓					

As noted in Table 4.9, participants 5 and 9 are not included above as the first participant only used the materials in the English reading while the latter did not use them in any of the two texts. Participants 6, 8, and 10 transferred one strategy; participants 1 and 4 transferred two strategies, while participant 2 transferred three.

In contrast, participants 3 and 7 transferred more strategies. Participant 7 transferred ‘underlines key ideas,’ ‘underlines with a pen,’ ‘circles words,’ and ‘draws brackets and arrows,’ while participant 3 transferred six of the nine strategies shown in Table 4.9. She transferred the same strategies as participant 7 in addition to ‘makes notes’ and ‘writes questions.’ Again, that both participants were constant in the kind of situations in which they transferred strategies.

#### 4.4. Reading Strategies Inventory in the Political Science Texts

After exploring the rest of the instruments of the Political Science texts, we shall analyze the last one: the strategies inventory. As mentioned in chapter two, the “Metacognitive Awareness of Reading Strategies Inventory” of Mokhtari and Reichard (2002) includes three strategy categories: global, problem-solving, and support. To see the reading strategies inventory go to Appendix X.

In the table below we will only see the number of strategies used by each participant in the first two texts:

Table 4.10. Average of Strategies Used in the Political Science Texts

<b>Number of strategies</b>	<b>Spanish</b>	<b>English</b>	<b>Both Languages</b>	<b>Total</b>
<b>Participant 1</b>	4	4	13	21
<b>Participant 2</b>	3	8	8	19
<b>Participant 3</b>	1	0	19	20
<b>Participant 4</b>	1	3	10	14
<b>Participant 5</b>	7	8	5	20
<b>Participant 6</b>	2	6	8	16
<b>Participant 7</b>	4	4	18	26
<b>Participant 8</b>	1	5	10	16
<b>Participant 9</b>	16	0	1	17
<b>Participant 10</b>	2	0	15	17
<b>Total</b>	41	38	107	186
<b>Average</b>	4.1	3.8	10.7	<b>18.6</b>

The strategies inventory that students answered included 28 strategies and, as seen in Table 4.10, all participants used at least half of the suggested strategies. The lowest number of strategies used was fourteen and the highest 26. The table consists of three moments: the use of strategies only in Spanish, the use of strategies only in English and the use of strategies in both languages.

According to these numbers 70% of the participants did limit some of the strategy use to Spanish and to English. The remaining 30% used some strategies in Spanish but did not use any strategies in English. All students used some strategies in both languages. The lowest number of strategies used in both languages was one while the highest was nineteen. From the 28 strategies in the inventory, the average of use was 18.6 strategies per reading text. Finally, an average of 10.7 strategies was used in both texts per participant, indicating that little transfer was made from the Spanish to the English strategies.

Table 4.11 will show which strategy category was most used in the Political Science texts. The table will include three sections: most used strategy category in the Spanish reading, most used strategy category in the English reading, and most used strategy category in general in both texts.

Table 4.11. Most Used Strategy Category in the Political Science Texts

<b>Strategy Category</b>	<b>Spanish</b>	<b>English</b>	<b>Political Science Texts</b>
<b>Global Strategies</b>	5	3	5
<b>Problem-solving Strategies</b>	7	7	6
<b>Support Strategies</b>	1	0	1

For the Spanish text, problem-solving strategies were used the most. Seven participants used between five and eight of the strategies included in this category. For the English text, the participants' most used strategies were in the problem-solving category as well. Also, seven students used from six to eight of the problem-solving strategies.

Finally, the most used category in both texts was obviously, as seen in Table 4.11, the problem-solving strategies. Here, six of the ten participants used more problem-solving strategies than global or support strategies. Table 4.11 highlights that the total of each section does not add up to 10 due to the fact that some categories shared the same number of strategies used.

Table 4.12 will show the most used strategies for each strategy category in the inventory:

Table 4.12. Most Used Strategies per Strategy Category

<b>Strategy Category</b>	<b>Specific Strategy</b>	<b>No.</b>
<b>Global Strategies</b>	I thought about what I knew to help me understand what I read.	18
	I critically analyze and evaluate the information presented in the text.	15
	I used context clues to help me better understand what I'm reading.	12
	I checked my understanding when I came across conflicting information.	12
<b>Problem-solving Strategies</b>	I tried to get back on track when I lost concentration.	18
	I adjusted my reading speed according to what I was reading.	16
	When text became difficult, I re-read to increase my understanding.	16
	I stopped from time to time and thought about what I was reading.	15
<b>Support Strategies</b>	I underlined information in the text to help me remember it.	17
	I went back and forth in the text to find relationships among ideas in it.	15
	I summarized what I read to reflect on important information in the text.	10

As seen in Table 4.12, the strategy category with more specific strategy use was problem-solving. The three most used strategies in the Political Science texts: 'I thought about what I knew to help me understand what I read,' 'I tried to get back on track when I lost concentration,' and 'I underlined information in the text to help me remember it.' Each strategy belongs to global, the problem-solving, and the support strategies respectively.

Among the global strategies, 'I thought about what I knew to help me understand what I read' was also the most used strategy in both Spanish and English; ten and eight people used it respectively. 'I tried to get back on track when I lost concentration' from the

problem-solving category was the most used in Spanish and in English as well. Ten people used it in Spanish and eight in English; however, there were three other strategies which were also used in English by eight people: 'I adjusted my reading speed according to what I was reading,' 'I stopped from time to time and thought about what I was reading,' and 'I tried to guess the meaning of unknown words or phrases.'

The most used strategy for the support category was, 'I underlined or circled information in the text to help me remember it.' Eight used it in Spanish and nine in English. Additionally, 'I went back and forth in the text to find relationships among ideas in it' was also used by eight participants in Spanish.

#### **4.5. Interview**

After having read both the Spanish and the English texts on Political Science and after answering the comprehension questionnaires and the reading strategies inventory, participants attended a 15 minutes interview. The interview consisted of four groups of questions related to English language acquisition, the acquisition of literacy skills and reading habits, the awareness of the reading monitoring process and the use of strategies in the Political Science reading texts. To see the interview go to Appendix XI.

As space is short, the interview analysis will only provide generalizations of the answers. First, we should define our participants. They are between 19 and 23 years old. Participants 1, 5, and 6 have been learning English since they were in Kindergarten, participants 2, 3, 6, and 7 since they were in elementary school (the schools of participants 3, 6, and 7 were bilingual), participants 4 and 10 learned it when they were about 10 years

old as their schools were bilingual but with a second language other than English, the last participant, number 9, has been learning English since birth as her father is American.

In response to questions about literacy skills, participants 1, 2, 3, 4, 6, 7, 8, and 9 said that their parents had read books to them at home since they were very young, pre-school age. In general, students did not remember how professors taught them how to read in Spanish, however, they said that it was probably first by recognizing letters, then sounds, and then understanding the texts. Then, participants 1, 3, 5, 6, 7, 9, and 10 said that they learned how to read in English the same way they did in Spanish.

When asked about their reading habits, all students said they loved reading. However, participant 2 said that she did not read all the academic articles they were supposed to read in college. Next, students were asked if a teacher in basic education taught them about reading strategies. Participants 4 and 8 recalled having specific classes about strategies starting in elementary school; participants 5, 7, and 10 had these kinds of classes in middle school; participant 3 learned about them until high school; participants 1 and 2 began learning them in university; participant 6 said that she has heard of them vaguely but that she does not really know about them; and participant 9 has never had a teacher explain any strategies to her.

From the students who have had classes on strategies, participants 1, 2, 4, 5, 6, and 10 learned about them in Spanish courses, participant 3 learned about them in English classes, and participants 7 and 8 learned about them in both Spanish and English. Finally, the kinds of strategies learned in Spanish classes were: underlining, paraphrasing, reading the first paragraph or lines of a text, skipping difficult information, putting everything in

context, scanning, looking for key words, finding the main ideas, speed reading, among other strategies mentioned by the participants. In English classes students were taught to contextualize, look for key words, and to guess meanings of words from the text.

After having heard about strategy learning, the researcher asked the participants whether they use the strategies they mentioned while reading academic texts. Participants 2, 4, 5, and 10, who learned about strategies in Spanish, said they use them in both Spanish and English texts while participant 6 said strategies do not work for her. Also, participant 1 said that as she is just learning about them, she is also learning how to use them. In the same way, participant 3, who learned strategies only in English, said that she uses them both in English and in Spanish. Finally, participant 7, who learned about strategies both in Spanish and in English, uses each strategy learned in the language in which it was taught. On the other hand, participant 8 said that she only uses strategies in English.

One of the questions that brought very interesting and different responses was regarding the difference between good and poor readers. When asked the question, participants 1, 2, 6, 7, 8, and 9 hesitated and took longer to answer while participant 3 asked the researcher who would be considered a poor reader. The answers to this question went from students saying that a good reader is the one who simply has the reading habit, the person who can find the main idea of the information without reading the text many times, who knows how to analyze a text, who understands what he/she is reading and has background knowledge about the topic, who knows a lot of vocabulary and is always concentrated when reading, and who knows how to use certain tools to help him/her read a text.

The following question asked if they considered themselves to be good readers. Participants 2, 3, and 7 said 'yes' right away without saying anything else. Participants 4, 5, 6, 8, 9, and 10 hesitated and doubted their answer but said that they 'guessed' they were good readers; also they tried to give a lot of explanations for their answers. Only participant 1 said directly that she did not consider herself a good reader.

The following question asked the first thing or things readers do before beginning to read in Spanish and in English. Participants 3, 4, 5, 6, 8, and 9 said they did the same things in Spanish and in English texts. Their answers were: 'check the length of the text,' 'scan the text briefly in order to see topic, title, and abstract,' 'read the first paragraph of the text as it has the main idea,' 'read the title,' and 'skip unimportant information.'

Participants 1, 2, 7, and 10 said they did different things in Spanish and in English. Participant 1 said that in Spanish she reads first the first paragraph and analyzes it while in English she reads without pausing. Participant 2 said that in Spanish she uses dictionaries before reading to learn the meanings of new words while in English she uses the context to learn the meanings. Participant 7 said that in Spanish she reads right away without pauses while in English she looks for the author's work before starting to read. Finally, participant 10 said that in Spanish she checks the length of the text while in English she reads the title.

Students were asked whether they use Spanish as a tool when reading in English and whether they translated into Spanish when the English text was difficult. Participants 2 answered affirmatively to the question and participants 1, 3, and 5 said that they used Spanish while reading English texts occasionally. The rest of the participants said they did not use it.

After all these questions, students were asked one of the most important questions in the interview. The question concerned readers' comprehension monitoring process. First, the researcher explained what we refer to by monitoring process (the process when good readers examine occasionally if they understand the text they are reading), and then asked the students whether they thought it really happened or not. Participants 1, 2, 3, 4, 5, 6, 7, and 9 said that the monitoring process does happen but only with good readers who are aware of the strategies they use. Then, participant 8 hesitated about her answer and said that she thinks that this process does happen. Participant 10 said that she does not think that it happens because readers' in general are not aware of the strategies they use.

Participants were asked if they had previously thought about the comprehension monitoring process. Participants 2, 4, 6, and 7 answered immediately saying that they have thought about what they do while reading and that they are aware of it even if they do not change strategies when reading. Participant 3 said she had rarely thought about it. Participants 1, 5, 8, 9, and 10 kept thinking until they said that they had never thought about the process. As an example, participant 1 laughed when answering and said that she actually thought that every person read in the same way.

The next interview question asked if they monitored their comprehension while reading, in which texts and in which language. Participants 2, 3, 4, 6, 7, 8, and 10 said that they monitored their comprehension while reading but that they think they did not change strategies if confronted with difficult information. Participants 1, 5, and 9 said that they think they do not follow this process. Then, all ten students said that the texts where they monitor the most were the academic ones. The language in which this happen, as reported

by participants, was Spanish for participants 1, 5, 9, and 10. English was for participants 3, 4, 6, 7, and 8; and both languages for participant 2.

The final section of the interview included questions related to the participants' performances in the readings of Political Science. The first two questions asked if students remembered what they did while they read both texts. All students recalled perfectly what they did: 'check length of the text,' 'underline,' 'circle words,' 'use dictionaries,' 'read title and name of author,' among other strategies. Then, they were asked what they were thinking while reading. In general, participants said that they thought about what they already knew about the topic and related their knowledge to the information in the reading.

Another question with interesting responses was why they read the Spanish text in time but not the English one. Students' responses were that they had to reread the English text many times in order to understand it better. However, most participants said that the English article was easier to understand because in Spanish there was more technical terminology. Participants 7, 8, and 9 took longer to answer the comprehension questionnaires. They said that it was due to not finding the answers in the text and due to looking for the answers to the first questions in the last pages.

When asked about the kind of strategies they used, 'underlining,' 'circling words,' 'making notes,' students who learned about strategies in only one language said they use the same strategies when reading in both texts. However, students who learned about them in both languages use specific strategies in each text. Participants who never had classes on strategies use the ones they see their peers use and the ones they have learned on their own.

Finally, when asked about the reading strategies inventory, participants in general said they did not use the same cognitive strategies in both languages as each text required different thinking and processing. Also, they said that each text had a different intention and that they used certain strategies for that. However, the strategies which were used more in both languages were the global and the support strategies.

#### **4.6. Analysis of the Results of the Instruments from the Text *Dimensión ética del desarrollo sostenible de la agricultura***

In this third reading text all ten students used at least one of the materials given at the beginning of the activity. The ten participants used the highlighter while reading. Participants 1, 3, 4, 7, and 9 used the pen to underline, to make notes, to circle important words or to draw arrows. The monolingual Spanish dictionary was used one time in the text by participants 7 and 8.

##### **4.6.1. Observed strategies in the text.**

To begin this section, a table with the most recurring situations that were observed during the reading of the Spanish text on Sustainable Development is presented below:

Table 4.13. Observed Strategies in *Dimensión ética del desarrollo sostenible en la agricultura*

<b>Strategy</b>	<b>Underlines key words</b>	<b>Underlines key phrases/ideas</b>	<b>Underlines proper names</b>	<b>Makes notes</b>
<b>Participant 1</b>	✓	✓	✓	
<b>Participant 2</b>			✓	
<b>Participant 3</b>	✓	✓		✓
<b>Participant 4</b>	✓	✓	✓	✓
<b>Participant 5</b>	✓	✓		
<b>Participant 6</b>	✓	✓		
<b>Participant 7</b>	✓	✓	✓	✓
<b>Participant 8</b>	✓	✓	✓	
<b>Participant 9</b>	✓	✓	✓	✓
<b>Participant 10</b>	✓	✓		✓

As mentioned previously, students used a total of fifteen strategies in the readings; however, Table 4.13 only shows the four most used. Nine of the participants underlined key words and also underlined key information or ideas. Six of the readers underlined most of the proper names mentioned in the text. Finally, half of the participants made notes concerning the information previously read, their prior knowledge, and information they perceived as contradictory in the text.

Participants 3 and 7 were involved in almost the same situations in the Political Science readings, and the Sustainable Development texts were not the exception. The only difference was that now, participant 7 used more strategies than participant 3. Participant 3 used a total of six strategies while participant 7 used eight. Both participants coincided in six of the situations; they are shown in Table 4.14.

Table 4.14. Coincidence of Strategy Use between Participants 3 and 7

<b>Strategy</b>	<b>Participant 3</b>	<b>Participant 7</b>
<b>Underlines title and subtitles</b>		✓
<b>Underlines key words</b>	✓	✓
<b>Underlines key phrases/ideas</b>	✓	✓
<b>Underlines proper names</b>		✓
<b>Underlines with a pen</b>	✓	✓
<b>Makes notes</b>	✓	✓
<b>Circles words with a pen</b>	✓	✓
<b>Draws brackets/asterisks/arrows</b>	✓	✓

Participant 7 was the one who used the most strategies, with eight. However, participants 4 and 10 used one more strategy than participant 3, for a total of seven situations. Even though they used more strategies, they could not be part of the relation between participants 3 and 7 as they did not share the same strategies. In reference to the coincidence of strategies among the known participants, the two strategies that participant 7 used and

participant 3 did not use ‘underlines title and subtitles’ and ‘underlines proper names.’ Finally, as seen in Table 4.14, both participants used the highlighter and the pen but only participant 7 used the monolingual Spanish dictionary while reading.

#### **4.6.2. Systematic observation rubric results from the text.**

To complement Table 4.14, a second table related to the researcher’s observations in the course of the second Spanish reading is presented below:

Table 4.15. Systematic Observation Rubric of *Dimensión ética del desarrollo sostenible en la agricultura*

Observation	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Asks for a monolingual Spanish dictionary							<sup>1</sup> (p. 4)	<sup>1</sup> (p. 2)		
Asks for a highlighter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wanders away while reading	D=4	D=1	D=1	D=4	D=2	D=2	D=3		D=2	D=2
Wanders away while answering	D=2 W=1		D=1	D=3	D=1	D=4 W=1	D=4	D=2		D=3
Time taken to read Spanish text	30 min	22 min	21 min	27 min	24 min	21 min	<u>30 min</u>	22 min	<u>30 min</u>	22 min
Time taken to answer Spanish questionnaire	22 min	17 min	18 min	18 min	11 min	20 min	22 min	20 min	17 min	26 min

<sup>1</sup>= times used    D= distracted    W= wanders away

Unlike the tables from the Political Science readings, Table 4.15 does not include the items ‘asks for help’ and ‘strategy used after having heard options’ as they were not used. When using the highlighter, almost all participants used it within the first paragraphs of the first page; some others used it from page two on. Eight of the students did not put the highlighter down when not using it.

In this reading, participants 7 and 8 used the monolingual Spanish dictionary once. The pages where they searched for words were pages 2 and 4. As in the previous readings, students did not wander away in general, they were more distracted by people talking or walking near them. Participant 8 was the only one who did not get distracted when reading but did get distracted when answering. In contrast, participants 2 and 9 did not get distracted when responding to the questionnaire.

As mentioned in chapter three, there was a 30-minute time limit to read the two readings on Sustainable Development. This time, participants were stopped when the half hour had passed even if they had not finished reading. Underlined in Table 4.15 we can see that only participants 7 and 9 could not finish reading the text on time. After the 30 minutes, participant 7 was reading page 9 and participant 9 was reading page 7.

All the participants answered the third questionnaire in less than the 35 minutes allotted. Participant 10, who was the student who took more time, finished after 26 minutes. In general, students answered the questionnaire more quickly than those of the Political Science texts. This was probably because students were more aware of their strategy use and had learned that they should look for the first questions in the first pages of the text.

In the ‘other observations’ section the researcher reported that participants 2, 4, 7, 8, and 10 had checked the length of the text before reading, the rest of them started reading immediately after receiving the text. Participants 1, 3, 4, 5, 7, 8, and 9 read slowly but at a steady rate, while participants 2, 6, and 10 read more quickly. Finally, while reading, all students except participants 8 and 10 counted how many pages they still needed to read. Participants 5, 7, and 9 counted the missing pages repeatedly.

#### 4.6.3. Comprehension questionnaire results.

Regarding the results of the comprehension questionnaire, this third instrument consisted of fifteen questions. There were two linguistic questions, nine textual questions, and four thematic questions: three evaluative and one personal response. To see this third comprehension questionnaire go to Appendix VII.

The responses to the linguistic questions will be analyzed first. Readers had to tell what the words ‘sostenible’ and ‘ética’ mean in context in the text. These were the participants’ responses:

Chart 4.9. Question 11: Meaning of ‘sostenible’

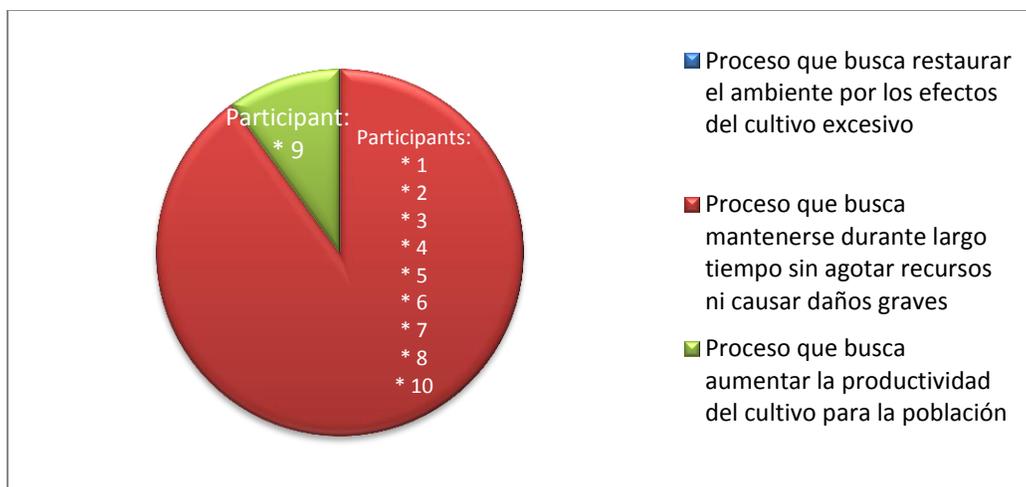
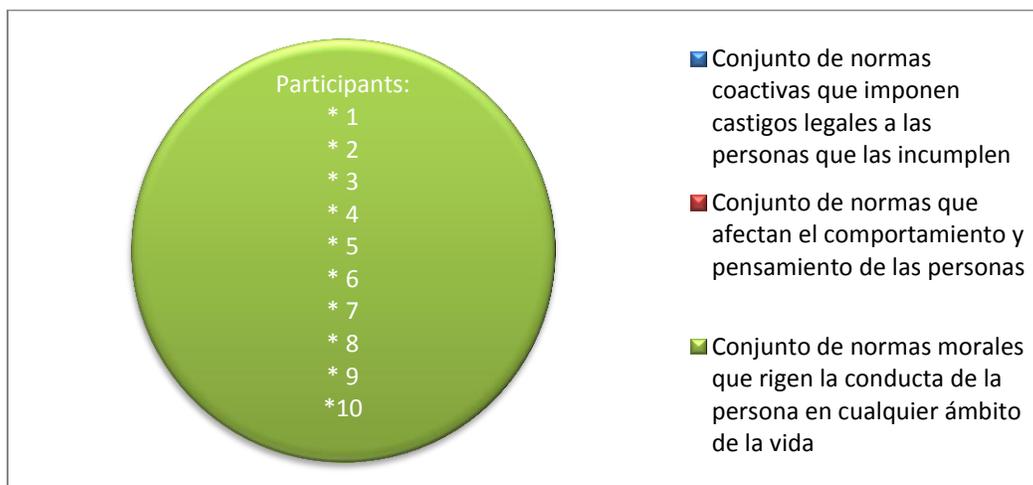


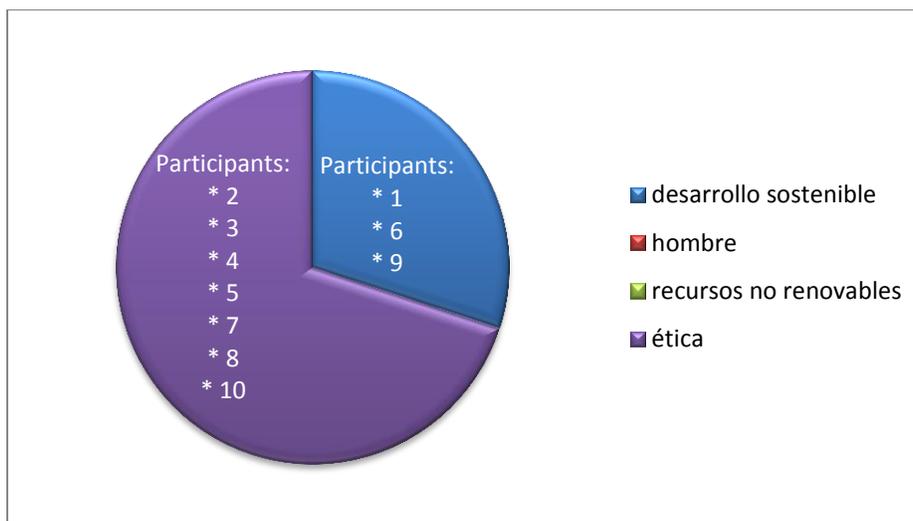
Chart 4.10. Question 13: Meaning of 'ética'



We should begin by analyzing question 11. For the word 'sostenible,' the correct answer was: "Proceso que busca mantenerse durante largo tiempo sin agotar recursos ni causar daños graves" (answer in red). As seen in Chart 4.9, 90% of the participants answered the question correctly; only participant 9 gave a different answer. Thus, the correct answer for the word 'ética' was: "Conjunto de normas morales que rigen la conducta de la persona en cualquier ámbito de la vida" (answer in green). In the same way as question 11, students chose the correct answer. As seen in Chart 4.10, 100% of the participants answered the question correctly.

Participants performed better in the textual questions of this third questionnaire. Therefore, only the answers of the three most representative questions will be analyzed in this section. First, question 1 was a multiple choice question. Readers could find the answer literally in the abstract of the text. The question was: "¿Qué elemento debe ser considerado como primordial cuando se planea la producción y explotación de recursos?" The answers to this question were:

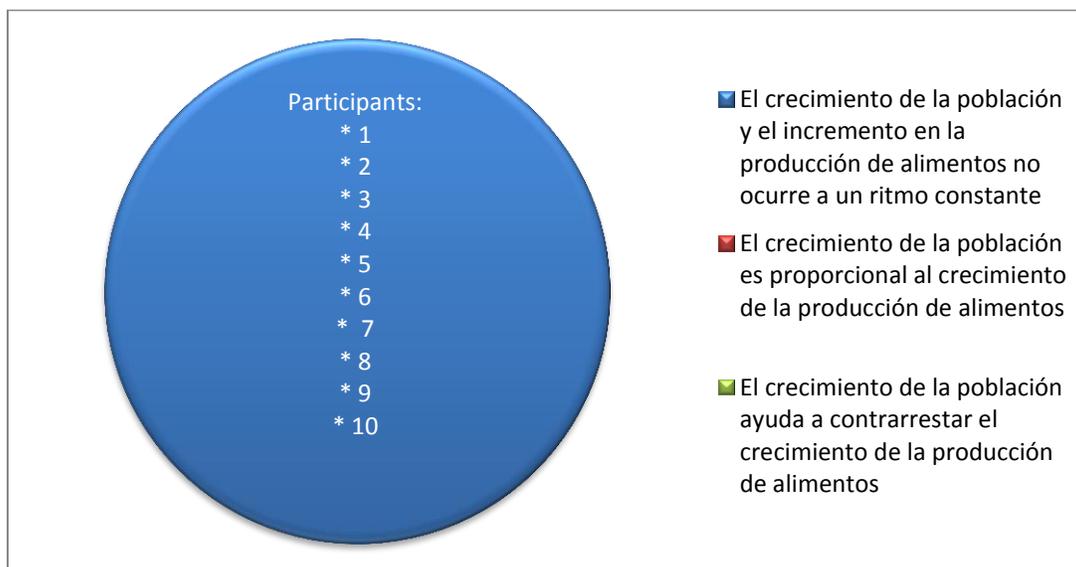
Chart 4.11. Question 1: Multiple Choice



The answer to question 1 was: 'ética' (answer in purple). As seen in Chart 4.11, 70% of the participants answered the question correctly while participants 1, 6, and 9 got the answer wrong. Question number 1 along with questions 3 and 5 were the questions with the least correct answers as only seven participants answered correctly. These questions were answered incorrectly by two students.

Question 4 was also a multiple choice question. Again in this question, participants could find the answer literally in the text. The question was: "¿Cuál fue el planteamiento más destacado del 'Ensayo sobre el principio de la población' escrito por Thomas Malthus en 1798?" Participants' answers were:

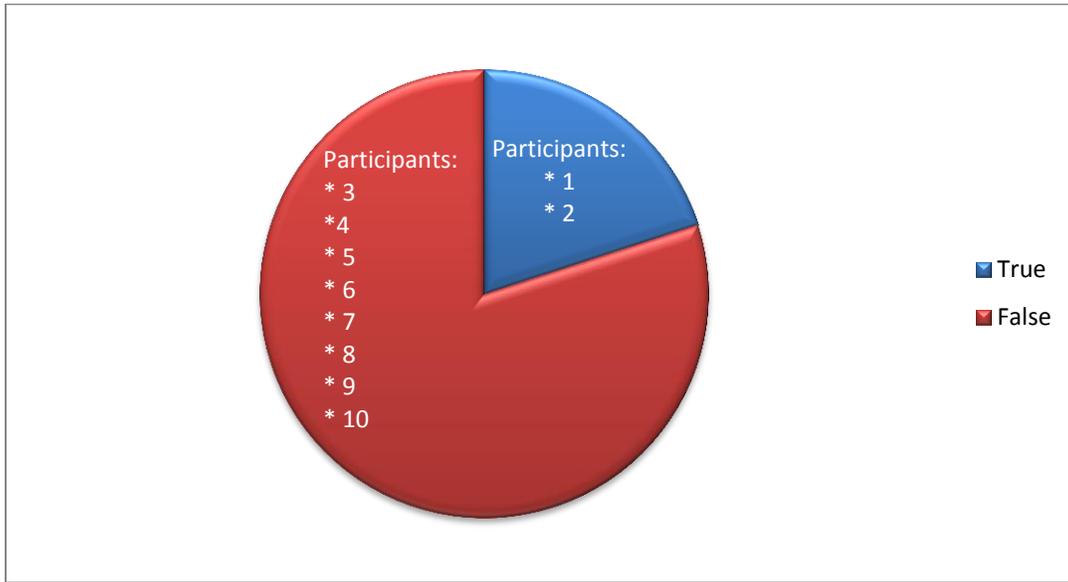
Chart 4.12. Question 4: Multiple Choice



The answer to the question was: “El crecimiento de la población y el incremento en la producción de alimentos no ocurre a un ritmo constante” (answer in blue). As seen in Chart 4.12, 100% of the participants answered correctly. Question 4, along with question 12, were the best answered textual questions with all participants answering correctly.

The last question to be analyzed here is question 7. This question was true or false. The question was: “Cierto o Falso: Los métodos de producción agrícola en el mundo han cambiado mucho gracias a la concientización de los hombres en dirección del desarrollo sostenible.” In this question students were required to recall the answer from the text; this time, participants did remember and did not look for the answer in the text. The answers were:

Chart 4.13. Question 7: True or False



The answer to this question was: “False, few changes can be observed nowadays” (answer in red). Chart 4.13 shows that 80% of the students answered correctly and that participants 1 and 2 said that this statement was true.

Table 4.16, below, shows all the results for the textual questions:

Table 4.16. Results for Textual Questions

Question no.	1	3	4	5	6	7	10	12	14	No. of right answers
Participant 1		✓	✓	✓	✓		✓	✓	✓	7
Participant 2	✓		✓		✓		✓	✓	✓	6
Participant 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	9
Participant 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	9
Participant 5	✓	✓	✓	✓	0.5	✓	✓	✓	✓	8.5
Participant 6		✓	✓	✓	✓	✓	✓	✓	✓	8
Participant 7	✓		✓		✓	✓	✓	✓	✓	7
Participant 8	✓	✓	✓	✓	✓	✓	✓	✓		8
Participant 9		✓	✓			✓	✓	✓	✓	6
Participant 10	✓		✓	✓	✓	✓		✓	✓	7

As Table 4.16 shows, participants in general did a very good job when answering the textual questions. Participants 3 and 4 answered all nine answers correctly. Three more

participants answered eight questions correctly, and another three more answered seven questions correctly. Participant 2 got three answers wrong. Adding students' responses of the linguistic questions to this sum, we can see that two participants, 3 and 4 outperformed the others in the questionnaire scoring eleven correct answers out of eleven. Three participants, 5, 6, and 8 got ten correct answers; participants 1, 7, and 10 got nine correct answers. Finally, participants 2 and 9 got eight and seven correct answers respectively.

As stated before, thematic questions could not be graded as they were open questions which required critical thinking on the part of the participants. This third questionnaire included four thematic questions. Only the answers to question 2 will be analyzed here. The question said: “La inversión en obras de viabilidad, infraestructura, servicios, tenencia de la tierra (...), resulta casi inexistente en las comunidades agrícolas venezolanas’ (p. 3). ¿Qué tanto dista esta realidad de la situación mexicana actual?”

In general, participants said that the situation between Mexico and Venezuela was not that different. However, participants 3, 5, 7, and 10 agreed that Mexico has many more advantages than Venezuela. Participants also agreed that Mexico has the necessary resources to overcome any agriculture problem, yet the country does not want to help figure out how to make the most use of these resources, leaving the rural and agricultural areas impoverished.

#### **4.7. Analysis of the Results of the Instruments from the Text *Reinterpreting the Definition of Sustainable Development for a More Ecocentric Reorientation***

In this last text all ten participants used at least one of the materials given before starting to read. The ten students used the highlighter while reading. Then, half of the students, 1, 2, 3,

4, and 7, used the pen either for underlining, making notes, circling important words or drawing arrows. Later, the monolingual English dictionary was only used once by participants 3 and 7 and twice by participant 4; while the bilingual dictionary was used once by participants 5 and 7 and twice by participant 2.

#### 4.7.1. Observed strategies in the text.

To begin this section, a table with the most recurring situations that were observed during the reading of the English text on Sustainable Development is presented below:

Table 4.17. Observed Strategies in *Reinterpreting the Definition of Sustainable Development for a More Ecocentric Reorientation*

Strategy	Underlines key words	Underlines key phrases/ideas	Draws brackets/asterisks/arrows
Participant 1	✓	✓	✓
Participant 2	✓	✓	✓
Participant 3	✓		✓
Participant 4	✓	✓	
Participant 5	✓	✓	
Participant 6	✓	✓	
Participant 7	✓	✓	✓
Participant 8	✓	✓	
Participant 9	✓	✓	✓
Participant 10	✓	✓	✓

As mentioned before, there were a total of fifteen strategies used in the readings; nevertheless, not all strategies were used by all participants. Table 4.17 shows the three most used strategies. All 10 participants underlined key words; while nine, except for participant 3, underlined key information or ideas in the text. Only six participants drew brackets, asterisks or arrows to connect ideas or signal important information. The rest of the strategies were not included in Table 4.17 as they were only used by four or fewer readers.

This last reading was no exception for participants 3 and 7 who used almost the same strategies. Participant 3 was the one who used more strategies using a total of seven, while participant 7 along with participant 10 used a total of six. Both participants 3 and 7 coincided in the five situations shown in Table 4.18.

Table 4.18. Coincidence of Strategy Use between Participants 3 and 7

<b>Strategy</b>	<b>Participant 3</b>	<b>Participant 7</b>
<b>Underlines title and subtitles</b>	✓	✓
<b>Underlines key words</b>	✓	✓
<b>Underlines key phrases/ideas</b>		✓
<b>Underlines with a pen</b>	✓	✓
<b>Make notes</b>	✓	✓
<b>Circles words with a pen</b>	✓	
<b>Draws brackets/asterisks/arrows</b>	✓	✓
<b>Writes questions</b>	✓	

Participant 3 used two strategies that participant 7 did not use; while participant 7 used one strategy that participant 3 did not. The strategies that were only used by participant 3 are ‘circles words with a pen,’ and ‘makes questions.’ On the other hand, the strategy that was only used by participant 7 is ‘underlines key phrases or ideas.’ Also, the two participants used the three materials given at the beginning of the activities; the highlighter, the pen, and the dictionaries. Both participants used the monolingual English dictionary while reading but participant 7 also used the bilingual dictionary.

To conclude the analysis of the relation of strategy use between participants 3 and 7, a final table with the coincidences of strategies repeated in four, three or two readings is presented below:

Table 4.19. Coincidence of Strategy Use between Participants 3 and 7 in the Four Readings

<b>Strategy</b>	<b>Times used</b>
<b>Underlines key words</b>	2
<b>Underlines key phrases/ideas</b>	3
<b>Underlines with a pen</b>	4
<b>Makes notes</b>	3
<b>Circles words with a pen</b>	3
<b>Draws brackets/asterisks/arrows</b>	4

In total in the four readings, participants 3 and 7 coincided in seven strategy situations. Table 4.19 does not show the strategy ‘underlines title and subtitles’ as it was only present in the English text on Sustainable Development. As seen in the table, only the strategies ‘underlines with a pen’ and ‘draws brackets, asterisks or arrows’ were used in the four texts.

Three other strategies, ‘underlines key phrases or ideas,’ ‘makes notes,’ and ‘circles words with a pen’ coincided in three of the texts. From these strategies, ‘underlines key phrases or ideas’ and ‘circles words with a pen’ were present in the two texts of Political Science and in the Spanish text on Sustainable Development, whereas the strategy ‘makes notes’ appeared in the Spanish text on Political Science and in the two texts of Sustainable Development.

Finally, the strategy ‘underlines key words’ was only present in the Sustainable Development texts. In chapter five we will discuss this relation of strategies among these participants, the possible reasons for the similarities, the transfer and constant appearance of the strategies and why it was important to devote some space to them.

#### **4.7.2. Systematic observation rubric results from the text.**

A table related to the researcher’s observations will be presented below:

Table 4.20. Systematic Observation Rubric of *Reinterpreting the Definition of Sustainable Development for a More Ecocentric Reorientation*

Observation	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Asks for a monolingual English dictionary			<sup>1</sup> (p. 135)	<sup>1</sup> (p. 134) <sup>2</sup> (p. 135)			<sup>1</sup> (p. 139)			
Asks for a bilingual dictionary		<sup>1</sup> (p. 156) <sup>2</sup> (p. 156)			<sup>1</sup> (p. 138)		<sup>1</sup> (p. 139)			
Asks for a highlighter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wanders away while reading	D=5		D=3	D=8	D=2	D=2	D=1		D=2	D=3
Wanders away while answering	D=1	D=1	D=2	D=3		D=3	D=1	D=3		D=1
Time taken to read Spanish text	<u>30 min</u>	28 min	30 min	<u>30 min</u>	30 min	30 min	<u>30 min</u>	30 min	<u>30 min</u>	30 min
Time taken to answer Spanish questionnaire	20 min	22 min	16 min	25 min	11 min	18 min	26 min	16 min	15 min	22 min

<sup>1</sup> = times used    D= distracted

In the last reading and questionnaire, students did not ask for help; therefore, Table 4.20 does not include the items 'asks for help' and 'strategy used after having heard options.' In this fourth and last reading text, all 10 students used the highlighter. All participants began underlining within the first paragraphs of the first page; participants 1, 3, 8, 9, and 10 did not put the highlighter down when not using it.

The monolingual English dictionary was used by three readers; once by participants 3 and 7, and twice by participant 4. They searched for words on pages 134, 135, and 139. Three people used the bilingual dictionary. Participants 5 and 7 used it once while participant 2 used it twice. They look for words on pages 138, 139, and 156. This last reading was the only text where participants did not wander away. However, they did get distracted by people talking or walking near them. Participants 2 and 8 did not get distracted while reading, and participants 5 and 9 did not get distracted while answering the questionnaire.

Finally, the time limit to read the English text on Sustainable Development was 30 minutes as students had to read nine pages. Again, as in the Spanish text participants were stopped when the 30 minutes passed even if they did not finish reading. As seen in Table 4.20, participants 1, 4, and 7 did not finish reading the text on time. After the half hour, participant 1 was about to begin reading page 140 and participants 4 and 7 were reading the same page.

All participants answered the questionnaire in less time than the allotted 35 minutes. The longest answered questionnaire was that of participant 7 who answered it in 26

minutes. In general, students answered the questionnaire more quickly than those of the Political Science texts and were able to recall more information.

In the 'other observations' section the researcher could observe that participants 2, 5, 8, and 10 checked the length of the text before starting to read, and that participants 5, 7, and 8 also read the title and the subtitles. Then, participants 1, 3, 5, 8, and 9 read slowly but at a steady rate, while the rest of the students read more quickly as they scanned and skimmed the text. Afterwards, all participants except for 4 and 6 counted how many pages they still needed to read. All participants except for 1 and 10 counted the missing pages repeatedly. Finally, three participants, this is, students 4, 5, and 7 occasionally read the text out loud in a soft voice.

#### **4.7.3. Comprehension questionnaire results.**

This final comprehension questionnaire consisted of fifteen statements. There were three linguistic, nine textual, and nine thematic questions: two evaluative and two personal responses. To see the fourth comprehension questionnaire go to Appendix VIII.

First, the answers to the linguistic questions will be analyzed. Readers had to state what the words 'anthropocentric,' 'ecocentric,' and 'ecological growth economy' mean in context. Participants' answers were:

Chart 4.14. Question 5: Meaning of ‘anthropocentric’

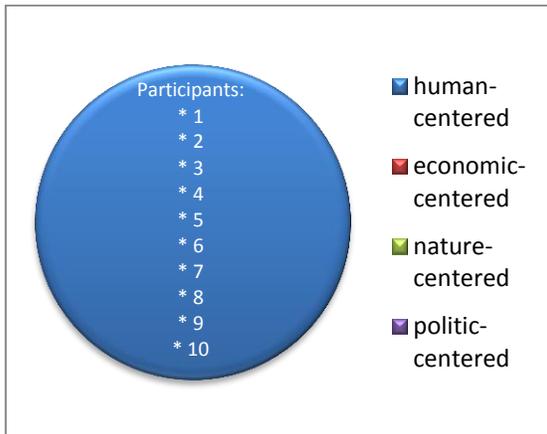


Chart 4.15. Question 5: Meaning of ‘ecocentric’

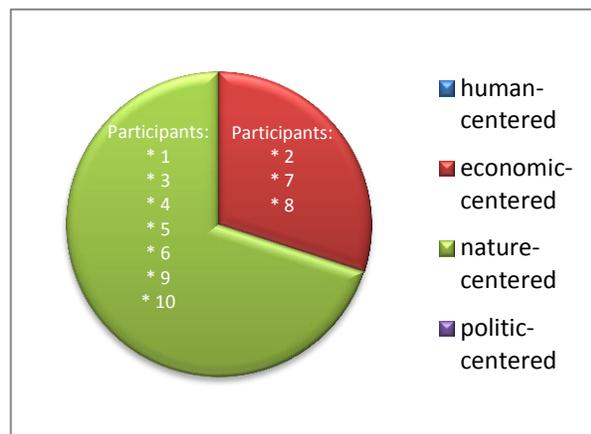
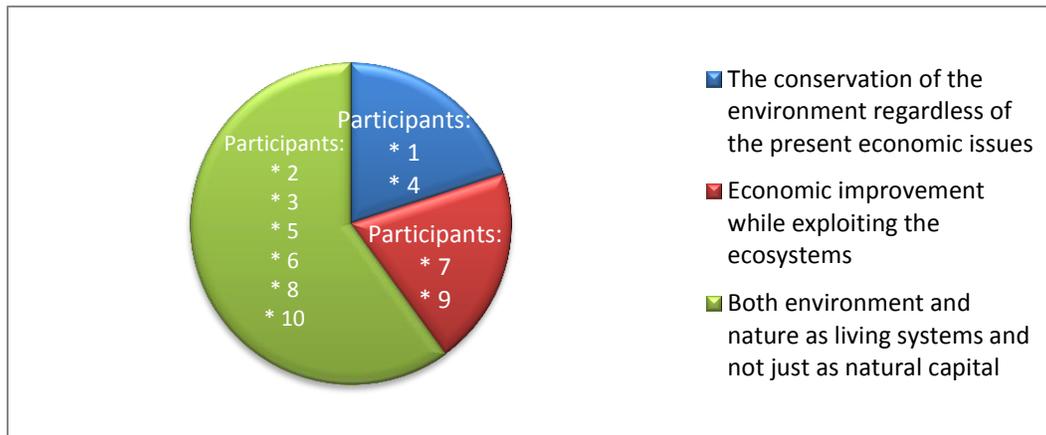


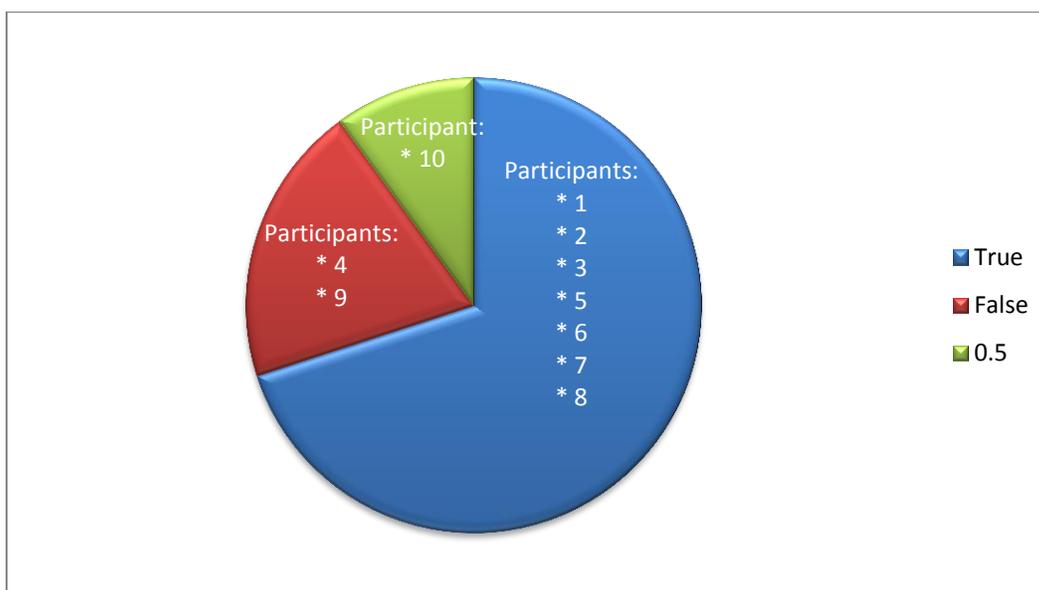
Chart 4.16. Question 13: Meaning of ‘ecological growth economy’



Question 5 was a two part question which included the first two linguistic statements. The correct answer for the word ‘anthropocentric’ was: ‘human-centered’ (answer in blue), and for ‘ecocentric’ was: ‘nature-centered’ (answer in green). As seen in Chart 4.14, 100% of the participants answered the question correctly. On the other hand, Chart 4.15 shows that part two of question 5 was answered correctly by 70% of the students. For the concept ‘ecological growth economy,’ the correct answer was: “Both environment and nature as living systems and not just as natural capital” (answer in green). Chart 4.16 shows that 60% of the participants answered correctly, while the remaining four participants chose the other two answers.

Participants did not obtain very good results in the textual questions of this final questionnaire. Only the answers to the three most representative questions will be analyzed below. First, question 10 was a true or false question. Readers had to recall the answer from the text or infer it from their prior knowledge; however, all students tried to look it up in the text. The question was: “True or false: According to the current definition of Sustainable Development, species and ecosystems must be preserved because they have an ‘ecological value’ that is important in order to preserve the environment.” The answers were:

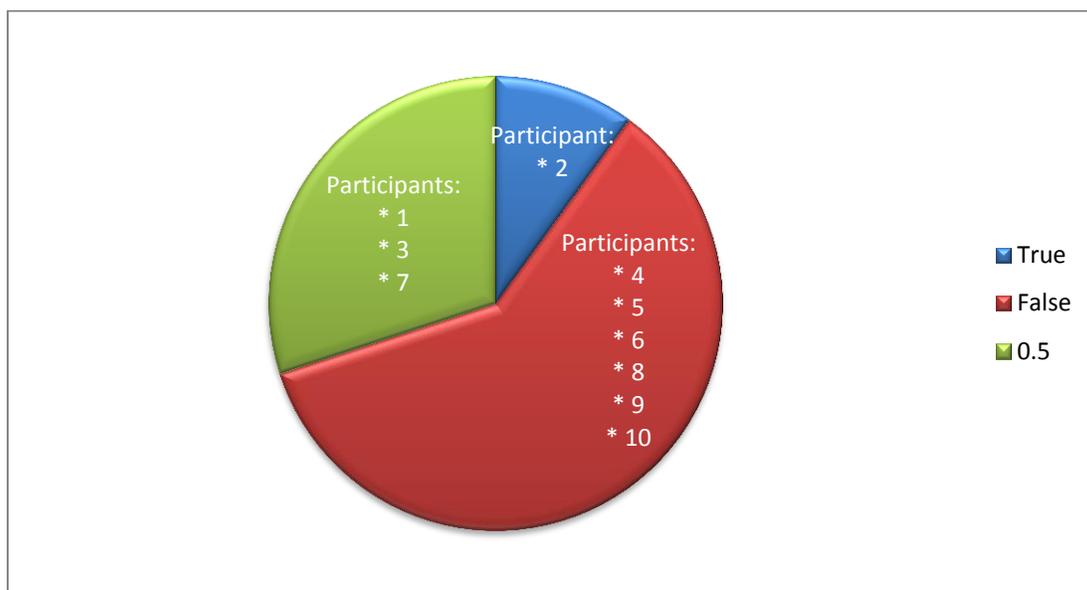
Chart 4.17. Question 10: True or False



The answer to question 10 was: “False, the current definition does not have an ‘ecological value’ but an ‘economic value’” (answer in red). As seen in Chart 4.17, only two people answered the question correctly, while the rest of the participants got it wrong. Also, participant 10 got part of the answer right because she said that the statement was false because the importance is not the ‘ecological value’ but the importance to the world that we do not understand yet. Question number 10 was the lowest answered question with only two participants answering correctly.

Question 12 was also a true or false type of question. The statement was: “According to the text, in order to reach a real Sustainable Development, three goals have to be met: safeguarding long-term ecological sustainability, satisfying basic human needs, and promoting inter-generational and intra-generational equity. True or False: These three goals have been met equitably.” Participants’ answers were:

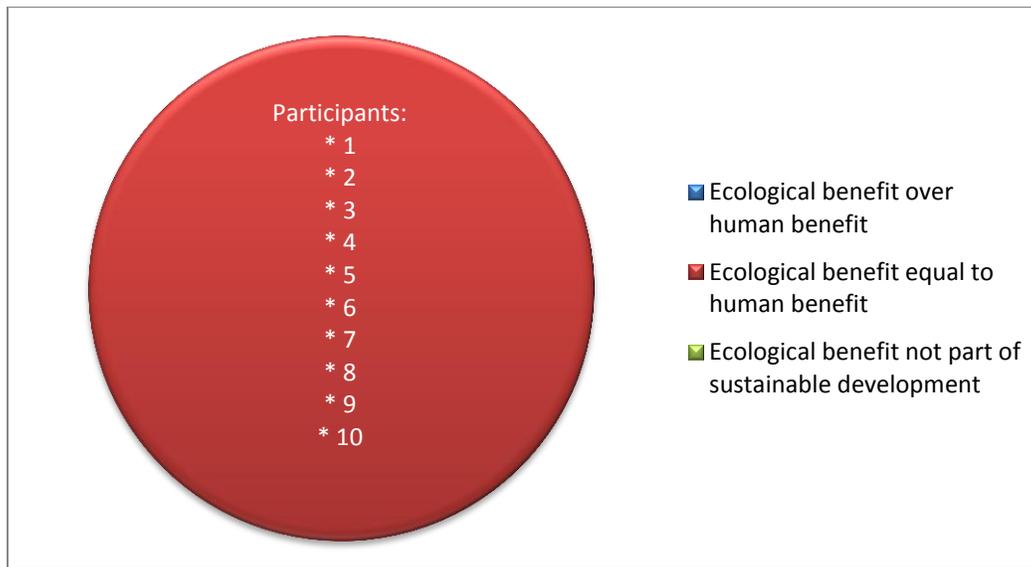
Chart 4.18. Question 12: True or False



The answer to question 12 was: “False, the first goal tends to be completely ignored” (answer in red). Chart 4.18 shows that 60% of the participants answered correctly while 10% answered both parts incorrectly. The remaining 30%, participants 1 and 7, got the false part correct but their justifications were not well explained. Participant 1 said: “We still live as there is not going to be people in the future.” Participant’s 7 justification was: “Satisfying basic human needs does not even happen in most of the world, yet our ecosystems are breaking down.” Participant 3 justified correctly but said the statement was true.

The last question to be analyzed in this section is question 14. This question was a multiple choice statement. The question was: “The authors suggest a complicated resolution in order to conceive Sustainable Development as it should be. What is this resolution?” The answers were:

Chart 4.19. Question 14: Multiple Choice



As mentioned several times before, this type of questions can be retrieved literally from the text. The answer to question 14 was: “Ecological benefit should not be considered to be secondary but equal to human benefit.” As seen in Chart 4.19, 100% of the participants answered correctly.

To conclude the section on textual questions, a table with all the results from the nine statements is shown below:

Table 4.21. Results for Textual Questions

<b>Question no.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>No. of right answers</b>
<b>Participant 1</b>	✓	✓	✓	✓	✓			0.5	✓	6.5
<b>Participant 2</b>	✓	✓	✓						✓	4
<b>Participant 3</b>	✓	✓	✓	✓				0.5	✓	5.5
<b>Participant 4</b>	✓	✓	✓	✓	✓		✓	✓	✓	8
<b>Participant 5</b>	✓	✓	✓		✓			✓	✓	6
<b>Participant 6</b>	✓	✓	✓	✓	✓			✓	✓	7
<b>Participant 7</b>	✓	✓			✓			0.5	✓	3.5
<b>Participant 8</b>			✓	✓	✓	✓		✓	✓	6
<b>Participant 9</b>	✓		✓	✓		✓	✓	✓	✓	6
<b>Participant 10</b>	✓	✓	✓	✓	✓	✓	0.5	✓	✓	8.5

Upon analyzing Table 4.21, three participants did a good job answering the textual questions. Participant 10 got 8.5 out of nine correct answers; then, participant 4 got eight correct answers; and participant 6 answered seven questions correctly. The rest of the participants performed poorly having six or fewer correct answers. When adding the linguistic correct answers, half the participants outperformed the questionnaire. Their answers went from obtaining nine to 11.5 correct answers out of twelve. Participants, who did not do well in the questionnaire, participants 1, 2, 3, 7, and 8, had fewer than eight correct answers.

The last four questions, the thematic ones, were answered based on students' critical thinking, prior knowledge and from the information recently learned in the text. Only answers to question 4 will be analyzed below. The question said: "The term 'Sustainable Development' was put forward in 1987 as '(...) development that meets the needs of present generations without compromising the ability of future generations to meet their own needs' (p. 135). Whose needs are being fulfilled? Do you think that this definition is fair?"

As described later on in the text, the needs being fulfilled were human needs which made the 1987 definition of Sustainable Development unfair as it did not include the needs of the other living species in the planet. Participants 1, 2, 3, 5, 6, 7, and 8 did say that only human needs were met. However, participants 3, 4, 5, 6, and 8 said that the concept was unfair as it did not take into consideration the rest of nature. Participants 1 and 7 said the definition was fair.

On the other hand, participant 9 said that the needs being fulfilled were the economic needs from governments which do not show the negative impact. Participant 10 gave a very interesting answer: she thinks that not even human needs are being fulfilled as everybody in the world does not enjoy the same rights and resources.

#### **4.8. Transfer of Observed Strategies in the Sustainable Development Readings**

After analyzing all the instruments of the Sustainable Development readings, it is time now to compare the observed strategies used in the second Spanish reading and the strategies used in the second English text. As in Table 4.9, not all fifteen strategy situations took place in both texts; therefore, only the transferred strategies will appear in the following table:

Table 4.22. Transfer of Strategies in the Sustainable Development Texts

Strategy	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Underlines title and subtitles					✓		✓			
Underlines key words	✓		✓	✓	✓	✓	✓	✓	✓	✓
Underlines key phrases/ideas	✓			✓	✓	✓	✓	✓	✓	✓
Underlines proper names				✓				✓		
Underlines entire paragraphs		✓				✓				✓
Underlines with a pen			✓				✓			
Makes notes			✓				✓			
Makes notes with a highlighter										✓
Circles words with a highlighter									✓	
Circles words with a pen			✓	✓						
Draws exclamation marks										✓
Draws brackets /asterisks /arrows	✓		✓				✓			✓

Table 4.22 shows a total of twelve strategies transferred from one reading text to the other. All transferred strategies are shown even if they were only transferred to the second language by one student. As seen in Table 4.22, participant 2 transferred ‘underlines entire paragraphs’ in the text. Participants 1, 5, 6, 8, and 9 transferred three strategies, while participant 4 transferred four.

Participants 3, 7, and 10 transferred the most strategies. Participant 3 transferred five of the strategies she used: ‘underlines key words,’ ‘underlines with a pen,’ ‘makes notes,’ ‘circles words with a pen,’ and ‘draws arrows.’ Participants 7 and 10 transferred six strategies. Participant 7 transferred: ‘underlines title and subtitles,’ ‘underlines key words,’ ‘underlines key phrases or ideas,’ ‘underlines with a pen,’ and ‘makes notes’ and ‘draws arrows.’ Similarly, participant 10 transferred: ‘underlines key words,’ ‘underlines key phrases or ideas,’ ‘underlines entire paragraphs,’ ‘makes notes with a highlighter,’ ‘draws exclamation marks,’ and ‘draws brackets.’

Throughout this analysis a coincidence of strategy use was noted between participants 3 and 7. In these texts they transferred four of the same strategies: ‘underlines key words,’ ‘underlines with a pen,’ ‘makes notes,’ and ‘draws arrows.’ Compared with the transfer of strategies in the Political Science texts, they only transferred two strategies in the four texts: ‘underlines with a pen’ and ‘draws arrows.’

#### **4.9. Transfer of Observed Strategies from the Political Science Readings to the Sustainable Development Readings**

Now that we finished analyzing the transfer of observed strategies in each pair of Spanish and English texts, it is time to analyze if the same transfer events that occurred in the Political Science readings happened as well in the Sustainable Development texts. This comparison is shown in a table below:

Table 4.23. Transfer of Strategies in the Political Science and in the Sustainable Development Texts

Strategy	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Underlines title and subtitles					3		2			
Underlines key words	4		2	4	3	2	2	2	2	2
Underlines key phrases/ideas	2	3	3	4	3	4	4	4	2	3
Underlines proper names	3	3		3				2		
Underlines entire paragraphs		4				2				3
Underlines with a pen			4				4			
Makes notes			4				3			2
Circles words with a highlighter									2	
Circles words with a pen			4	2			3			
Draws exclamation marks	2									2
Draws brackets /asterisks /arrows	2		4				4			3
Writes questions			3							

From the fifteen total strategies, only thirteen are included in Table 4.23. Strategies not included were ‘writes numbers’ and ‘draws separation lines between sentences or paragraphs.’ The strategy ‘writes numbers’ was used once by participants 7 and 10 and ‘draws separation lines between sentences or paragraphs’ by participant 1. As they were only used one time, no possible transfer could be observed.

As seen in Table 4.23, each strategy use has been labeled with a number from 2 to 4. The number shown is the number of times the participant used the strategy throughout the four readings. Number 4 indicates that a strategy was used in all four reading texts; number 3 indicates that a strategy was used in three of the texts, and number 2 indicates that a strategy was transferred once. Participants 5 and 9 are the only students who do not have a number 4 as they did not do anything in the Political Science texts. The remaining eight participants, except for participant 10, do have a number 4 at least once in their use of strategies.

We begin by analyzing the strategies that were transferred by participant 1. In order of most used to least used, participant 1 underlined key words in the four texts; then, she underlined proper names in the two Political Science texts and in the Spanish text on Sustainable Development. The former strategies were the only ones transferred from the Political Science texts to the Sustainable Development texts. On the other hand, she underlined key ideas and drew arrows only in the Sustainable Development texts. Finally, she drew exclamation marks only in the Spanish text on Political Science and in the English text on Sustainable Development.

Participant 2 underlined entire paragraphs in the four texts; then, she underlined proper names in the two texts of Political Science and in the Spanish text on Sustainable Development. Finally, she underlined key ideas in both Political Science texts and in the English text on Sustainable Development. Participant 3 was one of the students who transferred the most strategies in all four texts. She underlined with a pen, made notes, circled words with a pen, and drew brackets and asterisks in the four reading texts. She only underlined key ideas in the two Political Science texts and in the Spanish text on Sustainable Development; and she only wrote questions in the two Political Science texts and in the English text on Sustainable Development. Finally, she underlined key words in the two Sustainable Development texts.

Participant 4 transferred ‘underlining key words’ and ‘underlining ideas in all texts.’ However, she only underlined proper names in the English text on Political Science and in the two Sustainable Development texts. Finally, she underlined words with a pen just in the Sustainable Development texts. Participant 5 underlined the title and the subtitles, underlined key words, and underlined key ideas in the English text on Political Science and in the two texts on Sustainable Development.

The only strategy that participant 6 transferred in the four reading texts was underlining key phrases or ideas. She also underlined key words and entire paragraphs but only in the two Sustainable Development texts. Then, participant 7 was also one of the students who transferred more of the strategies. She underlined key phrases or ideas, underlined with a pen, and drew brackets and arrows in the four texts. She also circled words with a pen in the two Political Science texts and in the Spanish text on Sustainable Development; she made notes in the Spanish text on Political Science and in the two texts

of Sustainable Development. Finally, she only underlined the title and subtitles and underlined the key words in the two Sustainable Development texts.

Participant 8 underlined key ideas in all four texts; but then she also underlined key words and proper names only in the Sustainable Development texts. Now, as said before, participant 9 did not use any strategy in the first two texts of Political Science; however, she did transfer strategies in the following texts. The strategies she transferred are underlining key words, underlining key ideas, and circling words with a highlighter. Finally, from all the strategies she used, participant 10 did not transfer any in all four readings. She underlined key ideas, underlined key phrases, and drew brackets and arrows in the Spanish text on Political Science and in the two Sustainable Development texts. Then, she underlined key words and drew exclamation marks only in the Sustainable Development texts. At the end, she only made notes in the Spanish text on Political Science and in the English text on Sustainable Development.

#### **4.10. Reading Strategies Inventory in the Sustainable Development Texts**

After analyzing the instruments of the Sustainable Development texts, we are missing just one; the strategies inventory. We should begin by examining the number of strategies used by each participant in the texts:

Table 4.24. Average of Strategies Used in the Sustainable Development Texts

<b>Number of strategies</b>	<b>Spanish</b>	<b>English</b>	<b>Both Languages</b>	<b>Total</b>
<b>Participant 1</b>	6	5	11	22
<b>Participant 2</b>	1	9	13	23
<b>Participant 3</b>	0	5	17	22
<b>Participant 4</b>	1	6	13	20
<b>Participant 5</b>	3	12	11	26
<b>Participant 6</b>	2	4	8	14
<b>Participant 7</b>	4	6	17	27
<b>Participant 8</b>	1	3	10	14
<b>Participant 9</b>	7	2	10	19
<b>Participant 10</b>	0	3	16	19
<b>Total</b>	25	55	126	206
<b>Average</b>	2.5	5.5	12.6	<b>20.6</b>

As mentioned before, the strategies inventory conducted in the present study included 28 strategies. As seen in Table 4. 24, all participants used half or more of the suggested strategies. The lowest number of strategies used was fourteen while the highest was 27, one more than in the Political Science texts. As in Table 4.10, Table 4.24 includes the total number of strategies used only in Spanish, only in English and in both languages.

Table 4.24 shows that 80% of the participants used some strategies only in Spanish and only in English; while the remaining 20% used some of the strategies only in English but did not use strategies only in Spanish. In contrast with the strategies inventory of the Political Science texts, in the first texts students did not use strategies only in English. On the other hand, all students used strategies in both languages. The lowest number of strategies used in both languages was eight while the highest was of seventeen. From the 28 strategies in the inventory, the average use was 20.6 strategies per reading; and the average strategies used in both texts per participant was 12.6.

If we compare the number of strategies used in the Political Science texts with the number of strategies used in the Sustainable Development texts we can see that each student used more strategies in the readings of the second topic; i.e. in the texts of Sustainable Development. Below a table with the number of strategies used per student in the two pair of readings is shown.

Table 4.25. Comparison of Number of Strategies Used in the Political Science Texts and in the Sustainable Development Texts

<b>Readings</b>	<b>Political Science</b>	<b>Sustainable Development</b>
<b>Participant 1</b>	21	22
<b>Participant 2</b>	19	23
<b>Participant 3</b>	20	22
<b>Participant 4</b>	14	20
<b>Participant 5</b>	20	26
<b>Participant 6</b>	16	14
<b>Participant 7</b>	26	27
<b>Participant 8</b>	16	14
<b>Participant 9</b>	17	19
<b>Participant 10</b>	17	19

As seen in Table 4.25, only participants 6 and 8 did not use more strategies in the Sustainable Development texts as did the rest of the participants. On the contrary, they used two fewer strategies. In general, participants used from one to six more strategies than in the Political Science texts.

The following table will show which strategy category was most used in the Sustainable Development texts. As in Table 4.11, the following consists of three sections: Most used strategy category in the Spanish reading, most used strategy category in the English reading and most used strategy category in general in both texts.

Table 4.26. Most Used Strategy Category in the Sustainable Development Texts

<b>Strategy Category</b>	<b>Spanish</b>	<b>English</b>	<b>Sustainable Development Texts</b>
<b>Global Strategies</b>	6	6	7
<b>Problem-solving Strategies</b>	5	5	5
<b>Support Strategies</b>	1	0	1

If we speak only of the Spanish text, the most used strategies were the ones in the global category. Six participants used from four to ten of the global strategies. The most used strategies in the English text were the global as well. Also six students used from seven to twelve of the global strategies. Finally, the most used category when using strategies in both texts was also the global one. As can be seen in Table 4.26, the total of each section does not add up to ten due to some categories sharing the same number of strategies used.

When comparing Table 4.26 with Table 4.11, one can see that there is a difference between the kind of strategies used in the Political Science texts and in the Sustainable Development texts. In the Political Science readings the most used strategies were the problem-solving in all three categories: Spanish, English and both texts. At last, as seen in these last texts, the global strategies were the most used ones in the Sustainable Development texts.

The final table presented below shows the most used strategies for each strategy category in the inventory:

Table 4.27. Most Used Strategies per Strategy Category

<b>Strategy Category</b>	<b>Specific Strategy</b>	<b>No.</b>
<b>Global Strategies</b>	I thought about what I knew to help me understand what I read	19
	I decided what to read closely and what to ignore	16
	I used context clues to help me better understand what I was reading	14
	I critically analyzed and evaluated the information presented in the text	14
<b>Problem-solving Strategies</b>	I tried to get back on track when I lost concentration	19
	I adjusted my reading speed according to what I was reading	17
	I stopped from time to time and thought about what I was reading	16
<b>Support Strategies</b>	I underlined information in the text to help me remember it	20

Table 4.27 shows that the strategy category with more specific strategy use was the problem-solving. This happened in the Political Science texts too. The most used global strategy in these texts was ‘I thought about what I knew to help me understand what I read.’ The most used problem-solving strategy was ‘I tried to get back on track when I lost concentration’ while the most used support strategy was ‘I underlined information in the text to help me remember it.’

From the global strategies, the strategy ‘I thought about what I knew to help me understand what I read’ was the most used in Spanish and in English, too. In Spanish it was used by nine people while in English it was used by ten. However, the strategy ‘I decided what to read closely and what to ignore’ also was used by 10 people in the English reading.

The strategy ‘I tried to get back on track when I lost concentration’ from the problem-solving category was also the most used strategy in Spanish and in English. It was

used by nine people in Spanish and by ten in English. The problem-solving strategy ‘I adjusted my reading speed according to what I was reading’ was also used by ten people in English.

As seen in Table 4.27, support strategies only included one strategy as it was the only one used by more than ten people. This strategy was ‘I underlined information in the text to help me remember it.’ It was used ten times in both the Spanish and English texts.

Finally, the three most used strategies in the Sustainable Development readings, ‘I thought about what I knew to help me understand what I read,’ ‘I tried to get back on track when I lost concentration,’ and ‘I underlined information in the text to help me remember it,’ were also the most used strategies in the Political Science readings.

Coming up next, chapter five will include a discussion of all the results recently analyzed in this chapter. This discussion will consist of the interpretation of the results, and the analysis of relations between the literature and the findings, readings and participants, and other factors.