

## **5. Chapter five: Discussion of Results**

As seen in chapter four, student performances were very diverse. However, some general results and similar behaviors could be observed. We should start by recalling the original research problem that this study wanted to explore and develop. Objective 1 in the present research project is concerned with whether bilingual readers transfer L1 reading strategies to L2 reading contexts, specifically academic ones, and objective 2 was aimed at finding whether this transfer helps readers improve their reading comprehension.

The present research study, as expressed in research questions 1 through 3, sought to find out if indeed all students used different strategies when reading in their L1, if they transferred those strategies to their L2, and if they were as aware as they should be of their reading strategy use and of their comprehension monitoring process. For all these questions, different results were obtained and they are presented in the rest of this chapter.

Let us start now with the discussion of the results. First, it was expected that not all students performed the way they do in an everyday basis. This could be clearly seen with participants 5 and 9, who in the Political Science readings did not use the highlighter, the pen or the dictionaries but in the interview said that they did regularly use these kinds of materials when reading. This could have happened because participants in general were not reading in a place where they felt relaxed, in the way and with the pace they like, and at times they did not feel comfortable.

As mentioned in chapter three, the reading activities started with the presentation of some materials that could be used throughout the texts. Then, students were told to start reading the texts and that after reading they would answer a reading questionnaire. Some

participants were surprised at this decision and a few of them asked if they could read the questions in advance. The reason they asked is because students commonly relate these activities to comprehension tests they generally answer in language and even in content courses. So, students are used to reading the questions first and then to scanning merely the text for the answers.

Before discussing the strategies used by the participants it is important to remember which students had previously learned about reading strategies in school. All participants except for 6 and 9 had learned about strategies. Participants 1, 2, 4, 5, and 10 learned about them in Spanish courses; participant 3 learned them in English courses and participants 7 and 8 learned about them in both Spanish and English. Knowing which participants learned about strategies will be an important factor to take into consideration throughout this discussion.

Regarding the observed strategies in the readings, ‘underlining’ strategy was present in all four texts. This was probably because it is one of the first strategies to be taught, and arguably the easiest one to follow. However, some participants used it indiscriminately. For example, participants 2, 3, 4, 6, 8, and 10 underlined entire paragraphs throughout the texts. A recurring action performed by these participants was to read several statements without doing anything and then suddenly to underline entire sections.

A probable explanation for why students overused the underlining might be because not all of them learned about it formally; only participants 4 and 10 mentioned it in the interview. Also, students might use it automatically because they are copying what others

do. This could be seen with participant 5 who did not underline anything in the Spanish text on Political Science but began highlighting after he observed his peers doing it.

Continuing with the strategy of underlining, one of the most recurring actions was to highlight what were considered the key ideas. In general, students did recognize the main information in the text. Participants underlined key words as well. The kinds of words that were highlighted were mainly jargon, connectors, numbers, unknown words, institution names, proper names, among other words.

Another action which was expected, but that not many participants did, was 'making notes.' It was surprisingly good to see that students made use of their prior knowledge when reading and that their notes were related to previously acquired knowledge about the topic. With readers' use of background knowledge we can clearly see that students followed a top-down reading approach. Also, the notes included questions that students wanted to answer about the information provided by the text.

A fourth strategy that students used was 'drawing brackets, asterisks and arrows.' The asterisks were mainly used to signal what participants considered the most important information in the text. Here in lies a difference with underlining. Students underlined certain information but when they encountered "more important details" they drew the asterisk. The brackets and the arrows were used to connect the information in the text to their notes. The arrows were also used to link ideas that were separated in different paragraphs.

Comparable to the use of the asterisks was the 'underlining with a pen.' Participants 3, 4, and 7 used a pen to underline certain information they considered to be less important

than what they underlined with the highlighter. Therefore, the hierarchy went from drawing asterisks, to using the highlighter, to underlining, to using the pen to underline. Lastly, the rest of the observed strategies in the reading texts will not be discussed as they were used by only three or fewer participants throughout the texts.

It is time now to talk about the researcher's observations from the four reading texts. First, as seen in chapter four, students used the dictionary more when reading the Spanish Political Science text. This was because, as students mentioned, this first text included much technical vocabulary. In the remaining three readings participants did not use the dictionaries as often as in the first Spanish text. Another reason for their decision was that students thought that using the dictionary would take a lot of time and that they would not be able to finish reading the texts in the established time; therefore, they guessed the meanings.

The observation rubric included as well an element that stated 'wanders away while reading and/or answering.' This statement was only followed literally by participant 6 who clearly said that when reading she likes to take a break sometimes and think about something else unrelated to the reading. On the other hand, the rest of the participants did not wander away but got distracted several times while reading and/or while answering the comprehension questionnaires. This happened because most students did not read in completely silent areas and got involved in other people's conversations. However, there were some attentive readers who did not get distracted with anything and that were very focused on the readings.

Continuing with the researcher's observations, a note should be made on the time taken to read the texts and to answer the questionnaires. In general, students took longer to read both English texts. As formerly mentioned, in the first two texts of Political Science the researcher did not stop the participants even though there was a time limit. However, as mentioned in chapter four, when reading the Sustainable Development texts, the researcher did stop students after the time limit.

The ten students read the Spanish text on Political Science in an average of 16.4 minutes; almost 4 minutes less than the time given. The Spanish text on Sustainable Development was read in an average of 24.9 minutes, also less than the total of 30 minutes they had available for that other task. On the other hand, the English text on Political Science was read in an average of 27.6 minutes. Students exceeded the 20-minute time limit. The English text on Sustainable Development was read in an average of 29.8 minutes. With this result one might think that all students finished reading on time, but four students (participants 1, 4, 7, and 9) did not finish reading and ran out of time. The same happened with the Spanish text on Sustainable Development where participants 7 and 9 did not finish reading either.

Students also had a time limit when answering the comprehension questions. To answer the questionnaires on Political Science participants had 25 minutes and 30 minutes to answer the questionnaires on Sustainable Development. Students read the Spanish text on Political Science in an average of 26.1 minutes; they exceeded the time allocated for the task by a minute. The English text on Political Science was read in an average of 17.1 minutes. Participants answered the English questionnaire faster because they considered the English text to be easier to understand and to follow than the Spanish text. Five of the ten

students (participants 2, 3, 7, 8, and 9) took longer than the 25 minutes in the Spanish questionnaire. The reason was, as they reported, that when they began to look for the answers in the text, they could not recall where the information was and they searched for the information in the last pages.

Talking now about the Sustainable Development texts, students answered both the Spanish and the English questionnaires in an average of 19.1 minutes. They answered very quickly even though they had a lot of time left to verify and to correct their answers. In general, students said that despite the fact that these two last texts were longer they were very comprehensible and that this helped them answer faster. The main reason why students answered these questionnaires in less time than the Political Science ones was probably because these tasks took place after the interview, so students were more aware of reading strategies and what they should do in order to understand the readings better.

To conclude the discussion about the researcher's observations, a number of comments should be made about the data collected under 'other observations.' As mentioned in chapter four, some students checked the length of the texts before starting to read. In the Spanish text on Political Science participants 2, 5, and 8 counted how many pages there were in the reading, but when asked only participant 2 was aware that she checked the length. What was surprising is that participants 1 and 10 said that they scanned the text before reading when they actually did not do it; they began reading right away. Then, in the English text on Political Science, only participants 1 and 5 checked the length before reading. Here, only participant 1 was aware that she counted the pages. Also, participants 2 and 10 mentioned that they checked the length of the text when actually they did not.

Since the two texts of Sustainable Development were read after the interview with the participants, students were more aware about their reading process and their reading strategy use. That is probably why more students checked the length of the texts they were about to read. In the Spanish text, participants 2, 4, 7, 8, and 10 counted the number of pages to read. Whether in the English text only participants 2, 5, 8, and 10 did it. It is important here to mention that in the Political Science texts students only counted the number of pages they were about to read by passing very quickly each sheet of paper without looking to the text. However, in the Sustainable Development texts they checked the length of the text but scanned the text as well by reading title and subtitles.

From the participants, there were two students who coincided in many of the strategies they used. Participants 3 and 7 were the ones who used more strategies when reading. They coincided in the use of seven strategies: 1) 'underlines key phrases/ideas,' 2) 'underlines with a pen,' 3) 'makes notes,' 4) 'circles words with a pen,' 5) 'draws brackets/asterisks/arrows,' 6) 'underlines key words,' and 7) 'underlines titles and subtitles.' Both participants learned in school about the importance of reading strategy use. Participant 3 received this education only in English courses in high school, while participant 7 learned about them in both Spanish and English in middle school.

Even though participant 3 only learned about strategies in her second language, she used a lot of them in her mother tongue. In the interview she said that she uses almost the same strategies in Spanish and in English, only depending on the type of text. She said that she cannot use the same exact strategies because each language is different in its written form. In the same way, participant 7 who learned about strategies in both languages did recognize that the strategies that different professors taught her varied according to the

language or the kind of text being read. However she does transfer occasionally some strategies that she thinks she can use in the other language.

Both participants showed that being taught explicitly about reading strategies helps students be fully aware of their use and employ them accurately. The reason why a relation between participants 3 and 7 was made explicit was because of the similarities in their behaviors while reading. Both students used each of the strategies they mentioned in the interview, they talked about the differences between Spanish and English as languages and as media for reading, and they were fully aware of their reading strategy use.

Regarding students' performances in the comprehension questionnaires, as mentioned in chapter two, reading strategies are used in order to enhance comprehension or to solve text comprehension problems. Even though participants did use a lot of strategies when reading, they did not demonstrate a clear comprehension of the texts they were reading. The Spanish text on Political Science included eight textual questions from which students got an average of 5.4 correct answers. The one linguistic question included was answered correctly by almost all the participants, while the rest, which were seven textual questions, were not answered accurately and were not analyzed carefully before answering. When responding to the linguistic questions on the questionnaires, participants were told that they could not use the dictionaries when answering. However, some students asked if they could use it to answer the linguistic questions.

The English text on Political Science included nine textual questions. Students got an average of 5.75 correct answers. Obtaining this result was rather surprising as students said that the English text was very easy to understand. Also, they finished answering the

questionnaire very quickly which left the researcher with no doubt that participants were doing a good job.

About the Sustainable Development texts, these last texts and their corresponding questionnaires were given after the interview in which students reflected about their reading strategy use. In general, students performed better than on the Political Science texts. First, the Spanish text had a total of eleven textual questions. Participants got an average of 9.4 correct answers. Then, the English text had eleven textual questions and students got an average of 8.6 correct answers.

Even though students did not perform a hundred percent accurately in the textual questions, in the thematic questions they gave very interesting results. As mentioned in chapter four, the thematic questions were of two types: evaluative and personal response. In contrast to the textual questions, in all the evaluative questions students were able to recognize the information provided in the text and were able to provide adequate judgments taking into consideration their prior knowledge. Also, the personal responses that students gave indicated a good level of critical thinking.

As can be deduced from the above results, students can carry out tasks more efficiently when they are aware of their reading strategy use and they know the purpose of using certain strategies. In the Political Science questionnaires, students commonly felt the need to find the answer to each question in the text instead of recalling it. Later, if they got frustrated when not finding certain answers they would go back to the question and choose what they thought was the correct response. This did not happen in the Sustainable Development questionnaires as students learned to keep the important information in mind.

Taking into consideration the role of the strategies in these reading texts, one can see that participants usually use strategies when reading but also take them for granted and do not know exactly how to use them unless they are aware of their use.

As to the interpretation of the results obtained from the reading strategies inventory, they were adapted from the “Metacognitive Awareness of Reading Strategies Inventory” by Mokhtari and Reichard (2002). As mentioned in their article, Mokhtari and Reichard (2002) said that the purpose of creating such inventory was not to merely assess the kinds of strategies that students use when reading but to raise awareness of the types of strategies that readers may use to understand a text.

This research project used this instrument with two purposes. First, after answering the four questionnaires students were assessed on the kind of strategies they had used when reading. However, this assessment had a double goal, also making students aware of their reading strategy use. In the interview, each participant had to reflect on what they did while reading the Political Science texts. Then, they were able to reflect on their strategy choices in the inventory. Six of the ten students were actually aware of using reading strategies; some to a greater extent than others. The four unaware students were surprised about their own reflections and their ‘discovery’ of using reading strategies. The purpose to raise awareness was fulfilled not only with these four participants but with all ten students.

From the three types of strategies included in Mokhtari and Reichard’s (2002) inventory the two used most by the participants were the global strategies and the problem-solving strategies. This coincided with the statement by Mokhtari and Reichard (2002) who said that people who perceived themselves as ‘good readers’ were the ones who used more

global and problem-solving strategies. From the ten participants in this research project, only six students considered themselves to be ‘good readers.’ Participants 1, 4, 5, and 9 did not consider themselves good readers.

In the Political Science texts the most used type of strategies was the problem-solving ones. This was because, as students reported, the Political Science readings were more difficult than the Sustainable Development texts which had less jargon and technical words. On the other hand, participants probably used more global strategies in the Sustainable Development readings for a more general analysis of the texts.

Taking also into consideration O’Malley and Chamot’s (1990) classification of reading strategies mentioned in chapter two, we can see that the participants used both cognitive and metacognitive strategies. The cognitive strategies included: 1) ‘underlining,’ 2) ‘using titles,’ 3) ‘using dictionaries,’ 4) ‘writing down,’ 5) ‘guessing from context,’ 6) ‘using prior knowledge,’ among others. While the metacognitive strategy they used was the ‘self-monitoring.’

Continuing with the topic of monitoring, the comprehension monitoring process cannot be explicitly observed as it only occurs in the mind of the reader. In order to assess the level of awareness that participants had of their comprehension monitoring process, the researcher had to explain how this process functions when reading and then asked them whether they thought it happened in real reading contexts.

As reflected in their own reading experiences in order to answer this question, the researcher could observe that before posing this question students were not really aware of their comprehension monitoring process. Certainly, students make use of it while reading

but they had never thought about it before. Actually, when asked if they monitor their comprehension most of them said they did not as they had never reflected on it.

Now that we have discussed the most important instruments of the study, it is time to talk about the transfer of strategies that happened during the application of the instruments. First, in the Political Science texts all participants, except for 5 and 9 who did not use observable strategies when reading, transferred at least one of the strategies they used. The two participants who had not learned formally about reading strategies transferred fewer strategies than the ones who did. Participant 6 only transferred one strategy from Spanish to English while participant 9 did not transfer anything. Nevertheless, from the participants who learned about strategies, participants 8 and 10 also transferred only one strategy.

As it has been mentioned repeatedly above, there were great changes and positive results in all the reading and answering processes of the Sustainable Development texts after the interview. In the Political Science texts only nine strategies were transferred from Spanish to English. However, in the Sustainable Development texts twelve of the fifteen strategies were transferred. A change in all participants was visible as they used more strategies and transferred more of them. Even participants 6 and 9, who had not learned about strategies, engaged more in this practice.

Comparing now the transfer of strategies in the Political Science texts with the transfer in the Sustainable Development texts, it was extraordinary to see that readers were constant in their use of strategies. All students transferred strategies from one pair of texts

to the other; however, not all of them were used in the four readings. The vast majority of the strategies used were carried out to at least three of the documents.

We can also see a small difference between the eight participants who did learn about strategies. As remembered, not all students learned about strategies at the same age. Participant 8 said she had learned them since she was very young, participants 5, 7, and 10 learned them in middle school, participants 3, 4, and 6 learned them in high school and participants 1 and 2 in college. The last two students, participants 1 and 2 were the ones who used and transferred fewer strategies. The process of using these reading tactics accurately cannot be mastered from one day to the next, since it takes a lot of time and practice. People who learned in high school actually performed better than those who learned in middle school and better than participant 8, who learned about strategies at a young age.

As mentioned above, participants 3 and 7 were the students who used more strategies when reading. They also happened to be the ones who transferred the most of the strategies used. That participants 3 and 7 were able to use a lot of strategies and to transfer them was probably due to their awareness of the use of strategies and to learning about them in English. This experience left them with the opportunity to reflect on the reading process of Spanish texts as well. This was clearly the case with participant 7 who also received education on reading strategies in Spanish.

Both participants 3 and 7 performed similarly way on the comprehension questionnaires. Despite being the students who used more strategies and transferred most of them, in the Spanish questionnaire of Political Science they failed at answering many of the

questions. Participant 3 did better than participant 7 in the English questionnaire of Political Science. In the Spanish questionnaire of Sustainable Development both students did great but in the English questionnaire of Sustainable Development, participant 3 outperformed participant 7.

These results may be the consequence of the already mentioned difficulty of the Spanish text on Political Science. But then, the Spanish text on Sustainable Development rendered better results as these students were more aware of their reading process. Also, participant 3 might have outperformed participant 7 in the English questionnaires as she has studied in the USA recently. Both readers attended bilingual schools, but that does not mean that both of them have the same level of English proficiency.

This research project contained a second instrument to assess the transfer of cognitive strategies. This instrument asked about the strategies used in the different readings given to students. In the Political Science texts, students chose an average of 18.6 strategies out of the 28 included in Mokhtari and Reichard's (2002) inventory. In the Sustainable Development texts, participants used an average of 20.6 strategies. Here, we can see that after reflecting on their use of strategies, students could identify more strategies and be more aware of them during the reading of the last two texts.

As seen in chapter four, from all the strategies included in the inventory, participants only transferred an average of 10.7 strategies in the Political Science texts. On the other hand, in the Sustainable Development texts, students transferred an average of 12.6 strategies. Further analyzing these results, readers did transfer non-observable

strategies from one language to another but not to a great extent. Less than half of the 28 total strategies transferred from one language to the other.

There is one more instrument to discuss, the interview. All the data obtained from the interview were processed and encoded as they contained valuable information which gave us some answers about students' performances when reading. As these were bilingual readers, it was important to know when they began learning English and how this would affect their behaviors. Three participants began learning since Kindergarten, four participants since elementary school, two others had English as their third language and one was a native English speaker. Even though the exposure to a young age might be a difference to take into consideration, it was not a variable that affected participants' performances in this study.

Regardless of the age in which they began learning English and their level of English proficiency, when asked if they used the Spanish language as a tool to comprehend English readings, five participants said no. These participants were readers who learned English as a third language, the native English speaker and two participants who had learned English since elementary school.

At last, a very important factor that these bilingual students mentioned in the interview and that clearly affects how they perceive the reading process was if they learned how to read in one or two languages. Participants 1, 3, 5, 6, 7, 9, and 10 learned to read in both Spanish and English, while the three remaining participants only learned to read in Spanish. The participants mentioned above were the ones who used varied strategies when reading, except for 5 and 9, and who use them but match them more efficiently with the task.