

Moroccan Students' Writing Difficulties: Problems of Cohesion and Coherence Kenitra as a Case Study

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Abstract

This study aims at investigating and identifying cohesion and coherence problems that Moroccan 2nd year baccalaureate students encounter in written discourse. An overall number of thirty students from two fields of study (Math Sciences and Economics) participated in the study, producing a total number of thirty essays. Students' application of cohesion and coherence were studied and analyzed based on Halliday and Hasan's Cohesion in English (1976) and Oshima and Hogue's (2006) criteria for achieving coherence. Regarding the analysis of the corpus, it was discovered that students tend to use more reference ties, followed by lexical ties and conjunctions. Substitution and ellipsis linkers were scarcely used. Besides, the results clarify that Math Sciences Students outweigh their Economics counterparts in using and dealing with cohesion devices. As for coherence, the findings show slight differences between the two groups of upper high school students in adhering to coherence techniques. Finally, the study reveals that students lack important training in using and varying cohesion and coherence linkers.

Keywords: Writing, Coherence, Cohesion, second-year baccalaureate, Moroccan

1. Introduction

Researchers have long probed the difficulties that EFL learners usually encounter in writing. Some of the most commonly investigated areas of study in foreign language writing are cohesion and coherence. According to Halliday and Hasan (1976), cohesion involves different grammatical and lexical elements that combine various parts in written texts as well as between and among sentences. This suggests that cohesion creates syntactic and lexical relationships through different cohesive ties, such as the five cohesive categories devised by Halliday and Hasan (1976). As for coherence, it is broadly viewed as "the relationship that links ideas in a text to create meaning for readers" (Lee, 2002, as cited in Castro, 2004, p. 216). Coherence then is constructed as the meaningful interaction that exists between the ideas of a text and the reader (Castro, 2004).

There is a recurrent belief that EFL students face tremendous problems in writing, namely in cohesion and coherence. It is believed that when EFL learners write, they pay more attention to grammatical errors within sentences. They often think that they will come up with good pieces of writing if their texts are not syntactically deficient. Such an assumption has been proved wrong, for there is a lot of research (Carrell, 1982, Halliday & Hasan, 1976; Oshima & Hogue, 2006; Renkema, 2009; Taboada, 2004; Tanskanen, 2006) that has asserted the important contribution of cohesive and coherence linkers in the overall quality of students' compositions. That is to say, Cohesive and coherence devices bring sentences, ideas and paragraphs together meaningfully, as well as construct the overall unity of the text as a whole.

Additionally, students presumably think about cohesion and coherence as hazy concepts that are difficult to grasp. They also consider them a daunting mission to accomplish.

With the appearance of Halliday and Hasan's cohesion theory in 1976, understanding writing cohesion and coherence has witnessed a major breakthrough. They provided a framework that consisted of five types of cohesive devices for studying and evaluating cohesion and coherence: reference, lexical, conjunction, substitution, and ellipsis ties. These researchers assert that these ties can be utilized not only to examine cohesion, but also to determine the coherence and the general quality of writing. This view was later confronted by a lot of researchers such as Carrell (1982) and Brown & Yule (1983).

2. Review of the literature

2.1. What is coherence?

Coherence is "the outcome of a dialogue between the text and its listener or reader." (Tanskanen, 2006). It reinforces the unity of discourse, be it at the sentence, the paragraph, or at the text level. It is, along with cohesion, a significant criterion that determines the quality of students' written texts. Without it, a written text cannot be properly a text (Hatch, 1992, as cited in Hang & Huong, 2012). This explains that coherence, through rhetorical devices, establishes order and unity in a given discourse.

In language education, coherence is traditionally identified as a challenge to students' composition. It is also seen as a permanent concern to language teachers, because, as reported in Lee (2002), coherence is not easy to teach and difficult to learn. For such a reason, coherence or texture, as Halliday and Hasan (1976) call it, has been dealt with by many researchers in order to come up with some recommendations on how best to teach and learn it.

In order to help students write a coherent text, there are several techniques that need to be followed to achieve a coherent discourse. They are derived from Oshima and Hogue (2006). The first one is to use consistent pronouns. They claim that pronouns should be connected to the same person and number in the text. The second technique concerns transition signals that are said to add a special meaning to the text; here are some of them:

- a- In addition, similarly, moreover, etc.
- b- For example, for instance, etc.
- c- As a result, so, etc.
- d- In contrast, however, on the other hand, etc.
- e- In conclusion, to sum up, etc.

Another technique suggested by Oshima and Hogue (2006) is the repetition of specifically important nouns in the text. It is advisable in this vein to replace a pronoun by the repetition of a key noun, particularly when the meaning is vague or ambiguous. In addition to this, there is a fifth technique that "arranges sentences in some kind of logical order" (ibid., p. 34). It is illustrated by the use of chronological order (order by time), logical division of ideas, and comparison / contrast paragraph (the similarities and or differences between two or more items). With such techniques, coherence can substantially be achieved, but it needs to be correlated with cohesion ties in order to fully create cohesive and coherent texts.

2.2. What is cohesion?

Halliday and Hasan's Cohesion in English is undoubtedly the primary reference for understanding cohesion. According to these researchers, cohesion or cohesive ties determine whether a set of sentences make a text. To them, a text is conceived of as "any passage, spoken or written, of whatever length, that does form a unified whole". This leads to the creation of 'texture', which entails that the texture of a text is established by the cohesive ties that the latter includes. In considering the following example '*Peter made a delicious meal. He cooks spaghetti*' it appears that, in these sentences, cohesion is achieved through the cohesive device that connects the presupposing item (the pronoun *he* in the second sentence) with the presupposed one (*Peter* in the first sentence) across the two sentences. This is a signification of how cohesive devices can form meaningful relationships between sentences and distinguish a text from a set of isolated sentences.

2.3. The relationship between cohesion and coherence

Halliday and Hasan's (1976) cohesion theory states that cohesion is the basis for coherence in written texts. They claim, as mentioned in Tanskanen (2006), that grammatical and lexical devices become cohesive when they are interpreted through their relations to other elements in the text. Tanskanen illustrates that they have given more importance to explicit markers of cohesion while neglecting the underlying semantic relations in a text. This means that they ignore the role of coherence in building the meaning of texts.

They have been severely criticized for this by several researchers. They emphasize that cohesion alone cannot create unity in a text. In her influential article "Cohesion is not Coherence" (1982), Carrell says that cohesion is not the essence of coherence. She contends that a text can be coherent, but not necessarily cohesive. Following the example 'the picnic was ruined, no one remembered to bring the corkscrew', Carrell explains that coherence in this example is not achieved by cohesive elements of the 'picnic' and 'the corkscrew', but rather by the reader's 'schema' of picnic. This brings to light the schema theory that states that cohesive ties can be noticed only when coherence is accomplished in the text. Therefore, coherence is likely to be observed before cohesion, because we normally conceptualize and think about the coherence of texts, which is built around the common cultural knowledge of the writer and reader, before we consider texts' cohesive properties.

Morgan and Sellner (1980), as reported in Castro (2004), also criticized Halliday and Hasan for claiming that the coherence of content does not appear to make a text really coherent, and that for a text to be coherent there should be certain cohesive elements in it (Morgan and Sellner, 1980; as cited in Castro, 2004). They actually stress the significant role of content in texts, claiming that cohesion heavily involves content.

In addition to this, Tierney and Mosenthal (1983) investigated the relationship between coherence and Halliday and Hasan's cohesion. They studied students' utilization of cohesive ties in twelfth graders' written compositions, and they correlated them with coherence rates that were provided by instructors (Tierney and Mosenthal, 1983; as cited in Castro, 2004). The results demonstrated that content has important effects on "the options a writer has for using cohesive items" (Carrell, 1982, p. 484).

From their part, McClure and Steffensen (1980) explored the influence of cohesive links and background knowledge over students' reading of short texts. The students were given several passages in their own culture and in a foreign one. They were asked to read different passages and write about what they have recalled. After investigating the passages, McClure and Steffensen discovered that students were able to recall some cohesive links in their native culture more than in the foreign one. The outcome revealed that textual cohesion may be lost if students' background knowledge is far removed from that of the assumed text.

Widdowson (1978) (as cited in Tanskanen, 2006, p.28) believes that a text can be coherent even if it may not be cohesive. He says that when we engage in a discourse, we express a proposition, and, through this proposition, we perform an illocutionary act. According to Widdowson, the communicative value of a sentence depends on whether it carries a proposition, and this is what makes a cohesive discourse. And if the reader is unable to identify cohesive devices in a discourse, then he/she can resort to covert propositional links to make sense of the text. Widdowson provides an example to show that a text can be coherent although there may exist no cohesive connectors; let us consider this example:

A: That's the telephone.

B: I'm in the bath.

A. O.k.

The three utterances are not attached by any cohesive ties. If each utterance is signaled out individually, it just does not make any sense. However, 'that's the telephone' is taken to be a request to answer the phone, whereas 'I'm in the bath' is considered a replay that is meant to be an excuse for not answering the phone. Hence, the non-cohesive dialogue does indeed bear a communicative objective, which ultimately explains its unity.

In a similar regard, Brown and Yule (1983) emphasize the existence of coherence in order to come up with a meaningful text. They contend that 'meaning relations' are important in identifying texts; relying on cohesive elements is not the only option. They illustrate that when we read texts, we quickly conceptualize 'semantic relations'. So, cohesion only does not appear to be the only source for making sense of a discourse.

The relationship between coherence and cohesion reveals the diversity of opinions towards the importance of cohesion and coherence in written discourse. Both of them are key elements in the development and construction of readable sentences and texts. Cohesion, on the one hand, establishes grammatical and lexical links between written ideas. Coherence, on the other hand, creates semantic build-up within and among those connected ideas. No matter how disputable it may be, it can be deduced that each one complements the other. The most comprehensible written discourse is the one that is both cohesive and coherent. But we can say that cohesion and coherence are less dependent on one another in spoken dialogues, as previously argued by Widdowson (1978).

3. Methodology

The present study investigates the types of cohesion and coherence ties that Moroccan EFL students use in writing and the problems they encounter in dealing with them. To this end, Halliday and Hasan's

(1976) cohesion theory as well as Oshima and Hogue's (2006) set of coherence conventions will be adopted. This study is due to explore the following:

- a- Cohesion and coherence errors in Moroccan High School students' written work.
- b- The adequacy and inadequacy of cohesive ties they utilize.
- c- The adequacy and inadequacy of coherence techniques they use.
- d- The correlation between students' utilization of cohesive devices and the overall score they get in writing.
- e- The correlation between the students' use of cohesive ties and the extent to which these ties lead to coherence in writing.
- f- The differences between High School students in the application of cohesion and coherence in writing.

3.1. Research method for analyzing data

The research method is basically quantitative; that is to say, it aims at gathering numerical data from writing tests, which will be administered to students as a measuring instrument. The collected data are expected to be about various elements of cohesion devices used by 30 individual second-year baccalaureate EFL learners. The 30 students under study will be assigned writing tests in which they are required to write an essay on two different topics. The tests will be corrected and marked by their classroom teachers, and then studied by the researcher.

3.2. Participants

The participants are going to be 30 students in 2 high school classes. There are 15 students from each class, representing the actual number of students found in their corresponding classes. All of them are in the upper high school level, but from different fields of study: Math Sciences and Economics. These fields are randomly selected to be representatives of baccalaureate students from other fields in Kenitra city.

3.3. Data collection

The data is collected from writing tests that are assigned to 2nd year baccalaureate students. The data obtained are 30 written texts from two classes. Students' writing results will be statistically analyzed to see if there is a correlation between the scores attained and the number of cohesive ties applied in compositions.

3.4. Instruments for analyzing data

The data obtained from students' compositions will be analyzed based on two primary instruments: the researcher will resort to Halliday and Hasan's Cohesion in English to analyze and evaluate the learners' application of cohesive ties, while Oshima and Hogue's (2006) criteria for achieving coherence will be used to analyze and evaluate students' application of correct coherence devices.

The following are Halliday and Hasan's (1976) criteria for studying cohesion:

- 1) Reference ties: they provide references, such as personal pronouns, personal determiners, relative pronouns, etc.
- 2) Lexical ties: they involve repetition of lexical items.

- 3) Conjunctive ties: they link between sentences, paragraphs and ideas.
- 4) Substitution ties: they substitute an item by another.
- 5) Ellipsis ties: they involve omitting certain components from text.

And the following are Oshima and Hogue’s (2006) conventions for achieving coherence that will be taken as a reference for studying coherence in students’ writing:

- 1) Repetition of key nouns
- 2) Using consistent pronouns
- 3) Using transition signals
- 4) Arranging ideas in logical order

3.5. Data analysis

Based on the SPSS statistical package, the researcher is going to analyze the correlation between the students’ utilization of cohesive ties and their writing scores, on the one hand, and between their use of cohesive ties and coherence scores on the other hand. Pearson correlation statistics will be adopted to study correlation between the target variables.

4. Results and discussion

4.1. Testing correlation between students’ writing scores and the cohesive ties used

4.1.1. The group of Math Sciences

The analysis of the corpus in this group of students demonstrates that the number of cohesive ties applied by Math Science students does not match the given scores. There is an extensive discrepancy among individual students in terms of the quantity of ties used, as shown in the following:

Table 1: Number of cohesive ties and students’ writing scores In Math Sciences

Number of Cohesive Ties			Writing Scores			
	Frequency	Percent		Frequency	Percent	
Valid	36	1	6,7	5	8	53,3
	38	1	6,7	6	3	20
	43	1	6,7	7	4	26,7
	48	2	13,3	Total	15	100
	60	1	6,7			
	67	1	6,7			
	68	2	13,3			
	71	1	6,7			
	72	1	6,7			
	84	1	6,7			
	86	1	6,7			
	90	1	6,7			
	97	1	6,7			
Total	15	100				

However, the table does not include a considerable gap in the writing scores obtained by students even if there were too many differences in the amount of cohesive ties used. Therefore, this can be illustrated by the minimum score, which is 5 out of 10, while the maximum is no more than 7/10.

In this regard, the correlation between the scores students received in the administered written tests and their utilization of cohesion ties was tested by Pearson correlation statistics in order to see whether the compositions that have more cohesive elements could get high scoring. The number of cohesive ties identified in each of the students’ written texts was correlated with the respective grades given by their classroom teachers. The following table summarizes students’ total number of ties and the scores they had for each composition.

After analyzing the correlation between the two variables above on the SPSS statistical package, the resulting correlation coefficient is $r = 0,185$, which explains that there is a very weak correlation between the two variables; that is to say, a text that includes cohesive ties, regardless of their quantity, cannot necessarily get high scoring.

4.1.2. The group of Economics

As the table below shows, the correlation between the two variables is weaker than expected. Although this group of students had more grammatical ties (more synonyms, antonyms and collocations), a lot of them failed to establish a logical relationship between the quantity of cohesive linkers they used and the grades they received in the written tests. There are a lot of cases where the application of cohesive linkers does not appear to go hand in hand with the writing score, as in this table:

Table 3: The number of cohesive ties and students’ writing scores in Economics

	Frequency	Percent		Frequency	Percent	
31	1	6,7	Valide	4	33,3	
33	1	6,7		5	40	
36	2	13,3		6	6,7	
41	1	6,7		7	13,3	
45	3	20		8	6,7	
46	1	6,7		Total	15	100
47	1	6,7				
49	1	6,7				
52	1	6,7				
54	1	6,7				
64	1	6,7				
70	1	6,7				
Total	15	100				

The resulting correlation coefficient observed here ($r = 0,420$) confirms a weak correlation between the two variables. It can be deduced from such a result that the number of cohesive ties used in writing does not strongly affect writing scores.

Table 4: Correlating the number of cohesive ties and writing scores in Economics

		Number of ties	Writing Score
Number of ties	Pearson Correlation	1	,420
	N	15	15
Writng score	Pearson Correlation	,420	1
	N	15	15

4.2. Testing correlation between students’ number of cohesive ties and coherence scores in the Math Sciences group

Analyzing Pearson correlation between students’ number of cohesive ties and their corresponding coherence scores show a negative correlation between the two variables ($r = - 0, 272$) as in this table:

Table 5: Correlation between the number of cohesive ties and coherence scores in Math Sciences

		Coherence Score	Number of Ties
Coherence Score	Pearson Correlation	1	-,272
	N	15	15
Numebr of Ties	Pearson Correlation	-,272	1
	N	15	15

Such a result, in fact, suggests that the coherence scores students have are not in harmony with the number of cohesive devices they used in their compositions. Many students had fewer linkers, but obtained a higher coherence grade (4 out of 4), while other compositions had 84 and 72 devices, and still received a minor grade, 3 out of 4. So, it can be confirmed that the application of cohesive ties does not always contribute to coherence in writing.

4.3. Testing correlation between students’ number of cohesive ties and coherence scores in Economics

The table below shows the number of cohesive ties that each student has in his / her essay and the score they received in coherence. Grading coherence follows Oshima and Hogue’s four criteria for achieving coherence (repeating key nouns, using consistent pronouns, using transition signals, arranging ideas in logical order); so grading is limited to 4/4.

Table7: Number of cohesive ties and coherence scores in Economics

		Coherence Scores							Total	
		1,00	1,90	2,00	2,15	2,75	3,15	3,75		4,00
Number of	31,00	0	0	0	0	0	1	0	0	1
Ties	33,00	0	0	0	0	0	0	0	1	1
	36,00	0	0	1	0	0	0	1	0	2
	41,00	0	0	0	0	1	0	0	0	1
	45,00	1	0	0	1	0	0	0	1	3
	46,00	0	0	0	0	0	0	1	0	1
	47,00	0	0	0	0	0	0	0	1	1
	49,00	0	0	0	0	0	0	0	1	1
	52,00	0	0	0	0	0	0	0	1	1
	54,00	0	1	0	0	0	0	0	0	1
	64,00	0	0	0	0	0	0	0	1	1
	70,00	0	0	0	0	0	0	0	1	1
Total		1	1	1	1	1	1	2	7	15

The table demonstrates many differences between the two variables. In considering some examples, it can be noticed that one of the most coherent essays (4/4) used 33 cohesive ties only, whereas one of the least coherent (1, 90) had 54 cohesive devices. This implies that cohesion does not always lead to coherence, and that the number of ties that exist in compositions may have little to do with coherence. Consequently, the correlation between the two variables seems to be very weak (r= 0,213). Yet, there are other students whose written texts were both cohesive and coherent, as in numbers 10, 11, and 12. However, the above results indicate that the use of cohesive ties in writing does not strongly affect coherence.

4.4. Cohesive ties used by students

4.4.1. Cohesive ties used by students of Math Sciences

The following analysis provides details and examples about the cohesive ties that are used by the Math Sciences group of students.

Table 9: Number of cohesive ties used by Math Sciences

Cohesive Ties	Number of Ties	Percentage
Lexical	355	36,83%
Reference	439	45,54%
Conjunction	165	17,12%
Substitution	4	0,41%
Ellipsis	1	0,10%
Total	964	100%

The corpus in this field of study appears to have extensive cohesive elements. Reference ties are amongst the most common ties in students' essays, particularly personal pronouns that are highly recurrent: (220 pronouns). The number of relative pronouns is also very reasonable: (55 counts). Most of students are aware of how best to use relative pronouns. Let us consider this example:

"The first thing that I want you to know is that education is one of the most important things in our life because it gives us more information, *which* shows the right way." This example shows that personal and demonstrative reference ties (I, that, the, our,) are correctly used in the sentence.

What is special about this group is that a lot of students can use and correctly manipulate comparative adjectives and adverbs, as in the following examples:

"You know, your future won't be *better* if you don't complete your studies."

"You should know that you're going to suffer because you will have *more* problems."

These two examples demonstrate a carefully meaningful application of 'better' and 'more'. Nevertheless, they still find difficulty using such comparative references properly.

As for lexical cohesion, it was considerably present in this group's written texts. Most of the repeated words involve personal pronouns, personal determiners, demonstrative pronouns, and the conjunction 'and' (70 counts). The following is an example:

"I was worried when *I* read *your* letter. *I*'m sorry for *your* father. *I* know *he* is dead now and *you* have to work for *your* family."

"You're smart *and* you have just three years of hard work *and* then you will enjoy and relax."

In addition, one of the mostly repeated lexical items used by this group is the pronoun 'you'. In this way, students made their writing more personal and subjective, for they used fewer third person pronouns. Here are some examples:

"I know that you are going through a hard time in your school, and you are very exhausted"

"I know that you suffer due to the problems that you have, but you must take care of your future."

Indeed, this is not everything about lexical repetition. There are also other cases where students use the same word more than once, which obviously means that L1 conventions are transferred into their English, as in:

"I heard about your last *decision*, and I want to tell you that the *decision* is a mistake."

Actually, repetition is a recurrent issue in Moroccan students' composition. These students usually transfer their knowledge of Arabic into English writing; that is why there is an excessive use of repeated words and phrases in their written essays.

According to Hoey (1991), Lexical cohesion, which includes repetition, is the most widely used cohesive device. He said that “lexical cohesion becomes the dominant mode of creating texture.” (Hoey, 1991; as cited in Tanskanen, 2006). He further explains his claim by comparing the frequency of repetition to reference, conjunction, substitution, and ellipsis. He also stresses that lexical cohesion is essential in establishing cohesion, because it reduces ambiguity between sentences.

What is important again in this group of Math Sciences is the presence of - albeit in a small number - synonyms and antonyms. This does not only represent the amount and diversity of their cohesive devices, but also their ability to play with words and avoid redundant repetition, as in this example:

“Motivation can come from seeing the *bad* situation of other poor children who don’t have the chance to study or to have a *good* education.”

As far as conjunctive cohesion is concerned, it comes in the third place. Math Sciences have a noticeably significant use of conjunctive ties, ranging from additive (83 counts), adversative (22 counts), to causal conjunctions: and, but, because, also, in addition, etc. Here are two instances:

“Education is one of the necessities of life. It has a lot of benefits, *as* it guaranties a good job, *and consequently* a better life.”

“You should know that you’re going to suffer, *because* you will have more problems *as* in our country if you don’t have a good degree, you can’t do anything and you can’t have a good job. *Moreover*, I guess that you forgot your objective of becoming a doctor.”

These two examples comprise several conjunctions: five additives such as ‘consequently’ and ‘moreover’, and one causal, ‘because’. The student has managed, through those connectors, to create a logical connection between the sentences above. Yet, a number of other students still find problems with the additive ‘and’, which they overused. This is to say that they try to make a sequence and refer to previous clauses, as in:

“If you study hard, you can have a good job *and* you can help your family with your own money *and* you will learn the skills that you will need in your life.”

Students belonging to Mathematical sciences have undoubtedly demonstrated practical skills in working with various cohesive devices. Their problems in cohesive ties are distinctively fewer than Economic students. So, according to Halliday and Hasan’s (1976) taxonomy and Oshima and Hogue’s (2006) coherence conventions, it might generally be concluded that this group has succeeded in building cohesion and coherence.

4.5. Students’ problems in cohesion

a- They excessively use and misuse the conjunctive additive ‘and’

In both classes, there are a lot of cases where students exaggerated and misused ‘and’. Here are two instances from the data:

“You don’t have any reason to give up studying, *and* you know your future better if you don’t complete your study. Don’t forget that your family counts on you, *and* ‘she waiting’ the end of the year to see the result of your *and* their effort.”

“The death penalty is an order ‘who’ came from the judge and is actually said this ‘order for a man or a woman who killed somebody and the death penalty is a different way and it so cruel.”

The examples include situations where students transfer the application of ‘and’ from Arabic into English. In addition to this, instead of using other connectives, they kept repeating the coordinator ‘and’ over and over, making their sentences look awkward.

b- They overuse lexical reiteration

Reiteration is a constant issue in students’ writings. In his study about cohesion and coherence in Arab EFL College students’ writings, Khalil (1989) found that repetition of the same word is highly overused. The two groups under study have similarly produced the same problem, especially Economics students. A lot of their reiteration involves similar words, as in the following:

“The *death penalty* is something that many people do not have a clear decision on. Many people support *the death penalty*, while others wish for the *death penalty* to be abolished, and there are some that support the *death penalty*.”

‘Death penalty’ is repeated above four times. Such a problem occurs as a result of students carrying over their L1 linguistic conventions into English. They negatively transfer repetition, which is one of the main features of Arabic rhetoric, into English writing.

c- Absence and misuse of references

The two classes have encountered problems of references, which in turn created non-cohesive and incoherent sentences and ideas. Most of the weaknesses in this area came from Math Sciences group. Some examples of wrong reference are given below:

“You study languages. *It’s* help you communicate.”

“Don’t forget that your family counts on you, and *she* waiting... .”

In the first example, instead of using the correct plural pronoun ‘they’ that refers to languages, the student wrongly used the third person singular ‘it’. In the second example, it is the same thing happened. There were also examples where students did have the presupposing items, but with no presupposed ones:

“I hope you’ll think about before you make a decision.”

The student did not include the presupposed item ‘it’ that should normally follow the verb ‘think about’; therefore it will look like this:

I hope you’ll think about it before you make a decision.

4.6. The use of coherence by students

a- The group of Math Sciences

The class of respondents who apply coherence techniques better are Math Sciences students. Obviously, more than half of their written tests are in line with Oshima and Hogue’s coherence elements. Most of the pronouns they used are consistent and they are appropriately used as referents, as in the following:

“I know you have a big problem with study, but every problem ‘have’ a solution, that’s why you should think a lot before taking this bad decision.”

Furthermore, many students in this group succeeded in smoothly moving from one idea to another through several transition signals, as shown in this example:

“The first thing you should know, without education you can’t be successful in your life.... . Another thing you should never forget”

The student here has two transitions: the ‘first thing’ and ‘another thing’. He managed then to give meaning to his idea and establish transition between various sequences.

The following is an example of coherence in one of the students’ essays:

“Well you told me that you wanted to drop out of school just to have a new life and leave all problems of school, but I’m sure you don’t know the value of education as you’re still an adolescent.”

The student repeated the key pronoun *school*, used a consistent one *you*, used exact and adequate conjunctions, and found no difficulty moving from a sentence to another.

b- The group of Economics

In this class, the application of coherence techniques is relatively precarious and inconsistent. Many students were unable to properly use the coherence criteria suggested by Oshima and Hogue (2006). Their essays are less coherent. 7 essays out of 15 are less coherent, while 1 is totally incoherent. The number or type of cohesive ties used has nothing to do with the scores obtained. Despite the fact that their conjunctions outnumber those of Math Sciences in quantity and variety, they failed to get the expected results. So, this does not always lead to cohesion.

Indeed, the improper application of a number of conjunctions did not allow students to come up with effective transitions between ideas, as in this example:

“The death penalty is firstly an order that came from the judge. And is actually said this order for a man or a woman who killed somebody. And the death penalty is indifferent ways and it is so cruel.”

The above example shows that the incorrect use of the conjunction ‘and’ did not allow the student to meaningfully link between his ideas, therefore, he failed to arrange them in order.

Actually, there are several cases where students were unable to properly create logical connection between their sentences. Here is another example:

“This is the only way we didn’t try before. For this reason, the totality of countries trying to stop death penalty in legislations. In my opinion, those who must be killed.”

This student’s set of sentences are completely disconnected. There is no relation between the first, the second, and the third sentence.

5. Conclusion

The analysis of the data has clarified that Moroccan 2nd year baccalaureate students have significant imperfections in the use of cohesive ties and coherence techniques, as suggested by both Halliday & Hasan (1976) and Oshima & Hogue (2006) respectively. The analysis has also shown that the type and quantity of cohesive ties used by students do not strongly affect the scores they received in writing. In coherence, it was discovered that students’ application of coherence linkers do not necessarily lead to cohesion.

As seen earlier, Math Science and Economics students used various cohesive devices, but obtained different writing scores. They primarily made use of lexical, reference, and conjunctive ties in their essays. In both groups, reference ties were the dominant type: 45 % in Math Sciences and 40 % in Economics

group. The second mostly used type were lexical devices: 36 % in Math Sciences and 29,74 % In Economics group. Conjunctions came in the third place with 17 % and 29, 31 % in Math Sciences and Economics group respectively. The least cohesive techniques used were substitution, whereas ellipsis ties were rarely encountered in students' essays.

Given the fact that students utilized such cohesive linkers, it might presumably be believed that they would get good scores in writing. However, that was not the case. There were a lot of examples where students used fewer cohesive devices than others, but scored higher. There were also examples where some students had many cohesive ties, but scored lower than others who had fewer ties. These results prove that the relationship between the use of cohesive devices and writing scores is not systematic; meaning that cohesive techniques cannot strongly affect writing scores.

Concerning coherence, the two groups (Math Sciences and Economics) made use of a number of coherence techniques, such as repeating key nouns, using consistent pronouns, using transition signals, and arranging ideas in a logical order. Following the application of these linkers, students received scores that were different from one to another. The students who properly had all these techniques obtained good coherence scores: 4/4. Such a correct use of coherence techniques was believed to correlate with the number of cohesive devices used in students' essays, but it was found out that coherent essays are not always cohesive. Many students had 4/4 as a coherence score, but their writings included fewer cohesive ties. Thus, it can be confirmed that cohesion does not always contribute to coherence.

From another perspective, Math Sciences students are considered high level classroom learners. This implies that they were able to use a wider variety of cohesive devices. They had more reference ties and a wider range of lexical ties. As for the second group, although most of them used more conjunctions, more synonyms and collocations, they did get good scores, because they had fewer lexical devices and a generally improper application of coherence techniques.

In this study, Math Sciences students utilized a considerable number of lexical ties. They could effectively manipulate various lexical items and avoid repetition. In the other group, the situation is, to some extent, different. The added value they have is the percentage of conjunctions they employed that is apparently higher in number and type; that is to say, they varied their use of conjunctions.

Besides, the analysis of the corpus has shown that both classes face considerable cohesion problems. Both of them used a lot of reiteration and repetition of similar words, had various wrong references, repeated 'and' quite substantially, and misused several conjunctions.

Regarding the application of coherence devices, the study discovered that Math Science students' essays were more coherent than their counterparts'. Their coherent texts outnumber those of Economic students. The former made fewer mistakes in linking between sentences and paragraphs. Their ideas were more arranged in logical order than their counterparts. Yet, the differences between the two groups in achieving coherence were very slight. Economic students have also produced well coherent essays, in which they managed to follow the criteria of coherence achievement set by Oshima and Hogue.

It should be acknowledged that there are plenty of key elements that contributed to the imbalanced scores of the two groups under analysis, such as grammatical incompetence, lack of vocabulary, and lack of training in and understanding of cohesive and coherence skills. It should also be emphasized that the application of cohesive ties, regardless of their type and quantity, does not always help students come up

with coherent essays. In addition, the use of cohesive ties in writing does not, again, guarantee high writing scores.

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