

MULTICULTURAL CONTEXTS AND COMPREHENSION OF YOUTH LITERARY TEXTS

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Abstract. Based on a comparison between 11 year old students who are monolingual French and bilingual French and Kabyle (one of the Berber languages) our research aims at showing how two specific factors influence understanding narratives: the first is the mode of presentation (oral vs written). It is combined with cultural aspects of the 1st language (from now on L1) in which children have been socialized; the task was a written recall of a Kabyle text. Our results show facilitating effects of the oral mode to access meaning and the positive role played by culture in mediating understanding, hence founding potential solutions to improve literacy in standard French in areas where the cultural diversity in the school population is very often associated with difficulties in learning the school language. Teaching should switch from an ethno-centered model to a multicultural one since to build knowledge requires explaining the symbolic systemic relations languages and cultures have with one another.

Key words: cultural context, didactic cognition, text comprehension, orality, youth literature

Dutch. Samenvatting. [Translation Tanja Janssen].

Ons onderzoek is gebaseerd op een vergelijking tussen 11-jarige leerlingen die alleen Frans spreken en leerlingen die zowel Frans als Kabyle (een van de Berbertalen) spreken. Doel van het onderzoek is te laten zien hoe het begrijpen van verhalen beïnvloed wordt door twee factoren. De eerste factor is de manier van presentatie (mondeling versus geschreven). De tweede factor zijn de culturele aspecten van de eerste taal (L1) waarin kinderen gesocialiseerd zijn; de taak was een geschreven 'recall' van een tekst in Kabyle. De resultaten laten zien dat de mondelinge presentatievorm en de cultuur een positief effect hadden op het tekstbegrip. Dit wijst op mogelijke oplossingen om de geletterdheid in het Frans te verbeteren op terreinen waar de culturele diversiteit in de schoolpopulatie heel vaak geassocieerd wordt met moeilijkheden in het leren van de schooltaal. Onderwijs zou van een etnocentrisch model naar een multicultu-

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reel model moeten overstappen. Kennis construeren vereist dat men de symbolische systeemrelaties verklaart die talen en culturen met elkaar hebben.

French. Résumé [Translation Laurence Pasa].

Basé sur une comparaison entre des élèves âgés de 11 ans français monolingue et bilingues français-kabyle (une des langues Berbères), notre recherche vise à montrer comment deux facteurs spécifiques influencent des récits narratifs : le premier est le mode de présentation (orale vs écrite). Il est combiné avec des aspects culturels de la langue maternelle (L1) dans laquelle les enfants ont été socialisés. L'épreuve consistait à rappeler par écrit le contenu d'un texte kabyle. Nos résultats soulignent les effets facilitateurs du mode de présentation oral pour l'accès à la signification et le rôle positif joué par la culture dans la médiation de la compréhension, et par conséquent apportent des solutions susceptibles d'améliorer l'enseignement du Français standard dans les secteurs où la diversité culturelle des élèves est très souvent associée aux difficultés d'apprentissage de la langue de l'école. L'enseignement devrait commuter d'un modèle ethno-centré à un modèle multiculturel dans la mesure où construire la connaissance nécessite d'expliquer les relations symboliques et systémiques entre les langues et les cultures.

Mots-clés : contexte culturel, didactique cognitive, compréhension des textes, oralité, littérature de jeunesse

German. Zusammenfassung. [Translation Irene Pieper].

Multikulturelle Kontexte und das Verständnis jugendliterarischer Texte
Auf der Basis eines Vergleichs von 11 Jahre alten SchülerInnen, die monolinguale Französisch-SprecherInnen oder bilinguale Französisch- und Kabylisch-SprecherInnen (i.e. SprecherInnen einer Berber-Sprache) sind, stellen wir zwei spezifische Faktoren heraus, die das Verständnis von Narrationen beeinflussen: Der erste besteht im Modus der Präsentation (mündlich oder schriftlich). Der zweite besteht in kulturellen Aspekten der Erstsprache, in der die Kinder sozialisiert wurden. Die Aufgabe bestand darin, einen kabylischen Text schriftlich nachzuerzählen. Unsere Ergebnisse zeigen, dass der mündliche Modus das Verständnis erleichtert und dass die Berücksichtigung kultureller Faktoren eine positive Rolle beim Aufbau des Verstehens spielt. So weisen unsere Forschungen auf potentielle Lösungswege hin, die die Lesefähigkeit im Standardfranzösisch entwickeln helfen in Umgebungen, wo die kulturelle Diversität der Schülerschaft oft mit Lernschwierigkeiten im Bereich der Schulsprache verbunden wird. Unterricht sollte von einem ethno-zentristischen Modell zu einem multikulturellen übergehen, denn der Aufbau von Wissen erfordert es, die symbolisch systemischen Beziehungen zwischen Sprache und Kulturen zu erklären.

Portuguese. Resumo. [Translation Paulo Feytor Pinto].

Baseada na comparação entre alunos de 11 anos que são monolíngues em francês e alunos bilingues em francês e cabilo (uma língua berbere), a nossa investigação procura mostrar como dois factores específicos influenciam a compreensão da narrativa: o primeiro é o modo de apresentação (oral ou escrito). Ele articula-se com aspectos culturais da primeira língua (doravante L1) em que a criança foi socializada; a tarefa foi uma recolha escrita de um texto cabilo. Os nossos resultados mostram aspectos facilitadores do modo oral no acesso ao significado e também o papel positivo da cultura na mediação desse significado, estabelecendo assim as bases para possíveis mecanismos de melhoria dos níveis de literacia em francês padrão, em zonas em que a diversidade cultural da população escolar está muitas vezes associada a dificuldades de aprendizagem da língua da escola. O ensino deveria então passar de um modelo etnocêntrico para um modelo multicultural uma vez que a construção de significado obriga à explicação das relações simbólicas e sistémicas que as línguas e as culturas estabelecem entre si.

Polish. Streszczenie [translation Elżbieta Awramiuk]

Celem niniejszych badań opartych na porównaniu 11-letnich uczniów władających tylko językiem francuskim z uczniami władającymi językiem francuskim i kabylskim (jeden z języków berberyjskich) jest pokazanie, jak dwa specyficzne czynniki wpływają na rozumienie narracji. Pierwszym z nich jest sposób prezentacji (mówione albo pisane), co jest związane z kulturalnym aspektem języka ojczystego (L1), w którym dzieci się socjalizują. Zadanie polegało na pisemnym odtworzeniu kabylskiego tekstu. Nasze rezultaty wskazują na korzystny efekt przekazu oralnego w dotarciu do znaczenia oraz pozytywną rolę odgrywaną przez kulturę w rozumieniu. Dają też podstawy do potencjalnych rozwiązań służących poprawianiu umiejętności czytania i pisanie w standardowym francuskim tam, gdzie kulturowa

różnorodność w szkolnej populacji bardzo często wiąże się z trudnościami w uczeniu się szkolnego języka. Nauczanie powinno przejść od modelu etnocentrycznego do modelu wielokulturowego, ponieważ budowanie wiedzy wymaga wyjaśniania symbolicznych i systemowych relacji pomiędzy językami i kulturami.

Słowa-klucze: kulturowy kontekst, uczenie się, rozumienie tekstu, oralność, literatura młodzieżowa

1. INTRODUCTION

The question of literacy has become crucial in countries such as France. Reasons are various but two are of special interest for the research exposed here: the first one has to do with the fact that the school institution acknowledges the fact that children come from very different cultural backgrounds and, second, that excluding those who have problems in acquiring standardized French which is mostly expressed in the written code is no longer an acceptable solution.

This has called research in developmental psycholinguistics to look at how information is processed and stored by children who before they were schooled were exposed to different cultures, based on oral and/or written traditions, with values which can be set differently. For example, recent studies on text comprehension have shown that bilingual children improve their language skills in their second language (from now on L2¹) when they are exposed in class to both the oral code and their L1. They are thus able to use methods of text processing they have been made familiar with in their L1 culture. Based on the theoretical framework of didactic cognition, this first study aims at showing that myths and legends induce representations of the world and activate pre-built knowledge. Exposing students to a multi-cultural universe in school enables them to form and adapt their processing of information in order to enrich their comprehension.

2. THEORETICAL FRAMEWORK

Understanding a text means more than just understanding the linguistic system, i.e. vocabulary and syntax, in which the text has been written, the reader needs higher cognitive operations such as those required to select and organize the relevant information. When information that was not explicitly stated in the text is activated, an inference is made. This process of inference-making is a key component of fluent reading (St. George, Mannes, & Hoffman, 1997). In order to build correct inferences, readers need to recover the necessary elements of knowledge which forms a background to the story itself from memory. This background naturally varies depending on the individual knowledge built in a specific cultural environment. To put

¹ *It is always difficult to label the languages spoken by children who either are the first generation born in the country their parents moved to or were very young (before they would have to go to primary school) when they moved countries with their parents. We decide to call L1 the language heard at home which is dominant in the first years of the child, before they actually go to school; and L2 the language they acquire once they get the opportunity to communicate with others than family members, and which is dominant in school.*

it in a nutshell, understanding a story means organizing the causal relations between the factual milestones of the story hierarchically (Bourg, Bauer, & van den Broek, 1997; Berman, 1995; Graesser, Singer, & Trabasso, 1994; Stein & Liwag, 1997; van den Broek, Rohleder, & Narvaez, 1996). Links between actions are not always made explicit; the reader has to restore the missing links in order to recreate the logic leading to understanding. This is where the difficulty lies for a student who learns a language. He has to acquire the skills needed to understand the causal relations between events which are not systematically adjacent.

Cain, Oakhill, Barnes, & Bryant (2001) investigated the relation between young children's comprehension skill and inference-making ability using a procedure that controlled individual differences in general knowledge. The children with low comprehension skills build an incomplete representation of the text. They may be able to integrate information at a local level but are unable to produce a coherent integrated model of the text as a whole (Cain & Oakhill, 1999).

A second reading overall activates some of the knowledge stored in memory and thus eases processing of the different levels in the comprehension process (Dunlosky & Rawson, 2005). Yet, even in the case of a second reading, facilitation still depends on the overall competence of the reader (Stine-Morrow, Gagne, Morrow, De-wall, 2004). If texts are presented orally the second time, the 'reader-listener' can skip bottom types of language processing mechanisms (such as establishing bonds between different representational systems: letter recognition, letter-sound association, how to combine letters in a given language ...) and concentrate on top ones (when the orthographic stream is recoded into propositions, see below), which are intrinsically cognitive. They, therefore, can directly process information in terms of semantics; linking events (Tagushi & Gorsuch, 2002) and analyzing their coherence (Graesser, Louwerse, McNamara, Olney, Cai, & Mitchell, in press).

According to the model of comprehension developed by van Dijk & Kintsch (1983), information to be processed can be divided in two sorts: first, the text base which contains meaningful information given by the text, independently of the wording and the syntax used in the text; second, the situation model (or mental model) which contains information relative to the 'microworld' associated to the text. It leads to a further division of the semantic propositions: micro-propositions belong to the textbase and macro-propositions to the situation model.

In a multilingual context, L1 used to understand a text in L2 (here French) is a powerful means to activate knowledge first encoded in L1 and stored in the long term memory. In a task of recalling a text, stored information is activated to connect with information derived from the text (Kintsch, 1998). Hoareau and Legros (2006) have shown that access to knowledge stored through the L1 and the cultural context associated to the L1 influences inferential processes, both quantitatively and qualitatively.

3. HYPOTHESES

This research aims at analyzing the role played by culture (oral *versus* written) in understanding a text. Here we chose a text from kabyle² culture, a tale presented to the students in French. Two factors are discussed: the culture associated to the students' L1, and the students' reading level. Although the text itself plays a role when it comes to evaluate understanding (some texts are easier to understand than others), readability is viewed as an interaction between a text and a reader's cognitive skills (McNamara, Kintsch, Songer, & Kintsch, 1996).

The first hypothesis is about the mode chosen to present the text to the students: those who read and listen to the text will recall the text better than those who read the text twice.

The second hypothesis is about how reading levels combine with the mode chosen to present the text: in a comparison between the two recalls, amongst those who read and listen to the text, low proficiency students will add more information to their second recall than high proficiency students.

The third hypothesis is about the type of information added in relation to the mode of presentation: students who read then listen will, in their second recall, add more information belonging to the situation model, hence macro-propositions, than those who read the text twice.

The fourth, fifth and final hypothesis is about the influence of reading levels on the type of information added:

4th: Low proficiency readers will add more macro propositions than micro-propositions in their second recall.

5th: For the same reading level, there will be a difference in the distribution of information added between micro- and macro-propositions, depending on the mode of presentation of the text.

6th: Low proficiency readers who are bilinguals and whose L1 is associated to a culture that is essentially oral, will perform better than low proficiency readers who are monolingual, when they both read and listen to the text. However, we do not have a sufficient number of those students to be able to run statistical analyses,

² The **Berber languages** (or *Tamazight*) are a group of closely related languages mainly spoken in Morocco and Algeria. A very sparse population extends into the whole Sahara and the northern part of the Sahel. They belong to the Afro-Asiatic languages phylum. There is a strong movement among Berbers to unify the closely related northern Berber languages into a single standard, *Tamazight*. After independence, all the Maghreb countries to varying degrees pursued a policy of 'Arabization', aimed primarily at displacing French from its colonial position as the dominant language of education and literacy, but under which teaching, and use in certain highly public spheres, of both Berber languages and Maghrebi Arabic dialect have been suppressed as well. This state of affairs was protested by Berbers in Morocco and Algeria – especially Kabylie – and is now being addressed in both countries by introducing Berber language education and by recognizing Berber as a 'national language', though not necessarily an official one. http://en.wikipedia.org/wiki/Berber_languages.

therefore we will proceed to analyze the recalls of four students qualitatively and concentrate on the strategies they use³.

4. METHOD

4.1 *Participants*

Forty two eleven year old students took the test. They were selected from two Year Five classes of a primary school located in a socio-economically deprived Parisian suburb. Both groups, G1 (22 subjects) and G2 (20 subjects), were equally divided into two sub groups according to their levels of ability in reading. These levels were made from the results they obtained after taking a national test in Year Three.

4.2. *Material*

The Kabyle traditional tale used for the experiment displays a very simple structure, based on a repetition of an episode. The main protagonist, a small cicada, searches for a husband. She receives each suitor and listens for what they have to offer. The suitors are animals too and their dialogue with the cicada is more or less the same. The tale is thus formed with a double progression: from the biggest of the animals, the camel, to the smallest, the rat; moreover, the first four are rejected and the last one, the smallest, wins the heart of the cicada. The first four are eliminated because they do not come close to human beings; they make animal sounds while the rat says he will provide the cicada with fresh supplies such as flour and oil, the basic staple of Kabyle food to which he adds sweets with sugar and honey. His voice is said to be melodious by the cicada. He then acquires a human status which legitimates his being chosen as a husband.

4.3. *Procedure*

Students read the tale but they had limited time to do so. The first recall took place immediately after this first reading. A week later, students were split in two, one group (G1) listened to a recording of the tale and were asked to write the second recall, the others (G2) read the tale for the second time before they were asked again to write down what they remembered. For the second recall, the instructions asked for a more precise and detailed narrative. The first step was designed in order to get all the students to perform a similar task, independently of their reading levels or cultural background; the influence of these factors is established in the comparison between the first and second text obtained with a variation into the experimental conditions.

³ It will be possible to run statistical analysis when combining results from Tizi Ouzou (Algeria) where the same kind of experiment is run by Dihiya and Med Makhlof.

5. RESULTS AND ANALYSES

Students' recalls gave rise to both quantitative and qualitative analyses. We will first look at statistical results before moving to a more in depth analysis of the four students' recall. The independent variables manipulated in this experiment were:

- 1) mode of presentation, G = (G1: oral; G2: Rereading),
- 2) reading level, N = (N1: high proficiency student; N2: low proficiency student) and
- 3) types of proposition, T = (T1: Macro-propositions belonging to the mental model; T2: micro-propositions, belonging to the text base).

5.1. Quantitative analyses

The first result is about the amount of information added:

More information is added by students in the G1 group (oral presentation) than in the G2 group (rereading) when they recall the text for the second time (10.6 as opposed to 3.2), ($F(1,38) = 18,020, p < .0001$). It confirms our first hypothesis.

Moreover, the amount of information added by the students in group G2 does not vary according to their reading levels (G2N1 = 3.2; G2N2 = 3.2). However, the reading level influences the amount of information added in group G1. Low proficiency students add more than high proficiency ones (14 vs 7), ($F(1,38) = 013, p < .05$). This confirms our second hypothesis, see figure 1.

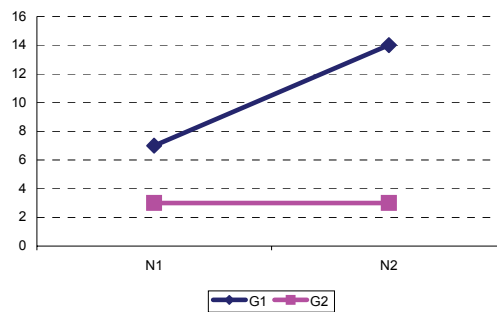


Figure 1: Amount of information added in both groups in relation to the students' level.

The second result is about the type of propositions added which varies according to the group observed. Students in group G1 add more information pertaining to the mental model (macro-propositions) than to the text base (micro-propositions: 13 against 8). This is the other way round in group G2 (micro-propositions: 4.6 against 1.7), ($F(1,38) = 9,184, p < .004$). It confirms our third hypothesis, see figure 2.

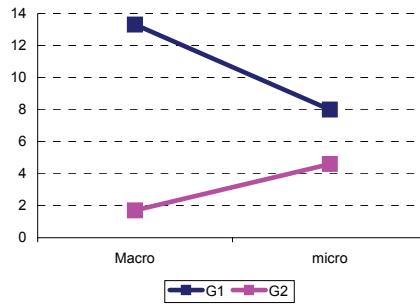


Figure 2: Types of information added depending on the group.

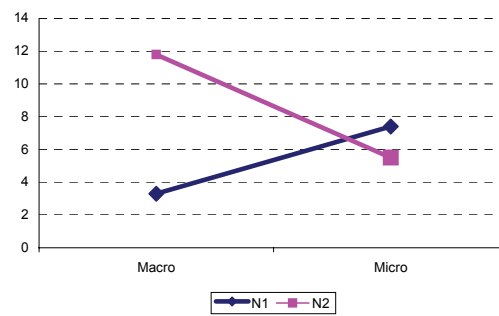


Figure 3: Type of information added depending on the students' reading level.

The type of propositions added also varies according to the level of the students. High proficiency students recall more information from the text base (7.4) than from the mental model (3.3). This is the other way round for the low proficiency students: (11.8 against 5.5), ($F(1,38) = 14,41, p < .0005$). This confirms the 4th hypothesis, see figure 3.

If we now combine students' reading level with the mode of presentation, we observe that even though low proficiency readers add more macro-propositions in the second recall (12.7) no matter what the mode of presentation is (against 3.15 for the high proficiency readers), those who were in group G1 added more macro-propositions (stored and retrieved from the long term memory) than their counterparts in group G2 (21.6 against 2, which explains the average at 12.7). Because of the oral presentation, low proficiency students in group G1 can access information stored in long term memory directly, they are thus able to process it at a semantic level and link it with new information given by the text; ($F(1,38) = 11,2888, p < .001$). This confirms our fifth hypothesis, see figure 4.

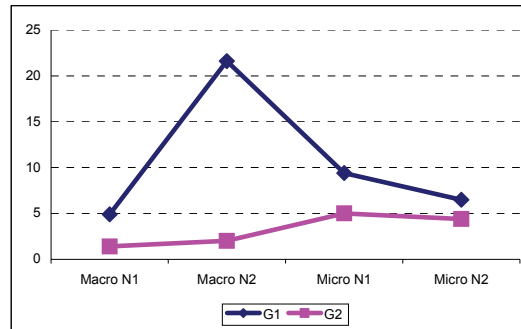


Figure 4: Types of information (macro or micro-propositions) according to students' reading levels and modes of text presentation.

Qualitative analyses should enable us to refine the hypotheses, especially about the strategies used by low proficiency readers from a Kabyle background who read and listened to the text.

5.1 Qualitative analyses

Analyzing the semantic content of individual recalls (Bourg, Bauer, & van den Broek, 1997) in each subgroup, should give us insight needed to fully comprehend the quantitative results; especially if we concentrate on the links in the factual chain missing in the recalls.

5.1.1 The implicitness of the tale

We start with the recalls from K who has read and listened to the tale (group G1). He is from a multicultural background. In school, he is characterized as a low proficiency student. He recalled a larger amount of information when he read the tale than when he listened to the CD. In his first text the animals are introduced from the biggest, the camel, to the smallest, the rat. We believe that typographic indications played a role when he had to memorize the text: recurring structures were visually reinforced by spatial structuring on the page; indented lines at the beginning of a new paragraph and at the beginning of direct reported speech. The fact that the child is able to read parts of the text that are structured similarly (as if they were a chorus) facilitates the location of recurrences; for example, each animal suitor is introduced before the dialogue and reappears before it exits, indented three times from the beginning of the line ('And the **camel** leaves'; 'And the **ox** leaves'; 'And the **donkey** leaves' see Appendix). However, during this first recall even if he tends to restore almost the totality of the suitors of the small cicada, the implicitness of the text is not uncovered.

After reading the tale the cognitive capacities mobilized by this student during the first recall, seem to enable him to make an inventory. Indeed, more than just knowing the number of animals eliminated by the little cicada, it is important to determine how the animal gets to the conclusion. The reasons are: seduction ('a sweet voice') and the domestic virtues of the rat (he wants to protect the little cicada and give the future partner oil, flour, sugar and honey). After listening to the CD, K. recalls this type of information. We notice two things: a certain number of information has disappeared in the second text compared to the first but these were unnecessary because redundant; conversely, information about the sensible reasons for the choice made by the little cicada has been added: she has nothing to do with vanity. Moreover if the rat's voice is considered sweet by the cicada, it is because it is in tune with the delicacies he promised to give her. Anaphoric linkage is made in the original text between mentions of the rat's gift. The fact that it appears in K's second text and not in the first illustrates the fact that after listening to the CD, causality relations between narrative elements are restored indicating a better understanding of the text and above all the implicit behind the words.

According to a cultural representation conveyed by this tale, the rat would represent the stereotype of a good husband, quick to satisfy the material needs of his wife. Although it is necessary to be cautious with this hypothesis, it would be interesting to observe how the students' cultural origin influences the recall of this type of information and its location in the hierarchy of information selected to be recalled.

5.1.2 *The structuring of the narrative*

Low proficiency students show some difficulties in structuring their written paper: in its chronological development as well as displaying their text on a page. F, a student belonging to group G1 seems a very good example of this kind of students. She is from a monolingual and mono-cultural background. She is like K. characterised by average to below average (a average of 4/10).

As with K. we observe a difference between the two recalls. After listening to the CD, her written text displays structured paragraphs. This was paradoxically not the case after she read the text, even though going into a new paragraph should have been stored into the visuo-spatial sketchpad from reading the text. When she heard the text, she processed the information as to recreate the coherence behind the words (the consistency of the recursive structure) and thus use it when writing down her own text.

Improving in the second recall (after listening to the CD) can also apply to the lexicon. Superordinate terms such as 'jewels' found in the first text are replaced in the second by the exact words found in the tale such as 'ring', 'necklace', 'bracelet'. Mental images of these objects were strengthened and thus stored in the working memory to be retrieved when writing. This was true for a certain number of students.

5.1.3 *From 'knowledge telling strategy' to 'knowledge transforming strategy'*

According to Scardamalia and Bereiter (1987) 'knowledge transforming strategy' characterizes students whose deep understanding of a text makes them use their own words to recall the text. On the opposite 'knowledge telling strategy' consists in using similar words to recall a text: this is the strategy used by low proficiency readers.

The remarkable capacity to switch from direct quote they hear to indirect reported speech when they write displayed by students who listened to the CD questions the status of reformulation. This stylistic difference could mark the measure of the autonomy taken in regard to the tale and its appropriation by the student. Added comments are processed, and not just 'stuck', as it has been showed in situations when the cultural and linguistic environment interferes with learning. (Marin & Legros, 2006).

We observe it in the example of the rewritten presentation of B, a mono-cultural student belonging to group G1:

'Elle répondit qu'elle s'était faite belle car elle voulait trouver un mari' ('She replied that she was making herself beautiful for she wanted to find a husband.')

when the original sentence in the tale was:

'Je me suis faite belle parce que j'attends un mari' ('I made myself beautiful because I am waiting for a husband')

Beside the change in personal pronouns and the move from parataxis to hypotaxis, the replacement of 'parce que' (because) in the original version with 'car' (for) in the student's text shows that B. takes into consideration the fact that its output is written, hence the desire to erase traces of oral into her own text.

Moreover the difference with the original sentence reveals some synthetic processing of the information at this level and more so of the whole information distributed in the text. Indeed, the modality introduced by the student shows her own contribution as regards to the original wording. More interesting, this information turns out to be essential, so much so that it appeared in the introduction of the Kabyle tale. Indeed, the first sentence of the tale repeats it in a similar way 'a little cicada decided to find a husband':

'Voici l'histoire d'une petite cigale, jolie comme tout, qui voulait trouver un mari.' ('Here is the story of a little cicada, quite pretty, who wanted to find a husband.')

In the recall, redundancy is perceived as the will to foreground the existential quest of the little cicada.

Even if nothing can be said in this case of the relation between cultures and understanding, what B. does with the original text is an illustration of how the use of 'knowledge transforming strategy' enables the student to recreate a hierarchy between events based on causal chains.

5.1.4 *From one culture to another*

Among the students whose culture originates in the Northern part of the Sahel, morality has an impact on the texts they produced, first and second alike. This element

contradicts what has been said otherwise of the processing of the information in the tale. Planning at the level of the pre-verbal message includes only three episodes out of five, even though the episodes are recursive. The one with the rat is systematically recalled because it serves the expression of the coda and the morality uttered by the tale.

In this example from J. (group G2, he read the tale twice), three episodes are recalled:

‘Le chameau est venu voir un jour la petite cigale qui attendait devant sa maison et elle l’a renvoyé parce qu’elle le trouvait trop gros et il faisait un sale bruit avec sa voix et il faisait peur à la pauvre petite cigale. Ensuite, c’est l’âne qui est venu la voir et qui lui a dit ‘Veux-tu m’épouser ?’, il bramait ‘Hi! Han!’ et embêtait la pauvre cigale. Après, le petit rat est arrivé avec sa jolie voix douce.

Elle aimait le rat et ils marièrent. La cigale est tombée dans l’eau et le rat l’a sauvée. ‘

(One day, the camel came to see the little cicada who was waiting in front of its house and it (she for the cicada in French) sent it (him for the camel in French) away because she found him too big and he was making dirty noises with his voice and he scared the little cicada. Then, it is the donkey that came to visit her and that said: ‘Do you want to marry me?’ he bellowed ‘Hi! Han!’ and was bothering the poor cicada. After, the little rat comes with his nice sweet voice. She loved the rat and they married. The cicada fell in the water and the rat saved her.)

In the second recall, J. fills in the missing episodes, the ox and the rooster:

‘Le chameau est venu voir la petite cigale et elle l’a renvoyé parce qu’elle ne le trouvait pas beau et trop gros et en plus il faisait un sale bruit avec sa grosse voix et il faisait peur à petite cigale gentille. Ensuite, le boeuf est arrivé et il était horrible à faire peur, et c’est l’âne qui est venu la voir à son tour, il bramait ‘Hi! Han!’ et embêtait la pauvre cigale. Le coq a fait ‘cocorico’ et la cigale était fâchée après lui. Après, le petit rat est arrivé avec sa jolie voix douce.’

(The camel came to see the little cicada and she sent him away because she didn’t find him nice looking and too fat and moreover he made dirty noises with his big voice and he scared the gentle little cicada. Then, the ox came and he was so ugly he was scary, and it is the donkey that next came to see her. He bellowed ‘Hi! Han!’ and was bothering the poor cicada. The rooster cries ‘cocorico’ and the cicada was annoyed at him. After that, the little rat came with his nice soft voice.)

Obviously, adding episodes is time costing for J.; he concluded in the first (She loved the rat → the rat saved her) and not in the second (the little rat came with his nice soft voice).

What is similar in both texts is that what matters for J. is the chronology and because of a lack of time in the second version, the chronology doesn’t go to the end. This is the case for many students like J. who are monolingual with a mono-cultural background. As a result, some of them produced a second text which was worse than the first.

Looking at N.’s texts (N. is from a multicultural and bilingual if not trilingual background) we observe that the second text produced after she listened to the CD is better than her first after she read. As with J., only three animals are mentioned in the first text:

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‘Quand la cigale voulait trouver un mari et qu’elle attendait devant sa porte, elle a vu passer le grand chameau et elle lui a dit de partir avec sa grosse voix. Le boeuf est passé et elle a crié de partir loin et elle a dit ‘oui’ au rat qu’elle voulait l’épouser. Le rat a une jolie voix et il allait lui voler du miel et elle faisait la lessive. Elle est tombée et la rat l’a sauvée. Il est parti travailler et la cigale chante toute la journée.’

(When the cicada wanted to find a husband and when she was waiting on her doorstep she saw the big camel go by and she told him to leave with his big voice. The ox came by and she told him to go far away and she said ‘yes’ to the rat that she wanted to marry. The rat has a nice voice and he went to steal honey for her and she did the washing. She fell and the (feminine) rat saved her. He went to work and the cicada sings all day long.)

Two episodes are missing and they will be missing as well in the second text. However, this second text exemplifies a way to synthesize the information processed and thus produce a narrative that ends with a proper coda:

‘Quand la cigale voulait trouver un mari et qu’elle attendait devant sa porte avec tous ses beaux bijoux brillants, elle a vu passer le grand chameau et elle lui a dit de partir avec sa grosse voix. D’autres animaux très gros et plus petits, aussi, sont arrivés. Le rat est venu et la petite cigale a dit ‘oui’ au rat qu’elle voulait l’épouser.

Le rat allait lui voler du miel du sultan et elle faisait la lessive. Elle est tombée et le rat l’a sauvée. Il travaille pour elle. Alors maintenant, la cigale, elle chante dans la maison et ne sort plus dehors.’

(When the cicada wanted to find a husband and when she was waiting on her doorstep with all her sparkling beautiful jewels, she saw the great camel go by and she told him to go away with his big voice. Other animals big ones and smaller ones too came by. The rat came and the little cicada said ‘yes’ to the rat that she wanted to marry.

The rat went to steal honey from the sultan and she did the washing. She fell and the rat saved her. He works for her. So now the cicada she sings in the house and never goes out of the house.)

The implicit moral of the story, the protection the rat gives to the cicada (*He works for her*), is perceived by the children from the Kabyle background and not by the mono-cultural ones.

Because the cultural factor doesn’t change in between both recalls, students who are able to find the deep meaning of the story because it corresponds to something they are familiar with can more easily find the hierarchy amongst the information given than monolingual and mono-cultural ones, and this independently from the students’ reading level.

6. INTERPRETATION OF THE ANALYSIS, DISCUSSION AND CONCLUSION

Hypotheses were such that they predicted that students who listened to the CD would score better than those who read the text a second time, and this difference would increase for the students coming from a cultural background based on orality. The oral mode of presentation is directly linked to a better performance the second time for all students and especially those with oral tradition. Students who do not

have to use bottom types of language processing mechanisms can use memory resources to semantically process and activate knowledge stored in the long term memory that they had previously acquired in their own culture.

This result is in par with the hypothesis which predicts that low proficiency readers will have trouble understanding a text because they have trouble accessing the information when they have to find it in a written format. Hence an explanation could be found for the higher amount of information added by the low proficiency students who listened to the CD (from group G1) compared with the high proficiency ones in the same group.

This progress turns out to be even more noticeable for low proficiency students in the multi-cultural situation. Their second recall after they listened to the CD shows that their results become similar to the high proficiency readers, even for those whose results after the first recall were very low. Furthermore when the factors, oral mode of presentation and cultural setting of a text, are interwoven, the student and especially the student who is a low proficiency reader, is helped in finding the causal links, thus being able to first establish a hierarchy in the information given and then derive the meaning behind the words.

His performance naturally improves. The strategies he uses are in par with our sixth and last hypothesis. This result would have to be confirmed by more data collected in a similar experiment done in Tizi Ouzou (see footnote 2).

These results lead us to strongly recommend the use of many different modes of presentation for one text, more so when students in a class come from different backgrounds and do not have the same level in reading and writing. Failing at school is often due to the fact that knowledge stored in the long term memory does not reach an activation level sufficient enough to be used when processing information given in a text or in a task. Taking into consideration the cultural background of the children is a way to increase this activation level so that the children are able to infer and build a meaningful representation of what they read or have to do. This could be a solution to improve literacy amongst a group often described (maybe wrongly) as nearing illiteracy.

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APPENDIX: THE TALE: THE CICADA AND THE LITTLE RAT

Here is the story of a cicada, little and quite pretty, who wanted to find a husband. One morning, the cicada gets up early, smoothes her wings and sprays herself with perfume. Her mother brushes her hair, then she puts on her most beautiful necklaces, her rings and bracelets. Adorned with all these jewels, the cicada goes out in front of the door of her house:

- If I sit down here, everybody will be able to see me and admire me. Maybe I'll find a husband I like.

She sits down very straight, crosses her six legs and begins to wait. It is then that a camel comes along. He sees the cicada and stops:

- Hello little cicada, you're quite pretty today!

- I've made myself beautiful because I'm waiting for a husband.

- It's true, you are beautiful and your jewels shine! Do you want to marry me?

The cicada thinks.

- What can you do?

- I know how to sing. I go: Ron! Ra! Ron!
 - Go away! – says the cicada. – You’re too big for me! You frighten me.
 And the camel goes away, his head hung low.

A big bull appears from afar. He approaches the cicada.
 - You are beautiful and your jewels shine, little cicada! Do you want to marry me?
 - What can you do big bull?
 - I know how to sing. I go: Meuh! Meuh!
 - Go away! – says the cicada. – You frighten me with your big horns and your loud voice.
 And the bull goes away, his head hung low.

Then a little grey donkey goes past:
 - You are beautiful and your jewels shine, little cicada! Do you want to marry me?
 - What can you do, little donkey?
 - I can sing. I go: Heehaw! Heehaw!
 - Go away! Go away! You’re making me deaf – shouts the cicada.
 And the donkey goes away, his head hung low.

Then a cock comes forward, preening his cockscomb:
 - You are beautiful and your jewels shine, little cicada! Do you want to marry me?
 - What can you do, pretty little cock?
 - I can sing. I go: cock-a-doodle-do! Cock-a-doodle-do!
 - Go away! Go away! You’re piercing my eardrums! – shouts the cicada.
 And the cock goes away, also with his head hung low.

Then a little rat with a pointed snout and a long tail comes by.
 - Nothing equals your beauty, little cicada! – he says. – Would you like to marry me.
 - What can you do, little rat?
 - Me? I can bring you some oil, some sugar, some flour and some honey from the house of the Sultan.
 - As your voice is gentle, kind little rat. You are the first one to offer me some oil and some honey. I want to marry you!

The next day, the pretty cicada and the little rat celebrated their marriage. They settle down in a beautiful house where they lead a happy life. Every day the small rat steals food from the palace of the Sultan, and the cicada takes charge of the house-keeping. One morning, while the little rat is at the palace, the cicada washes his clothes in the river. She rubs and rinses with so much force, suddenly, she slips on the bank and falls in the water. In her shrill voice, she calls:
 - Help! Oh my dear little rat who steals honey and flour from the palace of the Sultan, come quickly, your wife is drowning!
 The small rat hears the cries of his wife. Leaving the honey and flour, he runs as quickly as possible. From the bank, he throws down a rope to the cicada. But, as much as she tried, she couldn’t catch it with her legs. So then, the little rat plunges

his tail into the water. His wife hangs on to it and he brings her back very quickly to the bank. What a fright! The little rat lights a big fire to warm up the poor cicada.

- Never again will you do the washing or the household chores – he says. – From now on, it's me who will take charge of it all.

Since that day, the rat ferrets around everywhere and always seems very busy, whereas, as soon as the sun begins to shine, the cicada sings until she has no breath left.

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