

## ■ The Use of the ENNI to Assess Story Grammar Competency of School-Aged French Speaking Children With and Without Specific Language Impairment

## ■ L'utilisation de l'ENNI pour évaluer la compétence en grammaire du récit d'enfants francophones d'âge scolaire avec ou sans trouble spécifique du langage

Andréanne Gagné  
Martha Crago

### Abstract

Narratives provide a rich source of linguistic data for the study of language production at the discourse level. In Canada, the Edmonton Narrative Norms Instrument (ENNI) provides speech-language pathologists with a tool for quantifying the narrative skills of English-speaking children with respect to their production of Story Grammar elements (i.e.: characters, setting, etc.) and First Mentions (i.e.: referential expressions). This study presents findings on the potential of the ENNI to measure the changes in Story Grammar scores of French-speaking children of ages seven and nine and its potential to differentiate French-speaking children with specific language impairment (SLI) from their typically-developing peers (TD).

Twelve nine-year-old children with SLI, 12 typically-developing children matched on language abilities (LA), and 12 typically-developing children matched on chronological age were included in this study. Results indicate that the set of pictures designed for English-speaking children can be used for Story Grammar elicitation with French-speaking children of Quebec. However, the findings presented in this study raise the question of potential cultural bias and emphasize the need for a normalization study with the French-speaking population of Quebec.

### Abrégé

Les récits offrent une source riche en données linguistiques pour l'étude de la production du langage en ce qui a trait au discours. Au Canada, l'Edmonton Narrative Norms Instrument (ENNI) sert d'outil aux orthophonistes pour quantifier les compétences narratives des enfants anglophones en ce qui concerne leur production d'éléments de la grammaire du récit (p. ex. les personnages, les lieux, etc.) et les premières mentions (p. ex. les expressions référentielles). Cette étude présente des données sur la façon dont l'ENNI pourrait mesurer les changements des résultats obtenus en grammaire du récit par les enfants francophones âgés de sept et neuf ans et sur son potentiel à différencier les enfants francophones ayant un trouble spécifique du langage (TSL) de leurs pairs au développement typique.

Douze enfants de neuf ans ayant un trouble spécifique du langage (TSL), douze enfants au développement typique jumelés selon les aptitudes linguistiques et douze enfants au développement typique jumelés selon l'âge ont participé à cette étude. Les résultats indiquent que l'ensemble d'images conçu pour les enfants anglophones peut être utilisé pour l'incitation à la grammaire du récit avec les enfants francophones du Québec. Cependant, les résultats présentés dans cette étude soulèvent la question d'un biais culturel potentiel et mettent en évidence le besoin de normaliser l'étude pour la population francophone du Québec.

**Key words:** narratives, SLI, Story Grammar, French-speaking children

Andréanne Gagné, PhD,  
Département de  
didactique des langues  
Université du Québec à  
Montréal  
Montreal, Quebec,  
Canada

Martha Crago, PhD,  
Dalhousie University  
Halifax, Nova Scotia,  
Canada

Narratives provide a rich source of linguistic data for researchers and practitioners who are interested in studying language production at the discourse level. The recent publication of the Test of Narrative Language (Gillam & Pearson, 2004) provides researchers and practitioners with a tool for quantifying narrative language ability that is norm-referenced on American children. In Canada, another tool offers norms for Canadian English-speaking children, the Edmonton Narrative Norms Instrument (ENNI; Schneider, Hayward, & Dubé, 2006). The ENNI consists of two sets of three stories each, with norms that have been established for Story Grammar and First Mentions for two of the six stories, a simple story (that includes one event and two characters) and a complex story (that includes three events and four different characters). The authors defined Story Grammar as the categories of information that are customarily provided in a story. The ENNI raw test scores for Story Grammar and First Mentions were normalized on 377 children between four and nine years of age from Edmonton in the province of Alberta. The groups consisting of typically-developing children (TD) included 50 children per age group, whereas the groups consisting of children with specific language impairment (SLI) included between 10 and 17 children per age group. For the Story Grammar, the researchers found a significant developmental trend for the complex and for the simple story. Their findings showed that the development of Story Grammar occurred mainly between the ages of four and seven years. From age seven years for the simple story, and from age nine years for the complex story, Story Grammar performance on the ENNI leveled off. Children with SLI were found to have significantly lower Story Grammar scores until the age of eight.

### The Use of the ENNI with French-speaking Children from Quebec

Adaptation of the ENNI to Quebec French was undertaken as part of a study on diagnostic language measures in French and on the prevalence of primary language impairment in the province of Quebec conducted by Thordardottir, Kehayia, Courcy, Lessard, Majnemer, Mazer, Sutton, and Trudeau between 2003 and 2008. Preliminary findings from this study reported by Gagné and Levy (2006) indicated that the pattern observed in English-speaking children might be different for French-speaking children of Quebec. In their study, 58 French-speaking children of Quebec were shown the same two sequences of pictures as the English-speaking children in Schneider, Hayward, and Dubé (2006), and were asked to generate a story from the pictures. Story Grammar performance was then analyzed to determine the level of development of Story Grammar. Because Thordardottir et al.'s study of French-speaking children was mainly concerned with children aged between four and six years, the ENNI Story Grammar scores for French-speaking children were only available for these ages. The Gagné and Levy (2006) preliminary findings study reported on three age groups:

4½ years (N=12), 5 years (N=32) and 5½ years (N=14). Interestingly, at age five, French-speaking children showed lower scores than their English-speaking peers on Story Grammar for both the simple and the complex story.

The discrepancies between French-speakers and English-speakers might be explained by the fact that Story Grammar development might not follow the same developmental path in all languages. Very few cross-linguistic comparisons of narrative production exist, and they can be divided into two types, qualitative and quantitative. Mandler, Scribner, Cole and DeForest (1980) demonstrated that qualitatively, story recall organization is universal across cultures. According to these authors, there seems to be a universal way of structuring experience that results in the use of a widespread story format. However, quantitative cross-linguistic differences in narratives might still be expected. These quantitative differences might be observed at the microstructure level (characteristics of the language used during the narration) or at the macrostructure level (information that is typically provided in a story). The most extensive study on cross-linguistic differences at the microstructure level was Berman and Slobin's (1994) study that compared children's story-telling in five different languages: English, German, Turkish, Hebrew and Spanish. The authors compared different aspects of the narrative microstructure and found that Spanish-speaking children tended to produce more subordinate clauses than English-speaking and German-speaking children. Turkish-speaking children were found to produce shorter utterances than other children and, finally, German-speaking children were found to produce single clauses for introductions rather than using relative clauses, as the Hebrew and Spanish speakers did. For instance, rather than introducing participants with a relative clause such as 'this is a story about a boy and a dog who have a frog in a jar', the German narrator would say 'It's about a frog, a boy and a dog to begin with, and the boy has a frog in a jar' (Berman & Slobin, 1994, p. 632). These differences might have a certain influence on Story Grammar performance. Indeed, introduction of the characters typically includes more subordinate clauses in Spanish than in German, so it can be hypothesized that complete introductions appear at a later age in Spanish children than in German children because in Spanish children the introductions are linguistically more complex. This hypothesis implies that syntax and Story Grammar are somehow interdependent. A recent study explored the dependence between syntactic complexity and Story Grammar. Gagné & Crago (2008, in prep.) asked children to tell the same story to an adult and to a baby. Based on previous studies on listener adaptation (Shatz & Gelman, 1973; Sachs & Devin, 1976), the children's listener adaptation to the adult was expected to generate more complex syntactic structures than the children's listener adaptation to the baby. This was indeed the pattern found. More interestingly, Story Grammar scores were found to be significantly lower in the syntactically complex condition than in the syntactically simple condition. These results demonstrated that syntactic complexity and

Story Grammar are not totally independent, and support the previously stated hypothesis that complex syntactic structure typically used for story-telling in one language might impact Story Grammar.

Another explanation for the discrepancies between French-speakers and English-speakers on the ENNI might be that the ENNI is culturally or linguistically biased. With regard to this hypothesis, the genders of the characters included in the ENNI story might be confusing for French-speaking children. The ENNI presents a girl-elephant and a boy-giraffe as the main characters of its stories. In French, all nouns have predetermined gender. Unfortunately, the predetermined gender of the word 'éléphant' is masculine and the predetermined gender of the word 'girafe' is feminine. Consequently, the gender of the noun is in contradiction with the gender personified by the giraffe (a boy) and the elephant (a girl). In one of the stories, the giraffe and the elephant play with an airplane (un avion) a masculine noun commonly referred to as feminine in Quebec French (une avion). Although this fact might appear trivial, it was reported in Gagné and Levy (2006, from Thordardottir et al., 2003-2008) that children stutter and often change the determiner or the article preceding a hermaphrodite character. This study aims to make an empirical demonstration that these hesitations do not have any impact on Story Grammar scores.

### Objectives

This study presents findings that can inform researchers and clinicians on the potential for the use of the ENNI with French-speaking children. The study addresses three questions that need to be answered before normalization of the ENNI on a wider scale:

Does the ENNI appear to be an adequate tool to measure the developmental changes in Story Grammar scores in the narratives produced by typically-developing French-speaking children?

Can the ENNI potentially differentiate French-speaking children with SLI from their typically-developing peers?

Does a contradiction between the gender of the noun and the gender of the character require the development of a new set of pictures?

To evaluate the potential of the ENNI to measure developmental changes, narrative production of typically-developing children of ages seven and nine years were included in this study. The data provided by this study, in addition to the data previously published on the Story Grammar scores of French-speaking children between the ages of four and six years (Gagné and Levy, 2006, from Thordardottir et al., 2008), will provide the field with an overview of Story Grammar developmental changes in French-speaking children during pre-school and school years and hence, can provide future research orientations in the development of a normalization tool to measure Story Grammar in this population.

To evaluate the potential of the ENNI to differentiate French-speaking children with SLI from their typically-

developing peers, an experimental group of children with SLI was included. The diagnosis of SLI is made when a child has hearing, intelligence and social-emotional development within normal limits and no obvious neurological damage. There is variation in the language profiles of children with SLI, but most of these children have marked problems in the acquisition of morphosyntax (Leonard, 1998). Although the morphosyntactic characteristics of French and English differs in many respects, French-speaking children with SLI were noted to have morphosyntactic deficits that are comparable to some of the morphosyntactic deficits observed in English-speaking children with SLI (Paradis & Crago, 2001).

To evaluate the potential of the ENNI to differentiate French-speaking children with and without SLI, the SLI group was compared to a typically-developing group matched on chronological age (CA). Based on previous results, children with SLI were expected to have lower Story Grammar scores than their CA peers. However, this group comparison gave no indication of whether children with SLI show a delay or a deficit in Story Grammar. To determine whether children with SLI do in fact show a delay or deficit in Story Grammar, children with SLI need to be compared to typically-developing children matched on language abilities (LA). In the case where Story Grammar scores of children with SLI are found to be significantly lower than what would be expected from their language abilities, the hypothesis of a Story Grammar deficit could change the interpretation of future results on the use of the ENNI for diagnostic purposes.

To measure the effect of the contradiction between the noun and the character, character gender changes were tracked during narrative production. If Story Grammar is negatively affected by such a gender switch, Story Grammar scores should decline as a function of the number of gender switches produced during the narrative. If such a decline should be observed, the design of the set of pictures used in the ENNI to elicit Story Grammar would have to be re-examined.

## Methodology

### Participants

Three groups of 12 French-speaking children participated in this study: a group with specific language impairment (SLI), a group matched on chronological age (CA) with typically developing language, and a group matched on language abilities (LA) with typically developing language. Children with and without SLI all scored between 85 and 145 on the Test of Non-verbal Intelligence (TONI-3; Brown, Sherbenou, & Johnsen, 2002) and no significant differences were found between the three groups on non-verbal IQ scores, as described in Table 1. The children in the LA group were matched to children in the SLI group on the *Évaluation du Langage Oral* (ÉLO; Khomsi, 2001). The ÉLO morphosyntactic score is a composite score of sentence comprehension and production. Mean performance on this test for all

**Table 1**  
Participant Characteristics

	SLI (n=12)		LA (n=12)		CA (n=12)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
N boys	10		7		6	
N girls	2		5		6	
Age (y.m)	9.4	0.8	6.8	0.8	9.0	1.0
Non-verbal IQ (TONI)	97	5.9	109	11.5	112	15.6

**Note:** SLI = Specific Language Impaired group; LA = Language-Matched group; CA = Age-matched group; SD = Standard Deviation.

Differences were assessed with a univariate one-way analysis of variance ( $df = 2, 33$ ); superscripts indicate planned comparisons that are significant at the .05 level.

**Table 2**  
Descriptive Statistics and ANOVA Results for the *Évaluation du Langage Oral*

	SLI (n=12)		LA (n=12)		CA (n=12)		F	p-value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Sentence Comprehension (SC)	14.00 <sup>a</sup>	3.16	15.25 <sup>b</sup>	1.42	17.58 <sup>ab</sup>	1.78	7.836	0.001
Sentence Production (SP)	14.25 <sup>a</sup>	2.93	16.17 <sup>b</sup>	2.82	19.25 <sup>ab</sup>	2.83	9.178	0.002
Morphosyntactic Composite Score (SC and SP)	63.16 <sup>a</sup>	10.45	72.17 <sup>b</sup>	8.18	82.00 <sup>ab</sup>	9.09	12.332	0.000

**Note:** SLI = Specific Language Impaired group; LA = Language-Matched group; CA = Age-matched group; SD = standard deviation.

Differences were assessed with a univariate one-way analysis of variance ( $df = 2, 33$ ); superscripts indicate planned comparisons that are significant at the .05 level.

three groups is described in Table 2. A one-way analysis of variance (ANOVA) with associated planned comparisons confirmed that the CA group had superior language skills to the SLI group, while the LA group had similar language skills to the SLI group as expected on the basis of the selection criterion.

Children were either from Quebec City or the suburbs. The children with SLI had been diagnosed with moderate to severe specific language impairment by a certified speech-language pathologist at their entry to school, and attended a special school for children with SLI. The children were assessed annually by a certified speech-language pathologist, and 10 of the 12 children with SLI had received a diagnosis that emphasized their pragmatic disabilities in addition to their morphosyntactic difficulties. All of the French-speaking children had learned French as their native language and had been schooled in French. None had significant exposure to another language, with the exception of one child with SLI, who was adopted from China at eight months of age and therefore, was exposed to Mandarin until the age of adoption. Since her arrival in Canada, she has been exclusively exposed to French at home and at school.

French-speaking typically-developing children all had one parent who had at least completed a college degree. Parents of the children with SLI had, in general, a lower level of education, but all children had one parent who had completed high school. None of the parents of children included in the study was unemployed. Two children with SLI and two typically-developing children were growing up in single-parent families. The number of single-parent families was about what would be expected statistically in the province of Quebec, where 16% of children grow up in single-parent families (Statistics Canada, 2010).

Experimental sessions took place at the child's home and typically lasted between 90 and 120 minutes. The testing session took place in a quiet room (typically in the child's bedroom or in the library room) and parents did not attend the experimental session. Typically, one experimental session was required to complete the experimental protocol. However, due to family constraints, the experimental protocol was split into two sessions for two of the participants.

## Tasks and Analyses

Story A1 (the simple story that contains one initiating event) and story A3 (the complex story that contains two initiating events) from the ENNI were used to evaluate Story Grammar performance. The experimental sessions were conducted by a former special-education teacher who had seven years of experience with children with language impairment and reading disabilities. At the time of the experiment, the experimenter was a PhD student in communication sciences and disorders. The protocol for the elicitation of narratives was identical to the one described in Schneider, Hayward, and Dubé (2006), and had previously been used with French-speaking children (Thordardottir et al., 2003–2008). This protocol included the administration of a training story followed by the administration of stories A1 and A3. For all the stories, the black-and-white illustrations (placed in a binder) were presented to the child in order. The examiner held the binder in such a way that the examiner could not see the pictures. The stories were always presented in the same order, the simple story first and the complex story second. The experimenter informed the child that he or she would see all the pictures first, and then would be asked to tell the story. The instructions emphasized the fact that the examiner could not see the pictures. The children's narratives were audio recorded on a digital Panasonic IC-recorder, and transcribed using the CHAT transcription system from the CHILDES database (MacWhinney, 2000). The Story Grammar scoring for the simple and the complex story was based on a French translation of the English scoring protocol (Schneider, Hayward, & Dubé, 2006; see Appendix 1). Scoring was based on the number of Story Grammar components included in the narrative. The theoretical maximum on Story Grammar was 13 for the simple story and 37 for the complex story. Measures of richness of vocabulary, fluency, expressiveness and correct grammar were not included in this study, but are presented in Gagné & Crago (2010).

In addition to the Story Grammar analysis, a gender-switch analysis was performed. A gender switch was scored every time a child switched the gender of a character throughout the story. Gender error in the first mention (e.g.: le girafe) of a character is not an error *per se* since the character could be either feminine or masculine. No gender switch was recorded when the gender chosen in the first instance remained the same in the subsequent mentions. A gender switch was recorded only if the child used a different gender pronoun ('il' or 'elle') or article ('le' or 'la', 'un' or 'une'). Some children clarified the gender by using the noun 'madame' or 'monsieur' or 'ami' or 'fille' before the noun 'girafe' or 'elephant'. However, despite this strategy, some gender switching could still be observed in their narratives (e.g.: 'monsieur girafe' became 'la girafe'). Gender switches for 'éléphant', 'girafe', and 'avion' were coded. Gender switch statistical analysis was performed with the complex story only because its length provided more gender switch occurrences.

## Example of a gender switch:

**Child 1:** Là, c'est une fille éléphant (fem) qui joue avec son ballon. Là sans faire exprès elle (fem) l'échappe. Pis là son ami est avec lui (masc)/avec elle (fem) je veux dire. Pis là son ami plonge dans l'eau pis va le chercher et le redonne à son amie la girafe (fem). Là son amie la girafe (fem) est contente pis elle lui dit merci.

Scoring: 1 gender switch

**Explanation:** 'éléphant' was identified as feminine at the beginning of the story. The child switches to masculine once in the narrative.

**Child 2:** C'est une girafe (fem) et un éléphant (masc) qui jouent à la balle. La balle tombe dans l'eau. Le/la/le heu le garçon girafe (final answer masc) tombe dans l'eau aussi et là l'él/ heu la éléphant (fem) ramasse le ballon pis le girafe (masc) la girafe (fem) je veux dire s'en va au bord.

Scoring: 2 gender switches for 'girafe' and 1 gender switch for 'éléphant'. 3 gender switches total.

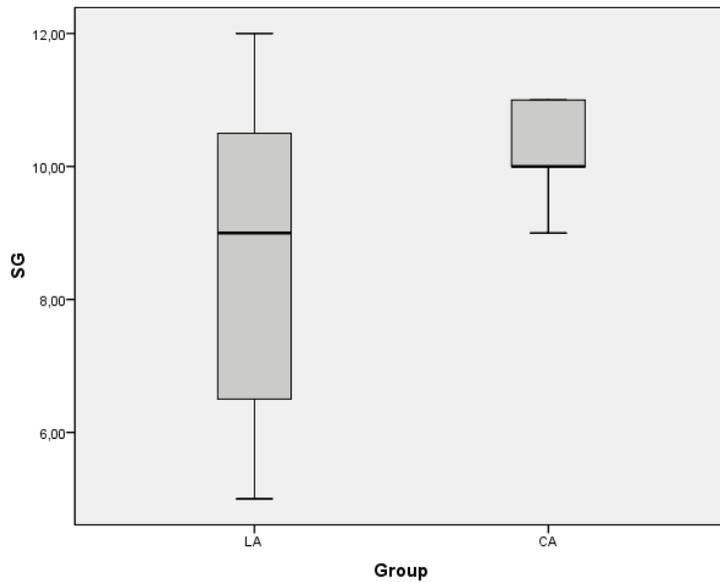
**Explanation:** At the beginning of the story 'éléphant' was identified as masculine and 'girafe' was identified as feminine. The child switches 'girafe' to masculine twice and 'elephant' to masculine once throughout the narrative. Stuttering (e.g.: le/la/le) is not considered a gender switch. To be considered a gender switch and not simply stuttering, the incorrect article had to be followed by the noun.

For all narratives, a first transcription was carried out by the first author. Twenty percent of the narratives were also transcribed and coded by a research assistant. The research assistant who transcribed the narrative was a literacy special educator in elementary schools. The research assistant was blind to the status of the children (typically developing or SLI). In the transcriptions, the reliability on a word-by-word basis was 88.89%. Instances in which transcriptions differed were solved through discussion. The written transcriptions were used for the Story Grammar and the gender switch coding. The Story Grammar and the gender switch coding were carried out by the first author. Twenty percent of the narratives were coded by another research assistant who was also a literacy special educator in elementary schools. The second research assistant was blind to the purpose of the study and the clinical group involved. Reliability, measured on a code-by-code basis, was 98.25% for Story Grammar and 100% for gender switch. The very few instances in which coding differed were solved through discussion.

## Results

Is the ENNI an adequate tool to measure the developmental changes in Story Grammar scores in narratives produced by typically-developing French-speaking children?

According to the Levene test, the variance between the two groups of children was significantly different ( $p = .001$ ) for the Story Grammar simple story, but not for



**Figure 1:**  
Box plot of Story Grammar simple story scores for the CA and the LA group.

**Note:**  
LA = Language-Matched group;  
CA = Age-matched group;  
SG = Story Grammar

**Table 3**  
Descriptive Statistic and t-test Results for Narrative Measures by Typically-Developing Groups

	LA (n=12)		CA (n=12)		<i>T</i>	p-value (1-tailed)	Effect size <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Age	6.8	0.8	9.0	1.0			
Story Grammar-simple story	8.75 <sup>a</sup>	2.26	10.25 <sup>a</sup>	0.62	2.22	0.023	
Story Grammar-complex story	22.42 <sup>a</sup>	4.91	25.92 <sup>a</sup>	3.47	2.02	0.028	0.71

**Note:** LA = Language-matched group; CA = Age-matched group. Inequality of variances was assumed for the Story Grammar simple story. Differences were assessed with t-test (df = 1, 22) for equal variances (df = 1, 12.65) and for unequal variances. Superscripts indicate differences that are significant at the .05 level. Effect size *d* was assessed using Cohen's *d* calculation.

the Story Grammar complex story ( $p = .507$ ). The Story Grammar scores for the simple story varied greatly for the younger group (with scores ranging between 5 and 12), whereas the scores for the older group varied much less (with scores ranging between 9 and 11). As illustrated in Figure 1, these results seem to indicate a ceiling effect at age nine for the simple story for the CA group.

It was hypothesized that the younger group would show lower scores than the older group, so a one-tailed significance test was used to measure significant differences between the LA and the CA group in Story Grammar scores. The t-tests between the two groups for the Story Grammar (simple and complex story) reached a significant level, indicating that younger children performed significantly lower than their older peers (see Table 3).

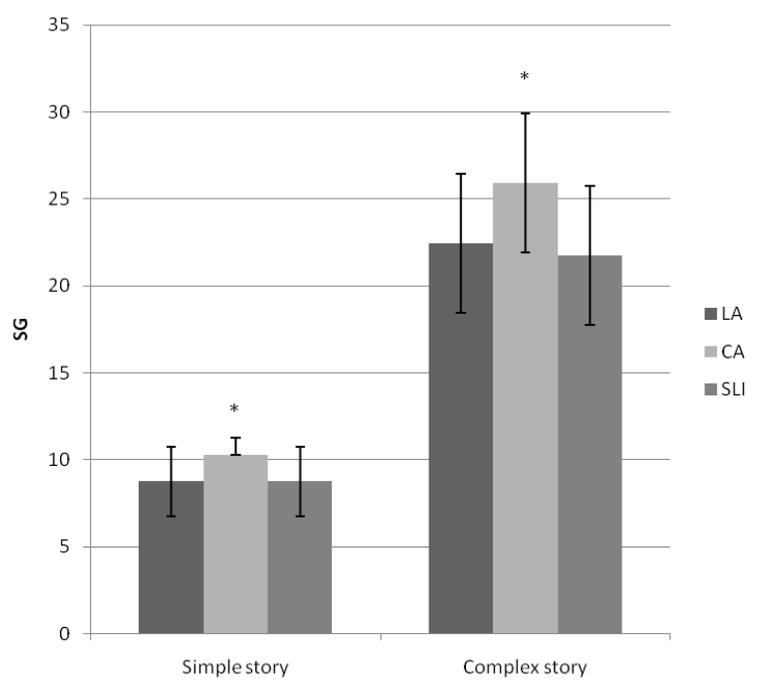
Can the ENNI potentially differentiate French-speaking children with SLI from their typically-developing peers?

The results from the ANOVA of Story Grammar

complex story between French-speaking children with and without SLI indicate that children with SLI have Story Grammar scores similar to those of their LA peers. Indeed, neither Story Grammar simple story, with  $F(2, 33) = 2.634, p = 1.000$ , or Story Grammar complex story, with  $F(2, 33) = 3.251, p = 0.707$ , could differentiate children with SLI from their LA peers. In contrast, children with SLI had scores significantly lower than their CA peers on Story Grammar simple story, with  $F(2, 33) = 2.634, p = 0.04$ , than on Story Grammar complex story, with  $F(2, 33) = 3.251, p = 0.024$  (see Figure 2).

Despite the power of the ENNI to discriminate French-speaking children with SLI from their CA peers in this study, the clinical use of the ENNI for this purpose cannot be considered before the availability of norms for a French-speaking population. Figure 3 presents the Story Grammar scores from this study, from the previously published study on Story Grammar scores of French-speaking children between the ages of four and six (Gagné & Levy, 2006) and the norms for English-speaking children published

**Figure 2:**  
Story Grammar scores comparison between LA, CA and SLI for the simple and the complex story.



**Note:** SLI = Specific Language Impaired group; LA = Language-Matched group; CA = Age-matched group. Differences were assessed using a univariate one-way analysis of variance (df = 2, 33);

\* indicates planned comparisons that are significant at the .05 level. Bars represent standard deviations.

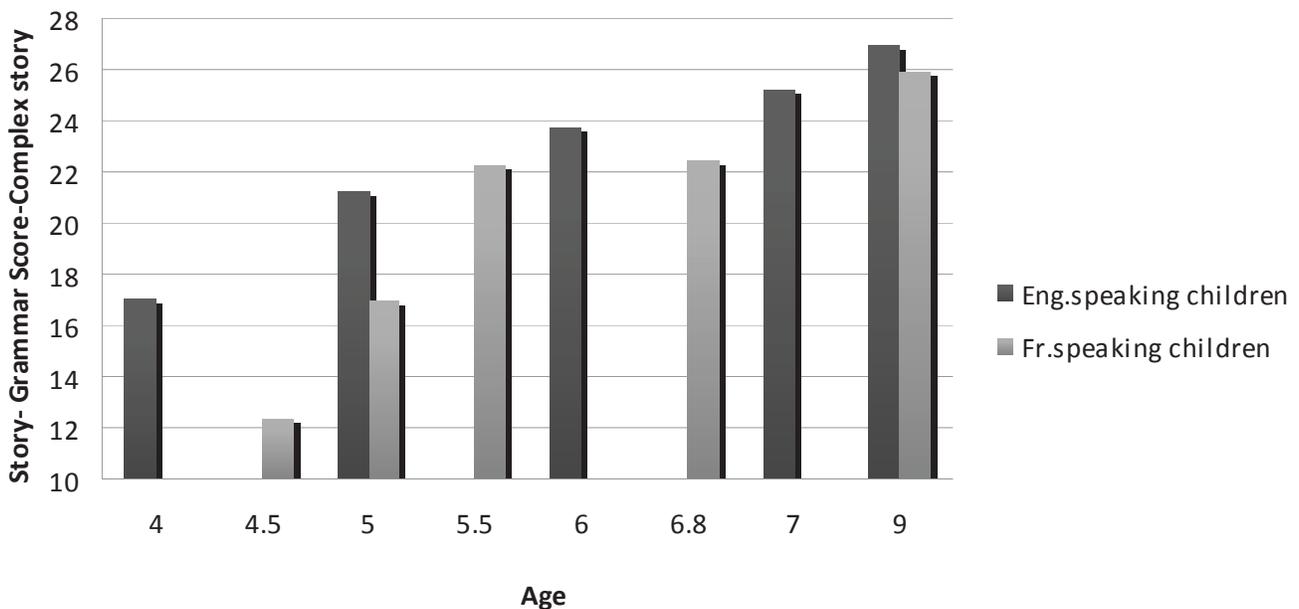
on the ENNI website (Schneider, Hayward and Dubé, 2004). Figure 3 reveals that there seems to be a general tendency for French-speaking scores to be lower than English-speaking scores.

### The Impact of Gender Switch on Story Grammar

In general, one-third to one-half of children switched the gender of a character or object at least once during the narrative. The younger group of typically-developing children made more gender switches than the nine-year-old children with SLI and the nine-year-old typically-developing children (see Table 4). However, none of the differences reached statistical significance. The number of children producing gender switches was very similar within each group. Thus, it does not appear that children with SLI make more gender switches than typically-developing children.

The range of scores and the mean scores in the Story Grammar complex story of children who made no gender switches, one gender switch, two gender switches and three gender switches were tabulated to evaluate the extent to which gender switches could potentially alter performance at the Story Grammar level (see Table 5). The data shown in this table confirm that gender switches were not related to the children's language status or to their narrative production abilities. The latter was confirmed by the absence of a significant negative correlation between Story Grammar scores and the number of gender switches produced ( $r(36) = -.21, p = .9$ ).

**Figure 3:**  
Overview of Story Grammar scores of French-speaking and English-speaking children (current study; Gagné & Levy, 2006; Schneider, Hayward & Dubé, 2006)



**Table 4**  
Descriptive Scores and ANOVA of Gender-Switches per Group

	SLI (N=12)		LA (N=12)		CA (N=12)		F	p-value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Number of gender-switches	0.5	0.91	0.83	1.03	0.5	0.67	0.571	0.570
Number of children having made gender switches (%)	4		6		5			
	33		50		41			

**Note:** SLI = Specific Language Impaired group; LA = Language-Matched group; CA = Age-matched group.

**Table 5**  
Story Grammar Performance Scores per Group Based on the Number of Gender-Switches

Group	N	N per experimental group			Story Grammar			
		<i>SLI</i>	<i>LA</i>	<i>CA</i>	<i>M</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
0 gender switches	21	8	6	7	23.19	13	29	4.97
1 gender switch	10	3	3	4	24.00	14	30	4.62
2 gender switches	3	0	2	1	23.67	22	26	2.08
3 gender switches	2	1	1	0	21.50	18	25	4.94

**Note:** SLI = Specific Language Impaired group; LA = Language-matched group; CA = Age-matched group; M = mean; SD = standard deviation

## Discussion

### Is the ENNI an adequate tool to measure the developmental changes in Story Grammar scores in the narratives produced by typically-developing French-speaking children?

The ENNI captured the Story Grammar score differences between the two typically developing groups. The Levene test for equal variance seems to indicate a ceiling effect at the age of nine for the Story Grammar simple story. The possibility of a ceiling effect will have to be investigated in a larger-scale study. Nevertheless, the value of the standard deviation (0.62) encountered by the CA group in this study remains surprising, considering the mean of the group (10.25) and the maximum score of the Story Grammar simple story (13). If the ceiling effect at a lower value than the maximum score is confirmed in future studies, this could be an indication that competent French-speaking story tellers may never achieve a perfect Story Grammar performance the way competent English-speaking story tellers do. Future studies on the normalization and on the use of the ENNI in French should include competent young adult story tellers to measure whether the maximum score on Story Grammar can be achieved for both the simple and the complex story.

Significant differences were found between the

two typically-developing groups for the two stories. Unfortunately, the absence of a group consisting of eight-year-old typically-developing children limited a finer-grained analysis between the ages of seven and eight, and between eight and nine. Therefore, it was not possible for us to determine whether the significant developmental trend found between the ages of seven and nine was due to a developmental trend until the age of eight followed by a ceiling between the ages of eight and nine, or to a continuous developmental trend between seven and nine. However, unlike the Story Grammar scores for the simple story, the Story Grammar scores for the complex story showed similar variations within the group of seven-year-olds and within the group of nine-year-olds. Therefore, it is likely that progress in Story Grammar persists until age nine for the complex story in typically-developing French-speaking children. However, this hypothesis needs to be confirmed in a normalization study that includes all age groups and more participants within each age group.

### Can the ENNI potentially differentiate French-speaking children with SLI from their typically-developing peers?

SLI Story Grammar scores were significantly lower than CA Story Grammar scores for both the simple and the complex stories. The significant difference found between

the two groups for the simple story at age nine is surprising since, in Schneider, Hayward & Dubé (2006), the same measure at the same age was not found to differentiate typically-developing children from children with SLI. This result raises numerous questions that can only be resolved by a larger-scale normalization study. In the meantime, we propose two alternative speculative explanations.

First, the difference in the scores on Story Grammar complex story of children with and without SLI is significant in French-speaking children because the narrative developmental path is different for this population of learners. Indeed, it might be the case that French-speaking children of Quebec have significant Story Grammar development at later ages than English-speaking children. Consequently, because French-speaking children's Story Grammar is still developing at age nine, Story Grammar can be used to differentiate between children with and without SLI at this age, whereas, for the English-speaking population included in Schneider, Hayward and Dubé's study (2006), Story Grammar development levelled off at the age of eight, and therefore, at the age of nine, children with SLI were more likely to have reached the performance of their typically-developing peers who have not made significant progress between the ages of eight and nine. The normalization study proposed above should carefully analyze the Story Grammar scores of French-speaking children at the ages where they were found to level off in English-speaking children, to determine whether the developmental path is similar for the two populations at this specific age range.

The second speculative theory that might explain the discrepancies between French-speaking and English-speaking children concerns the interdependence of syntax and Story Grammar. As discussed earlier, the use of complex syntactic structures tends to negatively impact Story Grammar scores (Gagné & Crago, 2008; in prep.). Certain languages, such as Spanish, make use of subordinate clauses to introduce the characters, whereas other languages, such as German, tend to use simple clauses or coordinate clauses (Berman & Slobin, 1994). If typical ways to express certain Story Grammar units affect Story Grammar performances, we might expect quantitative differences in Story Grammar of French-speakers and English-speakers. However, this explanation is speculative, and only a detailed comparison of the linguistic structures used for the different components of Story Grammar, such as the introduction of the characters, settings, attempts and conclusion in French and English storytellers would enable us to identify quantitative differences.

### **The Impact of Gender Switch on Story Grammar**

This study attempted to investigate the potential influence of gender switch on Story Grammar in French-speaking children. It was found that more than one-third of children make gender switches throughout their storytelling. Younger children were found to produce more gender switches than older children with or without SLI, although the difference never reached a significant level.

Gender switches did not affect any group in particular, and the number of gender switches had no effect on Story Grammar scores. In summary, French-speaking children make gender switch errors; however, the impact of these errors on Story Grammar performance is trivial, and the use of the set of pictures designed for English-speaking children is adequate for the evaluation of Story Grammar in French-speaking children.

The ENNI includes, in addition to the Story Grammar analysis, a First Mention analysis. The First Mention analysis measures the referential expressions that English-speaking children use to introduce characters and objects when telling a story. The referential expressions are deemed adequate if they are appropriate for the listener's knowledge, the shared physical context and the preceding linguistic context. For example, an indefinite noun phrase such as 'an elephant' or a proper name was considered appropriate for a new character in a story, while 'the elephant' was only considered appropriate for mentioning the character later on in the story. First Mention analysis was beyond the scope of this study, but the results presented in this study raise some concerns about the First Mention measure. Our first concern regards the scoring protocol. Our scoring protocol accepted both the feminine and the masculine forms as correct. We believe both forms should also be accepted for the First Mention analysis, and only the use of an indefinite pronoun for a new character (either feminine or masculine) should be penalized. Our second concern regards the impact of gender ambiguity on First Mention performance. As stated above, many children used 'monsieur' or 'madame' before the noun to clarify the gender of the character. The use of this strategy made the interpretation of First Mention results too complex for the data to be used in this current study. Indeed, in Quebec French the article 'la' or 'le' often precedes a noun such as madame or monsieur. As a result, children use *lamadame* or *lemonsieur* as nouns rather than as a definite article+noun. The extent to which this language characteristic affects the validity of the First Mention measure will need to be studied in detail in other studies. If future results find such a significant impact, a new set of pictures will have to be designed to use the ENNI to measure referencing.

A number of different issues that are beyond the scope of this study were raised. Among them is the need to investigate how Story Grammar elements are typically expressed in different languages. Future research should compare the linguistic structures for each component of Story Grammar in proficient adult story-tellers to evaluate whether linguistic structures vary for some of these components. Another limitation of this study is the small number of participants included. Our sample size did not allow the inclusion of social factors that might interact with narrative abilities, such as social economic status, literacy environment and special school services. A normalization study that includes more participants per group should also integrate into its design the study of social factors known to impact literacy development. Also, the limited number of participants included in each group increases the chances

that they were not truly representative of the norm. This is especially the case for the group of children with SLI, who all attended special schools. Children schooled in regular and special classrooms and the number of boys and girls included within each group should be controlled in future studies.

### Conclusion

The results of this study define the possibilities and the limits for the use of the ENNI with the school-aged French-speaking population of Quebec. With regard to Story Grammar, developmental changes were observed between the ages of seven and nine for the simple and the complex story. In addition, the two measures were found to differentiate TD French-speaking children from age-matched children with SLI until the age of nine years. One of the expected limitations of the ENNI, the possibility that gender switch influenced Story Grammar, was not found to be true. Considering these results, the ENNI appears to be a promising tool to evaluate the Story Grammar of French-speaking children of Quebec. Nevertheless, the use of the ENNI to measure Story Grammar in a French-speaking population will require the availability of norms established with this population. In addition, a complementary exploratory study on gender-confusion effects on First Mention should be designed to confirm the appropriateness of the ENNI to evaluate referencing.

### References

- Berman, R. A., & Slobin, D. I. (Eds.). (1994). *Relating-events in narrative: A crosslinguistic developmental Study*. Hillsdale: Lawrence Erlbaum.
- Brown, L., Sherbenou, R., & Johnsen, S. K. (2002). *Toni-3: Test of non-verbal intelligence*. Austin, TX: Pro-Ed.
- Gagné, A., & Crago, M. (2010). Quand les enfants bredouillent, le jugement s'embrouille. Paper to be presented at the Association Francophone pour le savoir (ACFAS). Montreal, Canada.
- Gagné, A., & Crago, M. (2008). *Tell me more, tell the baby: The impact of listener adaptation on Story Grammar performance in children with Specific Language Impairment*. Poster presented at the International Association for Child Language Development. Edinburgh, Scotland.
- Gagné, A., & Crago, M. (in prep). The interdependence of syntax and Story Grammar in narrative production of children.
- Gagné, A., & Levy, J. (2006). Narrative development in normally developing children aged between four and six. Poster presented at the Joint conference of the American Association of Applied Linguistics and the Canadian Association of Applied Linguistics. Montreal, Canada.
- Gillam, R. B., & Pearson, N. (2004). *Test of Narrative Language*. Austin, TX: Pro-Ed.
- Khoms, A. (2001). *Évaluation du langage oral*. Paris: Les Éditions du centre de Psychologie Appliquée.
- Leonard, L. B. (Ed.). (1998). *Children with specific language impairment*. Cambridge, MA: MIT Press.
- MacWhinney, B. (2000). *The CHILDES project: Tools for analyzing talk. Third Edition*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Mandler, J. M., Scriver, S., Cole, M., & Deforest, M. (1980). Cross-cultural invariance in story recall. *Child Development*, 51, 19-26.

Paradis, J., & Crago, M. (2001). The morphosyntax of specific language impairment in French: An extended optional default account. *Language Acquisition*, 9, 269-300

Sachs, J., & Devin, J. (1976). Young children's use of age appropriate speech styles in social interaction and role-playing. *Journal of Child Language*, 3, 81-98.

Schneider, P., Dubé, R. V., & Hayward, D. (2004). The Edmonton Narrative Norms Instrument. Retrieved April 1, 2008 from: <http://www.rehabmed.ualberta.ca/spa/enni/>.

Schneider, P., Hayward, D., & Dubé, R. V. (2006). Storytelling from pictures using the Edmonton Narrative Norms Instrument. *Journal of Speech Language Pathology and Audiology*, 30, 224-238.

Shatz, M., & Gelman, R. (1973). The development of communication skills: Modifications in the speech of young children as a function of listener. *Monographs of the Society for Research in Child Development*, 38 (5, Serial number 152).

Statistics Canada (2010). Familles monoparentales, proportion de toutes les familles de recensement occupant un logement privé, Canada, provinces, territoires et régions socio-sanitaires. Retrieved February 15, 2010 from: <http://www.statcan.gc.ca>.

Thordardottir, E., Kehayia, E., Lessard, N., Majnemer, A., Mazer, B., Sutton, A., & Trudeau, N. (2003-2008). Troubles spécifiques du langage: développement d'outils d'évaluation. Unpublished raw data.

### Footnote

Examples of gender switches were taken from the simple story for editorial purposes. The same coding protocol was used for the complex story.

### Acknowledgements

The authors would like to thank Dr. Susan Rvachew, Dr. Vincent Gracco and Dr. Elin Thordardottir, who have provided feedback on previous versions of the manuscript.

The authors thank those who kindly accepted to participate in the study, as well as Madeleine Plante, Anne-Marie Guillemaine, and Marie-Eve Bérubé for their help in task design and coding.

This research was supported by the Canadian Social Sciences and Humanities Research Council (SSHRC) and the Centre for Research on Language, Mind and Brain, Montréal.

Finally, the authors thank Élisabeth Déry and La Commission scolaire des Navigateurs for their great collaboration during the recruitment.

### Author Note

Correspondance concerning this article should be addressed to Andréanne Gagné, Département de didactique des langues, Université du Québec à Montréal, P.O. Box 8888 - Downtown, H3C 3P8. Email: [gagne.andreanne@uqam.ca](mailto:gagne.andreanne@uqam.ca).

**Received: September 18, 2009**

**Accepted: April 7, 2010**



## Appendix 1

### French adaptation of Story Grammar scoring procedure

Nom de l'enfant: \_\_\_\_\_

Date de naissance: \_\_\_\_\_

Date de l'expérimentation: \_\_\_\_\_

Personnage	Réponses acceptables	Réponses inacceptables	Résultat
Personnage 1 (P1)	<ul style="list-style-type: none"> <li>• Girafe</li> <li>• Vache</li> <li>• Garçon</li> <li>• Cheval</li> </ul> <p><i>Le personnage 1 est crédité même si il est décrit plus tard dans la narration</i></p>	<ul style="list-style-type: none"> <li>• Les pronoms</li> <li>• Ça</li> <li>• Utilisation du pluriel</li> </ul>	0 1
Personnage 2 (P2)	<ul style="list-style-type: none"> <li>• Éléphant</li> <li>• La fille</li> <li>• Madame</li> </ul> <p><i>Le personnage 2 est crédité même si il est décrit plus tard dans la narration</i></p>	<ul style="list-style-type: none"> <li>• Les pronoms</li> <li>• Ça</li> <li>• Utilisation du pluriel</li> </ul>	0 1
Contexte	<p>Le contexte doit décrire l'environnement tel qu'il est avant l'événement perturbateur</p> <ul style="list-style-type: none"> <li>• Ils sont autour d'une piscine/ à la piscine</li> <li>• Un (ou les deux personnages) jouent avec une balle/une pomme/un chapeau</li> </ul>	<i>Tombé dans la piscine n'est pas acceptable pour le contexte, mais est crédité comme événement perturbateur</i>	0 1
Événement perturbateur	<ul style="list-style-type: none"> <li>• Tombé/jeté dans l'eau/la piscine</li> <li>• La balle est dans l'eau</li> <li>• Ils voient la balle</li> </ul>		0 2
Réaction introspective	<ul style="list-style-type: none"> <li>• Il a peur (Ils ont peur)</li> <li>• Il est triste (Ils sont tristes)</li> <li>• Il veut aller chercher la balle (ils veulent aller chercher la balle)</li> </ul>	<ul style="list-style-type: none"> <li>• Il veut aller nager (ils veulent aller nager)</li> <li>• P2 dit: Regarde ce qui est arrivé!</li> </ul>	0 1
Planification de la solution	<ul style="list-style-type: none"> <li>• P1 décide d'aller chercher la balle</li> <li>• P1 pense qu'elle est capable d'aller chercher la balle</li> </ul>	<i>L'enfant ne doit pas exprimer l'action, mais plutôt la planification de l'action</i>	0 1

Personnage	Réponses acceptables	Réponses inacceptables	Résultat
Tentative	<ul style="list-style-type: none"> <li>• P1 va chercher le ballon</li> <li>• P1 nage pour aller chercher la balle</li> <li>• P1 essaie de chercher la balle</li> </ul>	<ul style="list-style-type: none"> <li>• P1 nage/saute dans l'eau</li> </ul> <p><i>La réponse n'est pas acceptable si l'enfant décrit une action qui n'a pas comme objectif d'aller chercher la balle</i></p>	0 2
Résultat de la tentative	<ul style="list-style-type: none"> <li>• P1 attrappe la balle/le ballon</li> <li>• P1 donne la balle à P2</li> <li>• P1 a sauvé la balle de P2</li> </ul>	<ul style="list-style-type: none"> <li>• P2 donne la balle à P1</li> </ul>	0 2
Réaction de la girafe (P1)	<ul style="list-style-type: none"> <li>• P1 est contente/sourit</li> <li>• P1 dit merci</li> </ul>	<ul style="list-style-type: none"> <li>• P1 est mouillé et a froid</li> </ul>	0 1
Réaction de l'éléphant (P2)	<ul style="list-style-type: none"> <li>• P2 est content/sourit</li> <li>• P2 dit merci</li> </ul>	<ul style="list-style-type: none"> <li>• P2 prend la balle</li> </ul>	0 1
Réaction des 2	<ul style="list-style-type: none"> <li>• Ils sont amoureux</li> <li>• Ils sont contents</li> </ul> <p>Cette réaction est créditée seulement si l'une des réactions (P1 ou P2) n'est pas nommée</p> <p>Il ne devrait pas y avoir plus de 2 réactions au total</p>	<ul style="list-style-type: none"> <li>• Tout est parfait</li> </ul>	( 0 1 )
Total			/13

## Appendix 2

## ENNI (French) Story Grammar scoring criterion COMPLEX STORY

Personnage	Réponses acceptables	Réponses inacceptables	Résultat
Personnage 1 (P1)	<ul style="list-style-type: none"> <li>• Girafe</li> <li>• Vache</li> <li>• Garçon</li> <li>• Cheval</li> </ul> <p><i>Le personnage 1 est crédité même si il est décrit plus tard dans la narration</i></p>	<ul style="list-style-type: none"> <li>• Les pronoms</li> <li>• Ça</li> <li>• Utilisation du pluriel</li> </ul>	0 1
Personnage 2 (P2)	<ul style="list-style-type: none"> <li>• Éléphant</li> <li>• La fille</li> <li>• Madame</li> </ul> <p><i>Le personnage 2 est crédité même si il est décrit plus tard dans la narration</i></p>	<ul style="list-style-type: none"> <li>• Les pronoms</li> <li>• Ça</li> <li>• Utilisation du pluriel</li> </ul>	0 1
Contexte	<p>Le contexte doit décrire l'environnement tel qu'il est avant l'événement perturbateur</p> <ul style="list-style-type: none"> <li>• Ils sont autour d'une piscine/ à la piscine</li> <li>• Un (ou les deux personnages) jouent avec une balle/une pomme/un chapeau</li> <li>• Ils jouent</li> <li>• Ils ont/tiennent un avion</li> <li>• Un demande à l'autre de jouer</li> </ul>		0 1
Événement perturbateur	<ul style="list-style-type: none"> <li>• P1 joue avec l'avion</li> <li>• P1 fait voler l'avion</li> <li>• P1 montre/ donne l'avion</li> </ul>	<ul style="list-style-type: none"> <li>• Si P2 est le sujet du verbe</li> </ul>	0 2
Réaction introspective	<ul style="list-style-type: none"> <li>• P2 aimerait avoir l'avion</li> </ul>	<ul style="list-style-type: none"> <li>• P2 prend l'avion</li> </ul>	0 1
Planification de la solution	<ul style="list-style-type: none"> <li>• P1 pense qu'elle devrait prêter l'avion</li> <li>• P2 décide de prendre l'avion</li> <li>• P2 pense que c'est à son tour de jouer avec l'avion</li> </ul>	<p><i>L'enfant ne doit pas exprimer l'action, mais plutôt la planification de l'action.</i></p> <ul style="list-style-type: none"> <li>• P2 prend l'avion</li> </ul>	0 1
Tentative	<ul style="list-style-type: none"> <li>• P2 prend l'avion</li> <li>• P2 fait tourner l'avion</li> <li>• P2 joue avec l'avion</li> <li>• C'est le tour de P2 de prendre l'avion</li> <li>• P1 donne/prête l'avion à P2</li> </ul>		0 2
Résultat de la tentative	<ul style="list-style-type: none"> <li>• L'avion tombe dans l'eau/dans la piscine</li> <li>• P2 échappe/jette l'avion</li> </ul>		0 2
Réaction de la girafe (P1)	<ul style="list-style-type: none"> <li>• P1 est triste/fâché</li> <li>• P1 pleure dans sa tête</li> </ul>	<ul style="list-style-type: none"> <li>• P1 regarde l'avion</li> </ul>	0 1

<b>Personnage</b>	<b>Réponses acceptables</b>	<b>Réponses inacceptables</b>	<b>Résultat</b>
Réaction de l'éléphant (P2)	<ul style="list-style-type: none"> <li>• P2 a peur de se faire chicaner</li> <li>• P2 est triste</li> <li>• P2 s'excuse</li> </ul>	P2 regarde l'avion P2 dit oups!	0 1
Réaction des 2	<p>Ils sont mécontent/ pas contents</p> <p>Cette réaction est créditée seulement si l'une des réactions (P1 ou P2) n'est pas nommée</p> <p>Il ne devrait pas y avoir plus de 2 réactions au total</p>		( 0 1 )
Personnage 3 (P3)	<ul style="list-style-type: none"> <li>• Sauveteur</li> <li>• Autre éléphant</li> <li>• Le monsieur</li> <li>• Le papa</li> </ul>	<ul style="list-style-type: none"> <li>• Les pronoms</li> <li>• Ça</li> <li>• Utilisation du pluriel</li> </ul>	0 1
Événement perturbateur	<ul style="list-style-type: none"> <li>• P3 arrive/vient</li> <li>• P2 voit P3</li> <li>• P3 voit l'avion dans l'eau</li> <li>• P3 demande à P1/P2 qu'est-ce qui s'est passé</li> </ul>		0 2
Réaction introspective	<ul style="list-style-type: none"> <li>• P3 est fâché</li> <li>• P3 veut aider</li> <li>• P1/P2 espère que P3 peut les aider</li> </ul>	<ul style="list-style-type: none"> <li>• P3 va les aider</li> </ul>	0 1
Planification de la solution	<ul style="list-style-type: none"> <li>• P1/P2 demande de l'aide</li> <li>• P1/P2 explique ce qui s'est passé</li> <li>• P1/P2 demande à P3 d'aller chercher l'avion</li> <li>• P3 décide de les aider</li> </ul>	<ul style="list-style-type: none"> <li>• P1/P2 parle à P3 sans préciser le sujet de la conversation</li> </ul>	0 1
Tentative	<ul style="list-style-type: none"> <li>• P3 essaie de chercher l'avion</li> <li>• P3 s'étire de toutes ses forces pour avoir l'avion</li> </ul>	<ul style="list-style-type: none"> <li>• P3 attrape l'avion</li> </ul>	0 2
Résultat	<ul style="list-style-type: none"> <li>• P3 n'est pas capable de prendre l'avion</li> <li>• L'avion est trop loin</li> <li>• L'avion coule</li> </ul>		0 2
Réaction de P1	<ul style="list-style-type: none"> <li>• P1 est fâché/triste/inquiet/pleure dans sa tête</li> </ul>	<ul style="list-style-type: none"> <li>• P1 regarde l'avion</li> </ul>	0 1
Réaction de P2	<ul style="list-style-type: none"> <li>• P2 est inquiet/se sent mal/coupable</li> <li>• P2 s'excuse</li> </ul>		0 1
Réaction de P3	<ul style="list-style-type: none"> <li>• P3 est déçu</li> </ul>	<ul style="list-style-type: none"> <li>• P3 hausse les épaules</li> <li>• P3 dit qu'il n'est pas capable</li> </ul>	0 1

Personnage	Réponses acceptables	Réponses inacceptables	Résultat
Réaction de l'ensemble des personnages	<ul style="list-style-type: none"> <li>Ils sont déçus/se sentent mal/tristes/inquiets</li> </ul> <p>Cette réaction est créditée seulement si l'une des réactions (P1/P2/P3) n'est pas nommée</p> <p>Il ne devrait pas y avoir plus de 3 réactions au total</p>		( 0 1 )
Personnage 4 (P4)	<ul style="list-style-type: none"> <li>L'autre sauveteur</li> <li>L'autre éléphant</li> <li>L'autre personne</li> <li>La maman/La madame</li> </ul>	<ul style="list-style-type: none"> <li>Les pronoms</li> <li>Ça</li> <li>Utilisation du pluriel</li> </ul>	0 1
Événement perturbateur	<ul style="list-style-type: none"> <li>P4 arrive/vient</li> <li>P4 a un filet</li> </ul>	<ul style="list-style-type: none"> <li>P4 va aider</li> </ul>	0 2
Réaction introspective	<ul style="list-style-type: none"> <li>P4 sait comment aller chercher l'avion</li> <li>P4 offre son aide</li> <li>P4 veut aider</li> </ul>	<ul style="list-style-type: none"> <li>P4 aide</li> </ul>	0 1
Planification de la solution	<ul style="list-style-type: none"> <li>P4 décide d'essayer</li> <li>P4 a une idée</li> <li>P1/P2/P3 demande à P4 d'aller chercher l'avion</li> </ul>	<ul style="list-style-type: none"> <li>P4 dit: je vais chercher l'avion</li> </ul>	0 1
Tentative **	<ul style="list-style-type: none"> <li>P4 va chercher l'avion</li> <li>P4 essaie d'attraper l'avion</li> <li>P4 attrape l'avion</li> </ul>		0 2
Résultat de la tentative **	<ul style="list-style-type: none"> <li>P4 donne l'avion à P1</li> <li>P1 a l'avion</li> </ul>		0 2
Réaction de P1	<ul style="list-style-type: none"> <li>P1 est contente/excitée/heureuse-consolée</li> <li>P1 dit merci</li> </ul>		0 1
Réaction de P2	<ul style="list-style-type: none"> <li>P2 est content/soulagé</li> <li>P2 est consolé</li> <li>P2 dit merci</li> </ul>		0 1
Réaction de P4	<ul style="list-style-type: none"> <li>P4 est contente/fière</li> </ul>		0 1
Réaction de l'ensemble des personnages	<ul style="list-style-type: none"> <li>Ils sont heureux/contents</li> <li>Ils disent merci</li> </ul> <p>Cette réaction est créditée seulement si l'une des réactions (P1/P2/P4) n'est pas nommée</p> <p>Il ne devrait pas y avoir plus de 3 réactions au total</p>		( 0 1 )
<b>Total</b>			<b>/37</b>

\*Pour le segment de cette histoire (et de cette histoire seulement), deux choses peuvent être acceptées: la tentative d'aller chercher l'avion ou le fait que P4 ait réussi à aller chercher l'avion.

\*\* Pour le segment de cette histoire, P4 doit donner l'avion à la girafe (et non à l'éléphant) parce que le but ultime de cette histoire est de retourner l'avion à la girafe.