INTERACTIVE READINGS OF CHILDREN'S LITERATURE IN DAY CARE: MICROGENETIC ANALYSIS OF THE SEMIOPICTORIAL CONSTRUCTION

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Abstract. In line with educational issues involved in emergent literacy practices in preschool, in particular those concerning comprehension processes, this paper focuses on *picture-based narrative comprehension* during an interactive reading session of a wordless picture book, involving a group of children aged three and their teacher. Children are asked to make inferences about the meaning and outcome of the story, a procedure which gradually elicits their responses on how events link together, thus enhancing their capacity to use prior and implicit knowledge to build the story meaning. Moreover, this study highlights the importance of *interaction* for developing comprehension.

Data collected was analysed following didactic microgenesis, an analytical approach showing that knowledge built during interaction depends on the joint construction of a *zone of common meaning* by which teacher and children try to adjust to each other. In order to help the process of merging different meanings of the story built online, a text written by researchers, following the narrative structure of the story, was read by the teacher after the picture-based reading. This led us to examine through interactional analysis which semiotic cues were used during recall on the following day, as an additional measure of knowledge construction.

Keywords: Emergent literacy, Narrative comprehension, Semiopictorial knowledge, Dialogic reading, Didactic Microgenesis, Interaction.

Chinese
[Translation Shek Kam Tse]

日托兒童文章的互動閱讀

半圖式建構的微觀發生之分析

摘要：與當前重視學前兒童讀寫訓練特別是有關綜合理解過程的教育熱點相一致，本篇文章關注了三歲兒童和他們的老師在無字圖畫書的互動閱讀環節中*對於圖片的敘述理解*情況。通過要求幼

兒推論故事的含義和結論逐漸引導他們留意事物之間的關聯，進而促進他們運動高級間接的知識
來建立故事的含義。此外，本研究強調了互動對於發展幼兒理解能力的重要性。

數據搜集後採用微觀發生方法進行分析，顯示了互動中建立的知識取決於師生之間的共通意義區
的共同建構。由於現場可能建構出不同故事的含義，研究者根據故事的敘述結構寫出一篇課文，
由老師在圖片閱讀之後讀給幼兒。這使得我們可以在第二天運用提示語言進行互動分析從而進一
步檢查建構的知識。

關鍵詞：讀寫萌發，敘述性理解，半圖式知識，對話式閱讀，教導上的微觀發生 ，互動

Dutch
[Translation Tanja Janssen]
TITEL: Interactief lezen van kinderliteratuur in de kinderopvang; Microgenetische analyse van semi-pictografische kennisconstructie
SAMENVATTING: Dit artikel haakt in op onderwijskundige kwesties in de voorschoolse praktijk van ontluikende geletterdheid, in het bijzonder op begripsprocessen. Het is gericht op het begrijpen van verha-len die gebaseerd zijn op beelden, tijdens interactieve leessessies rond een prentenboek, waaraan een groep van driejarigen en hun leidster deelnamen. De kinderen werd gevraagd gevolgtrekkingen te maken over de inhoud en de afloop van het verhaal. De procedure lokte gaandeweg hun reacties uit over verban-den tussen gebeurtenissen in het verhaal, om op die manier hun (impliciete) voorkennis te activeren en te laten gebruiken bij het betekenisverlenen aan het verhaal. Bovendien benadrukt dit onderzoek het belang van interactie voor begripsontwikkeling.
Verzamelde gegevens zijn geanalyseerd met behulp van didactische 'microgenesis'. Dit is een analytische benadering die laat zien dat de kennis, opgebouwd tijdens interacties, afhankelijk is van het gezamenlijk construeren van 'een zone van gedeelde betekenis', waarin de leidster en de kinderen zich aan elkaar aanpassen. Om het proces van samensmelten van verschillende betekenissen te stimuleren, las de leidster – na afloop van de prentenboek-sessie – een tekst voor die geschreven was door de onderzoekers. De tekst volgde de narratieve structuur van het prentenboek. De volgende dag werd het verhaal in herinnering geroepen. De interactie werd geanalyseerd om na te gaan welke aanwijzingen de kinderen gebruikten, als aanvullende maat voor kennisconstructie.
TREFWOORDEN: ontluikende geletterdheid, verhaalbegrip, semi-pictografische kennis, dialogisch lezen, didactische microgenesis, interactie.

Finnish
[Translation Katri Sarmavuori]
TITTELI: Päiväkodin lastenkirjallisuuden interaktiivinen lukeminen: semiokuvallisen konstruktion mik-rogeneettinen analyysi
ABSTRAKTI: Tämä esitys tähtää kuvaperustaisen narratiivin ymmärtämiseen sanattoman kuvakirjan interaktiivisen lukemissession aikana esikoulun alkavien kirjallisuuskäytäntöjen, varsinkin ymmärtämis-prosessien kannalta. Istunnossa oli kolmivuotiaita lapsia ja heidän opettajansa. Kun lapsia pyydetään päättelemään kertomuksen merkitystä ja lopputulemaa, tämä prosessi auttaa heitä yhdistämään tapahtu-mia lukemisen aikana lisäten heidän kapasiteettiaan käyttää aiempaa ja implisiittiä tietoa rakentaa ker-tomuksen merkitys. Lisäksi tämä tutkimus valottaa interaktion tärkeyttä ymmärtämisen kehittämiseksi.
Kerättyä tietoa analysoitiin didaktista mikrogeneesistä seuraten, analyyttista lähestymistapaa, joka näyt-tää, että interaktion aikana rakennettu tieto riippuu yhteisen merkityksen vyöhykkeen oheiskonstruktiosta, johon opettaja ja lapset yrittävät mukauttaa toisiaan. Kuvaan perustuvan lukemisen jälkeen opettaja luki vielä kertomuksen narratiivista analyysia noudattavan tutkijoiden kirjoittaman tekstin auttaakseen ker-tomuksen erilaisten merkitysten muodostamisen prosessia. Tämä johti meidät tutkimaan interaktioanalyy-sin kautta, mitä semioottisia vihjeitä käytettiin toistossa seuraavana päivänä tiedon konstruktion lisämitta-na.
AVAINSANAT: kehittyvä luku- ja kirjoitustaito, narratiivinen ymmärtäminen, semiokuvallinen tieto, dialoginen lukeminen, didaktinen mikrogeneesis, interaktio.

French
[Translation Christine Gamba]

TITRE : Lecture interactive d'ouvrages de littérature de jeunesse en institution de la petite enfance : analyse microgenetique de la construction sémiopicturale

RÉSUMÉ : En lien avec les enjeux pédagogiques liés aux pratiques de littéracie émergente dans le milieu préscolaire, en particulier celles concernant les processus de compréhension, cet article porte sur la compréhension du récit à base d'images pendant une session de lecture interactive d'un livre d'images sans texte, entre un groupe d'enfants âgés de trois ans et leur éducatrice.

Comme les enfants sont amenés à inférer sur le sens et le dénouement de l'histoire, cette démarche les incite à lier entre eux les événements du récit au fur et à mesure de la lecture, ce qui augmente ainsi leur capacité d'utiliser leurs connaissances antérieures et implicites pour construire le sens du récit. De plus, cette étude met en évidence l'importance de l'interaction pour développer la compréhension.

Les données recueillies ont été analysées suivant les microgenèses didactiques, une approche analytique mettant en évidence que la connaissance construite pendant l'interaction dépend de la construction collective d'une zone de compréhension commune où l'éducatrice et les enfants tentent de s'ajuster l'un à l'autre. Afin de faciliter le processus de convergence des différentes significations de l'histoire construites pendant la lecture interactive, un texte écrit par les chercheures, suivant la structure de récit de l'histoire, a été lu par l'éducatrice après la lecture sur la base d'images. Cela nous a conduit à examiner, à travers une analyse interactionnelle, quels indices sémiotiques ont été utilisés pendant le rappel de l'histoire le jour suivant, en tant que mesure supplémentaire de la construction de la connaissance.

MOTS-CLÉS: littéracie émergente, compréhension narrative, savoir sémiopictural, lecture interactive, microgenèses didactiques, interaction.

Greek
[Translation by Panatoya Papoulia Tzelepi]

Τίτλος: Διαδραστικές αναγνώσεις παιδικής λογοτεχνίας σε παιδικό σταθμό:
Μικρογενετική ανάλυση κατασκευής της σημειωτικής – εικονιστικής

Περίληψη: Σε συμφωνία με τα εκπαιδευτικά θέματα που σχετίζονται με πρακτικές ανάδυσης του γραμματισμού στην προσχολική ηλικία, ιδιαίτερα με όσες αφορούν στις διαδικασίες κατανόησης, αυτό το άρθρο εστιάζει στην κατανόηση αφήγησης βασισμένης σε εικόνες, κατά τη διάρκεια συνεδρίας αλληλεπιδραστικής ανάγνωσης βιβλίου με εικόνες, που αναφερόταν σε μια ομάδα τρίχρονων απιδιών και τη δασκάλα τους. Τα παιδιά κλήθηκαν να βγάλουν συμπεράσματα σχετικά με τη νοήματα και τα αποτελέσματα της ιστορίας, μια διαδικασία η οποία βαθμηδόν οδηγεί τις απαντήσεις τους σχετικά με το πώς τα γεγονότα συνδέονται, επομένως βελτιώνει την ικανότητά τους να χρησιμοποιούν την προηγούμενη και άρρητη γνώση για να κατασκευάσουν το νόημα της αφήγησης. Επιπλέον αυτή η μελέτη υπογραμμίζει τη σπουδαιότητα της αλληλεπίδρασης για την ανάπτυξη της κατανόησης. Τα δεδομένα που συλλέχθηκαν, αναλύθηκαν σύμφωνα με τη «διδακτική μικρογένεση» μια αναλυτική προσέγγιση που δείχνει ότι η γνώση που δομείται κατά την αλληλεπίδραση εξαρτάται από την από κοινού κατασκευή μιας «ζώνης κοινού νοήματος» με την οποία δασκάλα και παιδιά προσπαθούν να αλληλοπροσαρμοστούν. Για να βοηθηθεί η διαδικασία της συγχώνευσης διαφορετικών νοημάτων/σημασιών της ιστορίας που κατασκευάζεται on line, ένα κείμενο γραμμένο από τις ερευνήτριες που ακολουθεί την αφηγηματική δομή της ιστορίας, διαβάστηκε από τη δασκάλα μετά από το «διάβασμα» της ιστορίας από τις εικόνες. Αυτό μας οδήγησε να εξετάσουμε, μέσω αλληλεπιδραστικής ανάλυσης ποια σημειωτικά σήματα χρησιμοποιήθηκαν κατά την ανάκληση την επόμενη ημέρα, ως επιπρόσθετο μέτρο δόμησης της γνώσης.

Λέξεις κλειδιά: Ανάδυση γραμματισμού, κατανόηση αφήγησης, σημειωτική-εικονιστική γνώση, διαλογική ανάγνωση, διδακτική μικρογένεση, αλληλεπίδραση.

Italian
[Translation Manuela Delfino, Francesco Caviglia]

TITOLO: Lettura interattiva di libri per bambini nella scuola per l'infanzia: analisi micro-genetica della costruzione semiotico-visiva

SINTESI: In linea con le tendenze didattiche emergenti nelle scuole per l'infanzia riguardo alle pratiche di alfabetizzazione, in particolare di quelle che coinvolgono i processi di comprensione, questo contributo è centrato sulla comprensione della *narrativa basata su immagini* durante una sessione di lettura interattiva di un libro illustrato privo di testo, che ha coinvolto un gruppo di bambini di tre anni e il loro docente. Ai bambini è stato chiesto di formulare inferenze sul significato e sull'evoluzione del racconto, un processo che stimola progressivamente le loro risposte sui legami tra gli eventi, migliorando di conseguenza

la loro capacità di ricorrere alle conoscenze pregresse e a quelle implicite, in modo da costruire il significato della storia. Inoltre, questo studio evidenzia l'importanza dell'*interazione* per lo sviluppo della comprensione.

I dati raccolti sono stati analizzati attraverso un esame microgenetico della didattica, un approccio analitico che mostra come la conoscenza costruita durante l'interazione dipenda dalla costruzione di una *zona di significato comune*, in cui il docente e i bambini tentano di adattarsi gli uni agli altri. Per favorire il processo di unione dei diversi significati della storia costruita online, un testo scritto dai ricercatori, seguendo la struttura narrativa del racconto, è stato letto dal docente dopo la lettura basata sulle illustrazioni. Questo ci ha portati ad esaminare, attraverso l'analisi delle interazioni, quei segnali semiotici che sono stati usati durante il giorno successivo in fase di ricapitolazione, come mezzo aggiuntivo di ricostruzione della conoscenza.

PAROLE CHAIVE: alfabetizzazione emergente, comprensione narrativa, conoscenza semio-visiva, lettura dialogica, microgenetica della didattica, Interazione.

Polish

[Translation Elżbieta Awramiuk]

TITUŁ: INTERAKTYWNE CZYTANIE DZIECIĘCEJ LITERATURY W PRZEDSZKOLU: MIKRO-GENETYCZNA ANALIZA KONSTRUKCJI SEMIOPIKTORIALNEJ

STRESZCZENIE: Zgodnie z edukacyjnymi zaleceniami obejmującymi początkową naukę czytania i pisania w przedszkolu, a w szczególności z tymi, które dotyczą procesów rozumienia, niniejszy artykuł koncentruje się na rozumieniu narracji opartej na obrazkach podczas sesji interakcyjnego czytania książeczki obrazkowej (bez tekstu). Sesja obejmowała grupę trzyletnich dzieci i ich nauczycielkę. Dzieci były proszone o wyciąganie wniosków na temat znaczeń i zakończenia opowieści, a procedura, w której stopniowo uzyskiwano ich odpowiedzi na temat powiązań między poszczególnymi wydarzeniami, wzmacniała ich zdolność do wykorzystania wcześniejszej i nieuświadamianej wiedzy w celu budowania znaczenia opowieści. Co więcej, przeprowadzone badanie podkreśla znaczenie interakcji w rozwijaniu procesu rozumienia.

Uzyskane dane zostały zanalizowane w oparciu o dydaktyczną mikrogenezę, rodzaj analitycznego podejścia pokazującego, że wiedza budowana w czasie interakcji zależy od konstrukcji strefy wspólnego znaczenia, dzięki której nauczyciel i dzieci próbują dostosować się do siebie. Aby wspomóc proces łączenia różnych znaczeń opowieści budowanych na bieżąco, tekst pisany przez badaczy, rejestrujący strukturę narracji opowieści, został przeczytany przez nauczyciela po czytaniu obrazkowym. Pozwoliło to ustalić poprzez analizę interakcji, jakie semiotyczne wskazówki zostały użyte podczas powtórzenia następnego dnia, co dodatkowo wzbogaciło badanie procesu rozumienia (konstrukcji wiedzy).

SŁOWA-KLUCZE: początkowa nauka czytania i pisania, rozumienie narracji, wiedza przekazywana przez obraz, czytanie w dialogu, dydaktyczna mikrogenetyka, interakcje

Spanish

[Translation Ingrid Marquez]

TÍTULO: LECTURAS DE LITERATURA INFANTIL INTERACTIVAS EN UNA GUARDERÍA: ANÁLISIS MICROGENÉTICA DE LA CONSTRUCCIÓN SEMI-PICTÓRICA

RESUMEN: De acuerdo con asuntos educativos relacionados con las prácticas emergentes del alfabetismo a nivel preescolar, particularmente los que tienen que ver con los procesos de comprensión, este ensayo se enfoca en la *comprensión de una narrativa basada en dibujos* durante una sesión de lectura interactiva de un libro pictórico sin palabras, con un grupo de niños de tres años y su maestra. Puesto que a los niños se les pide inferir el significado y resolución del cuento, el procedimiento pide que liguen los eventos que se desencadenan conforme la lectura avance, mejorando su capacidad para usar conocimientos previos e implícitos para construir el significado del cuento. Además, este estudio demuestra la importancia de la *interacción* para llegar a la comprensión.

Los datos compilados fueron analizados de acuerdo con la microgénesis didáctica, un acercamiento analítico que muestra cómo los conocimientos construidos durante la interacción dependen de la construcción conjunta de una *zona de significado común* en la cual el maestro y los niños procuran ajustarse a los demás. Para facilitar el proceso de homogeneizar diferentes significados de un cuento construido en línea, la maestro leyó un texto escrito por investigadores y que sigue la estructura narrativa del cuento después de la lectura basada sólo en dibujos. Esto causó que examináramos, por medio del análisis interaccional, cuáles fueron las pistas semióticas utilizadas para recordar el cuento al otro día, como medida adicional de construir la información.

1. INTRODUCTION

There has been a growing concern over the past years among scholars about the relatively high ratio of poor results in international assessments on reading comprehension at the end of compulsory school education. Thus, one of the main issues involved in implementing early literacy practices in preschool is to ensure better academic success later during the school years. One major difficulty concerns the comprehension of implicit information, drawn from previous knowledge and from the text read, needed in order to build the meaning of the latter.

Thus, *narrative comprehension* appears to be an important skill to be fostered in preschool and involves the construction by the child of implicit causal relations between events in a picture book as the reading with an adult reader progresses. In particular, this study focuses on narrative comprehension in a setting using a wordless picture book with a narrative structure, as previous research has shown how much children rely on pictures as meaningful cues before formal instruction of reading begins.

Moreover, this research highlights the role of *interaction* as an important means of enhancing picture-based narrative comprehension (hence *semiopictorial knowledge*) as the children involved participate actively in the process of building the story meaning, with the help of their regular preschool teacher. *Didactic microgenesis* is used as an analytical tool which studies the online construction of semiopictorial knowledge. One of the major assumptions of this approach is that the construction of knowledge during interaction depends very much on the joint construction, by all partners involved, of a *zone of common meaning* which requires the latter to adjust the meanings they build as the reading progresses. One of the important issues this approach examines is how to measure how much knowledge children interiorise, once the reading session is over.

As the data collected from this research is in process, this contribution presents the recall of the story on the day following the interactive reading as a significant measure, and focuses particularly on the semiotic supports children rely on to build the story meaning.

Furthermore, this analytical tool was originally developed through field studies involving instructional environments in kindergarten and early primary school, where teachers received formal instruction on interactive reading practices. This contribution adapts this tool to an informal setting, and thus aims at length at enhancing interactive reading processes in preschool.

2. THEORETICAL FRAMEWORK

2.1 Narrative comprehension in preschool

Previous research has shown that narrative comprehension requires children to use prior and implicit knowledge to build the story meaning and accounts for more trou-

ble later on in school in reading comprehension than that of explicit knowledge drawn from the text being read (Makdissi and Boisclair, 2004a).

« Outside-in » use of implicit information, drawn from prior world experience and from previous readings of story books as well as from the actual story being read, allows the reader to build the story frame and to structure text comprehension as the child gradually becomes an expert reader (Fayol, 2004; Whitehurst & Lonigan, 1998). More specifically, the child builds the story meaning and its outcomes by making inferences on the latter as the reading progresses (Saada-Robert, 2003), namely by linking events through a chain of causal relations (Fayol, 2004, Grossmann, 2000). This causal chain is constantly reorganised as the story unfolds through transitive operations linking actions/events to an initial aim or difficulty encountered by the main characters and to the final resolution ending the story (Makdissi & Boisclair, 2004a).

Based on children's recall of a picture book read to them previously, Makdissi & Boisclair (2004a) show how children develop the capacity to establish causal relations, as they gradually learn to read. Their developmental grid highlights how children shift from first attending to minute descriptive cues before they start to link events and gradually attend to more complex causal relations.

2.2 Picture-based narrative comprehension (semiopictorial knowledge)

In line with previous studies focusing on reading strategies and on the transition from oral to written language (Sulzby, 1985), Makdissi and Boisclair's grid underlines how pictures are an important semiotic support for preschool children as they learn to distinguish different notational systems (Gamba, 2005) and gradually attend to textual cues as they learn to read (Saada-Robert et al, 2003).

Paris and Paris (2003) have shown that the use of wordless picture books with a narrative structure enhance narrative comprehension and requires the same comprehension of causal inferences as text based comprehension regardless of decoding constraints.

Moreover, pictures namely relieve preschool children's working memory load and facilitate elaboration of causal inferences and reading comprehension when actions are linked to their goal explicitly (Trabasso, Stein, Rodkin, Munger, & Baughn 1992). This is an important finding as the recall of the story immediately after the reading of a picture book is a frequently used procedure to analyse narrative comprehension. Recall thus appears as a means of tracing internal cognitive processes in settings involving a read-aloud procedure. However, considering that preschool children rely on the adult reader's mediation to build the story meaning, there is a growing interest for studying *interpersonal processes*, namely the role of interaction and more precisely of adult scaffolding during picture book reading as a means of facilitating comprehension.

2.3 Role of interaction in preschool environments

Following a socio-constructivist perspective, there is growing evidence that interaction constitutes a dialogic learning process that aids the construction of knowledge (Tartas, Perret-Clermont, Marro & Grossen, 2004). Moreover, it appears that interaction supports language development, and that communication, language and cognition are closely linked. In the context of the development of literacy skills, shared book reading is acknowledged by scholars to contribute in a significant way to early literacy and language development (Brabham & Lynch-Brown, 2002; Hargrave & Sénéchal, 2000; Newman & Dickinson, 2003; Whitehurst, Arnold, Epstein, Angell, Smith & Fischel, 1994). In this particular activity, language appears to be taken out of context and removed from everyday experience. Thus, it requires children to make sense of the story being read from words only (McKeown & Beck, 2006) and to learn vocabulary they would not usually encounter in daily conversations (Wasik & Bond, 2001).

Moreover, dialogic reading, in which children participate actively by answering questions ("why", "what", where", etc.), appears not only to foster lexical development (Hargrave & Sénéchal, 2000; Sénéchal, 2000; Whitehurst et al, 1994) but also allows children to shift from descriptive to more inferential language in stimulating environments (Massey, 2004). Furthermore, many studies show the strong impact of dialogic reading in preschool on later academic success, especially for children from low-income families (Neuman & Dickinson, 2003; Saada-Robert, 2003; Valdez-Menchaca & Whitehurst, 1992).

Concerning the development of narrative skills, dialogic reading helps the process of meaning making as the child is asked to become the storyteller and to infer on the meaning and the outcomes of the story (Saada-Robert, 2003, Saada-Robert et al, 2003). Makdissi and Boisclair (2004b) have shown that interactive readings contribute to enhancing children's capacity to build causal relations. In particular, Zevenbergen & Whitehurst (2003) have shown that children having participated in a shared-reading intervention program appear to have gained specific narrative skills, especially when they refer to the internal states of mind of characters.

Besides, as preschool children lack the necessary cognitive skills to structure and put into words the whole storyline all by themselves (Trabasso et al, 1992), narrative comprehension ought to be studied taking into account the role of adult mediation. Comprehension, in the context of picture-book reading, is indeed a process elaborated within a complex symbolic system implying meaning is constructed not only from the picture book alone but also according to the context of the reading activity (Grossmann, 2000). The interaction influences how the story will be understood and interpreted. Internal semiotic processes, relative to the genre of the text being read, are thus to be distinguished from external semiotic processes, concerning the role of the adult as an agent facilitating the child's assimilation processes.

Finally, while scaffolding the activity, the adult appears to be influenced and actually relies on children's utterances during the interaction (Hudelot, 1997). This means that the child is also active during interaction and that both partners are attempting to adjust their meanings of the story they are reading together. The following section discusses didactic microgenesis, an analytical approach that examines

how semiopictorial knowledge depends precisely on the co-construction of a *zone of common meaning* involving both adult and child during interaction (Martinet, Balslev & Saada-Robert 2006; Balslev & Saada-Robert, 2007).

2.4 Didactic microgenetic analysis

As "the study of online processes of knowledge acquisition, in a short time and a specific situation" (Nguyen-Xuan, 1990, p. 197), didactic microgenesis refers to studies on situated cognition and situated learning (Allal, 2001) and on dialogic analysis of children-adult interactions in the classroom (Grossen, 1999; Trognon, 1999). It analyses the situated ongoing process of knowledge co-construction between teacher and learners by distinguishing knowledge (such as defined in different academic subjects) and to-be-built meanings during the interaction. In particular, this analytical approach relies on the assumption that the on-line construction of knowledge depends on a process of adjustment of the interactants' own meanings about the story in order to achieve a *zone of common meaning* (Balslev, 2006; Martinet, Balslev & Saada-Robert, 2006). More detail will be given below on the analytical procedure of didactic microgenesis

2.5 Interactional analysis

As mentioned above, the dialogic situation studied here implies an exchange between the teacher and the children, that is, between the partners of the interaction. In a socio-constructivist perspective, the interaction in itself is constitutive of the construction of knowledge. This takes place throughout and after the interaction, when the child reorganizes what he/she already knew and what appears as newly learned. Francis (2004) explains that "if young children's monological behaviors were first described by Piaget as evidence of an egocentric language appearing prior to dialogic skills, Bakhtin's (1929) and Vygotsky's (1934) research led to the insertion of these monological behaviors within the socialized form of language. Internal and external language indeed naturally influence each other."

3.   RESEARCH DESIGN

3.1 General context of the research

Data collected here is part of a wider research study involving four day-care centres selected in low SES urban zones in Geneva and Lausanne (Switzerland). In two day-care centres, the teachers involved in the study were familiarised with the formal pictorial cues of two wordless picture books, the latter having been pointed out, prior to the reading, by a semiological analysis (Grau, 2005). In the remaining day-care centres, an informal discussion on the books took place with the two teachers. Per day-care, four interactive reading sessions involved two separate groups of children (ages 3 and 4) in two- month intervals between September 2005 and March 2006. Each book was used twice, alternatively

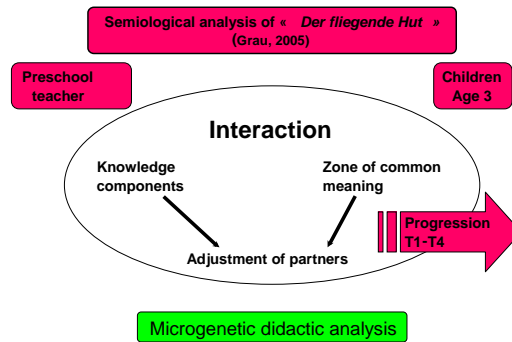Figure 1 shows our research design of the interactive reading sessions.

Figure 1. Research design.

3.2 Population

The data analysed for this paper was collected from the first session of the research and concerns one day-care centre in Geneva.

Four children aged three (mean age: 2,11) participated in the study together with their regular day-care teacher. As the day-care centre was situated in a multicultural environment, in which French could appear as an L2 language, only children having attended the day-care centre regularly during the whole previous year were selected in order to have a comparable degree of oral mastery among children.

Reading picture books was a regular daily practice in this day-care centre but neither the children nor the teacher were familiarised with reading wordless picture books, hence without relying on text as a meaningful semiotic resource to tell the story. Interactive reading, in which the teacher requires children to tell the story by asking questions of them, was not a regular formalised practice either, although the teacher was used to interrupting her reading to answer questions and discuss the story with the children on the basis of the pictures and/or texts.

The children were taken away from the rest of the regular group and directed to a separate but familiar room for the reading sessions.

3.3 Significant material from the semiological analysis

A semiological analysis of the selected picture book used for session 1 (Grau, 2005) was undergone prior to the interactive reading session in order to point out narrative cues in the pictures. The latter inform on the narrative structure, i.e. the narrative links between pictures, as the book selected for the study is a wordless picture book. These cues were examined within each picture as well between pictures, considering the explicit and/or implicit relations between them. This analysis thus brought to light the narrative cues that could potentially be used by the teacher and the children

during the interactive reading session. The link[1] below presents all the pictures from this book.

The preschool teacher was introduced to the cues highlighted in the semiological analysis during a semi-directed discussion. We assumed this discussion would prompt her to help children focus on the narrative cues during the interactive reading session.

A brief presentation of the cues discussed with the teacher helps to get more insight on the cues she actually focused on during the reading session.

First of all, as she first gave a quick glance through the book, the teacher expected the story to be about the character on the cover page looking for his blown away hat. Through a closer examination, the teacher distinguished the actual story line which, through several repetitive sequences, is about a hat on a boy's head blown away by the wind and going from head to head until its initial owner finds it again. The discussion first allowed main characters/objects to establish the storyline: the hat as the main character, other main characters being those who shift their status in relation to their hat ownership in sequential order, i.e. they start as actual owner and become previous owner as owner-to-be becomes actual owner. This repetitive narrative structure thus led us to examine the cues that anticipate each hat move episode. These cues appear as semiotic resources through a comparative examination of pictures in order to distinguish continuity versus discontinuity in the story line, as well as similarities and/or contrasts. Thus, in the different hat move episodes, the actual owner and owner-to-be appear almost always together before and after the move. Furthermore, expressions and gestures/attitudes of characters differ between characters losing the hat versus those receiving it. Cues such as the grin on owners-to-be characters (the dog and the monkey) inform on the rather explicit intention of taking the hat whereas other cues show a more accidental move of the hat. The latter can be seen through the repeated presence of a man with a similar but smaller hat who appears totally absorbed in the reading of a book in different settings, which suggests his distraction will eventually lead him to take the wrong hat as he gets off the train and to pass it on by mistake to a goat.

3.4 Interactive reading procedure

During the interactive reading, the children were asked to tell the story while looking at the pictures, helped by the teacher's questions. After having looked at the whole book, the teacher went through it again and this time read aloud a text written beforehand by the researchers to convey the same story line as the pictures. This read-aloud was intended to help the process of knowledge construction, as the oral text is a means of merging the different meanings built during the interactive reading.

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[1] http://www.aquatica.ch/images/FliegendeHut.jpg

3.5 Recall

The following day, children were asked to recall the story. Initially, it was planned to recall the story using only the cover page as support, but it was necessary to go through all the pictures again. Data collected during recall was not analysed using didactic microgenesis, but interactional analysis to point out which semiotic cues children rely on to recall the story, and thus gives more insight into which ones were more significant for children to build semiopictorial knowledge.

4. RESEARCH QUESTIONS AND METHODOLOGICAL PROCEDURE

The following research questions are investigated using the microgenetic analysis (question 1-2) and the interactional analysis (question 3):
1) Which contents of semiopictorial knowledge are *actually* activated during the reading?
2) How do the children and their teacher adjust to each other in order to negotiate common meanings?
3) Which semiotic supports do children rely on to recall the story the following day?
In order to answer these questions, the didactic microgenesis methodology was applied as explained in next sub section.

4.1 Didactic microgenesis

Didactic microgenesis consists of a series of specific methodological steps in which complete verbatim of verbal and significant non-verbal interactions is processed using a double deductive/inductive qualitative approach (Balslev & Saada-Robert, 2002). The whole procedure is based on the segmentation *within speech utterances* from the transcribed verbatim into *units of meaning*, categorised according to the content of knowledge being discussed and to speech modalities as meaningful cues revealing the communicational intentions behind utterances (i.e. reformulations, validations, open-ended questions, clarification requests, etc.).

To begin with, contents of knowledge that could *potentially* be activated are first defined according to a corresponding conceptual framework and to the specific context of the didactic interaction. In the case of our study, the semiological analysis described above next allowed the semiopictorial knowledge to be divided into separate formal contents, as possible discussion items (description of characters, objects, actions, inferences on causal relations, etc.) (Gamba, 2006). This deductive approach occurring prior to the interactive reading is followed by an inductive analysis requiring a « full immersion » attitude of researchers, so as to let meaningful material emerge from the collected data itself. A back and forth examination of verbatim makes it possible to interpret and re-establish *actual* meanings built during the interaction itself (Martinet, Balslev & Saada-Robert, 2006; Balslev & Saada-Robert, 2007).

Modalities are analysed considering the degree of openness of the teacher's questions and of how much children may bring their own meanings into the conversation

(yes/no type of question/answers correspond thus to the least degree of openness whereas children's spontaneous interventions correspond to the highest level). Furthermore, back and forth analysis of verbatim reconstructs the teacher's intentions about the content knowledge she is intending and expecting children to discuss.

In relation to narrative comprehension, this categorisation helps to point out how children manage to build causal relations during the interaction with the help of their teacher. Moreover, the analysis of speech modalities, in the first steps of the microgenetic procedure, displays how partners manage to adjust to each other and hence build *a zone of common meaning*.

4.2 Interactional analysis

This part of the study analyses the data according to the dynamic and coherence of the interactive text, and not by using didactic microgenesis. As the data is studied in order to understand the building of the narrative skills (examined through didactic microgenesis) and of the communicative skills (interactional analysis), we'll show here an example of this method, still to be refined and completed. The two processes, didactic microgenesis and interactional analysis, are thus both supposed to show the importance of a common zone of understanding being built in order to facilitate the construction of different skills linked to the semiological knowledge.

5.   RESULTS FROM SESSION 1

5.1 Interactive picture-based reading

The videotaped verbatim from verbal and significant non-verbal interactions during the picture-based reading and read-aloud was transcribed and then processed according to the analytical procedure involved in didactic microgenesis. As mentioned above, the unit of analysis or unit of meaning is defined through the categorization of contents of knowledge analyzed jointly with the speech modalities informing on the intent behind each partner's utterances.

Tables 1 and 4 present the most frequent contents crossed with the most frequent speech modalities for the teacher and the children. A cross examination of both tables highlights which contents are addressed by the teacher and how she helps children to address the latter, as well as how both the teacher and the children react to one another's utterances. Ultimately, this procedure shows how the teacher and children negotiate common meanings on the story.

To start with, the main contents in the teacher's utterances concern, first of all, the description or denomination of main actions (i.e. actions which are central to the narrative structure but without reference to any causal relation to previous or following actions in the story line). A typical description of a main action is found in utterances such as "this boy is running", when the teacher is talking about the first owner of the hat running across a bridge to catch his blown away hat.

Table 1. Most frequent contents and speech modalities produced by the teacher. Number of units per content (speech modalities) and number of units per speech modality (contents). See for explanation of categories appendix A

Speech modalities	Content				
	Reference to life contexts	Description of character, object, environment	Description main actions	Causal inference	Percentage of modalities
Information	6	0	16	13	24%
Open-ended questions	5	13	17	11	18%
Validation	12	19	8	4	14%
Repetition of children's utterances	4	9	5	6	9%
Follow-up questions	1	3	4	4	5%
Induction	0	0	1	9	4%
Percentage total contents	10%	26%	20%	15%	
Remaining speech modalities	29%	Reformulations, injunctions, reorientations, corrections, invalidations: high dispersion across all contents.			
Remaining contents	26%	Contents on secondary actions, local causal inferences (not related to previous or future events), management of the activity, aim of the activity, attention management, non specific cue-related meaning of the story: high dispersion across all speech modalties.			

According to Makdissi and Boisclair (2004a), mere description/denomination of actions ranks at a second level in their developmental grid of narrative comprehension, the first one corresponding to the description/denomination of main objects and/or characters without any reference to the plot. The latter accounts for 26% of all contents addressed by the teacher. This shows that the teacher is involved most of the time in a descriptive activity with the children.

Fragment 1 below shows how utterances are categorized and how a back and forth examination of the actual ongoing process of the interaction allows to identify the intention the teacher actually has. This fragment illustrates that the teacher's intention in pointing at and denominating the main character by asking questions such as "who is here?" is to help children anticipate who the next owner of the hat will be.

During the session, the teacher often stimulates children to infer on narrative links, hence causal relationships between actions, as the latter account for 15% of the teacher's utterances (see table 1). As the teacher was introduced to narrative cues prior to the picture-based reading, this finding reveals on the one hand that she actually succeeds in attending to these contents. Yet, on the other hand, a cross analysis of contents with speech modalities is necessary to investigate how and by whom the former are either brought into the conversation or followed up or not.

Table 2. Fragment 1

Tea (Teacher)	Who is here? (points at the dog behind the duck on page 3)		
		Zah A dog	Denomination of main character/expected developed answer (see Table 2 below for definition of categories)
Tea	Oh a dog!		Denomination of main character / repetition
		Dri A dog (whispers)	Denomination of main character / repetition
Tea	What is the dog going to do?		Inference on causal/chronological relations/open-ended question

The main speech modality used by the teacher reveals her concern with conveying explicit information to the children (24% of speech modalities). This category is followed by open-ended questions (18% of all speech modalities). This result shows that the teacher alternates between a directive guidance by injecting new information and a more interactive approach inviting children to offer their own meanings of the story to the conversation. Results in table 1 show that this alternation occurs mainly when the teacher is referring to main actions as well as when inferring on causal relations concerning the story line. Fragment 1 illustrates clearly an interactive approach, based on open-ended questions by the teacher, by which she directs the children's attention to the intended narrative links without explicitly introducing the information herself.

Yet, considering that this is the first interactive reading session and that preschool children would need the teacher's mediation, it is hardly surprising that she often tends to convey the information directly. Her efforts to encourage the children to explicate their meanings of the story sometimes lead to friction, resulting in her actually inducing answers. This happens especially when she is attending to causal inferences, although not in a significant way (4% of all speech modalities). Fragment 2 below clearly shows how this occurs.

Table 3: Fragment 2

Tea	Oh who's here? (points at the duck on page 5)		
		Zah	It's crying (actually her utterance is hard to understand but she wipes her eyes to show the duck is crying)
Tea	Do you think it's a bit cross?		
		Zah	Yes
Tea	Yes/he wants to have his hat back	Dri	Not happy

Table 1 also reveals that one of the major modalities in interactive reading practices is hardly used by the teacher. Indeed, she seldom follows up the children's utterances (5% of speech modalities), as compared to open-ended questions and informing explicitly. The fact that this is the first interactive reading session, all the more so with a wordless picture book, could explain that the teacher is not yet familiar enough with interactive reading practices. Finally, even though it does not appear frequently either, repetition of children's utterances (5%) could be seen as a means of anchoring meaning.

Table 4 presents the most frequent contents and modalities addressed by the children. The most striking feature in this table is that the children refer nearly in equal proportion as the teacher to descriptive and inferential cues. Indeed, 24% of the contents they address concern the description of main actions, 22% concern the description/denomination of main objects and/or characters and 22% the discussion of causal relations relevant to the storyline. In contrast, reference to the context of life appears to be more specific to children and amounts to 17% of their contents.

Table 4. Most frequent contents and speech modalities produced by the children. Number of units per content (speech modalities) and number of units per speech modality (contents)

Speech modalities	Content				
	Reference to life contexts	Description of character, object, environment	Description main actions	Causal inference	Percentage of modalities
Unexpected spontaneous relevant comment	8	14	8	6	20%
Yes/no expected answer	3	11	5	9	17%
Expected developed answer	2	2	10	3	11%
Repetition of answers (by children or teacher)	5	11	12	7	19%
Percentage total contents	17%	22%	24%	17%	
Remaining modalities	37%	Unexpected yes/no answer and comments; unexpected developed answers and comments, expected spontaneous comments.			
Remaining contents	20%	Same as for teacher.			

As mentioned in the research design, children's speech modalities are examined in relation to how they either answer to the teacher's more or less open initations or intervene spontaneously by bringing in personal meanings. A cross examination of contents with their speech modalities shows that children, whether talking about main actions or inferring causal relations, mainly utter yes/no type answers according to the content addressed by the teacher in her question (17% of all speech modalities), in nearly equal proportion to unexpected spontaneous comments (20%).

The latter are unexpected contents by the teacher at the moment they are brought in but are relevant for the activity as the teacher may lean on them to help build the story meaning. Fragment 2 above illustrates that Zah's answer "it's crying" to the teacher's question "oh who's here?" while pointing at the duck is unexpected at this point in the interaction as she is momentarily asking the children to denominate the character. Thus, unexpected answers do not necessarily mean wrong answers, as the teacher here leans on the child's utterance to build the intended causal relation, but unfortunately induces it in her haste.

Consequently, fragment 2 shows how induced questions by the teacher in particular close up children's possible meaning elaborations, hence leading the child Zah to a "yes" answer, and Dri to just repeat the teacher's induced question. Thus, yes/no answers are most frequent when children are engaged in inferential activity. This result provides some insight into the effect of the teacher's guidance. It reflects indeed that children answer according to what the teacher is expecting but without putting forward any of their own meanings when discussing these cues with her, as she is more informative and induces answers. When discussing main actions, children tend to develop their answers more (developed answers) as the teacher also asks more open-ended questions at this level. As children answer according to what the teacher is expecting concerning these cues (expected developed answers account for 11% of speech modalities) this may show that children feel more familiar with the latter. It may also mean the teacher feels more confident about the children's capacity to discuss at this level, whilst feeling the need to be more directive on narrative cues as these may be less frequently discussed within this institution.

Another relevant point is the fact that spontaneous comments also occur when children refer to their life context. This finding confirms that children use prior or implicit knowledge to build the story meaning. Furthermore, it is interesting to note on table 1 that the teacher agrees to let children discuss at this level, as most of her validations concern this category.

Finally, children often repeat utterances either from the teacher or from other children (19% of speech modalities). This finding suggests that repetition is an important way for children to build and incorporate new knowledge.

At this point, tables 1 and 4 give an instant picture of which contents are addressed and how they are discussed by both the teacher and children, but without elucidating the effects of utterances on the ongoing process of knowledge construction. A sequential analysis of the whole interaction is necessary in order to examine the effect utterances have on the course of the interaction, and is yet to be done. But this first level of analysis allows some insight into how all interactants adjust to one another to create a *zone of common meaning*. Figure 5 briefly summarizes what the comments above say at this point about how the teacher and the children adjust to each other.

Table 5. Summary of cross analysis of contents and speech modalities

Teacher	Zone of common meaning	Children
Helps to explicit children's meaning s with open ended questions but hardly push es to explicit more.		When teacher is directive, children respond in a *yes/no pattern* and very often according to what is expected..
Repeats what children say.		Yet *bring in* their own significations spontaneously concerning implicit knowledge, description of actions and causal inferences.
Tends to *induce* answers and orient in a directive way concerning narrative cues.		
Validates unexpected utterances especially ones linked to implicit knowledge.		Contagion effect: children *repeat* each other's and the teacher's utterances.
Shares descriptive cues while directing to narrative ones.		

5.2 Recall

The recall of the story which took place on the day following the interactive reading, reveals strategies the children use in order to build and recall the narrative structure. These strategies appear to be linked to the teacher's guidance and to three semiotic supports: pictorial cues, references to life context and read-aloud text at the end of the interactive reading. Fragment 3 shows an extract of verbatim from the interactive session in which the teacher helps to build meaning when asking open-ended and sequenced questions. The picture being read is about the first owner of the hat running across the bridge to catch it.

Table 6. Fragment 3: Interactive reading

Tea	(*comes closer to children*) (*turns page 2*) what is he doing here? (*points at the boy running on the bridge*) the hat is here (*points at the hat*) he's running this boy.
	Dri he's running.
Tea	Rox / put your hand away why is he running?
	Dri Runs / runs / for his hat. (*points at the picture*)
Tea	Yes / he wants to have his hat back.

Fragment 3 points out the effect on the meaning building process when the teacher asks open questions and, at the same time, guides the children in order to let them observe important cues on the picture: the boy running and the hat flying. During the interactive reading, this strategy is built over a sequence of oriented and organised questions, yet open at the same time. Dri reacts to this guidance first by repeating what has been said, and then by constructing the relation between the boy running and the hat.

Thus, the recall on the following day shows that this link is done much quicker: the teacher points to the boy having lost his hat and asks only one question: "and what is he doing here?". Dri, who had actively participated to the same sequence during the interactive reading, then answers directly, making the link clear to Pao, who was absent during the interactive reading.

This brief sequence shows that Dri has understood the story well enough to explain it very clearly and quickly to another child who reads the story for the first time. That child's direct inference without the help of the teacher, suggests that the teacher's well-structured, goal-oriented and open way of asking questions has helped Dri to build a solid narrative structure.

Table 7. Fragment 3b. Recall on the next day

Tea Oooh / look / he lost his hat / and what is he doing here?		
	Dri there's the man/wants to have his hat back.	
	Pao 'll have back.	
Tea Yes / he wants to run after it / wants to have it back.		

The pictorial cues in the book seem to be the main semiotic support during the interactive reading but also during recall, as it appeared necessary to go through all the pictures once again on the following day. Through a second example of recall below, descriptive and inferential moments allow the children to build the narrative frame of the story as it progresses, and to understand that pictures are linked together. The picture being read at this point is nearly at the end of the story, when the initial owner appears again and sees his hat on a snowman.

Table 8. Fragment 4. Interactive reading

	Dri Yes
Tea on it's head	
	Dri oooooh (*points at the boy on the right*)
Tea who's that?/do we know him?	
	Dri hat/man (*comes closer and shows the hat on the snow man*)
Tea you think it's his hat?/it's	
	Dri boy (*points at the boy on the right*)
Tea it's the boy we saw before /right/ who had lost his hat? (*points at the boy on the right*)	
	Dri Yes

Table 9. Fragment 4b. Recall the next day

Tea (…) he took the hat/he needed it for his snow man	
	Dri oh my hat.
Tea what?	
	Dri he took it he.
Tea oh he/yes/who's that?	
	Dri that's the boy.
Tea that's the boy/the boy who had lost his hat.	

Dri reacts here emotionally when he recognizes the boy of the cover page appearing again at the end of the story and finding his hat again. Thus, this connection appears immediately during recall, through what the child says. The emotional and surprised "oooooh" of the interactive reading doesn't appear during recall: on the contrary, Dri seems to have been expecting the boy's re-appearance at the end of the story. He identifies to this character and speaks on his behalf: "oh my hat". The teacher is surprised by this reaction to the picture, and Dri has to explain more precisely: "he took it he". In order to be sure of the child's meaning, the teacher asks him again and finally formulates the complete link.

As said, references to life context are very important to support the meaning building of children. If such references appear twice during the interactive reading, the latter increase up to seven sequences during recall. We assume that this implicit knowledge is a powerful support of meaning and memorisation. The children's implicit knowledge about the world helps them to understand implicit links between and within the pictures, as shown on Fragment 5.

Table 10. Fragment 5. Interactive reading

Tea	and what's the weather?	Zah	raining
Tea	it's raining/so if if the man doesn't have a hat on his head/aow/he'll be wet		
		Dri	yes/dog will be wet too
Tea	the dog / yes / that's why it brings the hat to the wom / to the man / to put it on his head / so that he doesn't get his hair wet.	Dri	eeh..
		Zah	also have a umbrella is raining.
		Dri	me too.
Tea	you too had a hat when 't was raining?		
		Zah	no.
		Dri	me too when is raining I'm wet.
Tea	(…) your hair's also wet?		
		Zah	yes
Tea	Yes.		
		Zah	have an umbrella on my head/me an umbrella on my head.

In this example, the children perfectly understand the meaning of the dog bringing the hat to the woman: they themselves need an umbrella on their head when it is raining. As these occurrences appear frequently, it seems improbable that they should reflect any lack of concentration or interest of the children. Interestingly, the two sequences appearing during the interactive reading are also present during recall, and the five new occurrences during recall could be a sign that knowledge continues to be built after the reading session. Reference to life context thus appears as a means to assimilate and interiorise the newly built knowledge.

The read-aloud text at the end of the interactive reading was meant to ensure a common understanding of the story, and was supposed to help the integration and memorisation of a prototypical narrative structure. However, there is no reference to this read-aloud text during recall. In the last example below, parts of the text appear during the interactive reading through the teacher's words.

One may assume that the teacher has prepared her read-aloud before the interactive reading, thus memorising forms such as "hold his hat tight on his head so that" and repeating them unconsciously to the children. These exact words, which don't come directly from the read-aloud text, but from the teacher's memory, are repeated many times during the interactive reading, as well as very soon and spontaneously during recall by the children. This tends to prove that it is not the read-aloud text that has an importance, but the repetition of fixed narrative forms easy to remember, as the extract in table 11 shows.

Table 11. Fragments 6 (Interactive reading) and 6a (Read-aloud text after interactive reading) and 6b (Recall the next day)

6	Tea	he **holds it tight on his head** so that it can't fly away			
6a	Tea	From now on he'll **hold his hat tight on his head** so that he can't loose it			
6b	Tea	yes/it is blown away			
			Zah	but **hold it tight**	
	Tea	yes/then/but yet he doesn't **hold it tight**/so it it is blown away/right			
			Dri	it blown away	
	Tea	ah la la			
			Dri	he can't have it back	

6. DISCUSSION

6.1 Concerning the picture-based interactive reading

At this point of the analytical procedure, the cross examination of contents of knowledge and speech modalities suggests that interactive picture-based reading has helped children to build narrative comprehension. The teacher appears to help them to focus on narrative cues by a dual approach. On the one hand, thanks to her directive guidance, namely through injecting information, children focus on causal relations by « yes/no » type of answers. This supports Mckeown & Beck's (2006) finding that, as children this age most frequently produce very limited responses, the adult reader tends to put forward lots of information.

Yet, on the other hand, the teacher's open-ended questions allow children to bring in their own meanings and to infer causal relations spontaneously. The fact that the teacher comments on and leans on descriptive cues referred to by the children before focusing their attention on the intended narrative ones may explain this result. Moreover, the fact that the teacher validates implicit knowledge brought in by children as meaning-making cues, appears as an important contribution to the construction of knowledge.

Repetition also appears here as an important means of assimilating the knowledge being built during the interaction. Besides, the very structure of the selected picture book, composed of repetitive hat moves, may also strongly contribute to making the formal pictorial cues salient enough for the children to build meaning from them.

The microgenetic analysis undergone here shows that a process of adjustment between the teacher and the children is already taking place at session one, as children don't just answer briefly and according to teacher's expectations. They introduce material, requiring the teacher to momentarily delay the discussion on the contents she intends to focus the children on, and leading her actually to rely on whatever they brought in in order to build knowledge. The teacher's guidance is then « situated » and not totally prescribed, as it relies on children's utterances (Hudelot, 1997).

The fact that there were few follow-up questions will be discussed below in the general discussion, as this involves issues concerning the whole research procedure.

6.2 Concerning recall

The positive results and difficulties occurring during recall are the same as during the interactive reading. During the second reading of the book on the following day, however, new cues interest the children, who are thus in conflict with the teacher's intention to focus more specifically and in a more directive way on the narrative frame. On the one hand, this provokes disengagement by children and results in less adjustment between the interactive partners. As a consequence, the teacher becomes more directive, and more attention management is needed. But on the other hand, it is important to notice that the children focus on new semiopictorial cues, use more implicit knowledge and make more frequent causal inferences, which should lead to a better narrative understanding.

Moreover, the children dare to speak more during recall, as one can see by the speech turns: on a similar amount of approximately 380, children altogether speak 184 times during the interactive reading, against 215 during recall. Moreover, the child Dri clearly is the leader, even if he spoke less during recall. This result is due to the teacher's management of the speech turns. Indeed, already during the interactive reading, she tries to make the other children speak by keeping Dri away from the book, or not noticing his comments on the pictures. As a result, during recall, Dri remains quiet and waits for the other children, especially Pao, to produce hypotheses. Only then, Dri allows himself to comment, correct or clarify what has been said.

Table 12. Fragment 7

Tea yes/it is in the hat	
	Pao it's not going out.
Tea you think he can't go out?	
	Pao can't.
Tea so maybe the little boy will help it//it wants to go out of the hat	
	Pao the hat.
Tea Yes	
	Pao it can't.
Tea (turns page)	Dri **now look he went out!**

Observations such as this one are yet to be analysed in order to study the importance of the interaction on the progression of knowledge. Moments of disruption showing a lack of adjustment between the teacher and Dri, for example, are nowadays analysed in order to study the construction of communicative skills.

7. GENERAL DISCUSSION AND FURTHER RESEARCH PLAN

The results discussed in this paper lead us to examine some points in the light of the possible effects of contextual elements in the research procedure. Thus, the teacher's tendency to appear more directive and sometimes to induce answers when discussing narrative cues may reflect first of all her lack of experience in interactive reading practices. During the semi-directed discussion prior to the reading, however, she did mention her opinion that the narrative structure would appear difficult to the children, as there is not one main goal for the main characters to achieve but several ones. Moreover, she also estimated that the children would not be able to maintain their attention throughout the whole interactive reading and read-aloud session. These two elements could explain her concern to inject more information when helping the children to link events between pictures. As preschool children need explicit pictorial cues in order to infer the goal to be achieved in a story read to them (Trabasso et al, 1992), the teacher's concern shows here what she expects children this age to know, and may thus explain her being more directive. As a consequence, it would be interesting to see how children improve on session 3, when looking at the same book again. The age of the children as well as the fact that these are results from the very first session with an unfamiliar book also appear as possible contributing factors to the teacher being more directive. Furthermore, the inductive questions may account for the teacher occasionally not being able to interpret children's utterances, as their oral language is not yet fully articulate. On several occasions, the teacher induced causal relations that were brought in implicitly by the children, but not mentioned explicitly in recognisable appropriate language forms.

Moreover, the low frequency of follow-up questions overall and the more directive guidance during recall may also account for another important contextual influence, that is, the teacher's concern about succeeding at meeting the demands of the research team.

This hypothesis raises the question, on the one hand, of the didactic nature of the activity designed and, on the other hand, of the transmission of results to practitioners, as well as its relevance for their pre-service or in-service training. For all the day-care centres involved in the study, this research was innovative in creating a link between researchers and practitioners in the field of interactive reading practices. This did place some constraints on the research design, the concern not to inhibit the teacher by restraining her into an unfamiliar practice being one very important issue. This research aims at fostering interactive reading processes in preschool but, as data is still in process, the approach to transmitting results and transferring them into training items is yet to be defined.

Finally, further examination of data will lead us to compare children age 3 with age 4 and to analyse the progression of knowledge within each session (more spe-

cifically the progression of narrative comprehension as well as the analysis of teacher uptake) and from T1 to T4. We assume results will show that there is a better adjustment between partners and a progression of the narrative competence. The microgenetic analysis will be complemented by an interactional analysis focusing on the development of communicational skills. In particular, we assume that disruption is part of the communicational learning process.

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ACKNOWLEDGMENTS

APPENDIX A: EXPLANATION OF CATEGORIES OF CONTENS MODALTIES
OF SPEECH (TABLE 1, TABLE 4)

Description of contents of knowledge

a)   Description characters, objects, environment: denomination/description of characters, objects, environment of the story without reference to the plot.
b)   Main action: Description/denomination of a central action for the narrative structure but without reference to previous or following actions/events in the story.
c)   Causal relations: content implying a causal and/or chronological relation to previous or following main actions/events.
d)   Reference to context of life: reference to knowledge of everyday life.

Modalities of speech

a) Open-ended questions: questions allowing children to bring in their own meanings of the story.
b) Validations: positive validation of children's utterances.
c) Follow up questions: questions intended to help children elaborate more on a content.
d) Information: the teacher gives explicit and direct information about the story and/or the activity.
e) Repetition: the teacher and children repeat previous utterances.
f) Induction: the teacher induces the answer in her question.
g) Yes/No answer: children answer to a question only allowing a closed yes/no answer.
h) Developed answer: Answer to a question allowing a higher degree of freedom in the answer.
i) Spontaneous comment: children bring in new information spontaneously and comments relevant to the storyline.
j) Unexpected answers/comments: coded according to the intended content by the teacher at the time of utterance.

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As of Last Complete Printing	
Number of Pages:	26
Number of Words:	10.783 (approx.)
Number of Characters:	64.052 (approx.)