THE EFFECT OF BACKGROUND KNOWLEDGE ON CHILDREN'S COMPREHENSION

Özler ÇAKIR
Mersin University

Abstract: In this study, we examined whether readers use different processing strategies for different texts. Seventeen sixth-grade primary school students participated. Each participant completed a think-aloud process and a free-recall process by reading two texts. The data obtained were analyzed qualitatively. The results indicated that the comprehension strategies of the readers changed according to the text being processed. When the readers processed a text about which they had strong background knowledge, they could monitor their comprehension process more efficiently and render a more coherent reconstruction of the texts.

In this study, we examined whether readers use different processing strategies for different texts or not. Eleven sixth-grade primary school students participated. Each participant completed a think-aloud process

and a free-recall process by reading an expository and a narrative text. The data obtained were analyzed qualitatively. Firstly, the results indicated that the comprehension strategies of the readers changed according to the text being processed. When the children processed a text about which they had strong background knowledge and when the text provides them with more overt linguistic clues, they could monitor their comprehension process more efficiently and render a more coherent reconstruction of the texts. Secondly, culturally imposed schema may have a strong effect on top-down processing of the texts leading the children misinterpret the text.

INTRODUCTION

Although there are many theories of reading and studies with regard to these applications, they can mainly be classified into three categories: bottom-up, top-down and interactive reading (McCormick, 1988). Bottom-up theories emphasize the written text and consider reading comprehension as a data-driven or text-driven process. Reading comprehension that relies heavily on the linguistic features of the text and on the information provided by the text itself is called bottom-up processing (Anderson, Reynolds, Schallert & Goetz, 1977; McCormick, 1988; Celce-Mercia & Olshtain, 2000; van Dijk & Kintsch, 1983). Top-down theories of reading emphasize the contribution of the reader during text-processing. Top-down processing thus refers to the conceptual hypotheses which are generated by the reader, dependent on his world knowledge. In the top-down theory of reading, "more important than structures which are in some sense 'in' a text are knowledge structures (schemata) the reader brings to the text" (Anderson, Reynolds, Schallert & Goetz, 1977). The interactive theory of reading suggests that reading comprehension is an interactive process containing "both the bottom-up content explicitly activated by the text expressions and the top-down content supplied from the reader's store of world knowledge" (de Beaugrande, 1984).

Today, the consensus is that reading comprehension is an interactive

process and what mainly differentiates good readers from poor readers is their ability to process the texts interactively (de Beaugrande, 1984; Celce-Murca & Olshtain, 2000; Singer, 1990; van Dijk & Kintsch, 1983). Good readers use a greater variety of comprehension monitoring and executive control strategies and use them more efficiently than poor readers (Thomas & Barksdale-Ladd, 2000). Good readers monitor their comprehension successfully by efficiently integrating textual information with prior information. As a result, they are able to construct a more complete and coherent mental representation of a text. In contrast, poor readers either depend heavily on the textual information itself (local processing) or are stuck into a preconceived schema even if incoming clues provided by the text contradict it.

Although it is possible to categorize readers as good readers or poor readers in terms of the characteristics just mentioned, studies in the field show that reading comprehension strategies of individuals may change according to the text genre, the reader's expectations about the text, the reading tasks, the reader's goals and also the reader's background knowledge related to the text (van den Broek, Lorch, Linderholm & Gustafson, 2001).

Wade (1990) has also pointed out that readers exhibit different characteristics while processing different types of texts in different reading situations. In her study, using the think-aloud method she differentiated five categories of readers: the good comprehender, the non-risk taker, the non-integrator, the schema imposer and the storyteller. Wade's categories are extensions of the three types of processors discussed in the literature: bottom-up processors, top-down processors and interactive processors.

In the present study, following Wade (1990), we aimed to observe whether readers use different processing strategies with different texts. In other words, we attempted to reveal whether or not having a strong schema related to the text makes any difference in the reading comprehension strategies of the participants.

METHOD

The study is based on a qualitative analysis of data obtained from the think-aloud and free-recall protocols of students in Turkey.

PARTICIPANTS

Seventeen sixth-grade primary school students in Mersin participated. Eleven of them were from Yalınayak Primary School, four were from Hakan Kundak Primary School and two were from Vali Şenol Engin Primary School. Yalınayak Primary School is located in the suburbs of Mersin and all of the participants were from families in a low socio-economic class. Although Hakan Kundak and Vali Şenol Engin Primary Schools are located in the center of the city, only two of the four participants belonged to families in a higher socio-economic status. All of the participants at Yalınayak and Hakan Kundak had decoding deficiencies. The criteria for efficient decoding were the participants' accuracy and fluency in reading. The children were asked to read two texts aloud during the think-aloud to determine their decoding problems and it was observed that they frequently mispronounced the vocabulary in the text.

The participants at Yalınayak Primary School had a stimulating environment for art. This was due to the efforts of the art teacher at the school. They had an art classroom specifically designed for drawing, painting and sculpting, which exhibited many samples of student work and which made a visitor feel as if he/she were in an art gallery. All of the walls in hallways were full of paintings made by the teacher and the students. Sculptures produced in classes were also on exhibit, as well as bulletin boards which displayed names of famous artists such as Picasso and Van Gogh.

The participants at Hakan Kundak and Vali Şenol Engin Primary Schools did not have an enriching environment for art classes. Before the think-aloud process, all of the participants were interviewed individually to determine their interest in arts. The results indicated that only three students did not have an interest in art (see Table 1).

MATERIALS

One expository text and one narrative text were used in the study. These texts were constructed in such a way that readers could not know for sure what the topic was until they read the last sentence of the text, so that the texts could reveal the processing strategies of the children (Wade, 1990).

The first text (referred to as the bicycle passage) was an expository text, taken from Wade (1990) and translated into Turkish. To ensure accuracy of the translation for the text, it was translated into Turkish by four instructors in the ELT department at Mersin University, all of them with MA degrees. These four translations were assessed in terms of their common points and also in terms of their cross-linguistic features by two scholars in the Linguistics department at Mersin University. Prior to the implementation of the think-aloud process with the children, the bicycle passage was presented to four adult native speakers of Turkish who were good readers. They were asked to think aloud and mention any difficulties or anomalies they confronted while they were reading the text. The adult readers did not mention any difficulties with the text, which was then accepted as a valid translation in terms of its readability.

The second text (referred to as the sculptor passage) was a narrative text. This text was constructed specifically for the purpose of this study, which is to address the effect of prior knowledge on individuals' reading comprehension strategies. An interest in art was considered as the basis for the world knowledge of the participants. The sculptor passage was developed together with the art teacher of Yalınayak Primary School. We assumed that the students from Yalınayak Primary School had developed an adequate schema necessary for the comprehension of the passage since they were all interested in drawing and painting, and the school provided them with an enriching atmosphere. Although the participants from Hakan Kundak and Vali Şenol Engin Primary Schools were not provided with a similarly enriching environment, three of them

stated that they were interested in drawing and painting individually. So we also assumed that these three students had an adequate world knowledge on the topic.

The texts used in the study had different discourse structures. In the bicycle passage, the non-interactive readers who failed to find the gist of the passage before they had processed the final text sentence ("When you have peddled up to a good speed …"), would have been able to identify the topic of the passage if they could infer "bicycle" from the reference in this final sentence to peddling. That is to say, the final chance for activating the correct schema "riding a bicycle" for the non-interactive readers was to make the correct inference with the help of the linguistic indicator "have peddled". Prior to the final sentence, the text included linguistic markers of the topic such as "hold on tight, climb up, walk beside, gain speed, run alongside". By using these textual clues, an interactive reader could correctly guess the topic of the text before reading the final sentence. Text 1 used in the study is given below:

Text 1

1. The first thing you will want to do is find a big person to help you out.

2. Have the grown-up hold on tight so that everything remains steady while you climb up.

3. The grown-up must walk beside you and hold on to make sure you don't fall over.

4. Then you can start going faster and faster.

5. When you gain speed, the grown-up will have to run alongside of you to keep up and still hold on.

6. When you have peddled up to a good speed and you feel like you can keep your own balance, you can tell the grown-up to

let go.

As with the first text, the second text, the sculptor passage, explicitly stated the topic of the text in the final text sentence: "And he told me 'I'm a sculptor'." The non-interactive readers who failed to activate the correct schema until they had read the final sentence would have been able to find the topic of the passage upon reading this final sentence, if they knew the meaning of the word "sculptor". The sculptor passage also included linguistic elements which could be used by the students as clues to activate the relevant schema. For example, lexical items in the text such as "hammering, something sharp and pointed like a nail, dust, brush, stone" and so on were linguistic markers of the topic. Thus, the children who had background knowledge of the subject could activate the relevant schema by using these clues. Text 2 used in the study is given below:

Text 2

1. The new tenant who moved to the basement of our apartment was a rather eccentric man.

2. His clothes covered with dust, and the skin of his hands hardened with too much work gave more the impression of a construction worker.

3. As far as I could see through the half closed door, the man was hammering something in front of him giving it a finish with something sharp and pointed like a nail, and shaking the dust off with the help of a brush.

4. And while doing all these, he looked meticulous as if he was treating something living.

5. My interest had intensified.

6. I decided to open up the door.

7. There stood a stone in front of the man.

8. He caught me while I was watching him secretly one day.

9. He said "come on, get in".

10. A bit hesitant, I entered.

11. The stone in font of him had turned into a bird which had extended its wings as if to fly.

12. "You carved the stone into such a nice figure" I said.

13. And he told me "I'm a sculptor".

PROCEDURES

In this study, the children's reading comprehension strategies were assessed via the think-aloud and the free-recall procedures. The think-aloud procedure is preferred as an on-line measure of reading comprehension strategies because it gives evidence for what is going on in the mind of the reader during reading (Ballstead & Mandl, 1984; Laing & Kamhi, 2002; Long & Bourg, 1996; Long, Seely & Oppy, 1996; Magliano & Millis, 2003; Narvaez, van den Broek & Ruiz, 1999; Oster, 2001; Pressley & Afflerbach, 1995; Suh & Trabasso, 1993; Trabasso & Magliano, 1996; Wade, 1990; Zwaan & Brown, 1996). Free recall was used as an off-line measure of reading comprehension.

The think-aloud procedure was based on existing methods (Trabasso & Magliano, 1996; Suh & Trabasso, 1993; Zwaan & Brown, 1996). Before reading the assigned texts, the participants practiced thinking aloud by reading a sample text. They were asked to say out loud any thoughts that came to mind following each sentence and before proceeding to the next sentence.

Afterwards, they first read and thought aloud for the bicycle passage and then the sculptor passage in Turkish. During this process the participants read each sentence at their own pace and talked about their

understanding of the sentence in the context of the text. The students were told to read each text sentence aloud in order to detect and eliminate any decoding deficiencies while reading. Following Wade (1990), during the verbal reports of the participants, we sometimes asked questions such as "Why do you think so?", "What clues in the text made you think so?" and "What does this text tell you so far?"

After the think-aloud procedure, the participants were asked to recall what they had understood from the passages. These were also recorded. The data obtained in this way were transcribed.

FINDINGS AND DISCUSSION

For the analysis of the think-aloud protocols of the participants, we used Wade's (1990) categories. As mentioned earlier, she had determined five main comprehender categories. The good comprehender is an interactive reader who successfully combines bottom-up and top-down processing strategies. The non-risk taker is actually a bottom-up processor and she/he assumes a passive role by failing to go beyond the text to develop hypotheses. The non-integrator is a curious mixture of bottom-up and top-down processors. Drawing on text clues and prior knowledge, the non-integrator develops a new hypothesis for every segment of the text, never relating them to previous information in the text. The schema imposer is a type of top-down processor who holds onto an initial hypothesis despite the fact that incoming information conflicts with that schema. The storyteller is an extreme top-down processor who draws far more on prior knowledge or experience than on information stated in the text. Wade mentions a sixth category, indicating that some comprehenders belong to two or more categories mentioned above.

On the basis of this categorization, the think-aloud data of the children pointed to the fact that readers' processing strategies may change according to the texts processed. Table 1 summarizes the qualitative data obtained from the think-aloud protocols of the children.

Table 1: *Findings Related to Think Aloud Protocols of the Children*

Participants		Passage I: Bicycle		Passage II: Sculptor		
		Processor category	Finding the topic or not	Processor category	Finding the topic or not	Inted. in art or not
Yalınayak	1	non-risk taker	+	non-risk taker	-	yes
	2	schema imposer	+	interactive	+	yes
	3	schema imposer	+	mix (non-risk t+intr)	+	yes
	4	non-risk taker	+	mix (non-risk t+intr)	+	yes
	5	non-integrator	+	mix (non-int+story t)	-	yes
	6	schema imposer	-	interactive	+	yes
	7	interactive	+	interactive	+	yes
	8	schema imposer	+	interactive	+	yes
	9	schema imposer	+	interactive	+	yes
	10	schema imposer	+	mix (non-risk t+intr)	+	yes
	11	non-risk taker	+	mix (sc imp+non-int)	-	yes
Hakan Kundak	12	schema imposer	-	non-risk taker	-	no
	13	schema imposer	+	interactive	+	yes
	14	non-integrator	-	mix (story t+non-int)	-	no
	15	mix(storytel+non-int+sch imp)	-	non-integrator	-	no
Vali Şenol Engin	16	interactive	+	interactive	+	yes
	17	schema imposer	+	interactive	+	yes

It can be seen that only two participants used an interactive reading strategy for the bicycle passage whereas eight participants processed the sculptor passage interactively. This finding is striking because it would be thought that most children have experience riding a bicycle, and therefore, would have sufficient background knowledge about it. If this is the case for our participants, then which schema has a stronger network and is more accessible in the mind at the time of reading becomes important for their comprehension. It is possible to say that the participants in this study had a more detailed and strong schema related to the sculptor passage which was ready to be activated by the textual clues in the passage.

Another important observation related to the children's success in finding the topic of the texts during the think-aloud procedure. As explained earlier, the texts used in this study had different discourse structures. Due to this fact, only two participants (Participants 7 and 16) who used the interactive reading strategy for the bicycle passage were able to activate the correct schema before reading the final text sentence. These participants developed a valid hypothesis about the topic of the text after reading the third and the fourth text sentences, and thought aloud as "this text is about riding a bicycle". In contrast, eleven of the children who were identified as non-interactive readers for the bicycle passage could not identify the topic of this text until they read the final text sentence. After reading "When you have peddled up to a good speed and you feel like you can keep your own balance, you can tell the grown-up to let go", these children gave indications of surprise with a big smile on their faces because they realized that they had misinterpreted the text.

For the sculptor passage the situation was different. Eleven of the participants who are interested in art (Participants 2,3,4,6,7,8,9,10,13 ,16,17) were able to develop correct hypotheses about the text as they began to process the text sentences (3) "As far as I could see through the half closed door, the man was hammering something in front of him giving it a finish with something sharp and pointed like a nail, and shaking the dust off with the help of a brush" , (7) "There stood a stone in front of the man" or (11) "The stone in front of him had turned into a bird which had extended its wings as if to fly". Five participants (Participants 1, 5, 11, 12, 14, 15) could not succeed in determining the gist of the text. Two of these participants were able to identify the topic of the text only after reading the final text sentence. Three of them were not able to understand what the text was about even after reading the final text sentence, "And he told me "I'm a sculptor". This finding is not surprising, because for the children who are interested in art, certain parts of the text served to activate the schema better than other words or phrases in the text (Landry, 2002).

The categories presented in Table 1 will be discussed on the sample protocols of the participants. The numbers indicate the participants' responses for each text sentence, and the sentences in parentheses indicate the researcher's remarks.

Participant 16

Think-aloud protocol of Text 1

1. If she is going to find a grown-up, then she is small. I think she has been assigned a duty since she seems to be listing the steps.

2. Since she has to climb onto something, she has to get help from the grown-up. She can't do it by herself. (Do you have any idea about what she is going to climb up?) Maybe a ladder …

3. Now I changed my mind. This should be something moving. Like a bicycle.

4. This is indeed something like a bicycle.

5. Something which can gain speed, something which you can ride on. (You've made a guess. Do you insist?) Yes, a bicycle.

6. Since it says "to peddle up" it is certainly a bicycle because it is difficult to keep your balance on a bicycle.

This participant shows the characteristics of a good reader (Celce-Murcia & Olshtain, 2000; van Dijk & Kintsch, 1983) during the think-aloud procedure. She carefully focuses on the linguistic clues in the text to construct meaning from the text. She changes or confirms her hypotheses about the text by drawing on her background knowledge, and by relating this background knowledge to the information presented earlier in the text. As a result, she makes reasonable inferences. Her think-aloud sentences (2), (3) and (5) indicate her interactive reading strategy.

Think-aloud protocol of Text 2

1. It seems that the man moved to the same block.

2. Hardened hands, so on … he must be a man who works.

3. The man is a master of something, but what is this?

4. I think it means he is working very carefully.

5. His curiosity has intensified.

6. Hmm, the observer seems curious.

7. Maybe the man is a master in carving stones. He is doing something with stones. He can also be a marble cutter or an artist.

8. … … (Silence)

9. Either he is going to teach it to the observer or just wants him to see.

10. I suppose, since that man seemed eccentric, the observer seems frightened.

11. He is something like an artist. A sculptor.

12. I'm sure he is a sculptor. At least some kind of artist. It may not be his job but he likes doing it. (What does the man do?) He shapes stones.

13. Mind you, I'd said it.

The same participant's (Participant 16) think-aloud protocol for the second text indicates that she is very reticent about producing new hypotheses when the textual clues are not sufficient for her. For example, for the second text sentence ("His clothes covered with dust, and the skin of his hands hardened with too much work gave more the impression of a construction worker.") she is cautious about drawing very specif-

ic inferences and prefers to say "he must be a worker". Upon reading the third text sentence, by using the textual clues again she develops a new hypothesis: "The man is a master of something but what is this?" She consciously avoids activating wrong schema that will mislead her during comprehension monitoring. Only when the linguistic clues are sufficient (text sentence 7) for her, does she develop a more specific hypothesis.

Participant 6

Think-aloud protocol of Text 1

1. For everything you want to do, you should find a grown-up to help you. You should get his idea, consider your idea and then make a decision.

2. In other words, while you are doing something in your mind, he can do just the opposite of what you are doing in order to help you keep your balance, meaning "show the right way to you".

3. While you are doing that, if you are tempted to do something bad, the grown-up will be there to protect you.

4. Even if you insist on going your way, the grown-up will always be with you to prevent you from doing bad things.

5. Now the grown-up has pulled you out of trouble, you can speed up for good things in life.

6. When you are saved and start relying on yourself, you can say to the adult to let you go.

This participant uses the top-down strategy for processing the first text and becomes a schema imposer. Beginning from the first text sentence he activates the schema "adults should always support youngsters" or "youngsters should respect ideas of adults". Once this schema is acti-

vated, he does not change her interpretation of the text though the in-coming information conflicts with the preconceived schema. The think-aloud protocol here illustrates that he holds onto the initial schema and tries to force the new data to fit this schema.

Think aloud protocol of Text 2

1. That is to say, this man is a bit snappish or unfriendly.

2. He is a man who wears rags. He is cold and also dirty.

3. The man is carving something, like a sculpture or something which produces dust, like a tree. He is carving something or giving a shape to something.

4. The thing in front of him is something living, like a tree. He looks as if he is beating something wooden.

5. He was curious to know the thing in front of the man. (What might the man be doing?) A sculpture or giving a shape to something.

6. Since he wanted to see what he was doing, he opens up the door.

7. As far as I know, there's a stone in front of the man. He is beating a stone or a similar thing. He is shaping a stone in front of him. (What might he be doing?) As he is beating the stone, he might be sculpting something.

8. … … (Silence)

9. When the man caught him, he must have asked …

10. Since he is a strange man he couldn't figure out why he invited him.

11. That is to say, he turned the stone into a bird which had ex-tended its wings to fly. (Who is this man?) He is probably a

sculptor.

12. When he saw the stone, everything made sense. He thought he had made a wonderful thing. (What did he do?) The sculpture of a bird.

13. My guess was correct. (Where did you get the clues from?) Something sharp and pointed, a stone. We worked like that in our sculpture class.

The think-aloud protocol for the sculptor passage illustrates that this participant becomes an interactive reader when he processes this text. He is capable of grasping every textual clue successfully and using these clues in activating the correct schema. His think-aloud sentences (3), (5) and (7) are the salient examples of his interactive comprehension monitoring strategies.

Participant 9

Think-aloud protocol of Text 1

1. It says that we need a grown-up all the time, the things that we don't know … That is to say we need them.

2. Here the grown-up … I couldn't understand.

3. Here it explains some of the duties of the grown-up. Or it says that the grown-up will always watch over you.

4. There is no danger for the child on the road anymore. Then the grown-up probably let him go.

5. The child speeds up. When he speeds up, the grown-up becomes anxious, for he can fall down. For this reason, he goes on holding the child. (What do you think he wants to help the child with?) Here it explains the danger.

6. Oh! He is teaching him how to ride a bicycle. The child is riding a bicycle. When the child feels that he can do it by himself, he will tell the grown-up to let him go since he doesn't need his help anymore. I first thought that the child was trying to walk but it turns out that the passage is about riding a bicycle.

This participant can also be classified as a schema imposer. When her think-aloud protocol is analyzed, just as Participant 6, she activates and imposes the "adults support youngsters" or "duties of adults towards youngsters" schemas for the text sentences (1), (3) and with the text sentence (4), she continues with another schema "adults protecting children from danger". Only when she reads the final sentence, does she grasp what the text is about.

Think-aloud protocol of Text 2

1. Here it writes about the block of flats and it says that the new tenant's behaviors were a little bit strange.

2. It writes that his clothes are also strange. The observer gets the impression that he is a construction worker.

3. This child or man tries to see what he is doing through the half closed door. He is curious about the thing the man is doing. He is hammering something; this can be the wall or a piece of wood, in order to give it a shape. He is using something pointed like a nail for giving it a finish. In my opinion, he is either a construction worker or an artist-sculptor.

4. In my opinion rather than being a construction worker, he is someone who is interested in painting or sculpting. He works carefully. Maybe he reflects his feelings in it and for this reason he is very meticulous. (How did you understand?) I also like painting very much and while doing this I try to be meticulous.

(What clues did you use in the text?) He was using an instrument like a nail, and a hammer.

5. The man or the child becomes curious while watching him through the half closed door.

6. He is trying to learn what it is. He decides to open up the door.

7. What he sees is a stone. May be in the construction field …, or trying to give a shape to it. May be he is sculpting.

8. The man caught him when he realized that somebody had been watching him.

9. He seems to have asked him to come in. In my opinion he came in because he was very curious.

10. On the one hand he was eager to know what he was doing, and on the other hand he was afraid to enter the room.

11. He might have sculpted something. By giving a shape to the stone, he must have sculpted a bird.

12. Seeing the stone, the boy was impressed. (What might be this man's job?) In my opinion he is a sculptor.

13. The man is a sculptor.

In contrast to the way she processed the first text, the same participant (Participant 9) becomes an interactive reader for the second text. Drawing on textual clues and prior knowledge, she develops appropriate hypotheses for every text sentence. The think-aloud protocol of this student is a striking example of the effect of prior knowledge or prior experience on successful text processing. For example, in the think-aloud sentence (4) she interprets the new information on the basis of her personal experience related to the topic: "I also like painting very much and while doing this I try to be meticulous."

When the think-aloud protocols of all participants are considered in general, their reconstructions of the sculptor passage are more coherent texts compared to their reconstructions of the bicycle passage. The findings of this study suggest that prior knowledge of the readers affects their processing strategies.

A second observation related to the think-aloud protocols is that cultural context and schema (Richeit, Schnotz & Strohner, 1985; van Dijk & Kintsch, 1983) play a significant role in the child's interpretation of the texts. It helps the reader fill the gaps for successful top-down processing. However, when the reader lacks local processing strategies (bottom-up processing) and when she/he heavily relies on preconceived schema, incorrect inferences and misinterpretation may result (Anderson, Reynolds, Schallert & Goetz, 1977). In Turkish culture "adults always support youngsters" is a strong cultural schema, and for this reason, many of the participants who were unable to process the local characteristics of the text used this schema to interpret the bicycle text though it led them to develop incorrect hypotheses related to the text. A majority of research deals with the relationship between readers' inference processes and their reading comprehension (Graesser, Singer & Trabasso, 1994; Halldorson & Singer, 2002; Long & Bourg, 1996; Narvaez, van den Broek & Ruiz 1999; Suh & Trabasso, 1993). These studies also focus on when inferences are made; that is to say, whether they are drawn during reading or after reading. In this respect, we observed that the participants who were stuck into the "adults always support youngsters" schema (Participants 6 and 12) during the think-aloud, retained this schema for their recall of the text. Once these children processed and reconstructed the text on the basis of this schema, they stored it in their long-term memory. For example, Participants 6 and 12 are categorized as schema imposers according to their think-aloud protocols (on-line processing) for the bicycle passage. They hold onto the "adults always support youngsters" schema for this text. These participants' recall protocols (off-line processing) of the same text reveal that they remembered what they processed. The recall protocols of these

children are given below.

Recall protocol of Participant 6

When you want to do something you have to get the idea of an adult. After getting his idea and combining it with your own idea, you start the work. If the grown-up made good suggestions and if you do not consider his suggestions, then you can do bad things in life. However, the grown-up still supports you in order to prevent you from doing bad things. For this, he holds onto your hand in order to make sure you don't fall over. If you start to gain speed in life, he also speeds up and holds you tight. When you become sure that you are safe in life (not doing bad things) by the help of the adult and gain speed just like the pedals of a bicycle, you can tell him to let you go.

Recall protocol of Participant 12

This text states that our elders will always help and support us. It states that grown-up people are more experienced than us and they will train us for life.

INSTRUCTIONAL IMPLICATIONS

It is very important for classroom teachers to know the variables that affect the reading comprehension of children in educational situations. One of these variables is the reader's background knowledge. In the comprehension process a great deal of meaning construction derives from students' background knowledge, which is called a "schema". Anderson, Reynolds, Schallert & Goetz (1977) claim that the comprehender's schema determines how new information will be processed by leading people to interpret the messages in certain ways. There are various types of comprehension strategies, and those used by the text processors may change according to the texts being processed. As

Landry (2002) states, "different types of texts require readers to adjust their schema and shape constructs with their own experience". In this respect, the same reader may exhibit different characteristics with different texts. Therefore, in instructional situations it is important for us to help our students to develop efficient background knowledge by providing them with enriched teaching–learning environments. The results of this study indicate that not only the overt curriculum but also the hidden curriculum (Oliva, 2001; Henson, 2001) of the school plays an important role in the development of the world knowledge of the students.

In reading classes, it is helpful to begin with activities that provide students with the necessary background knowledge related to the text to be comprehended whenever the teacher is aware of the fact that the students lack the required schema. Then, the students can be supported by pre-reading activities to activate the appropriate schema. As a next step, the teacher can use activities during reading to help check if the activated schema matches the local characteristics of the text.

Since this study points to different reading behaviors of students with different texts, teachers should carefully consider the texts to be used for measurement of comprehension, with particular regard to their students' background knowledge. Such an attitude can be helpful in achieving an objective assessment of student reading comprehension skills.

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