Supplemental materials

Table S1

Books Used in the Dialogic Reading Intervention

Author	Title and publisher
Badel, R. (2013).	*Der fette Fang [The big catch].* Wuppertal: Hammer.
Becker, A. (2015).	*Die Reise [The journey].* Hildesheim: Gerstenberg
Becker, A. (2016).	*Die Suche [Quest].* Hildesheim: Gerstenberg
Briggs, R. (2005).	*Der Schneemann [The Snowman].* Hamburg: Aladin.
Haughton, C. (2015).	*Psst! Wir haben einen Vogel [Shh! We Have a Plan].* Frankfurt: Fischer.
Heidelbach, N. (2007).	*Ein Buch für Bruno [A book for Bruno].* Weinheim and Basel: Beltz.
Holzwarth, W. & Strozyk, T. (2015).	*Mag ich! Gar nicht! [Don't like it! Not at all!].* Leipzig: Klett.
Mitgutsch, A. (2012).	*Mein großes Winter-Wimmelbuch [My big winter wimmelbook].* Ravensburg: Ravensburger.
Mitgutsch, A. (2015).	*Mein Wimmelbuch: Komm mit ans Wasser* [*My Wimmelbook: Come with us to the water*]. Ravensburg: Ravensburger.
Muller, G. (2000)	*Was war hier bloß los? [What happened here?].* Frankfurt: Moritz.
Muzo (2011).	*Gute Reise, kleine Wolke [Safe journey, little cloud].* Baar: Aracari.
Sendak, M. (1967).	*Wo die wilden Kerle wohnen [Where the wild things are].* Zurich: Diogenes.
Riphagen, L. (2011)	*So ein Tohuwabohu! [Animals Home Alone].* Cologne: Boje.
Rodriguez, B. (2008).	*Der Hühnerdieb [The chicken thief].* Wuppertal: Hammer.
Rodriguez, B. (2012).	*Das Hühnerglück [The lucky chicken].* Wuppertal: Hammer.
Schössow, P. (2010).	*Meehr!! [Mooore!!].* Munich: Hanser.
Tolman, M. & Tolman, R. (2010).	*Das Baumhaus [The tree house].* Berlin: Berlin Press.
Wiesner, D. (2007).	*Strandgut[Flotsam].* Hamburg: Carlsen.
Wiesner, D. (2014).	*Herr Schnuffels [Mr Wuffles!].* Hamburg: Aladin.

Table S2

Stimuli for Narrative Production Task by Measurement Point

		Main Points		
Measurement point	Book	Total	Inferential	Literal
Pretest	Frog on his own	32	12	20
Posttest	Frog, where are you?	42	15	27
Follow-Up I	Robot-bot-bot	30	11	19
Follow-Up II	One frog too many	37	14	23

Note. Number of items is displayed.

Table S3

Items of the Vocabulary Breadth Test

Number	Item
1	Segelschiff [sailing ship]
2	Laterne [lantern]
3	Wasserschlange [water snake]
4	Vollmond [full moon]
5	Ruderboot [rowboat]
6	Krake [octopus]
7	Heißluftballon [hot-air balloon]
8	Seetang [seaweed]
9	Strickleiter [rope ladder]
10	Anorak [anorak]
11	Labyrinth [maze]
12	Iglu [igloo]
13	Strandkorb [beach chair]
14	Tipi [tepee]
15	Kescher [landing net]

Narrative Comprehension Questions

and Examples of 0-, 1-, and 2-Point Responses

Story: "Frog on His Own" (Pretest)

Coding scheme taken from: Silva, M., & Cain, K. (2015). The relations between lower and higher level comprehension skills and their role in prediction of early reading comprehension. *Journal of Educational Psychology*, *107*, 321–331. doi:10.1037/a0037769

Coding scheme available at

Story: "Frog, where are you?" (Posttest)

1. Characters: Who are the characters in the story? (Explicit)

2-point response: states that characters are a boy, his dog, and a frog

1-point response: includes two of three main characters

0-point response: provides only one character or response inappropriate

2. Setting: Where does this story happen? (Explicit)

2-point response: includes multiple scenarios

1-point response: includes one scenario

0-oint response: no answer or an inappropriate setting

3. Initiating Event: What do you think happens here? Why is this an important part of the story? (Explicit)

2-point response: the initiating event is identified and connected to other events/pages

1-point response: the initiating event is identified but it is not connected to other events/pages

0-point response: no answer or an the initiating event was not identified

The picture: The boy and the dog lie sleeping in bed. The frog climbs out of the jar.

4. Problem: If you were telling your friend this story, what would you say is going on now? Why did this happen? (Explicit)

2-point response: identifies the problem and also a connection to other events/pages of the story

1-point response: identifies the problem but it is not connected to other events/pages

0-point response: no answer or the problem was not identified

The picture: The boy looks into a boot to check whether the frog is there. The dog searches the frog in a jar.

5. Dialogue: What do you think the boy would be saying here? Why would you say that? (Implicit)

2-point response: includes an appropriate dialogue that can be connected to other events/pages

1-point response: includes an appropriate dialogue but it is not connected to other events/pages

0-point response: no answer or an inappropriate dialogue

The picture: The boy and the dog stand on a meadow. The boy makes a funnel with his hands and calls something.

6. Thoughts: What do you think the young boy is thinking here? Why would he think that? (Implicit)

2-point response: an appropriate thought is inferred and connected to other events/pages

1-point response: includes an appropriate thought but it is not connected to other events/pages

0-point response: no answer or an inappropriate thought

The picture: The boy is holding his nose. A rodent looks out of an earth hole. In the background, the dog barks at a bee hive.

7. Feelings: What do you think the boy is feeling here? Why do you think so? (Implicit)

2-point response: an appropriate feeling is identified and connected to other events/pages

1-point response: an appropriate feeling is identified but it is not connected to other events/pages

0-point response: no answer or not feelings are identified

The picture: The deer stops shortly before a cliff. The boy and the dog fall down. The boy stretches his arms and has an open mouth.

8. Resolution: What happened here? Why does this happen? (Explicit)

2-point response: identifies the resolutions and it is connected to other events/pages of the story

1-point response: identifies the resolution but no connection to other events/pages is provided

0-point response: no answer or the resolution is not identified

The picture: The boy and the dog climb over a tree. Behind, they find the frog and his family. A small frog jumps near the boy.

9. Prediction: This is the last picture of the story. What do you think happens next? Why do you think so? (Implicit)

2-point response: is related to the events of the story but goes beyond the picture (the last picture of the story)

1-point response: is based only on the information of the last picture

0-point response: no answer or prediction is given

The picture: The boy and the dog leave the frog family. The boy waves goodbye to the frog family. He is holding a small frog in his other hand.

10. Theme: Think about everything that you learned from reading this book. What advice would you give to the boy or the frog so that the same thing doesn't happen again? Why would you say that? (Implicit)

2-point response: provides integration of multiple events of the story

1-point response: uses information of only one aspect of the story

0-point response: no answer or inadequate answer

Story: "Robot-bot-bot" (Follow-Up I)

Coding scheme taken from: Paris, A. H., & Paris, S. G. (2003). Assessing narrative comprehension in young children. *Reading Research Quarterly*, *38*, 36–76. doi:10.1598/rrq.38.1.3 (Appendices B and C)

Story: "One frog too many" (Follow-Up II)

1. Characters: Who are the characters in the story? (Explicit)

2-point response: states that characters are a boy, his dog, a turtle, a big frog, and a small frog

1-point response: includes three of five main characters

0-point response: provides only two characters or response inappropriate

2. Setting: Where does this story happen? (Explicit)

2-point response: includes multiple scenarios

1-point response: includes one scenario

0-point response: no answer or an inappropriate setting

3. Initiating Event: What do you think happens here? Why is this an important part of the story? (Explicit)

2-point response: the initiating event is identified and connected to other events/pages

1-point response: the initiating event is identified but it is not connected to other events/pages

0-point response: no answer or an the initiating event was not identified

The picture: The boy has opened the parcel and takes out the small frog. The big frog looks away. He is angry.

4. Problem: If you were telling your friend this story, what would you say is going on now? Why did this happen? (Explicit)

2-point response: identifies the problem and also a connection to other events/pages of the story

1-point response: identifies the problem but it is not connected to other events/pages

0-point response: no answer or the problem was not identified

The picture: The big frog pushes the small frog from the turtle's back. The small frog is surprised and falls onto the ground.

5. Dialogue: What do you think the boy would be saying here? Why would you say that? (Implicit)

2-point response: includes an appropriate dialogue that can be connected to other events/pages

1-point response: includes an appropriate dialogue but it is not connected to other events/pages

0-point response: no answer or an inappropriate dialogue

The picture: The boy stands with one foot on the raft. The big frog sits onshore and looks angrily away from the boy. The boy is angry with the big frog. The other animals sit on the raft.

6. Thoughts: What do you think the young boy is thinking here? Why would he think that? (Implicit)

2-point response: an appropriate thought is inferred and connected to other events/pages.

1-point response: includes an appropriate thought but it is not connected to other events/pages.

0-point response: no answer or an inappropriate thought.

The picture: They are on the raft. The small frog is missing because the big frog has pushed him into the water. The boy has his mouth open and looks scared.

7. Feelings: What do you think the frog is feeling here? Why do you think so? (Implicit)

2-point response: an appropriate feeling is identified and connected to other events/pages.

1-point response: an appropriate feeling is identified but it is not connected to other events/pages.

0-point response: no answer or not feelings are identified.

The picture: The boy, the turtle, and the dog go away from the raft. The boy is crying. The dog growls at the big frog who sits on the shore and looks sad.

8. Resolution: What happened here? Why does this happen? (Explicit)

2-point response: identifies the resolutions and it is connected to other events/pages of the story.

1-point response: identifies the resolution but no connection to other events/pages is provided.

0-point response: no answer or the resolution is not identified.

The picture: The boy and the dog sit on the bed. The small frog snuggles with the big frog. The big frog is happy.

9. Prediction: This is the last picture of the story. What do you think happens next? Why do you think so? (Implicit)

2-point response: is related to the events of the story but goes beyond the picture (the last picture of the story).

1-point response: is based only on the information of the last picture.

0-point response: no answer or prediction is given.

The picture: The boy and the dog sit on the bed. The small frog snuggles with the big frog. The big frog is happy.

10. Theme: Think about everything that you learned from reading this book. What advice would you give to the boy or the frog so that the same thing doesn't happen again? Why would you say that? (Implicit)

2-point response: provides integration of multiple events of the story.

1-point response: uses information of only one aspect of the story.

0-point response: no answer or inadequate answer

Narrative Production Main Point Items

The main points were derived from narratives collected in a pilot study with university students (16 female, 14 male; M_{age} = 23.9 years, SD = 4.4 years). Students received 20 Euros as reimbursement for study participation. Idea units that were mentioned in at least 60% of the narratives were categorized as main points and subsequently used for coding the children's narratives.

Table S4

Main Point Items and Mean Proportion Produced for Pretest Story "Frog on his own"

Main point	Type	Element	Proportion	
			Adults (N = 30)	Children (N = 197)
In a park,	literal	setting	0.97	0.14
there is a boy with his dog and his frog.	literal	character	1.00	0.41
They go for a stroll.	literal	event	1.00	0.75
The frog sits in a bucket.	literal	setting	0.77	0.21
He jumps out.	literal	initiating event	0.93	0.45
The boy doesn't notice.	inferential	thought	0.63	0.08
A couple	literal	character	0.97	0.38
is having a picknick.	literal	event	0.73	0.29
The frog goes into their basket.	inferential	motive	0.97	0.25
Then he is holding on to a woman's arm.	literal	problem	0.73	0.61
The woman is furious.	inferential	emotion	0.97	0.37
She shouts at him.	inferential	dialogue	0.67	0.10
The frog jumps away.	literal	resolution	0.80	0.49
He is at a pond.	literal	setting	0.73	0.15
A mother sits with a buggy,	literal	character	1.00	0.44
a baby, and a cat.	literal	character	0.63	0.21
The frog watches the mother.	inferential	thought	0.93	0.14
She is reading.	literal	event	0.70	0.22
The mother is distracted.	inferential	thought	0.70	0.09
She doesn't' notice that the frog jumps into the buggy.	inferential	thought	0.73	0.07
The frog drinks the milk.	literal	event	0.83	0.66
The baby is cross.	inferential	emotion	0.87	0.33
The cat jumps onto the frog.	literal	problem	0.80	0.71
The cat wants to catch it.	inferential	motive	0.97	0.25
The frog runs away.	literal	event	0.67	0.27
The buggy falls over.	literal	setting	0.63	0.30
The baby cries.	inferential	emotion	0.90	0.69
The cat sits on the frog.	literal	event	1.00	0.77
The boy returns.	literal	resolution	0.87	0.22
He rescues the frog.	inferential	motive	0.97	0.59
The frog is happy.	inferential	emotion	0.70	0.13
They go home.	literal	setting	0.90	0.72
			M = 0.83 SD = 0.13	M = 0.36 SD = 0.22

Table S5
Main Point Items and Mean Proportion Produced for Posttest Story "Frog, where are you?"

Main point	Type	Element	Proportion Adults (N = 30)	Children (N = 188)
A boy is with his dog and a frog	literal	character	1.00	0.53
in his room.	literal	setting	0.73	0.04
The frog is caught in a jar.	literal	initiating event	0.97	0.44
The boy and the dog sleep.	literal	initiating event	1.00	0.81
The frog escapes.	inferential	motive	0.93	0.78
The next morning,	literal	setting	0.87	0.26
the boy wakes up.	literal	event	0.83	0.46
The frog is gone.	literal	problem	0.93	0.67
The boy is sad.	inferential	emotion	0.70	0.08
He wants to find the frog.	inferential	motive	0.63	0.55
He searches the frog in the room.	literal	event	0.97	0.47
He goes to the window and calls the frog.	inferential	dialogue	0.93	0.44
They want to find the frog	inferential	motive	0.87	0.60
in the woods.	literal	setting	0.70	0.24
An animal bites the boy.	literal	event	0.93	0.48
The dog barks at some bees.	literal	event	0.60	0.34
He shakes down the bee hive.	literal	problem	0.67	0.53
The bees attack him.	literal	event	0.87	0.63
The dog is scared and flees.	inferential	emotion	0.63	0.18
The boy shouts into	inferential	dialogue	0.67	0.51
a hole in a tree.	literal	setting	0.60	0.42
He thinks that the frog is inside.	inferential	thought	0.97	0.26
An owl wants to chase away the boy.	inferential	motive	0.70	0.58
He startles.	inferential	emotion	0.60	0.15
The boy falls off the tree.	literal	event	0.77	0.50
He climbs	literal	event	0.83	0.42
on a rock.	literal	setting	0.93	0.48
He calls the frog.	inferential	dialogue	0.63	0.34
A deer	literal	character	0.63	0.90
takes the boy on his head.	literal	problem	0.97	0.63
The dog escapes from the bees.	literal	resolution	0.73	0.15
Deer, boy and dog come to a cliff.	literal	setting	0.73	0.22
The boy and the dog fall down.	literal	event	0.73	0.62
They land in water.	literal	resolution	0.97	0.89
The boy notices something.	inferential	thought	0.67	0.08
He thinks that there is something behind a tree.	inferential	thought	0.87	0.65
They find the frog.	literal	resolution	1.00	0.87
There are many other frogs.	literal	character	0.93	0.56

The boy is happy.	inferential	emotion	0.73	0.08
He takes one frog	literal	event	0.73	0.55
from the frog family.	literal	character	0.80	0.47
The boy says goodbye.	inferential	dialogue	0.67	0.33
			$M = 0.80$	$M = 0.46$
			$SD = 0.14$	$SD = 0.23$

Table S6

Main Point Items and Mean Proportion Produced for Follow-up I Story "Robot-bot-bot"

Main point	Type	Element	Proportion	
			Adults ($N = 30$)	Children ($N = 143$)
A girl waves to her	inferential	motive	0.90	0.08
father.	literal	character	0.70	0.35
The father has a packet in his car.	literal	setting	0.90	0.34
They go inside.	literal	setting	0.77	0.21
The family	literal	character	1.00	0.29
is curious.	inferential	emotion	0.60	0.13
They wonder what might be in the packet.	inferential	thought	1.00	0.83
It's a robot.	literal	character	1.00	0.96
They try out the robot.	literal	event	0.93	0.65
It cleans the dishes.	literal	event	1.00	0.86
It brings out the trash.	literal	event	1.00	0.92
The family is happy with the robot.	inferential	emotion	0.87	0.23
The parents chat and dance.	inferential	dialogue	0.70	0.21
The girl is curious.	inferential	thought	0.77	0.90
She wants to look inside the robot.	inferential	motive	0.67	0.24
She opens the robot.	literal	event	0.87	0.68
She pulls out cables.	literal	event	0.77	0.63
She ties them into a knot.	literal	initiating event	0.80	0.34
She turns on the robot.	literal	event	0.63	0.51
The robot becomes mad.	inferential	thought	0.83	0.48
It rushes into the living room.	literal	problem	0.67	0.23
It throws the father out of the chair.	literal	event	0.87	0.32
The father is scared.	inferential	emotion	0.70	0.14
The living room is trashed.	literal	setting	0.63	0.40
The robot goes out of the window.	literal	resolution	1.00	0.46
It lands in a trash can.	literal	event	1.00	0.75
A garbage collector puts the trash into a truck.	literal	problem	0.60	0.51
The family shouts at him.	inferential	dialogue	0.93	0.61
They want their robot back.	inferential	motive	0.80	0.38
Father and daughter repair the robot.	literal	resolution	0.97	0.90
			$M = 0.83$	$M = 0.48$
			$SD = 0.14$	$SD = 0.27$

Table S7
Main Point Items and Mean Proportion Produced for Follow-up II Story "One frog too many"

Main point	Type	Element	Proportion Adults (N = 30)	Children (N = 129)
A boy has a frog, a dog, and a turtle.	literal	character	1.00	0.95
The boy gets a present.	literal	setting	1.00	0.96
He opens it.	literal	initiating event	0.97	0.68
It's a small frog.	literal	character	1.00	0.90
The boy introduces the small frog to his animal friends.	inferential	dialogue	0.70	0.39
Everybody cheers except for the big frog.	inferential	emotion	0.83	0.56
They go out	literal	event	0.97	0.68
into the woods.	literal	setting	0.77	0.13
The animals follow the boy.	literal	event	0.70	0.40
The frogs sit on the turtle.	literal	setting	0.90	0.69
The big frog does not like the small frog.	inferential	motive	1.00	0.86
He pushes the small frog from the turtle back.	literal	problem	1.00	0.98
The small frog cries.	inferential	emotion	0.97	0.68
The boy shouts at the big frog.	inferential	dialogue	0.90	0.60
They come to water.	literal	setting	0.67	0.15
The boy tells the big frog not to come with them.	inferential	dialogue	0.67	0.18
The boy and the other animals go on a raft.	literal	event	0.97	0.56
The big frog stays at land.	literal	resolution	0.63	0.61
The boy is distracted.	inferential	thought	0.77	0.25
The big frog jumps onto the raft.	literal	initiating event	1.00	0.92
He pushes the small frog from the raft.	literal	problem	1.00	0.98
The small frog falls into the water.	literal	problem	0.73	0.59
The turtle alarms the boy.	inferential	motive	0.90	0.19
The boy is shocked.	inferential	emotion	0.90	0.65
They search for the small frog.	literal	event	1.00	0.95
They want to rescue him.	inferential	motive	1.00	0.06
They don't find the small frog.	literal	event	0.97	0.58
They feel sad.	inferential	emotion	1.00	0.86
At home,	literal	setting	0.60	0.21
the boy lies on his bed.	literal	event	0.90	0.43
The dog licks his arm.	literal	event	0.80	0.29
They notice a sound from outside.	inferential	thought	0.87	0.26
They look expectantly at the window.	inferential	motive	0.60	0.29
The small frog jumps into the room.	literal	resolution	1.00	0.95
He lands on the big frog.	literal	event	0.77	0.70
The two frogs are friends now.	literal	resolution	0.80	0.77
Everybody is happy.	inferential	emotion	0.97	0.70
			M = 0.87	M = 0.58
			SD = 0.14	SD = 0.29