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Creating Metacognitive Experiences During Written Communication: Positive Self-Talk Using the Thinking Mirror

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An excerpt from a case study:

After journal writing in kindergarten, Nathaniel looked into the thinking mirror (see Figure 1) and privately engaged in positive self-talk saying:

I am a Thinker! I am able to use my MIND in many ways!
I am an Illustrator! I drew my thoughts!
I am a Writer! I wrote my thoughts!
I am a Reader! I am able to read my thoughts!
My thoughts make sense!

A proud smile appeared upon his face and his eyes sparkled with delight. With confidence he looked closely at himself in the mirror, raised his hands, and gave himself two "thumbs up." Nathaniel seemed quite proud of himself.

This anecdote illustrates how Nathaniel took a few moments during the school day to look into the thinking mirror and say positive thoughts to himself about how he used his MIND during journal writing. The thinking mirror is an ordinary mirror in the classroom used to initiate
reflective moments for children. In this example, Nathaniel looks into the thinking mirror to see himself as a thinker, an illustrator, a writer, and a reader of thoughts that make sense. The thinking mirror provides Nathaniel with an opportunity to engage in positive self-talk where he attributes the cause of his thinking and communicating behaviors to his own efforts and competence.

![Figure 1: The Thinking Mirror](image)

Theoretically, when children see themselves in the thinking mirror and say positive thoughts to themselves about their communicative behaviors, they may activate a
variety of cognitive events. Positive self-talk using the thinking mirror may act as a metacognitive experience triggering positive thoughts, feelings, and sensations that may contribute to children's permanent metacognitive knowledge, clarify their cognitive goals, and initiate cognitive actions during written communication. Such positive experiences may strengthen children's intrinsic motivation to communicate thoughts during subsequent writing and reading endeavors.

Positive self-talk using the thinking mirror is founded upon cognitive monitoring of communication. Flavell (1981), a cognitive and developmental psychologist, describes the multitude of cognitive interactions that may occur during monitoring of communication (see Figure 2). In this article, cognitive monitoring will be succinctly summarized, and then used to analyze positive self-talk using the thinking mirror as a classroom strategy. Lastly, guidelines for implementing positive self-talk using the thinking mirror will be shared.

Cognitive monitoring: A theoretical framework

According to Flavell (1981), an individual's cognitive goals, metacognitive knowledge, metacognitive experiences, and cognitive actions may influence their efficiency and effectiveness during communicative endeavors. These four cognitive components interact with each other and influence how individuals monitor their communications. The arrows in Figure 2 illustrate the dynamic interactions that may occur among these cognitive components during communication.

Cognitive goals refer to "tacit or explicit objectives that instigate or maintain the cognitive enterprise" of writing or reading (Flavell, 1981, p. 40). Figure 2 shows arrows going from cognitive goals to the other three cognitive components. During writing or reading tasks, the goals children have direct
the stored-knowledge they use (metacognitive knowledge), initiate thoughts and feelings they encounter (metacognitive experiences), and activate the actions they implement to complete the tasks (cognitive actions). The cognitive goals children have as they engage in writing or reading tasks, influence how they monitor their communications (Bruner, 1971; Downing, 1979; Fitts and Posner, 1967; Flavell, 1981; Gelb, 1963, Gillete and Temple, 1994; Halliday, 1973; Jensen, 1970).

Figure 2
A Theoretical Model of Cognitive Monitoring
Metacognitive knowledge refers to children's awareness and use of accumulated world knowledge of: 1) one's self as a written communicator (person variables); 2) the purpose of the written communication tasks and related information (task variables); and 3) strategies needed to communicate effectively during writing or reading (strategy variables). Children's stored knowledge about reading and writing in these three categories influences how they monitor these communicative endeavors (Brown, 1980; Flavell, 1981; Flower and Hayes, 1981; Goodman, 1976; Hall and Lindzey, 1957; Henk and Melnick, 1995; Jewell and Zintz, 1986; Meichenbaum, 1977; Smith, 1978). Relevant portions of these three categories of stored knowledge may be retrieved and used "automatically or deliberately either with or without entering consciousness" during writing and reading endeavors (Flavell, 1981, p. 46). Figure 2 shows arrows going from metacognitive knowledge to the other three components. This means that children's stored knowledge about written communication may influence their goals for written communication (cognitive goals), the thoughts and feelings they encounter (metacognitive experiences), and the actions they take during writing or reading (cognitive actions).

Metacognitive experiences are "conscious experiences (ideas, thoughts, feelings, or 'sensations')" that may occur during writing or reading (Flavell, 1981, p. 46). According to Flavell (1981) sudden thoughts, feelings, ideas, and sensations represent a family of feelings that influence children's strategic behaviors and performance during written communication. Thoughts, ideas, feelings, or sensations occurring during writing or reading endeavors may influence how individuals monitor their communications (Flavell, 1981; Hayes and Flower, 1980). Figure 2 shows arrows going from metacognitive experiences to the other three cognitive components. Metacognitive experiences (sudden thoughts, feelings, ideas,
or sensations) that occur during reading or writing endeavors may influence children's goals (cognitive goals), accumulated knowledge (metacognitive knowledge), and actions (cognitive actions). Metacognitive experiences may occur whenever children "do a lot of conscious cognition, thereby providing many cognitive events" (Flavell, 1981, p. 49).

Cognitive actions refers to the actual actions implemented by children as they read or write. Reading and writing can be positively or negatively influenced by the actions of an individual (Bereiter, 1980; Brown, 1980). Figure 2 shows arrows going from cognitive actions to the other cognitive components. Children's cognitive actions during writing or reading may influence their goals (cognitive goals), their accumulated knowledge (metacognitive knowledge), and the family of feelings they encounter during these communicative endeavors (metacognitive experiences).

In summary, cognitive goals, metacognitive knowledge, metacognitive experiences, and cognitive actions represent a variety of cognitive events that may arise as children engage in writing or reading endeavors. The arrows in Figure 2 illustrate the complex, simultaneous, and reciprocal interactions that may occur at lightening speed among these cognitive components. As children engage in writing and reading endeavors these four cognitive components influence how they monitor their communications.

Theory into practice
Within this cognitive framework, Flavell (1981) implicates that schools should set about fostering metacognitive experiences during communicative events that produce specific thoughts, ideas, feelings and sensations. During writing or reading endeavors, teachers should try to get children to attend to the family of feelings that may occur as they write or
read thoughts. This means encouraging children to notice any conscious thoughts, ideas, feelings, or sensations that provide feedback about the task. For example, metacognitive experiences can be activated by simply encouraging children to ask themselves "Does this make sense?" as they write or read. This self-imposed metacognitive experience focuses children's awareness on whether or not what they just wrote or read makes sense.

Encouraging children to ask themselves, "Does this make sense?" as they write or read, creates a metacognitive experience that may prompt them to rewrite or reread (cognitive actions), clarify their goals for writing or reading (cognitive goals), and may contribute to their accumulated knowledge of strategies for writing and reading (metacognitive knowledge). Flavell (1981) explains that, "concrete metacognitive experiences and associated actions can provide input to permanent metacognitive knowledge, which in turn will influence future experiences and actions" (p. 57). Metacognitive experiences occurring during writing and reading activities may influence how children go about monitoring these communicative endeavors.

Metacognitive experiences may also be activated in the classroom by encouraging children to engage in positive self-talk using the thinking mirror during journal writing endeavors. This instructional activity is designed to trigger metacognitive experiences that generate positive input into children's metacognitive knowledge of written communication, clarify their communicative goals, and initiate future cognitive actions.

Positive self-talk using the thinking mirror during journal writing involves three important procedures. First, teachers observe children using their minds to draw and write
their thoughts in their journals. Next, teachers share their observations with individual children. Teachers provide positive feedback using specific words and phrases that describe how children are using their minds during this communicative activity. And lastly, teachers encourage children to reflect upon their writing behaviors using positive self-talk and the thinking mirror. The goal is to help children attribute their communicative behaviors to their own efforts.

The following anecdotal record describes how a classroom teacher implements self-talk using the thinking mirror to activate positive metacognitive experiences for a child during kindergarten journal writing:

**Observe:**
Nathaniel sat at a table attempting to write in his journal. I stopped to observe this 5 year-old child using his mind to draw and write his thoughts.

**Share:**
I took a few moments to share my observations with Nathaniel using specific words and phrases in my conversation:

Nathaniel, you are only five years old and you are using your mind to think, draw, and write your thoughts on paper. You are a thinker and a writer!
Your thoughts are special! Your thoughts make sense!

Nathaniel listened intently to every word I said. Then he smiled to himself and continued writing his thoughts in his journal.

**Reflect: Self-talk using the thinking mirror:**
At the conclusion of journal writing, Nathaniel read his journal thoughts to me. He invented the spelling of many words and his thoughts made sense. I complimented his efforts to use his mind to think, draw, write, and read his thoughts. I encouraged him to say positive thoughts to himself using the thinking mirror:

Nathaniel, it's time for you to look into the thinking mirror and say these happy thoughts to yourself:

I am a Thinker! I am able to use my mind in many ways!
I am an Illustrator! I drew my thoughts!
I am a Writer! I wrote my thoughts!
I am a Reader! I am able to read my thoughts!
My thoughts make sense!

After Nathaniel looked into the Thinking Mirror and said these thoughts to himself, a proud smile appeared upon his face and his eyes sparkled with delight. With confidence he looked closely at himself in the mirror, raised his hand, and gave himself a "thumbs up" sign. Nathaniel seemed quite proud of himself.

The interactions that occurred between the teacher and the child were very meaningful. These interactions may trigger cognitive events that could influence how Nathaniel monitors future experiences with written communication. First, the teacher uses her professional expertise to observe Nathaniel's communicative behaviors. She stops and thinks to herself, "this child is only five years old and is using his mind to think, draw, write, and read his thoughts in his journal."

Next, the teacher takes time to share her observations with the child by employing specific words and phrases in her conversation to provide Nathaniel with positive feedback. This personal feedback may help Nathaniel take notice of how he is using his mind to think, draw, write, and read his special thoughts. Such feedback is important for all learners, but it is especially important for those children who have vague notions about their abilities as thinkers, writers, and readers. They may benefit from this positive feedback by making important discoveries about themselves. The words and phrases the teacher uses during her interactions, may prompt Nathaniel to experience the moment, and become aware of positive thoughts, feelings, and sensations about his abilities to use his mind in many ways.

This scenario can be analyzed in terms of cognitive monitoring. Theoretically, the teacher may activate a variety of thoughts, feelings, and sensations for Nathaniel as he listens
to her describe how he is using his mind. The words and phrases the teacher uses during her conversation with Nathaniel may contribute to his permanent metacognitive knowledge of self as a thinker and a communicator of thoughts.

Authorities note that metacognitive knowledge of the self is formed by internalizing attitudes, values, and norms of one's peers, parents, teachers, and all others in society. The myriad of experiences children encounter constitutes their personal history, and represents their stored knowledge of self (Hall and Lindzey, 1957). How children feel about themselves is a product of what they sense parents, teachers, and others feel about them. Parents and teachers have a powerful influence upon how children come to view themselves. Their interactions contribute to whether or not children view themselves as confident productive learners.

Jewell and Zintz (1986) indicate that children's positive interactions with parents and teachers generates feelings of pride, delight, and confidence that enhance positive awareness and knowledge of self. Conversely, children's negative interactions with parents and teachers generates feelings of humiliation, disillusionment, and apprehension that influence negative awareness and knowledge of self. Teachers can create positive metacognitive experiences that contribute to children's metacognitive knowledge of self just by describing their communicative behaviors using specific words and phrases during their interactions with children.

In the anecdote previously described, the teacher continues to trigger positive thoughts for Nathaniel by encouraging him to produce his own metacognitive experience. After having Nathaniel read his journal thoughts, the teacher encourages Nathaniel to reflect upon his communicative
behaviors. Specifically, she encourages Nathaniel to engage in positive self-talk using the thinking mirror in the following way:

*Nathaniel, it's time for you to look into the thinking mirror and say happy thoughts to yourself:*

*I am a Thinker! I am able to use my mind in many ways!*
*I am an Illustrator! I drew my thoughts!*
*I am a Writer! I wrote my thoughts!*
*I am a Reader! I can read my thoughts!*
*My thoughts make sense!*

It is important to note in this scenario, that the child is responsible for providing his own metacognitive experience. The teacher acts as mentor guiding Nathaniel to reflect into the thinking mirror about his communicative efforts. Now, Nathaniel has a personal opportunity to see a positive visual image of himself and to say positive thoughts to himself. The teacher helps Nathaniel become aware of his abilities, and then encourages him to attribute his communicative behaviors to his own efforts and competence.

Positive self-talk using the thinking mirror contributes to Nathaniel's metacognitive knowledge of self and may in turn strengthen his efficiency and effectiveness during communication tasks (Flavell, 1981; Nicholls, 1979; Purkey, 1984; Ryan, Ledger, Short, and Weed, 1982; Quandt and Selznick, 1984). Specifically, theorists and researchers note that attributing the cause of one's behavior to one's effort and competence may enhance intrinsic motivation (Henk and Melnick, 1995). Gottfried (1983) states that "when children attribute the cause of their behavior to their own efforts, competence, or self-selection of goals, intrinsic motivation is likely to be enhanced" (p. 65). Conversely, "when children attribute the cause of their behavior to external influences
such as rewards or parental and teacher demands, rather than their own efforts, then intrinsic motivation is likely to be diminished" (Gottfried, 1983, p. 65).

How children perceive the cause of their behavior may influence their perceptions of self, their motivations, and their subsequent efficiency and effectiveness during tasks. Positive self-talk using the thinking mirror provides children with a personal opportunity to attribute the cause of their communicative behavior to their own efforts and competence. Such metacognitive experiences may enhance their intrinsic motivation to communicate thoughts in future writing endeavors.

Another factor explored by researchers and theorists, is the notion that self-awareness acts as a cue for producing an internal dialogue. An internal dialogue refers to statements individuals say to themselves as they engage in a task. Bruch, Meyer, and Chesser (1987), Meichenbaum, (1977), Uhlemann and Plater (1990), acknowledge that positive self-statements and images have positive effects on stored knowledge of self and influence subsequent positive behaviors. Conversely, negative self-statements and images have deleterious effects on stored knowledge of self and influence subsequent negative behaviors.

In terms of cognitive monitoring of communication, it can be noted that positive self-talk using the thinking mirror represents a metacognitive experience that may directly influence children's communicative goals (cognitive goals), their communicate behaviors (cognitive actions) as well as contribute to their stored knowledge (metacognitive knowledge). Authorities suggest that increased positive self-talk helps individuals gain a sense of control of their emotions and thoughts (metacognitive experiences), helps guide their
pursuit of goals (cognitive goals) and helps activate positive behaviors (cognitive actions) (Bruch, Meyer, and Chesser, 1987; Meichenbaum, 1977; Uhlemann and Plater, 1990). How individuals view themselves (stored metacognitive knowledge of self) and what they say to themselves during internal dialogues (metacognitive experiences), subsequently influences their goals (cognitive goals) and their behaviors (cognitive actions).

As children look into the thinking mirror, they are encouraged to see positive visual images of themselves as thinkers and communicators, and they are encouraged to attribute the cause of their communicative behaviors to their own efforts and competence. Such experiences may arouse their intrinsic motivation to communicate thoughts in future writing endeavors. As children deliberately engage in positive dialogues with themselves, they may experience positive thoughts that may guide their communicative goals and behaviors.

**Guidelines: Positive self-talk using the thinking mirror**

Teachers have many opportunities to encourage children to engage in positive self-talk using the thinking mirror during written communication endeavors. The following guidelines have been developed to help children attribute the cause of their communicative behaviors to their own abilities and efforts:

**Observe**

Observe children using their minds during any communicative endeavor.

**Share**

Share personal observations with individual children using specific words and phrases that describe how they are using their minds to communicate thoughts.
Reflect: Using positive self-talk and the thinking mirror

Encourage the children to take a few moments to reflect upon their behaviors. Encourage them to look into the thinking mirror and say positive thoughts to themselves about how they are using their minds to communicate thoughts.

These guidelines may be implemented with children at any grade level especially emergent readers and writers. It is a matter of catching children using their minds during the school day, and employing specific words and phrases in our conversations to help children become aware of their abilities. The following examples illustrate the words and phrases teachers or parents may say to children as they help them become aware of the different ways they are using their minds. These statements may help children attribute the cause of their thinking behaviors to their own efforts and competence.

Observe and share using words and phrases during literacy activities

**A young child scribbling thoughts on paper.**

Ethan, you are a Thinker! You are using your mind, your eyes, and your hands to communicate your thoughts on paper. Your thoughts are special! Please look into the thinking mirror and say, "I am a Thinker! I am using my mind to communicate my thoughts on paper!"

**A child examining the illustrations in a book in the classroom library.**

Heather, you are a Thinker and a Communicator. You are using your mind and your eyes to make sense of the picture thoughts the illustrator drew in this book. Good thinking! Please look into the thinking mirror and say, "I am a Thinker! I am using my mind to make sense of this book. I am reading the picture thoughts in this book."
A child painting thoughts on paper.
Jonathan, you are a Thinker! You are using your mind, your eyes, and your hands to paint your thoughts on paper. You are creating thoughts. Good thinking! Please look into the thinking mirror and say, "I am a Thinker! I am using my mind, my eyes, and my hands to paint my thoughts on paper. I am creating thoughts!"

Observe and share using words and phrases during other curriculum activities

A group of children problem solving in social studies.
Stevie, Tyler and Matt, you are using your minds to solve this social studies problem. You are using your minds to listen to each other and discuss a variety of ways to solve this problem. Good thinking! Please look into the thinking mirror and say, "I am a Thinker! I am using my mind to help solve this social studies problem with my group!"

A child looking at an object through a magnifying lens.
Holly, you are using your mind, your eyes, your hands, and the magnifying lens to examine the parts of that flower! You are a Thinker! You are using your mind to analyze the flower! Please look into the thinking mirror and say, "I am a Thinker! I am using my mind and this magnifying lens to take a closer look at the parts of this flower!"

A child climbing on the monkey bars on the playground.
Peter! Good climbing! You are using your mind, your eyes, your hands, and your body to climb these monkey bars! You are using your mind to control your body as you climb. Good thinking! Please talk to yourself and say, "I am a Thinker! I am using my mind and my body to climb these monkey bars carefully!"
Observing children's behaviors and sharing our observations by employing specific words and phrases that describe how they are using their minds, provides them with positive personal feedback. Children experience the moment and listen intently to positive comments with eager anticipation of finding out some important information about themselves. Children take notice of how they are using their minds to communicate, and they continue their communicative efforts with gusto and confidence.

A time to reflect: Positive self-talk and the thinking mirror

No matter what kind of communicative experience children have participated in, encourage them to reflect upon their efforts using positive self-talk and the thinking mirror. Prompt children to look into the thinking mirror and say positive statements to themselves. As children reflect using the thinking mirror, they see instant positive visual images of themselves as thinkers and communicators. The thinking mirror provides children with a personal opportunity to reflect upon their abilities and engage in positive self-talk that attributes the cause of their behaviors to their own efforts and competence.

Summary

Positive self-talk using the thinking mirror is a classroom strategy that involves taking time during the school day to observe children using their minds. It means sharing our observations with children employing specific words and phrases in our conversations to describe how children are using their minds to communicate thoughts. Most importantly, this classroom strategy encourages children to reflect upon their communicative behaviors. This means prompting children to see positive visual images of themselves as they engage in positive self-talk using the thinking mirror.
Cognitive monitoring of communication provides a theoretical framework to describe the variety of cognitive events that may occur as children engage in reading and writing endeavors. It can also be used to describe the cognitive events that occur as children engage in positive self-talk using the thinking mirror. When children see positive visual images of themselves as thinkers and writers, and say positive thoughts to themselves about their communicative efforts, they may stimulate positive feelings, and sensations (metacognitive experiences) that contribute to their permanent knowledge about written communication (metacognitive knowledge), clarify their communicative goals (cognitive goals), and initiate future communicative behaviors (cognitive actions).

Positive self-talk using the thinking mirror provides children with an opportunity to attribute the cause of their communicative behaviors to their own efforts and competence which in turn may stimulate their intrinsic motivation to engage in future communicative endeavors. When emergent readers and writers are placed in the driver's seat, they may become aware of their role as navigators and may eagerly embark upon the road of lifelong adventures in learning and literacy.

References


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