Overview of the HT Process

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Explains the HT process by showing how it played out for Virgie, a third-grade child who also is a second-language learner with a hearing loss.

The Hypothesis-Test process is just that—a process. A way of thinking. We’ve given it a form, but after a while, most teachers keep the process and make up their own form. That’s because (we want to emphasize in neon lights), HT is a process, a way of thinking. As a way of thinking, it has four recursive parts: observations, interpretations, hypotheses, and curricular decisions. Each of these parts has its own column on the HT sheet (see Figure 1, page 5).

In the first column, we record things we have noticed about a student we are worried about as a reader or learner. Two things make this difficult: (1) It’s hard to figure out what is worth noticing and recording; and (2) It’s hard to write down what you see instead of what you think about what you see. Both of these things get easier with time. Relative to the first difficulty, what happens is that you learn—from doing and from collaborating with others—which kinds of observations start you on a path to understanding and which ones dead-end. The hardest part is trusting the process. With practice, patterns emerge and it becomes clear what will be generative and what will not.

Relative to the second difficulty: well, we also work on this together. If a colleague tells us what he or she saw (for example, “When David came into the room, he stayed right by the door, sort of hugging it, and when anyone came near, he started to cry”) then we are able to think with that person about what might be going on for
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David; we can talk about why he might have behaved that way. On the other hand, if a colleague tells us that “David is insecure,” there really isn’t anything for us to say. The HT process is about understanding. We can’t generate possibilities if a judgment has already been made.

By talking with each other about these kinds of things, we have gotten better at writing down observations that lead to helping us understand the child as learner. These observations are the first step on our path to understanding.

The Hypothesis-Test sheet shown in Example 1 shows the observations one teacher, Stephanie Hisatake, made about Virgie. Because Stephanie recorded what she saw, we were able to brainstorm possible interpretations, to think with her about what those observations could mean. These observations then turned out to be generative ones.

**Interpretations**

Once we have a number of observations about a child we are trying to understand, we use column two to record our ideas about what the observations might mean. Stephanie and her study group, for example, came up with ten interpretations (see Example 1) as possible explanations for Stephanie’s fourth observation about Virgie’s miscues. These interpretations become stepping stones to the hypotheses we make.

As part of this process, we have found that it helps to brainstorm at least five possible interpretations for each observation. That pushes us past our tendency to make spontaneous decisions and helps us better understand the child and our theories and practices. Sally Omalza, a sixth-grade teacher, explains how this process helped her grow:

> The process of making five interpretations led me to question the way I was making decisions in the classroom. I realized that in my haste I was not giving children the benefit of a deeper look into their concerns. . . . Now all that has changed. It has been amazing to see how much all of us [teachers] grew when we opened our minds and hearts to multiple possibilities.

As we have worked by ourselves and with each other to generate five possible interpretations for each observation, we have sometimes found that we needed to know more about how children learn and, in particular, about how children learn to read and write. Kitty Aihara, a Title 1 teacher, described what happened to her:

The HT process pushed me to inquire and reflect on my beliefs and practices and, more importantly, to focus on the student as learner. In my search to systematically observe and formulate five interpretations, I found that I did not have a strong knowledge base about reading. . . . My quest to explore the “particulars” of readings and to
find words to interpret observations drove me to collaborate with others and to read professional literature. In this process of reflecting, searching, and taking action, I increased my knowledge of reading and of the conditions under which we learn.

When we generate possible interpretations together, we begin to make our theories explicit to each other and to ourselves. Indeed, as soon as we start to ask what something means, we are having a conversation about values and about our theories. Someone suggests, for example, that maybe David (who hugged the door in the example earlier) may not be much of a risk taker. That leads us to talking about risk taking. Do we believe that risk taking is an essential part of learning? Who has written about that? Whom should we read? And what does all this mean for our teaching? If we decide that risk taking is an important characteristic, how do we set up classrooms that help children take risks? Are our classrooms set up that way now? If not, what would have to change? We also start asking ourselves about other children in our classrooms. Are there other students who are reluctant to take risks? If so, who are they and what have we done to help them? Officially, we are talking about one child. In practice, however, we are broadly exploring, debating, and reflecting on our theories and our practices. By learning how to help one child, we learn to help each other and the other children in our classrooms.

Hypotheses

Once we have brainstormed possible interpretations for each observation, we look across all of the interpretations to identify possible patterns. These possible patterns get written down as hypotheses (third column) to explore. They are sometimes listed as questions, sometimes as statements.

When we first started using the HT process, we tended to write down one hypothesis for each observation. This turned out to be counterproductive, since we most often simply picked the interpretation we liked best and put it in the hypothesis column. We found out that it was more useful to look across all the interpretations and come up with four or five possible explanations that we wanted to explore the next time we were with the child. As Example 1 (see pages 11-13) shows, Stephanie generated several hypotheses to explore about Virgie.

Curricular Decisions

Curricular decisions are plans we make that will enable us to test out our hypotheses. The goal is to better understand the child as learner. Very often, these plans (recorded in column four) include observing more, listening more, and spending more time with the child and texts. Stephanie, for example, decided to talk to Virgie and her mother about Virgie’s hearing and about Virgie’s experiences with
Example 1. Stephanie Hisatake’s Hypothesis-Test sheet from her first one-on-one observations of Virgie, a nine-year-old third grader.

<table>
<thead>
<tr>
<th>Observations</th>
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<th>Hypotheses</th>
<th>Curricular Decisions</th>
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| 1. When Virgie was seated to my left and was engaging in conversation with me, she responded four times to my remarks by positioning her head close to me at an angle with her left ear facing me and said, “Huh.” | 1a. Virgie may not have been paying attention to what I was saying and moved closer when she realized she needed to.  
1b. Saying “huh” is a way for her to buy time because she didn’t know how to respond to what I said.  
1c. She said “huh” and turned her head because she did not hear what I said.  
1d. Virgie may have trouble hearing unless she focuses her attention.  
1e. Virgie may have trouble hearing out of her right ear. | 1. Virgie may have difficulty hearing (thus explaining her head turning and possibly her apparently limited understanding of sound-symbol relationships).  
2. Virgie may not have a solid understanding of English (thus explaining her saying “huh” and also her struggle with both reading and writing).  
3. Virgie may not have much experience with print (thus explaining her unfamiliarity with the words author and illustrator as well as her reading and writing strategies and skills).  
4. Virgie may not understand that reading is a meaning-making process (thus explaining her uncorrected miscues).  
5. Virgie may not use her world knowledge to make meaning from text.  
6. Virgie may not be aware that she can self-monitor and self-correct in order to make meaning from print.  
7. Virgie lacks confidence in herself as a reader and as a writer.  
8. Virgie may not have developed the skills and strategies she needs to be successful as a reader and as a writer. | 1. Talk to her mother and understand her perspective. In particular, find out about her background as a speaker, reader, and writer of English and about her hearing.  
2. Talk to mother and teacher about Virgie as a reader.  
3. Talk to her to understand how she is thinking when she reads and writes.  
4. Observe her some more in situations that involve both reading and writing. |
| 2. Prior to reading *The True Story of the Three Little Pigs* (Sciezka, 1989), I read the title and author and pointed out the author’s name. Virgie asked “What’s an author?” When I asked what an illustrator was, Virgie shrugged her shoulders and said, “I don’t know.” | 2a. Virgie may not have had much experience with books.  
2b. Virgie may not have heard the word author or illustrator before.  
2c. Virgie may be trying to avoid reading and so asks questions that delay the reading experience.  
2d. Virgie may not know what an author and/or illustrator is.  
2e. Virgie may not understand how what one writes becomes a book. |          |          |
| 3. When I asked her to read *There’s a Hippopotamus under My Bed* (Thaler, 1978) during a Shared Reading Experience, Virgie immediately picked up the book, opened it to the first page, and began to read aloud. | 3a. Virgie understood the directions I gave her.  
3b. Virgie responded to my directions by following them.  
3c. Virgie understands that a book/story begins on the first page.  
3d. Virgie seemed willing to take a risk and read as asked.  
3e. Virgie understands that print is read from left to right and top to bottom. |          |          |

**Example 1.** Stephanie Hisatake’s Hypothesis-Test sheet from her first one-on-one observations of Virgie, a nine-year-old third grader.
**Example 1. Continued**

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| **4.** Virgie made numerous miscues on each page, often substituting nonsense words. She read quickly and the miscues were not corrected. | 4a. Virgie may not understand what she is reading.  
4b. Virgie may not be self-correcting when something does not make sense.  
4c. Virgie may not know that she should self-correct.  
4d. Virgie may not have a variety of strategies she can use to make meaning.  
4e. Virgie may not perceive the task as meaningful.  
4f. Virgie may not perceive the task as valuable.  
4g. Virgie may not feel comfortable self-correcting.  
4h. Virgie self-corrected silently but not orally.  
4i. Virgie did not make connections between world knowledge and the text.  
4j. Virgie did not have the world knowledge needed to make connections with the text. | |
| **5.** When I asked her to write her name, her sister’s name, and their phone number, Virgie wrote legibly and without any hesitation. | 5a. Virgie had memorized this information.  
5b. Virgie perceived this task as meaningful.  
5c. Virgie is willing to do a writing task when she is sure her response is correct.  
5d. Virgie understands some of the conventions of print, e.g., that there are supposed to be spaces between words, that names start with a capital letter. | |
### Hypothesis-Test Sheet

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| 6. When I asked her to write in her journal about what had transpired that first day, Virgie shook her head and said, "No, I don't want to." | 6a. Virgie is reluctant to take risks as a writer when she is not sure how to do the task.  
6b. Virgie does not understand what I wanted her to do.  
6c. Virgie understands but is afraid she can not do it.  
6d. Virgie understands but is afraid she can not do it correctly.  
6e. Virgie may have misunderstood (not heard) what the teacher asked.  
6f. Virgie is embarrassed by her writing (spelling).  
6g. Virgie may think words always have to be spelled conventionally. | | |

| 7. When I told her it would not be shared with others, she took the journal tablet and wrote, *I ran a dad and I rit my fns*. She read her entry back to me, "I read a book and I write my sister's name and I write my sister's phone number." | 7a. Virgie understands that there is a relationship between what is spoken and what is written.  
7b. Virgie understands that what is written can be read.  
7c. Virgie sometimes uses the strategy of "spelling as it sounds", e.g. /th/ for write, /f/ for ph in phone.  
7d. Virgie may not know the conventional spelling of many of the words she wrote.  
7e. Virgie may not understand she is expected to use conventional spelling when she can.  
7f. Virgie may not have seen very many words in print.  
7g. Virgie may not have developed an extensive understanding of sound-symbol relationships.  
7h. Virgie just wrote to get the task over with. | | |

**Example 1. Continued**
English and possibly with other languages. She talked to Virgie, her mother, and her teacher about Virgie as a reader. She tried to understand how much reading Virgie did and of what kinds of text. She recorded and analyzed miscues. She observed Virgie in a variety of reading situations to try to understand her confidence and her willingness to take risks. She talked to Virgie about what she was reading so she could better understand Virgie’s meaning-making processes.

Initially, Stephanie jumped to “solutions” to try to fix what she almost instantaneously concluded were Virgie’s problems. That first day, under curricular decisions, instead of designing ways to test out hypotheses, she proposed what we have come to call “quick fixes.” Her quick fixes for Virgie included:

1. Provide a distraction-free environment.
2. Ask Virgie “Does that make sense?” when she does not self-monitor.
3. Model the use of semantic, syntactic, and grapho-phonemic cues.

Because we have learned over time that teachers first need to understand a child as reader/learner before being able to make informed decisions about how to be helpful, Stephanie realized she needed to back off from these “quick fixes” and instead focus on learning more about Virgie by using curricular decisions to test out her hypotheses.

Once curricular decisions have been made and carried out, we begin a new Hypothesis-Test cycle. On a new HT sheet, we record the observations we make while implementing our curricular decisions, consider new interpretations, make new hypotheses, and plan new curricular decisions. This recursive process continues for several cycles. Along the way, we start to become “pretty sure” about some of the patterns we are seeing. These “pretty sures” go on a cover sheet and are used to guide instruction.

Why We Bother

The HT process has evolved over a number of years, in North Carolina, Illinois, and Hawaii. I began using HT in graduate classes in North Carolina in 1986, subsequently moved to Illinois and used it there, and now use it in my graduate classes in Hawaii. In each of these communities, teachers have talked highly of the HT process and told stories about how it made a difference in their lives. Recently, a number of us here have been talking about why we value the HT process. We came up with three major reasons:

1. It provides time for us to be learners.
2. It provides time for students to be learners.
3. It focuses us on the particular, so we are able to make what Lynn Yoshizaki calls the “abstraction connection.”
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Time for Us to Be Learners

In traditional assessment, even in what is now being called “alternative assessment,” the focus is on the child as learner and, in the best of worlds, the teacher expects to know more about the child as a result of the assessment. One category of people, students, is studied by another category of people, teachers.

When we use the HT process, however, what happens is that we as teachers become involved both in assessment of others and in assessment of ourselves. We start paying attention to how our minds work—to how we make connections, construct hypotheses, and draw conclusions. In making our thinking explicit and talking with others about how we are thinking, we raise our consciousness about the thinking/learning process. We think about our own thinking; we inquire into our own learning. In our self-examination, we name and reexamine our theories and, in turn, reconceptualize our practices. Susan Oka-Yamashita, for example, tells the story about how, in order to better understand the second grader she was working with, she started reading Frank Smith’s *Understanding Reading* (1988). As she read, she paid attention to what she did as a reader. She realized that in the past she often was not able to make connections between what she was reading professionally and what she was doing as a teacher. This time, however, she did make connections. As she did so, “the text became easier, it began to make sense.” She found herself reading because she “wanted to.” This led her to wonder why things were different now:

Was this learning? If so, was I learning because I was given the time to experience and discuss with others what I was thinking? Were my experiences becoming meaningful, useful, purposeful, continuous, incidental, collaborative (talk! talk! talk!), vicarious (great role models!), free of risk (it was OK to be a learner)? Did I need to be ready to learn how to learn again and feel what it feels like to be a learner? Did I need to feel the tension—the need to know and no longer be satisfied with what I did know?

For all of us, this process was reflexive. As we learned more about ourselves, we made connections back to our teaching. Susan, for example, having thought about herself as a learner and critically examined Frank Smith’s theories, began to explore and make explicit her theory of learning. Having done so, she used her newly explicit (and revised) theory of learning to examine her classroom practices. Her theory also impacted the HT process she was using to better understand her students as learners; she noticed things she had not noticed before and she thought differently about what she saw. As Fran Yamate, a second-grade teacher, explained in her end-of-semester reflections paper:
As I watched myself as a learner, I was reminded of things that had been taken for granted or long forgotten... I noticed my excitement, curiosity, need to share ideas, and the sparks of interest that encouraged me to continue. I saw too the challenges and the exhilaration of making new discoveries. And, as I saw and understood myself as learner, I saw and understood myself more as teacher. The time I spent reading and thinking helped me rediscover and redefine my own values as a learner and as a teacher.

**Time for Students to Be Learners**

In traditional assessment, students are not engaged in self-assessment. In some forms of alternative assessment, students are explicitly asked to self-assess. The HT process is different. The process itself creates spaces for students to be learners. This happens because during everyday events, teachers begin to “step back” and watch and listen. Rather than fix, we try to understand. In doing so, we get out of the way of the students’ learning. Initially, because we did not want to jump to “quick fixes,” and because we were looking for multiple interpretations, we inadvertently gave students more time to solve their own problems. We subsequently came to value this time, time which Fran Yamate labels “discovery time—time for the child to figure out and use new strategies.”

Because we valued this discovery time, we changed the shape of our responses. Rather than trying to solve problems for a particular child, we helped the child solve problems for himself or herself. This provides the child with more time to learn. As Dianne Yoshizawa, a kindergarten teacher, explained in a reflective paper she wrote,

> I found myself observing more and thinking about why a child does what he does, instead of directing him/her to do it my way. I also found myself asking a child to think through his/her actions so we could name and value them. I can see that by doing so, I give children the time and opportunity they need to think for themselves and make their own decisions.

HT also provides students with more time to be learners because teachers who use HT change their ways of teaching. Bette Ito, who teaches at a middle school, explains how she altered her role and her goals:

> I now want them to teach me what they know, how they have come to know that, and show me what they’re going to do with that knowledge... I now believe my job is to guide them beyond what they can already do. My students need to read for their own purposes and write in their own voice and answer their questions, not mine. They must discover how powerful their own voice can be. Because I’ve thought with the HT process, I’ve given back a lot of the responsibility for learning to them.
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Making the “Abstraction Connection”

This term was coined by Lynn Yoshizaki, and many of us who have worked with Lynn have adopted the term because we have found it a useful way to placeholder the third reason we value the HT process. Lynn explains that the “abstraction connection” happens when a learner gets “beneath the surface” and really understands. She says abstraction connections are “internalized understandings” and that making an abstraction connection is “like Thomas Edison’s light bulb going on. Something clicks inside your brain. You get an ‘aha!’ and that feels so good.”

We were able to make abstraction connections because we focused on understanding the “particular.” As Elaine Tsuchiyama, a first-grade teacher, argues,

It is the particulars that bring forth new understandings which help us make informed generalizations (abstraction connections). This idea of looking at the particulars of a child’s learning is the driving force behind the HT process. It is the particulars that germinate possibilities that lead to new planes of understanding, making us, as learners, better teachers.

With this newfound knowledge we then began to use what we had learned to help all the children in the classroom.

For all of us, the HT process allowed us to make abstraction connections. Things we knew, things that were somehow outside of us, became things we understood, things that were part of us. For many of us, this revolutionized how we thought and how we taught. Carrie Kawamoto, who was then teaching first grade, explains:

As I listened to the children read, I could now see them making sense!! . . . Margaret Meek’s [1987] words [about how books teach us to read] came alive for me. I had read her essay many times over the years but not until this year did her words make sense to me. I am now able to see the children learning to read with a new set of eyes.

A Fourth Reason?

There is, perhaps, a fourth reason, one that transcends all other reasons and, while simpler, is more complex: Using the HT process leaves us in a better place as teachers. All of us “ache with caring,” all of us continually want to do a better job for children. We have seen that the HT process helps us do that. As Jennifer Story, a sixth-grade teacher, concluded:

HT helps me begin the year feeling hopeful instead of helpless. I know that most of my kids, even the ones who have had bad school experiences, begin the year hoping that this year will be different, that this year they will be good and successful and that teachers will like them. It’s obvious on the first day that all the children are trying to make a good first impression. It is only after they once again encounter the bitterness of failure that they begin to disrupt, call attention to
themselves, or resist through silence or non-cooperation. With HT, I hope to begin to find those students before they find me. Through my observations, I can be proactive instead of reactive, I can help my kids who need more help before they cry out for it, and, before they encounter failure again, perhaps I can introduce to them the sweet taste of success.

For all of us, this last reason is reason enough.

References


