

REFLECTION AS METACOGNITION: A “COMPLICATED CONVERSATION”

Transcribed by Kate Thomas
Edited by Matt Dealy

Selected moments of the transcript included here are from an hour-long conversation between three CPS art teachers (Kitty Conde, Chrissy Gray Rodriguez, and Kate Schick), our evaluator and ethnographer (Cynthia Gehrie, Ph.D.), and project leaders (Kate Thomas and Matt Dealy). It took place in Kitty’s art studio at Ravenswood Elementary during a small group meeting convened as a check-in for teachers participating in the Studio Thinking professional development. The depth of material and critical insights covered in this conversation were not pre-planned, but rather simply emerged as a beautiful “tidbit” of research we were lucky enough to capture.

**The cover of this catalog is a visual representation of this conversation.*

The conversation evolves as Cynthia recalls a section of text from a book she is currently reading (*The Taxonomy of Metacognition*)...

“Metacognition refers to one’s knowledge concerning one’s own cognitive processes and products or anything related to them, e.g. the learning-relevant properties of information or data... Metacognition refers among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective” (Tarricone, 2011, p. 2).

Cynthia pauses, then goes on to quote Flavell and reads...

“For example, I am engaging in metacognition (metamemory, metalearning, metaattention, metalanguage, or whatever) if I notice that I am having more trouble learning *A* than *B*, if it strikes me that I should double-check *C* before accepting it is a fact; if it occurs to me that I had better make a note of *D* because I may forget it; if I think to ask someone about *E* to see if I have it right. Such examples could be multiplied endlessly. In any kind of cognitive transaction with the human or nonhuman environment, a variety of information processing activities may go on” (as cited in Resnick, 1976, p. 232).

CYNTHIA: I think we try to make (reflection) into “a thing.” It’s really a constant pushing and effort to expand our awareness, our awareness of ourselves and who we are, how we approach things, how we do the work that we do, what things we tend to do all the time, and what things we might be doing that we never do. All of that is part of that and then it gets extended into all the things we are trying to

learn about and all of the things we want to be able to do successfully. Another thing across the board in reflection is that it almost always has a specific problem, and so the reflection process is a process where we are constantly referencing a goal that we have.

KITTY: If you make that goal explicit then... I just think about today. We took the kids around to see the school show and I didn’t really go with a goal in mind other than to leave a note for the artist and maybe to generate some ideas for their own work and understanding the art world; the kids understanding that the kids in our building are artists. I guess *that* is the goal: understanding that you have all these artists around you that are resources for you.

CYNTHIA: To become aware of all the resources around you...

KITTY: Yah, I wasn’t complicit about that.

CYNTHIA: A goal. I don’t think that we are talking about outcomes here. I think we’re talking about more strategies, more strategic thinking about things. Reflection is about planning.

KITTY: Like planning how to start to talk to kids...

CYNTHIA: All of these things, all of these things.

KITTY: So this is the meta-cognition piece. My research when I was in grad school was on autonomy in the middle school and I think the developmental piece of meta-cognition needs to be talked about because it’s all about presence, being present and what you’re present for. And the distraction developmentally of a middle school child and their hormonal nightmare, the fluctuations, whatever it is... they are so not about quiet reflection in these settings.

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would be naming what they are about rather than saying, "Now stop being how you are and be more like some image we have of how reflection should be."

KATE SCHICK: And, how do you help them to reflect?

KITTY: It won't necessarily look like what we want it to look like but we're still reflecting. Like I think the activity I did with the 7th graders was a reflection of a word, but it was reflection. It was extremely social. It has to be at their age.

KATE SCHICK: Right.

KITTY: Interactive and social... that was maybe reflecting, but that was their brainstorming or maybe their envisioning.

CYNTHIA: Reflection is not brainstorming. Brainstorming is not reflection.

KITTY: I'm trying to figure out what it is. Were they reflecting on this social issue or concept?

CYNTHIA: Here is the problem with reflection, because reflection has come to mean so many things. In psychology reflection has specific kinds of meanings, where as we use it as any time when you just sit and go (*she gestures looking off into space*) explore something verbally. Brainstorming is not that. In fact, brainstorming is going into the off list.

KITTY: I don't mean... I guess I mean in the way that Lois talks about how reflecting appears in the envisioning process and that's what I'm talking about. Maybe brainstorming is not the word but the process where they are generating how they are going to possibly approach this problem that is put to them.

CHRISSEY: Aren't they also assessing prior knowledge when they're doing reflection?

CYNTHIA: Reflection is about

problem solving; at least in the literature reflection always begins with prior knowledge. So those things, in terms of what the literature says, are definitely in the zone of reflection.

KITTY: Are you talking about Lois' literature?

CYNTHIA: No, I'm talking about the literature in the general field of psychology on meta-cognition. That's what I'm talking about.

KITTY: I see. I was just struck by Lois' conversation when she talked to us in October and she said reflection appears throughout the process.

CYNTHIA: Exactly.

KITTY: And it's not this final assessment piece.

CYNTHIA: Exactly. It's not something you do and then you're done. Reflection is a side bar to everything we do, every minute. So it's not like now we're going to reflect. It's not like that. The reflection is built into every single part of it. It wears a different face at different parts and phases.

KITTY: So how important is it to name it?

CYNTHIA: To name it as in label it?

KITTY: Oh, "now you're reflecting." Catch them in the act of reflecting.

CYNTHIA: I think it's better to be generating lots of questions that are reflective modalities. You can say to someone, "What are you doing with your feet right now?" or "What are you doing with your hands right now?"

MATT: Rather than labeling it, creating opportunities for it.

CYNTHIA: And ask questions that will guide them in the process of doing it. You know if part of reflection is about prior knowledge then you can ask thousands of questions about prior knowledge

and listen to the answers. If it's problem solving, there's all kinds of questions that can be asked about the problem solving process.

KITTY: So I'm metacognitive right now and I'm watching my brain think, and I'm thinking to myself, "How does this apply to the practice of teaching art?" You know I'm always sort of at this next step. I get what you're saying, how does that apply to my... there's a nuts and bolts piece to teaching. What is it that we need to do, or not do, to make that known? Or does that get too lofty and esoteric for the young kids? You know my action research is all about scaffolding. How do we begin this conversation when they are three years old so that by the time they're 13 it's so natural the conversation just rolls off their tongue because they've been using this vocabulary and language for so long? Is it about naming it? Is it about teaching it? What's it about for us as teachers? How does that play out for us?

"Reflection is a side bar to everything we do, every minute. So it's not like now we're going to reflect. It's not like that. The reflection is built into every single part of it. It wears a different face at different parts and phases."

CYNTHIA: The thing that comes to mind right away is all the kids' drawing they do when they are reflecting in arts integration, where they are showing through drawing the process that they are aware of themselves being in a certain situation, using certain materials, doing certain things, making certain decisions, and being in certain states

such as embodiment. So, I would say that one of the things is . . .

KITTY: An awareness.

CYNTHIA: ...is building awareness of yourself as a learner.

KITTY: There, you are doing it now.

CYNTHIA: You think that? What I see in a lot of classrooms with kids is that they have no idea what (*gestures to her head*)...

KITTY: Well, my daughter said something really interesting the other day. She said, "Mom, I really don't think that many of the kids in my class have a thought process." I said, "What do you mean?" and she said, "They just do stuff, they don't really think about it and I do because you and I talk all the time. And you are always making me think about why did I arrive at this decision to do this."

"Without reflection you don't have higher order thinking. Is that something that art teachers should be assessed on, teaching children the ability to reflect?"

KATE THOMAS: Education has to be higher order thinking. If you are given a task that you really don't have to think about, that you can complete without a lot of thought, then you know, well probably if you're a 7th or 8th grader, you're not going to give it a lot of thought given that opportunity.

CHRISSEY: But I think if you set down higher expectations, it's going to force them to have a thought process, with multiple

steps to the process...

CYNTHIA: Okay, so how do you know when a student can think? What tips you off to the fact that you've got a thinker?

KITTY: The way they answer things.

CHRISSEY: The way they question too. When they are asking what can they do differently... But then I think back, in the fall, I went to a two-day symposium about the art of science. Did anyone go to that? It was interesting because we had these little breakout sessions where art teachers got to sit down with engineers and this one engineer was saying that when they were interviewing people out of college they found that the people who had some arts background had a better understanding as how to think.

KITTY: How to approach science?

CHRISSEY: How to approach science and even how to think. He said himself as an engineer that the way that he thinks and how he does preliminary sketches is important and that the two rely upon each other.

KITTY: My cousin is a chemistry teacher at Virginia Tech and she said she has these brilliant kids and they come in and do the same experiment over and over again and keep getting the same result and they don't understand why it's not changing. She said, "I don't understand how these kids are so smart and yet they can't be reflective at all in that process... in saying that I have to reframe this or try it a new way."

CYNTHIA: Well, the research says if you can't reflect you cannot get to higher order thinking and you can't do higher levels of reasoning.

KITTY: Who says this?

CYNTHIA: That's what the literature says in psychology with reflection, so reflection is kind of in there like the bridge between your self past

and your knowledge, everything you bring to something and where you end up getting and going. And then there all these things that your brain is grappling with, finding its own ground and its own understanding of what it's trying to do and how it's going to do it and the strategies it's going to bring forward and then how it's going to monitor itself. And another part of reflection, by the way, is regulation.

KATE THOMAS: What does that mean?

CYNTHIA: Regulation is watching...

KITTY: Like self-watching.

KATE THOMAS: Can you talk about more what that looks like?

KITTY: Let's go back to the middle schoolers.

CYNTHIA: Okay. Let's go back to the middle schoolers and the whole idea of having them aware of when they are out of sync, not able to engage in anything because they are so jittery and so off the wall.

KITTY: That they can't self-regulate.

CYNTHIA: They can't self-regulate and so bringing them into the ability to reflect is like this (*gestures fingers slipping through each other*) with their ability.

KITTY: So, let me say we're going to sit on this committee (on how to assess arts instruction in CPS). And hopefully they're going to listen to us and talk about assessment and the arts, which we will then be evaluated on and then our students... basically assessment is going to define the curriculum in Chicago Public School arts because whatever the assessment, instruction follows. I mean, I see such a marriage between what they're trying to do with Common Core and the whole metacognitive piece and the arts. And, it's not about the craftsmanship piece, it's the behavioral piece, it's the reflective piece, it's the

engaging and persisting. How do we bring that into the dialogue with what the literature says about this metacognitive thing? Without reflection you don't have higher order thinking. Is that something that art teachers should be assessed on, teaching children the ability to reflect?

CYNTHIA: Exactly. I think so, but the problem is that we're stuck with a word like reflection that is used by everybody all the time to mean all kinds of different things...

KITTY: We need to define it.

CYNTHIA: It's out there all over the place for all kinds of things. We're talking about reflective practice.

CHRISSEY: So reflecting throughout the process.

KITTY: So not reflecting the grade per se, not to say you get an "A" because you did this, this and this, it's more about...

CHRISSEY: But don't you think, I'm thinking back to what I did this year, that there was a lot of reflective practice. I just think it's identifying it all year and having the kids identifying it for themselves.

KITTY: I think naming is huge.

CYNTHIA: I think naming is low hanging fruit.

KITTY: Is what?

CYNTHIA: Low hanging fruit, because there are too many teachers who are just naming it and so they think because they are naming it they're doing it and they're doing it well, and it never goes any further.

KITTY: But you have to start somewhere.

KATE THOMAS: It's step one.

KITTY: It's a mandatory step.

“...with younger children they really need to verbalize it first and then go to writing it and that doesn't mean just naming it, just labeling it. So your point of entry can be the label, but then you have to follow up.”

CYNTHIA: It's a step where you begin to recognize when it's happening.

KITTY: Because if you don't have that vocabulary, if you don't have that language, then you've got nothing to refer it to; there's no symbolic connections to your actions. You've got to name the actions. You've got to name what's going on. You have to. I mean when you're in the classroom you have to be able to acknowledge what is going on.

CYNTHIA: Okay, so you reach a point where...

KITTY: You're right in regards to Bloom's Taxonomy, that's the lower end of it. I'm not saying it's the be-all-end-all. It's a necessary step in the process and I feel like people need to be given that space to do it. If they are using reflective practice, then it opens a whole world to them, to say, "Oh, that's what he's doing."

CYNTHIA: I've just seen too many teachers never get beyond that.

KITTY: You just see people year after year just naming it. So what are your strategies or suggestions, what are your recommendations, for climbing the tree and getting the higher fruit?

CYNTHIA: I think it's a combination of verbalization, writing, and a lot of different notation strategies...

CHRISSEY: Are you saying for them or for us?

CYNTHIA: Both.

KITTY: Verbalization and writing... explain to me.

CYNTHIA: When they (students) understand what they are doing at that moment... with a lot of people verbalization comes before the ability to write. That may not be true of everybody, children with bigger vocabularies, but I've seen with younger children they really need to verbalize it first and then go to writing it and that doesn't mean just naming it, just labeling it. So your point of entry can be the label, but then you have to follow up.

KITTY: Use the language...

CYNTHIA: How to not just use the language but probe it. You've got to probe it, probe it. Let's think of a situation where you're looking at a student and you're seeing that they're going back and forth between two colors and you could label that. You could say you're trying to decide which color you like best and that's reflective process. And/or maybe you could start with your label, "We're going to do reflection now" (*Cynthia laughs*). But then what questions could you ask that child that would actually lead to her verbalization of exactly what she is doing because you're making an inference anyway about what she's doing. Maybe she's doing something else.

KITTY: That's a pretty interesting assumption.

CYNTHIA: So just think, what questions might you ask that would lead to a broader verbalization by that child for herself about what she is doing? I think a big piece of this is that most people think they are the

only people who have certain kinds of internal verbalizations. We all have internal verbalizations, if we have any inner life at all, but we think we're the only person who does or that we're the only person that has that particular internal verbalization.

KITTY: You see that's what is so powerful about the Writer's Workshop, Lucy Calkins. What they're talking about is giving voice to inner conversations in your head. So artists think about these things, this is what they do.

CYNTHIA: Yes.

KITTY: So this is what they do, they ask themselves these kinds of questions all the time. So maybe in an instructional capacity it's a lot like those where you're mentioning that skill. So you say, "Today when you're writing or painting or drawing in the studios... I want you to think about any kind of internal conversation you have and bring that back to the rug at the end of the class to reflect and talk about that and say who had a conversation in their head about a choice they made."

CYNTHIA: I think that would be wonderful and it would not always lead to something, but every now and again it would.

KATE SCHICK: I always found with the studio thinking reading... when kids get frustrated I really try and ask them good questions like, "why do you think...?" So they can think about, "well, you know, I just don't have an idea" or "I just can't get my idea on the paper" to try and get them to see what's really stopping them by asking them the right question so they can go, "oh, yah, it's not working because..."

KITTY: There was this really powerful moment the other day with this boy in first grade. We had this thing about understanding your classmates as artists where students go around and ask two questions: "What do you

like about my work?" and "What do you think needs work in my work?" Just get some feedback from people and sort of talk about that, and this boy is always "I'm done, I'm done." This is why we were doing this. You know stretch yourself, go and ask some people and see what they say and this boy was so frustrated and I said, "Well, have you talked to people?" and he said, "Yah, and I don't like any of the answers I've been given." And so I said, "Talk to me and let's see what the problem is." It was about space. He's a first grader and he has a horizon line (Kitty draws a line with her fingers on the desk) and he has these objects, these swords, and he's drawn this horizon line behind the swords so they're not overlapping. So, he's really wrestling with perspective and space and then the line stops and there's this space where there is no horizon line. And I said, "I'm just wondering why you haven't finished the line?" and he says, "Because the space over there is different." He didn't have the language for it. You could tell he was frustrated because he didn't have the language.

So, this little boy was behind me and I didn't know it was these "Ninjago" swords or whatever he had. I didn't know the story behind the "Ninjago" swords. Sam stood up behind him and said, "Yah there's this swirling space behind it" and we're having this conversation about space. But he said, "It's too late. I've already drawn the objects. I can't draw that swirling space." I said, "What did you do down on the horizon line? You didn't draw through the swords; you drew around the swords, like a dotted line through the swords. Can you use that same idea with the..." He was so excited. And his mom just happened to walk by that day and I told her the story, because he'll have meltdowns a lot when he gets really frustrated with things. This was a groundbreaking moment. Those are

"Thinking is "thinking with support." That's the whole reason we bring all of this forward is to give people a structure to coach and support the thinking that needs to go on."

moments that when we share back at the rug, I often share those with the kids and I'll ask the kid, "I noticed that you were struggling today. Can you talk to the class about what was going on for you and what amazing solution you came up? Can you tell us the process you went through?" So, often times they will sit in the chair and they will tell their story of what happened.

CYNTHIA: That's solid reflection, but he's not doing it all by himself, because he can't.

KATE THOMAS: That's why Lois says what we are doing with *Studio Thinking* is "thinking with support." That's the whole reason we bring all of this forward... is to give people a structure to coach and support the thinking that needs to go on.

CYNTHIA: And we're really at the beginning of learning how to do that. It's a mysterious process and there's nobody who can tell you how to do that or...

KATE THOMAS: How to coach it?

CYNTHIA: All of that.

KITTY: But there are models out there that lend themselves to that like this writer's workshop that's going on at Burley and here, the reader's workshop. I think that's a model that lends itself to it. And that's why I'm curious. So not the subject matter nor the technique were relevant to what was going

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on in the "Ninjago" student's mind and his experience. It was about that struggle to take his art to another level. It could have been penguins. Do you know what I mean? It could have been a painting. It could have been a drawing. So when we go to these assessment groups, I shudder to think that it would be printmaking in first grade, drawing a hand in 4th grade. That's what I shudder about because that has nothing to do with the value of what we're trying to do here.

CYNTHIA: I think there is not just subject matter in art, but there is also the artistic process and this is all about the artistic process. The artistic process is applicable far beyond using the subject of art to make art.

KITTY: It's the glue.

CYNTHIA: It's greatly needed across the board by everyone and it's not taught because of the subject driven schools that we have, so that the only place that it's maybe going to happen is in art.

KATE THOMAS: Can you explain to me the difference between subject and . . .

CYNTHIA: Process driven. And the difficulty with process driven work is that it's hard to enter into it.

KITTY: What do you mean?

CYNTHIA: You can't just enter into a process because somebody says we're all going to do this. The way into process work is...

KITTY: That everyone has to do it.

CYNTHIA: ...has to find their own door in.

KITTY: So you have to provide the opportunities.

CYNTHIA: So, a big part of reflection is finding your way in. And then once you're in, how do you move along through the process in a way that will provide results that you will find satisfactory? What I see in art classes

is... let's take color mixing. You can work your color wheel out and start to get the relationship of these two colors and how they impact on one and another, but then you can set a criteria with a student who is maybe going to paint an animal that he has drawn and he can see the color it should be and he wants to get that color and that color...

KITTY: ... isn't on the wheel.

CYNTHIA: And that color isn't on the wheel. I've documented first graders, second graders not only struggle, but succeed in nailing the color as they work their way through because the ones they wanted weren't on the wheel. So it's not one thing or another. If they hadn't had the color wheel to get them started, to start to understand how the colors work together and were just given a bunch of paint and the criteria to match the color, I don't think they would have succeeded. So, you have to introduce certain kinds of information so that people have what they need, but I would hope that it's not just about doing the color wheel and then going on to something else. But, how do you set up criteria based art instruction that requires all that problem solving and that is set up so you can really develop strong reflective practice? Because they're trying to solve a problem and to reach a goal. Now every kid isn't trying to make that color. Every kid has picked his animal and has been drawing it and has been invested and now he's not satisfied with the "out of the box" color. He wants the right color and he's got a goal and he's got a problem he has to solve. So that's how I understand it: it's either or.

KITTY: It's both.

CYNTHIA: There are layers, and the art of it is knowing how to put it all together . . .

KITTY: I think it's messy. It's a sloppy messy process.

CYNTHIA: It's a fabulous process.

KITTY: Let's go share this with the class because wow, that was an amazing experience. Some of them will get it. Some of them will be like (*Kitty gestures something that has just flown by you*) over their head.

"...a big part of reflection is finding your way in. And then once you're in, how do you move along through the process in a way that will provide results that you will find satisfactory?"

CYNTHIA: But I think that the process you're using of students understanding when they have some kind of important moment, that they're going to verbalize it to the group and hearing each other's verbalizations, that's way beyond labeling it, way beyond labeling it. And that's what's going to begin to move that process within the group. You work with these kids for three or four years and they're going to be knocking your socks off in terms of how they can think about what they're doing. Keep going. You're going to get there.

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