

# Taking the PYP Forward

## Reflections and Wonderings

I can't tell you how many times I have been recommended this book. For the last two and half years it has been sitting on my shelf. Whenever it was time to grab a new book, I passed it over, always telling myself that I would eventually get to it.

Perhaps it was because I moved from a PYP school to a different curriculum after 3.11 and it didn't feel necessary. Or maybe it was because I have been swamped with books and articles from my M.Ed and my mind was just elsewhere.

Whatever the reason, I am finally getting around to it. Next year I will be re-joining the PYP community at a school in Germany and I hope to get back into the flow (and speak the language more fluently). Over the break I hope to get to a chapter a night and reflect on each as I go. That is an optimistic goal, one that I know I won't be able to keep. The holidays are a busy time and two and half weeks will fly by. We shall see.

My initial impressions of the book, having only looked at the cover, scanned the table of contents, and read the introduction and contributors page are:

- there is a great diversity of voices present; from consultants, academics, administrators and teachers
- the range of topics looks broad; ICT to Reggio Emilia to organization culture and beyond
- I have a problem with the term *best practice*, and it has popped up several times and I haven't read the book yet; best for whom? Where? When? What is best for one may not be best for another...
- There seems to be a general arc to the book, starting with Inquiry as the foundation and zooming in to more specific topics

My biggest *wondering* about this book is this; what does *forward* mean? Are we talking about time? Development? Evolution? It is interesting title for the book, and I wonder to what extend the answers will be embodied in the content.

Where is forward?

Looking forward to reading this!

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First off, I loved this article. Short speaks to everything that I value in an inquiry approach; the focus on the process of learning, that it transcends content, and that it is so much more than just themed units. It is an approach to living within the world, a way of being more than a way of studying. I see a lot of parallels between [Ted Aoki](#) and his sense of the lived curriculum. She is bang on in her estimation of how inquiry can often become a teacher-centered method, rather than an over-arching philosophy. The tension that is often ignored in favor of clear outcomes is the place where we begin to reformulate our view of the world, and where learning lives. This is true of both teachers approaching inquiry in the class, and students living with inquiry as a way of seeing the world.

Wonderful stuff.

I am also struck with how much Short harmonizes with the complexity sciences view of learning and education. There are so many similarities in thought and philosophy.

**Inquiry is a collaborative process of connecting to and reaching beyond current understandings to explore tensions significant to learners (pg 12)**

Some big take-aways here are the concepts of *collaborative* and *tensions*. Brent Davis mentions that education should be about *making the familiar strange*. This is done not individually, but collectively. We are not the sum of our parts, but the collective is its own learning system. Essentially, this is what my [M.Ed project](#) is about in the context of the mathematics classroom. The collective cannot be taken out of the learning. We do not learn in isolation. Students are living, complex beings, not photons in a vacuum. Short gives us a sense of this in her phrasing of *off balance*. This tension, between what we think we know and what we don't know, drives the learning into new and uncharted waters. I would replace her use of the word off balanced and instead use [far from equilibrium](#). All complex systems operate far from equilibrium, and if they get stuck in that balanced area, they freeze and die. The tension acts as a driving point to evolution, growth, and learning.

**I would argue that three year olds epitomize inquiry (pg 13)**

So comforting to see a professional recognize the importance of the three year old mind. As a father of a three year old I watch in awe as he shifts from understanding to understanding. As we learn, we make complex, not simplify. It seems to me that Short is suggesting an awareness of this process, an inquiry into inquiry so to speak. Being mindful of *how* we are learning. Learning about learning. This is not always easy. I have started this year with my kids to help them understand how they learn, but I cannot say that it is always easy. It is a difficult idea to grasp, and the meta-awareness comes in pieces, not like a surging flood. It takes time.

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## Bateson says that learning.... (pg 13)

Quoting [Gregory Bateson](#) *Mind and Nature*?! We need to have a beer Kathy Short... (or a tea or a coffee). Love this book. He is a seminal thinker in the complexity sciences.

## From the information age to the conceptual age (pg 14)

I love Dan Pink's work as well. He is talking complexity science, though he is doing it from a populist perspective (as is Malcolm Gladwell). The focus on [imagination and creativity](#) are central to the environment I try to occasion in my class.

## Connection to the conceptual frame (pg 15)

This is something I struggle with, though I agree 100% on the importance. I have trouble bringing it back to the Central Idea, and we sometimes get lost in the content. Perhaps this is because that each unit in the current curriculum I work in is thematic by nature (complete with catchy titles), but more so because of me. I need to work on this identification of the key questions and issues, and not let the project or the product dictate what we do. At times I am good, other times I am not. Part of my own evolution is being aware of this...

It reminds me of *Making the PYP Happen* in Kobe, my first introduction to the PYP three years ago. The workshop facilitator said that if we are doing a unit on oceans, we need to keep it in the ocean and we cannot have the kids exploring rain-forests. The participants challenged her on this, saying that the concept should dictate, not the content. If the concept was the same in the rain-forest and the ocean, then why not let them go? I agree with this, but it is not something that I always do very well (and then other times I do it *really* well). During our unit on nutrition, we got stuck doing body systems (it was still a great learning experience), not because it was driven by the children, but because I set it up that way. I need to bring it back to the central idea and let that guide. Like I said, sometimes I do, other times I don't.

## Enacting inquiry in the classroom (pg 18)

I don't think I would use the word [enacting](#) here. Maybe *occasioning*, of *providing the conditions for*. Enacting sounds too purposeful, too close to *making*, and like Freire said a couple of pages back, *the person who poses the problem (enacts) is the person who controls the learning*. Still, I get the sense she is trying to create. You can't plan this stuff. A unit planner cannot be filled out at the beginning of the unit and followed like a list. There is a sense of reaction and improv that needs to be part of the teaching process. We need to go with the flow, not our own flow, but with the flow of the learners (collective). As Einstein said, *I never teach my students, I simply provide the environment for them to learn*.

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I feel a bit uncomfortable with the *circleness* of her model, but at the same time I sense that she is not suggesting it be followed around like the hours on a clock. It is dynamic and flexible. What I love about her model is that it starts with connection. This is harder than it looks, but if you can get the students connected to it in a personal and meaningful way, then inquiry comes much more easily. I am a fan of the [Kath Murdoch model](#), as it tends to be more about flows than circles, but I see a lot of harmony between the two. I would love to map them on top of each other and see where the similarities and the differences are. My gut says they are much more similar than they are different.

#### The focus in unpacking complexity (pg 22)

This is great. I remember working with Kath Murdoch at a workshop in Tokyo, and she said that you have to be comfortable with *fogginess*. That has stuck with me. To me, a unit of inquiry is not about packaging up a neat little book of understandings and saying that now I understand this. That is simplistic and reductionist. Rather, Short says that the final representations *support students is recognizing how much they have learned as well as what they still need to know (pg 24)*. This is such a shift from how many view education. Rather than *teaching* students to *know* something, the onus moves from *teaching* students to *learn* something. The learning never stops. In order to get to the next layer of the onion, you have to *know* what you don't *know*. This is such a beautiful way to view this profession. It turns so many institutionalized aspects of education on its head (grades, grade levels, subjects, assessments). For a much more complex and deeper look at this tension between knowing, learning, and teaching, read Brent Davis [Engaging Minds](#).

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I don't know, this article felt disjointed. It was hard to follow and seemed to bounce from place to place. I struggled to keep the central thesis in mind while I was reading. At times it was focused on the individual, at other times the collective, and at other times the environment. I really enjoyed it though!

At it's core, I read it as a defense of the social and collective intelligence of a classroom. Yes, the tools of inquiry are great, and becoming fluent in them is important for life in the 21st century, but there is a larger layer atop of this. It is not just about the individual, but the sense of collective, or community. This lays the conditions for inquiry, as inquiry is not an individual process, but a collective one.

**one has to make to make inquiry and its learning processes visible (pg 29)**

This is exactly what I have been trying to do with my **Making Thinking Visible** work this year.

**Developing Tools (pg 29)**

I have trouble separating the *physical* tools from the *psychological* tools. They are nested. You cannot have one without the other. They did not evolve separately, they co-evolved. The importance of these tools in our culture and society, that is another question. We absolutely value one over the other, but we often lose sight of the forest by starting at the trees. We are obsessed with the psychological tools, and schools have a propensity to just throw away the rest and, as **Ken Robinson** says, *educate the top of the head and slightly to the left.*

**Jazz musicianship is not individual, but social (pg 32)**

What is we viewed teaching this way? What is schools were more free flowing and allowed kids to make things as they go, follow their collective dreams and minds? What if all of education was like a big game of improv drama?

**Community of Readers (pg 32)**

This is something I have been working hard at this year. Trying to move the reading process away from the individual and into the realm of the collective. Have you really read the book if you have not shared your thoughts on it with somebody else?

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**a class has shared purposes and values; shared classroom routines and activities; shared talk; and changing roles (pg 33)**

A classroom is a culture. It is like an ecosystem. It is not a simple matter of opening the top of the container and pouring in the *knowing*. I am glad the author is taking from **Jean Lave**, because she is a wonderful writer. What this quote basically means to me is that a classroom is a **complex adaptive system** (and it is not just me and the books I read, it is becoming more mainstream, even **Ken Robinson referred to education as a complex adaptive system**). There is a host of research into the elements of complex systems, but this is touching on some of the major themes.

To me this section of the article is drawing attention to the diversity of a class, but also the redundancy. A system needs to be very redundant in order to communicate. Think of the kids in your class. I bet you will find there is more in common among them than there is difference. The diversity allows for that same redundant group to be creative and to react in novel ways to an unknown stimulus. This links in with Kathy Short's ideas of tension in the previous chapter. If you are creating some great tension in your class, but not developing a community of inquiry, it won't be enough. The tension needs a diverse collective for inquiry to soar.

**IRF, Initiation, Response, Feedback (pg 35)**

Ah, the old guess what's in the teacher's head game! **I have written about this before**, and how listening is such an important skill. Evaluative listening (the example from the book) has its place, but if it is the norm then not much creativity will emerge.

I also really liked the bottom of page 35, *Why do you say that?* Another visible thinking strategy.

**Experts (pg 37)**

I love the author's sense of how this plays out in the class. It is beautiful. However, I have a problem with the phrase *thinking like a mathematician*. When a mathematician is thinking, they are using a complete set of tools to create a new and emergent result. They have honed their understanding of the rules of math. A child, not so much. The difference is this, a mathematician is narrowing down, compacting rules and numbers to make them easier to understand. They are trying to make the box smaller. A child on the other hand, does not have all those tools, and then shouldn't the goal of teaching math be expanding the box? To make it bigger and broader? To understand more about the language and discipline, and then start compacting it? I struggle with this.

**PYP has a complex curricular model (pg 40)**

Yes, it does. There are many **researchers, curriculum theorists**, and teachers out there who are using the developed science of complexity to explain these processes in the world of education. I wonder how the PYP would be different if it adopted those metaphors, instead of the ones they already use? Should it? Is there a point? That is an entirely different post waiting to happen.

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This was superb. For the length of it, there were so many ideas in here. I will say that I see curriculum a little bit differently in terms of its shape, but this chapter is so wonderfully articulated and presented in such an open manner that it allows the reader to go into so many different directions.

### There is too much to teach (pg 43)

I am glad this was stated right up front. It is so true, and it is one of those aspects of schooling that teachers seem to shrug their shoulders to and say, meh. Curriculum is so [loaded and heavy](#) (or bloated and stuffed) with content that it is almost overwhelming. The standards and benchmarks often become the goal of school, and learning is forgotten or replaced with an assembly line mentality to cover everything and pass the test. There are schools out there who have freed themselves from these chains (look at the [Sudbury Schools](#)), but for the most part, is it still a trap.

The more rebellious teachers out there ([tricksters](#)) will purposely leave out parts of the curriculum that think are unsightly or unnecessary and instead focus on the things that matter; learning to learn, self-reflection, all those good things that the Learner Profile suggest. However, I have had this same conversation with a good friend of mine who has opened my eyes to another perspective. He loves his students, and he wants them to succeed and achieve their dreams. Part of that means they have to pass the test, to get into the program, to get the certification, to..... you get the idea. By focusing on the content and helping them clear those hurdles that the system puts up, is he not aiding them in their quest? I don't like this story, but it always makes me think.

### there are key ways of thinking and ways of being that are culturally important (pg 45)

The learner profile and trans-disciplinary skills are great. They are a wonderful goal and it would be great if we could set the conditions for kids to possess all these qualities. The problem for me; I don't possess all these qualities, and I value some more than others. Is that bad of me? I don't know. My classroom is certainly a place that over-extends on the Thinkers and Inquirers scale. Creativity and imagination are so important to what I do. Yet, another teacher may move in the direction of the Knowledgeable, or the Caring, or the Principled. The fine arts may be traded out for design and digital arts. Communication may be done through drama, or it may also be done through non-fiction essay writing, or it may be done through fiction. We each have our strengths that we bring to our life in the classroom.

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That is not to say I don't do these other things, I certainly do, but for me as a person I have my own values that I bring as a person. Should I not let these values shine? Or should I try and be Balanced all the time? The problem is, that is not me. I am not balanced. I believe in being genuine with my students, as true to who I am as I can. Is that a bad thing?

### Power Standards (pg 46)

I appreciate Marzano's idea of taking the standards and weeding out the unimportant ones down to a list of *important*-important ones. It is a useful goal, and would help teachers. My question with standards is this, why set them at all? Why do we need them? What are they for? What if we let the learner profile and trans-disciplinary skills *BE* the curriculum? What do we need standards? I have yet to hear a good answer to that question (or at least a personally satisfying one).

### Throughlines (pg 46)

I like this sense of a line running through the spiral, but I think if we are going to apply shapes to curriculum, the metaphors and images from [fractal geometry](#) and [networked systems](#) are much more powerful.

### The Null Curriculum (pg 47)

I love [Elliot Eisner](#). He is just a defender of the arts in school and his work on curriculum is wonderful. The explicit curriculum is huge, volumes and volumes of it. The implicit curriculum is more about being a good person and is more about skills (and in my opinion, should BE the explicit curriculum), and the null curriculum is the stuff that is left out. This one is the most interesting. Subjects are left out of the curriculum (what school covers nano-technology) for whatever reason. Also, certain people are left out of curriculum. There is a lot of great writing on [Queer pedagogy](#) and how our curriculum is very heterosexual. Food for thought.

### Year long throughline; How we Express Ourselves (pg 49)

I love this idea! I would love to have five units a year instead of six (well I would like four, but will settle for five!). The idea of the *How we Express Ourselves* running through each unit is great, and I made a note about the same thing before I got to this part. I think it would be problematic in some ways, and it may lead to a de-valuation of the arts. Yet, if schools made a commitment to the arts and self expression as a central tenet to their existence it would work wonderfully.

If all those damn standards don't get in the way.

I won't review this chapter, only because I have such a wildly different perception of what assessment means that it is like comparing apples to hairless grizzly bears. There are many ways to assess, and while I disagree (not everything) with the image of assessment presented in this chapter, I do not think it is wrong. Just different.

I will stop there.

Have a happy holiday.

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I wasn't going to do a post tonight (is it Xmas eve?), but I looked at this chapter and saw it was only a couple of pages long. My son was tucked into bed snugly, the presents are wrapped under the tree, the living room is prepared for the madness that will follow tomorrow morning, and I too excited at the thought of spending the day tomorrow making Lego and playing that I can't sleep; so why not.

My first thought is this; in 1950 Ralph Tyler came out with his Tyler rationale of curriculum design:

Teaching consists of organizing knowledge into some pattern, of presenting the facts and generalizations in a clear, easily understood fashion, of testing to determine the amount of information acquired, and of marking the pupil's attainment ... any change from this pattern is a softening of the educative process, a departure from the fundamentals. They are concerned with better ways of telling, explaining, drilling, testing, and marking.

Essentially, UbD is taking these principles and turning them around, making a *backwards design*. **Grant Wiggins**, a great writer and someone I enjoy reading, **mentions** Ralph Tyler as a huge influence in his research and work. Yet, I have concerns with any system that states it is able to plan a learning engagement without the students being present. A methodized system, to me, seems to lack the authenticity of a more improvisational approach to teaching, learning, and knowing. That being said, I am not an expert on UbD, and I do know that it is a tool, and like any tool, it can be used for reductionist purposes or it can be used as expansionist. It is all about how the tool is used. My only question at this point is; if this work is based on ideas that originated in the 1950's, what is *new* about this?

### **touch hearts as well as minds (pg 67)**

This is stated as a goal of the PYP. I agree wholeheartedly with this. However, it always feels to me that the documents and official tone of them are separating the two. *Mind and heart are different things, and we need to reach both of them.* I see them as one and the same. You can't have heart without mind, and you can't have mind without heart. It is like yin and yang.

### **Big Ideas (pg 68)**

As a student-teacher (in Canada we call them pre-service teachers) this was drilled into us. We were being taught the concepts of backwards planning in our curriculum course, and the big ideas were a constant calling point. So much so, that they lost their meaning and were a constant point of frustration. I get it now, but back then, it was incredibly annoying. We wanted to run wild, engage in ideas, follow the students and let them guide us, but we kept getting pulled back (like one of those canes that comes out during an old vaudeville performance and hooks the actor off stage) to the big idea. To this day, I still get that feeling when following a plan. I want to go off on a tangent, but I.....

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### Essential questions (pg 68)

I like the UbD approach to questions over central ideas. Something about me just likes the open ended part of a question that gets left hanging, and everybody answers it differently. Such a great metaphor for life. For more on this debate, see the **PYP Threads** discussion. It is a great read.

### Students asking their own questions (pg 70)

This is my favorite part of the job. A student can come up with a question that changes everything, and makes everybody stop and think (if the attention is drawn to it). This is a great aspect of the PYP that keeps me working with it. Independent inquiries (or group or class) that are driven by authentic questions from the students are so powerful. A great friend of mine and research partner told me of his grade 1 class that asked, *how many bricks are in the yellow brick road?* This question sustained them for nearly the entire year, and they covered the entire grade 1 curriculum trying to answer it. You can't plan that kind of thing, and if you did, would be authentic?

### UbD offers a more universal framework that is being used to plan curriculum from pre-K to university levels (pg 71)

I think this is my big issue with UbD. Here is my problem; I don't teach university. I teach children. I teach all subjects (except for PE and Music). I don't want to focus on a specific discipline because that is not the way the world works. In the first chapter of the book, Kathy Short quoted **Gregory Bateson**. Bateson was a polymath. He did everything. His career ranged from so many disciplines that it was impossible to say what he did. In his own words, he webbed the disciplines, and found the connections between them and above them. If the curriculum planning template gets in the way of me trying to provide that atmosphere for my students, then I have to question it's value. (Note: having not read a lot of the literature around UbD, I cannot say how it reacts to this type of environment. Maybe it works wonders.)

### Do not need to reinvent the wheel (pg 71)

I don't like the **OCC** and I am equally sure I would not like **UbD exchange**. I want to reinvent the wheel. I want my students to get as authentic and real as experience as I can give them, and I want them in control. They drive the bus, I just make sure it doesn't crash. By taking somebody else's unit plan and applying it to my class, that is like putting a pair of somebody else's old shoes and thinking that it makes you more like that person. They are just shoes. What works in one environment, may not work in another. Ideas are fine, but taking a planner and using it in exactly the same way, no thank you.

This is a topic that is very relevant to my day to day life. I appreciated this because it wasn't philosophical but was based on day to day life in the classroom. There are aspects to teaching ESL that I do well, and those that I need to work on. This made me feel good about both of those, and put into perspective some of the changes I need to make.

### **High Challenge High Support (pg 76)**

Focusing on integrating ESL students into the UOI may seem like a simple idea, but it is harder than it looks. I admit I have had students working on other projects (never alone) because I felt what we were doing was too difficult. This is something that I will stop doing (though I have not done it this year) in the future. It creates a sense of other, and limits the opportunities for meaningful interaction with the teacher and more importantly, their peers. If I want to follow a Vygotsky approach, they need that time to harmonize with the collective. I need to change my approach to how I set up those interactions.

### **Recasting the last sentence (pg 80)**

This is a such a simple and profoundly powerful way of being with ESL students. I first heard about this when I was a pre-service teacher at OISE and it has been part of practice ever since. Instead of correcting grammar mistakes, rephrase them in the proper form.

*S- I go to the library*

*T- oh, you went to the library? What did you get?*

My wife and I do this with our son in both languages of our house. We try to never correct his mistakes only give him opportunities to hear the proper form, over and over again. You do this once in a while and it has no meaning, but you do this 20 times a day and it starts to stick.

### **Playing the role of someone who doesn't understand (pg 81)**

I love this. Instead of explaining how to do something, have the kids teach you. It gives meaningful practice, they realize their mistakes as they rebuild their understanding on how it is done, and it is fun. Break into small groups and do it with friends is also a great strategy as it takes the voice away from the more vocal students. My advisor at OISE gave me the best advice ever at watching a lesson of mine. On my feedback sheet he wrote TTT, shut up, and don't talk unless you have to. My Teacher Talk Time was way to high, and I was explaining things that they should have been doing themselves. That stuck with me ever since.

### **This may seem like spoon feeding... (pg 82)**

Everybody needs to be spoonfed when learning to eat. Why not speaking? Interesting thought.

### **Non-threatening environment (pg 83)**

For me, this is key. If the students feel safe and that their mistakes will not be belittled but rather supported by the entire collective, then they will work more efficiently in the upper right High Challenge High Support quadrant.

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This chapter infuriated me. There, I said it. That felt better. They make some good points about higher order skills at the beginning of the chapter, and then go to provide five spotlights where schools could focus on these skills to... well, I'm not really what the purpose is. Improve learning? That seems to be what they are saying, that in order to improve learning you need to use technology. I profoundly disagree with this. Great learning can happen with or without technology. Yes, tech can improve on some things, or make others easier, but it does not replace other forms of learning. I see no separation between technology learning and non-technology learning.

A pencil is technology.

All of the examples of projects or units given in the chapter could have been easily done without technology, with no real change to learning or thinking going on. That to me is the key word, *thinking*.

How is technology changing the thinking of your students? Is it a necessary part of developing thinking skills?

Finally, I also don't buy the bit about the need to teach kids how to use technology. They will do that on their own. When they leave PYP and start their lives as teenagers, they will surpass us in terms of their technological understanding. They are natives. Let them run wild in their natural surrounding. Now, using it responsibly that is a different question and that is an area where we could have some meaningful impact.

### **Spotlight #1: ICT in PYP inquiry and communication**

They make the case that ICT has been left largely to the teacher initiative without any guidance in form of curricular design. That is very true. It is also the way I want it as a teacher! If there is a teacher who is not comfortable with technology, but is a master of getting kids to display their thinking visually and explain their reasoning, that teacher is still an amazing asset that should be cherished. Not forced to implement something they don't see the relevance of.

I am comfortable with computers and tech. I grew up with them. They are part of my life. That doesn't mean I need a bunch of standards and benchmarks to tell me how to do something that is part of the world I inhabit.

### **Spotlight #2: Thinking, social, communication, self-management and research skills**

*Technology can help elevate the tasks that we design for students.* This is the gist of my problem with the article for me; they make sweeping broad comments like this and then don't explain how or why this can be done with technology better than without it. Every example they give, I can take out the technology and make it just as rich in terms of the thinking that is going on. *Kids create a virtual museum.* Kids create a real museum. *Kids narrate stories onto computers and edit them together with images.* Kids do a public reading of the story surrounding by accompanying paintings. What is the difference? What is technology adding?

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## Aside: The Corporation influence

Apple and Google are not in education to make the world better for people. They are in it to make money. Be wary of anything that they are selling to schools, and have these conversations with your kids. Don't let them set the agenda, or start writing curriculum. That is a bad road to go down.....

## Spotlight #5: collaboration, inquiry, and problem solving

This is where technology has its true purpose to me. It can connect kids to the world. If we made an art gallery in the school we could invite people from the community using our analog methods. If we did it digitally, we could invite the world. It makes the learning community so much larger. It increases the response to our work, and it connects ideas to new ideas which form ever newer ideas.

## A Plea to Technology Coordinators from me

I love technology and I use it with my kids everyday. I also love paint, and play-doh, and going outside, and getting dirty, and collaborating on big pieces of paper with those smelly markers. My plea to educational technologists is this; please don't lose that in the future schools that you envision. It is too important to throw away. Technology is great, but so is making something with your hands. The tactile must be defended. Someone must write a chapter about the *The Role of the Tactile in the PYP* that goes right beside this one.

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I very much enjoyed this chapter. Davidson is one of the stronger writers in this book and his voice shines through his words. At first glance, I am struck by the image of a *power law distribution*. A power law says that small events will happen in greater frequency than large events. For example, earthquakes. There are hundreds of earthquakes every day, but the vast majority are never felt by humans. When a big one happens, we feel it. That big one however, is very statistically rare when compared to the number of small ones. There is something in here that is relevant to education (this is part of our M.Ed research project, looking for realizations in the math class and seeing if they fit power laws), but I am not entirely sure of what. Davidson alludes to it with his sense of big actions and everyday actions. Kids are taking action on a daily basis, though in our analysis of action as a concept, we tend to focus on the big events, and miss out on the small bits that are so important to being in the world.

The next aspect that struck me is the power of *talk*, especially in regards to reflection. I see power law distributions at play here as well. If reflection is to become a part of the disposition of learning that we are striving for, then do we need to hold off on the written reflections and allow for reflection to happen more spontaneously during the course of a day? *Stop for a moment and reflect with your partner. Sit silently and reflect with yourself. No need to record it, just the act of reflecting itself is what we are after.* All too often the reflection is tacked onto the end of the learning cycle, often in a methodized way (blog post, template, Color Symbol Image or other strategy, etc.). These are great, but is this really what we are looking for? They are very important, but are these just the big events in our power law distribution? Are we paying enough attention to the common events, those everyday earthquakes that nobody feels, or are we just searching for that big one?

This has me thinking about how this will effect my day to day life with my students. Perhaps, I don't need to see all their reflections? Just orient attention to the fact that they are being reflective, or I am providing a space for them to reflect in?

Anyway, this chapter was about Action, not reflection! Still, is there a difference? How much of the action is reflective practice? The problems we are asking our kids to consider are huge, wicked problems. They are complex, and by breaking them down into smaller bite size pieces I often feel that we are doing our kids a dis-service. The problems of the world cannot be solved with bake sales, or charity drives. Let's look at climate change. As a general requirement, it need a massive change in the way that we live. All the posters about saving electricity and the feel good slogans we come up with for a green future are not going to do anything as long as we keep living the way we live.

Maybe, the best form of action is reflection? To be aware of ourselves, our thoughts, and our connection with the world around us. If we are mindful of the little common events, perhaps this reflective way of being will allow us to spot and act on the big, life changing stuff.

# Taking the PYP Forward

## Reflections and Wonderings

I must admit that this is a subject I am ignorant of. The complexity of the brain and how it operates within the rest of our body system is a fascinating topic, but I find the material available on this subject to be incredibly simplistic. There also tends to be huge contradictions in one resource to the next, and while one person says one thing, you can almost certainly find another who says the opposite is true! Not to mention that many of them are made for profit (read the research behind the Baby Einstein products, it has nothing to do with toddlers or young learners yet spawned a multi-million dollar empire).

The popular edu-neurological texts are usually reduced to simple lists. They tend to be reductionist and simplistic. Where I do agree that this is an emerging field, and one that is very important, I have not experienced a great read or resource surrounding it. Then again, I haven't been looking very hard!

I appreciated the authors sense of the complexity, and he didn't seem to value one aspect of the brain over the other. There are many facets to the brain, and each one impacts learning. I think I am waiting for a holistic way of viewing these different areas, instead of breaking them down to individual phenomenon.

### **Attention Systems (pg 110)**

This is really interesting. I remember reading one study that stated our brain is inundated with close to a million pieces of information a second. We can only pay attention to and filter a small fraction of those. The author states that our attention is like a searchlight, finding and focusing only a small part of the stimuli in front of us. However, **Alison Gopnik** says that the opposite is true, and that babies and young children have more of a lantern approach, where the attention goes in all directions, and take in lots of information from lots of different sources all at once. There is one of those edu-neurological contradictions again! I have no idea which one to believe (though my experience with young children and my gut feeling tells me to side with Gopnik).

### **"Stop moving, be quiet and pay attention" (pg 111)**

I love the way Schneck treats movement and the brain. It is so refreshing to see an educator telling us that movement and fidgeting are not bad things, and actually, they are essential for effective learning. I have busy hands and feet, and I have trouble sitting still if I am not writing or reading. Listening to others can be difficult if I am forced to sit quietly and pay attention. I know so many kids who are the same. There are extreme cases, where kids need to be walking around the room while you speak, and less severe cases where squeezing a stress ball will help them stay focused. Other kids are very content sitting still and listening. Morale of the story, know your students and how they learn.

### **The brain does not work by a mechanistic blueprint (pg 113)**

He won me over with this comment. Metaphors are important to how we view the world, and speaking about the brain with using machine or computer like metaphors is just wrong. It is not like a computer. It is not a machine. It is a living system. It is dynamic. Metaphors from ecosystems and evolution are more apt. Darwin, not Newton.

### **The normal process at this stage of development is not to think fully about the consequences (pg 114)**

*Kids cannot control their inhibition sensors due to the limited growth of the prefrontal lobes and thus cannot comprehend fully the consequences of their actions.* This statement (a paraphrasing of mine) throws traditional methods of discipline on their head. Imagine a school that lived by that statement....

### **Stress (pg 120)**

The author seems to be suggesting without saying that high stakes testing is immoral. Wonderful! I wish we would have said it outright though! That being said, the brain needs stress to be efficient. Finding the harmony between too much and too little is another one of the jobs of teaching. I find that so much of teaching is searching for harmony...

At some point in my life and career as an educator, I must work in a pre-primary environment. Around the world the majority of places that call them themselves *Reggio inspired* are mainly for very young learners. I see no reason why the same practices and ideas cannot be applied to an upper elementary classroom as well. This is the first chapter in the book where I felt that this was really pushing education forward. There have been great ideas in the previous chapters, but for the most part, they are adaptations on the system that is already in place. *Reggio* on the other hand, is truly forward thinking. It brings so many questions forward, and paints a picture of schools that are so radically different from what is considered mainstream education.

### **Pedagogical Coordinator (pedagogista) (pg 125)**

Naturally, I compare this role with the PYP coordinator. Though it is so much different. In a sense, the PYPC is in charge of curriculum and the units of study. Yes, very good PYPC are also great at introducing the pedagogy and making sure the classrooms are dynamic sources of learning. Yet, they also have the responsible of making sure the official documents of the school policy are being covered. Imagine if they were free from that burden, and they could focus solely on pedagogy and practice...

### **children will gravitate toward that which challenges them and is worth knowing (pg 125)**

Reggio inspired classrooms have so much trust in the children, and believe so strongly in their abilities. That trust is something that heavily mandated curriculums and test driven environments can never accomplish. There is too much to cover, so you have to learn what I tell you to learn. Imagine if we let kids study what they wanted to. I am **not** taking about a three day independent investigation scheduled for week 4 or the UOI, or as a step in an inquiry model. I am taking about always. For the entirety of their elementary education, from PreK to Grade 5 (or later). What if they were free to do whatever they wanted to do? That is a great deal of trust. Take a look at the [Sudbury Schools](#) to see this in action.

### **Each classroom has two teachers (pg 127)**

This is impossible in my current school since our numbers are small and we don't have multiple classes at each level, but what if the teachers of a particular grade level rotated among all the classes? Or even the students? Why do three classrooms of grade 5 students have to stay in the same group, with the same teacher? Why not let it be more fluid? This would allow the kids to work with a much broader range of learning styles and personality types, and it would force the teachers to collaborate, not just with each other, but with the kids as well. Or is this just too chaotic? I would love to try this someday.

### Emergent Curriculum (pg 130)

This is the key to Reggio. There is no set curriculum. No outcomes. No standards and benchmarks. *Just inquiry unleashed.* It is focused on the individual child, and the group of learners how they are understanding and thinking about the world around them. This is what I dream about. **Teacher Tom writes about how his emergent curriculum** works at his pre-school (one of the best blogs on education, a must read, even if you don't teach young children). I think this is entirely possible to do with a group of grade 5 students. But, it requires a lot of trust, and in our world that is hard to come by. We would have to trust the teachers to be fully engaged, and we would have to trust the students to be curious and dedicated to personal growth. It would change the fundamental purpose of schooling, and it would change the way schools are viewed. It would be revolutionary.

I am willing to give it a try. You never know until you try.

## Taking the PYP Forward

### Reflections and Wonderings

This was a short one that spent the bulk of the text defining what those loaded terms actually mean. What is culture to a grade 4 student? What does it mean to live in a third culture? It was very interesting, and is an important part of life in international schools. For me however, I cannot read this without thinking and applying it to my own son.

He is now 3, soon to be 4. He was born in Japan, and aside from a year in Toronto as an infant, he has lived here his whole life. Next year he will officially start his formal education in Germany. I am of Canadian heritage, though I have been living in Japan for so long I don't really know what that means anymore. My wife is Japanese, but very non-traditional. We speak two languages at home, English and Japanese. We do not have a TV, nor will we probably even own one again. He is a textbook example of a TCK.

I wonder at how many of the *missed learning customs* he will not take part in. Japanese schools are incredibly safe and provide a great environment for their kids (IMO), but a strong part of the system is training young children to be Japanese, to live in Japanese society, to think like a Japanese person, and to fit into the strong collectivist culture that exists here. Canadian schools on the other hand are about individuality and expressing yourself. The incredible multi-racial and multi-cultural make up of Canada (at least in the large cities) make it more like an international school. However, it is a very top down system, with detailed curriculum and set objectives. It does not value the things we value in education; curiosity, imagination, and creativity.

Being a third culture family seems like a good fit for us as a family. Of course, we have no idea what we are getting ourselves into, but we are going to enjoy the ride.

## Taking the PYP Forward

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Being a third culture family seems like a good fit for us as a family. Of course, we have no idea what we are getting ourselves into, but we are going to enjoy the ride.

This chapter was hard to relate to. The majority of my teaching career has been in international schools, and my pre-service teaching was in a city that is very multi-cultural, even more so than the international schools I have worked at. I do have a great deal of experience in Japanese schools, which one could certainly categorize as not very international.

I do see the internet as playing a huge role in international education. The world online is a much different place from the borders of a school-yard, and it can open up means of communication and inquiry that would normally be closed to many of our students. Last year, my class had pen pals in PEI Canada, Skype meetings with a school in Australia, and a joint wiki with a school in Toronto. If fostered properly, and I am not sure if I did that, these relationships could be very beneficial to students in discovering more about other cultures.

The most striking thing about this article however, is the socio-economic issues of such an approach to pedagogy. Internationalism is a fantastic goal, but for a public school that can barely afford new chairs, let alone 1:1 laptops or web-cameras, this complicates things. They have different baskets with different items in them. Teaching the rich to be international makes perfect sense, they can afford it. They can visit new restaurants, go to foreign countries, and have access to books and resources that can pique their curiosity. It is a different world from an inner city school where putting food on the table is the major concern from month to month. It changes the way education is viewed by the community, and it provides a different approach to teaching. I always wonder at the difference, and how we can help our kids to not only be more international, but more aware if the privileged that they have. How can you apply that privilege to make the world a better place?

# Taking the PYP Forward

## Reflections and Wonderings

As a final chapter in this book, it was a good overview of how schools should approach their learning environments, but it was also anti-climatic. Part of me abhors the use of capitalist and business ideas or models in education, but another part of me sees their value. We live in a capitalist society, with capitalist values (whether we like it or not). Just because something is a business model, doesn't mean it has to be focused solely on the profit. It is a tough metaphor to sell (haha!) to education because the profit of a school is not as easily measured as the profit of a corporate entity. Education is complex. It is alive. It is not a product. It is a process. As Dewey has famously said, "education is not preparation for life, it is life".

As for the thesis of not relying on the data driven world to guide education, yes, but that is not new. It is frustrating to go back and read books or articles from 30-50 years ago (Friere comes to mind) and to see that we are still having the same discussions regarding testing and standardization and curriculum. Not much has changed. Many schools still run as top-down institutions and curriculum is set up as a top-down artifact.

To me, from a complexivist perspective, a system that is top down is not sustainable. It will not foster creativity, which will make adaptation to change slower or un-responsive. A more apt systems metaphor is the bottom up approach. The bottom, in educational terms, would be the classrooms. If we allow the creativity and the innovation to come from the bottom and move up to change the structures that hold it together, we may get a more emergent form of education that is better able to meet the needs of this changing world. To me (and I am biased, but aren't we all?) an understanding of **systems thinking** and **complex systems** would be a prerequisite for any bureaucrat or administrator in a school environment.