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Chapter 1

Inquiry as a stance on curriculum

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Inquiry is one of those frequently-used terms that educators rarely define because they assume a shared understanding. Most often, inquiry is used to signal that learners ask questions and engage in research, and so educators focus on getting students to ask better questions and to develop effective research strategies. Ironically, this view of inquiry often leads to teacher-directed projects and activities that are fun and engaging, but that actually violate the deep structures of inquiry.

Inquiry is not a particular teaching method but a stance that underlies our approach to living as learners, both within and outside of school. Within schools, inquiry highlights learning as a process that underlies curriculum across disciplines, subject areas, and age levels. We have always known that *how* we teach influences students as much or more than *what* we teach. Inquiry immerses us in exploring the learning process and using those understandings to shape how we teach our content so that an inquiry stance on learning permeates our teaching.

Since curriculum involves putting a set of beliefs into practice, we need to examine and articulate our beliefs in order to explore ways of enacting those beliefs in classrooms with students.¹ Curriculum as inquiry thus involves exploring inquiry as a stance on learning and envisioning ways of bringing that stance to life in classrooms.

Inquiry as stance

My first response to inquiry was skepticism because experts often use new terms to label old concepts so their approaches seem fresh and new. I had explored theme units for some time and the talk about inquiry seemed, on the surface, like adding a stronger focus on research investigations to theme units, rather than something fundamentally different. The tensions I was experiencing about theme units, however, gave me pause and led me to explore the possibilities of inquiry within curriculum, although initially I saw inquiry as a method, not a stance.

As a student, I experienced *curriculum as fact* through a textbook curriculum that emphasized skills and facts with right answers and correct procedures for getting those answers. Teachers covered the content through textbooks, worksheets, tests, and research papers. We covered lots of topics and memorized many facts, to be forgotten as soon as the test was taken or the research paper handed in. We ended up with superficial knowledge and no desire to keep learning about a topic – an indication that these experiences were not educative.²

As a teacher, I wanted to make curriculum meaningful for students and so explored ways to actively engage students, such as writing workshops, literature circles, and

theme units. This approach of *curriculum as activity* immersed students in a range of reading, writing, and research activities around particular topics. My tensions about these activities grew out of observations that the activities still involved covering the curriculum and facts, just in a more engaging way, so that, while I did not ask students to memorize facts, they still collected facts.

I often felt as though we were doing activities at the expense of critical, in-depth knowing. I was uneasy that the units remained teacher-driven since I was the one setting up the projects and activities within which students asked and pursued questions. The learning in these units was limited by my knowledge of the topic and students often viewed this learning as school-based, with little connection to their lives. The focus on topics like family, nutrition, or water made true curricular integration difficult – the activities were correlated across subject areas, but not integrated across the curriculum and students' lives in significant ways.

These tensions led to discussions with colleagues and to theorists such as Dewey, Freire, and Vygotsky to search for other ways of thinking about the construction of understanding. Several of us formed a study group where we worked together to enact *curriculum as inquiry* in our classrooms, meeting over several years to make sense of our experiences. We struggled with the difficulty of enacting our beliefs, challenged by students' responses to our attempts at inquiry. Our experiences convinced us that inquiry was not a refinement of project approaches or theme units, but a stance on learning that challenged our perspectives as teachers.³

The problem with defining inquiry is a stance is that describing a stance or philosophy is much more difficult than describing teaching methods or processes. I often find myself describing the different ways that inquiry might play out in classrooms, and avoiding defining the stance itself. Understanding and articulating inquiry as a stance, however, are essential to moving beyond projects and units to curriculum as inquiry. Changing a few engagements in our classrooms is much easier than changing our thinking about learning and that is what a stance of inquiry invites us to do as educators.⁴

For me, *inquiry is a collaborative process of connecting to and reaching beyond current understandings to explore tensions significant to learners*. Inquiry is a stance that combines uncertainty and invitation. A feeling of uncertainty encourages us to wonder and question, to move beyond current understandings to pursue new possibilities. Without invitation, however, we may not feel the courage to pursue those uncertainties or tensions; invitation beckons us to feel some safety in taking the risk to pursue those possibilities by thinking with others.

Inquiry is thus a reaching stance of going beyond information and experience to seek an explanation, to ask *why* and to consider *what if*. Lindfors⁵ argues that inquiry involves going beyond in intellectual, social, and personal ways – we go beyond our current understandings, our sense of identity, and our engagements with others. This process of going beyond is dependent on remaining connected to current understandings as the point from which to reach out and requires the support of a collaborative community. We need to know that we are still connected to the known

and are not totally separated from the ideas and beliefs that ground our lives. At the same time, if we do not reach beyond, we get stuck in a rut. Thinking with others provides the impetus and zone of safety from which to reach out.

Inquiry is also a stance of being off-balance. Although the self-help literature trumpets the need to lead a balanced life, a state of perfect balance involves staying perfectly still in the same place – in that comfortable rut. Reaching out occurs because learners experience a sense of being off balance or in tension, the driving force that compels learners to move forward (Dewey, 1938). Tension disrupts a learner's sense of unity and understandings about life, and this disruption compels learners to pursue a tension to reach toward new insights and unities.

Inquiry is natural to learning

A particular set of beliefs about learning underlies inquiry as a collaborative process of connecting to, and reaching beyond, current understandings to explore tensions significant to the learner. The first is that inquiry is natural to how children and adults learn outside of school contexts. In fact, I would argue that three-year-olds epitomize inquiry: they engage with life, immersed in what is occurring around them until something catches their attention and raises curiosity or doubt.

This curiosity creates a need to know that they explore through play and observation and through pestering adults with questions. They move from curiosity to knowledge that leads to more in-depth investigations (unless something more compelling catches their attention). These explorations and investigations, in turn, support them in constructing their understandings of the world and in asking new, more complex, questions.

Inquiry invites us as educators to base instruction on the processes that are natural to learning – to investigate how people learn and build curriculum from these processes. The typical approach is to create instruction based on how we think people should learn, to ask “How do I teach inquiry?” instead of first asking, “How do I and others inquire?” Once we explore inquiry as natural to learning, then we can engage in the difficult task of creating learning environments that immerse learners in these processes, rather than in how we think they should learn.

Barnes⁶ argues that many students operate as if there are two boxes of knowledge in their heads – an action knowledge box that contains the knowledge used to function in their daily lives and a school knowledge box that contains what is learned in school. They close the action box as they enter the classroom, assuming that knowledge is irrelevant in school, and open the school box, reversing the process at the end of the day. A stance on inquiry invites students to function with action knowledge both inside and outside of school.

Inquiry is based in connection

Inquiry has no other place to begin than in learners' own experiences and current understandings. Bateson⁷ states that learning is the search for and finding of

patterns that connect. Without significant points of connection, learning remains difficult and easily forgotten because that learning is experienced as isolated ideas and information. This search for connection distinguishes tension that drives learning from stress that shuts down the learner.

We typically begin a unit by teaching new information and covering key points about the topic to provide students with a knowledge base. Inquiry starts with immersing students in engagements so they can find and connect to their life experiences and so we as teachers can observe and listen to students' current understandings. Connecting in significant ways to students' lives means we often have to move beyond the topic so that, for example, a unit on immigration might begin with students exploring their experiences of moving from place to place, rather than with information on immigration patterns within a particular part of the world.

Inquiry is conceptual

If our goal is only for students to gain information on particular topics, then a curriculum based in inquiry is not essential. Inquiry includes but goes beyond information to search for an explanation, to understand the why behind that information. Inquiry is a conceptually-based, rather than a topic-based, approach to curriculum. Conceptually-based curriculum puts the major emphasis on the big ideas that lie behind topics, leading to deep essential understandings that transfer across contexts.⁸

Information and knowledge are still significant, but the goal is no longer to cover a particular set of information, but instead to build the knowledge necessary for providing the base from which to explore conceptual understandings that underlie that knowledge. Knowledge becomes a tool to explore conceptual understanding rather than an end in and of itself.

Preparing students for the 21st century has become a frequent topic in education, based on the assumption that we have moved from an Information Age that depends on knowledge workers and analytical thinkers, to a Conceptual Age depending on the ability to combine creativity and analysis.⁹ Children and adults need to be able to think conceptually in order to identify the critical issues of our society – to not be distracted by the massive flow of information around them – and to be able to apply their understandings and knowledge in future contexts that have not even begun to unfold in the present.

The focus on topics and content, however, is so deep-rooted in how we think about instruction that the conceptual frame for units of inquiry is easily lost. A unit on water may begin conceptually around the central idea of the consequences of the limited availability of natural resources, but get lost in information about water shortages and water conservation.

Or a unit on nutrition may be framed conceptually around making choices that affect our health and lives but get lost in information on body systems, bones, and food groups. A conceptual frame focuses on the biggest idea behind the central

idea – to the very essence of the unit, such as choice or limited availability – so that our attention remains on the 'why' of that unit.

These experiences have forced me to realize that units of inquiry need to begin with connection to the conceptual frame, not to the topic, as the essence of that central idea plays out in children's lives. Water is the topic and limited availability is the concept, so the connection is the consequences of limited availability in students' lives, not to water but to whatever they might currently experience as a limited resource. Nutrition is the topic and choice is the conceptual frame, so the connection is to the choices children make in their lives in comparison to the decisions that adults make for them.

A group of first grade teachers planning a unit of inquiry on endangered animals realized that they needed to start by exploring a conceptual understanding of loss, not with information about animals. They invited children to tell stories about losing things (a very common experience for six-year-olds) to understand the feeling of losing something forever in contrast to the joy of finding something they thought was lost. This conceptual frame provided a different perspective for children from which to consider the possibility of losing animals that are endangered in our world.

Many units of inquiry are designed to build initial knowledge separate from the conceptual frame with the goal of gradually working toward conceptual understanding; the result is that students focus on information in isolation from that frame. If inquiry is conceptual, then that frame must be the first focus of attention and be woven throughout the unit, not a conclusion we hope students might reach. The topic is a case study, a way to get at the broader conceptual understandings, not the actual focus or rationale for that unit of inquiry. As teachers, we are so used to covering content that we lose sight of the conceptual frame and immerse ourselves in designing activities to cover the content, to teach water or nutrition or endangered animals.

Inquiry is problem-posing and problem-solving

One of the most common understandings of inquiry is problem-solving with the vision of students engaged in research on particular topics of interest related to the class focus. The teacher sets up a situation to pose an engaging problem as a means of encouraging students to ask questions about that problem and to research those questions. A common approach to science, for example, is to provide students with batteries, wires and bulbs, and ask them to determine what causes an electric current to light the bulbs. Students are encouraged to ask lots of questions but the problem itself is already determined. Teachers often plan a unit to result in research projects around a focus already determined before the unit even begins, such as deciding that children will research the systems of government, family and education for particular ancient civilizations, or break into groups to research a specific explorer.

These experiences of guided inquiry provide students with strategies for how to go about research, but they do not learn how to find a problem that matters and is worth investigating in the first place. Scientists undertake investigations because they have a problem to solve. Inquiry begins with exploring a phenomenon of interest and attending to problems or tensions that emerge and that are worth taking the time to investigate. Scientists also have to be able to develop experiments that will further that investigation. We short-circuit the process by handing students the experiment and asking them to engage in the procedures of science labs, but not the processes of scientific reasoning. They do not actually experience science.

Freire¹⁰ argues that the person who poses the problem is the one who remains in control of learning. Inquiry makes us nervous as teachers because we may feel as though we are turning over control to our students. By retaining our role as problem-posers, we keep control, while at the same time seeming to actively engage students as inquirers. The problem is that they are asking questions about the problems we have posed, not the issues significant in their lives. They never fully experience inquiry.

Students need to know how, out of everything that is possible to know or experience, to determine what is significant and worth pursuing. It is essential that learners know how to reason through a question or problem to investigate it, but problem-solving is not sufficient. We do not want students to become problem-solvers who only pursue the questions that others pose for them and do not question the questions.

Many curricular models of inquiry start with students asking questions as the first step and then delineate in detail the steps to investigating those questions. My experiences as a researcher show that finding the question is often the most difficult part of the inquiry process and that often the question does not emerge until the study is almost over.

As a researcher, I start with a particular interest or tension, and then spend time immersed in the context, gaining knowledge through observation, conversation, and professional reading. The question or problem that is worth investigating grows out of knowledge and experience with the research focus. Even when I start with a particular question, that question usually changes once I know more. Problem-posing is not a simple starting point for a researcher; it is a process that goes across the research, intertwined with and informing the problem-solving.

Asking students what they know and what they want to know (KWL) at the beginning of a unit of inquiry may provide insights into current understandings, but not for posing problems. Frank Smith¹¹ argues that you can't think critically about something you don't know anything about. Posing thoughtful questions grows out of knowledge about a topic or issue and that takes time and immersion in explorations to see what tensions develop and become compelling for learners. Although we may be able to predict those tensions, we cannot determine what will cause a specific learner to feel tension. Dewey¹² argues that the role of the teacher

is to create a learning environment that has the most potential for creating anomaly or tension for learners. Learners need voice and knowledge to determine what is compelling for them to pose as a problem worth investigating.

This distinction between problem-posing and problem-solving distinguishes between guided inquiry, personal inquiry, and collaborative inquiry. Personal inquiry involves the learner as both the problem-poser and problem-solver in pursuing personal interests and tensions that may never be the focus of the school curriculum. Independent reading, writing workshops, and expert projects are examples of engagements that can provide the space for students to pursue inquiries growing out of personal interests or life issues.

Collaborative inquiries, where teachers and students collaborate on problem-posing and problem-solving through a process of negotiation within the curriculum, are at the heart of units of inquiry. Teachers influence the problems that are posed through engaging students with specific materials and experiences as well as by determining the understandings at the center of a particular unit of inquiry. Teachers, however, negotiate the curriculum with students, not just build curriculum from students, so that investigations grow out of process.

Guided inquiry, where the teacher is the problem-poser and students are problem-solvers, is often found in skill instruction. For example, teachers may use assessment to determine students' needs as readers and form a guided reading group to work on a specific reading strategy. Within the group, the teacher poses the problem that is the focus of the group and engages students in a meaningful reading of a text, within which they actively engage in reasoning to develop their own understandings of that strategy.

The tension for teachers is providing the space within classrooms for students to move in and across personal, guided, and collaborative inquiries. The project-based approaches that many schools have taken to inquiry are problematic only because all of their engagements and units are guided inquiries and students never experience posing problems. The units are filled with interesting projects and activities and end with summary projects that involve students in problem-solving to demonstrate their understandings. What gets left out is time for students to pose and investigate problems they find compelling within that unit.

Inquiry is collaborative

Since inquiry involves teaching beyond ourselves and our current understandings, we need collaborators with whom we can think to challenge us to outgrow ourselves. Those collaborators may be real (members of our immediate community with whom we talk and interact) as well as virtual (authors with whom we think in books or on internet sites). Schools often focus on cooperation, dividing up a task into different roles for students to complete. Inquiry goes beyond cooperation to collaboration where students think together, not just work together, through dialogue about ideas. Freire¹³ argues that this dialogue is how we transform ourselves as human beings.

Vygotsky's¹⁴ Zone of Proximal Development provides another rationale for the necessity of learning *with* others. Vygotsky argues that the most conducive space for learning is defined by what can be learned with the support of collaborative others. This space is located between the point of what learners can already do independently and the point at which they can only function if someone takes over the task for them.

Lave and Wenger¹⁵ argue that the most effective learning occurs within communities of practice where members work together toward understanding. These communities of practice involve participating in activity, not listening to someone, so that members learn in experience, not just *from* experience. Inquiry takes place in participation, not in individual minds. It is a way of being *in* the social world, not just coming to know *about* that world.

Everyone actively participates as a member of that community; while some may be less proficient or are newcomers with limited participation, they are still members of the community. For example, all children are viewed as English language learners with some more proficient in their use of the language, but no one is a non-speaker positioned outside of the community.

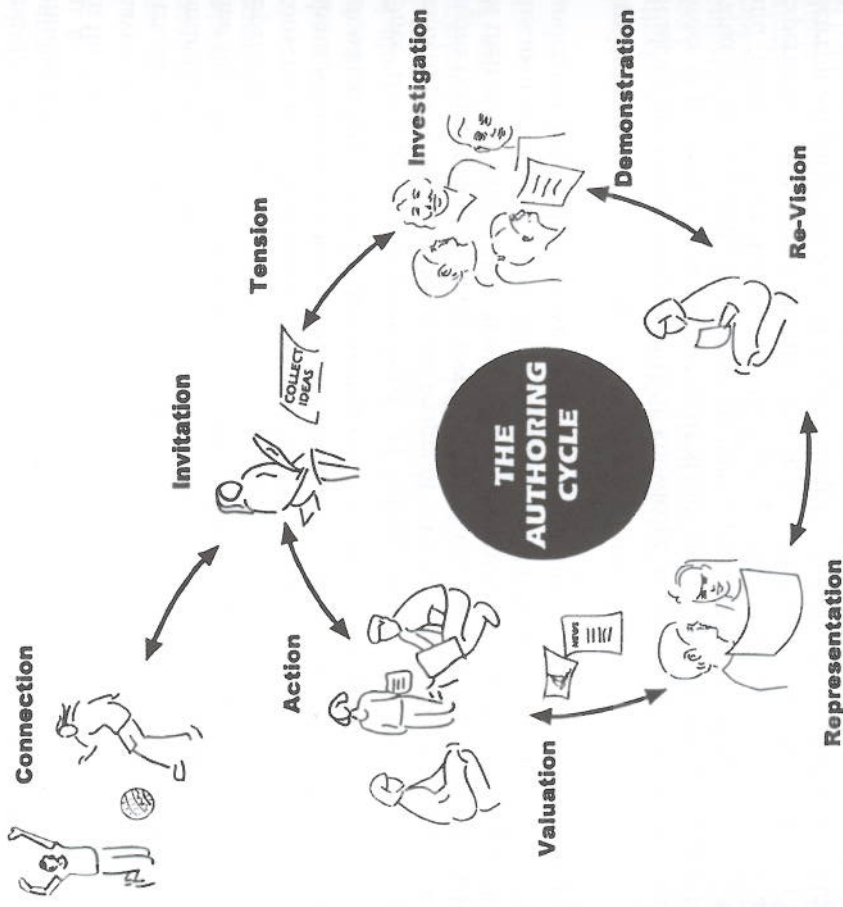
We construct understanding by working collaboratively with others, who are more or less expert, on problems that arise out of practice and are focused on understanding and improving practice within that community. Teachers may thus be at the center of the community in terms of their expertise and knowledge, but students are members of the community and have the responsibility of thinking collaboratively with their teachers and peers. Students are collaborators, not just informants, and so actively engage with teachers in negotiating curriculum.

Enacting inquiry in the classroom

Moving from these beliefs about inquiry to practice in classrooms is facilitated by the use of a curriculum framework. A framework provides a guide for planning curriculum based in theory as well as a structure for connecting theory and practice that reflects the complexity of the process. Curriculum frameworks provide a bridge between theory and practice that supports teachers in more consistently enacting theories. We are able to teach in a theoretically consistent manner because the framework allows us to articulate what is most significant. A framework provides the bigger picture, particularly highlighting the relationships between the parts, so that we can more effectively work at those parts within the whole.

Inquiry as a stance involves a set of beliefs about the learning process that can be depicted in a range of curricular frameworks. Although there is no one 'correct' framework, the framework I use to plan and implement curriculum based on my beliefs about inquiry as a process of learning, is the Inquiry Cycle.¹⁶ The inquiry cycle is an authoring process in the sense that learners engage in authoring or constructing meaning about themselves and the world. A unit of inquiry on human rights with ten- to 12-year-old students in Tucson, Arizona, provides one example of how this framework might play out in a classroom.

Figure 1. Inquiry Cycle



The Inquiry Cycle

Kathy G. Short & Jerome C. Harste, 2002

Connection

The inquiry cycle does have a specific starting point within any unit of study and that is with connections to the life experiences and understandings of learners. Connection gets at the *why* rather than the *what* of a unit. This connection to the broader conceptual frame involves getting at the essence of the central idea that frames a unit, for example the big idea of making choices as the why behind a

nutrition unit. The role of the teacher is to immerse students in engagements, so they can explore their current understandings of the conceptual frame for the inquiry, by considering how that idea is already present and significant in children's lives.

In the human rights inquiry, our conceptual focus was on 'rights' as the needs we have as human beings in order to live in a society. We knew that children would struggle with the difference between 'needs' and 'wants' as well as the balance of 'individual voice' with 'group responsibility'. In reflecting on rights, we realized that this idea plays out in students' lives in their complaints about what is unfair, especially at lunch or recess. We read aloud *A Fine, Fine School*¹⁷ to begin our conversations about unfair decisions in school and put out many picture books about school for students to browse. Students created unfair maps of their school on which they labeled places where unfair events had occurred.

Once the maps were completed, we talked about what determines when something is unfair, and that the feeling of unfairness is often based in a sense of rights being violated in some way. Students worked in small groups to create lists of their rights within the school, based on the entries on their unfair maps. These discussions were intense and engaged, providing them with a conceptual understanding of rights as well as strong connections to their own experiences.

Invitation

Students are invited to expand their knowledge, experiences, and perspectives in order to go beyond their current understandings. Teachers immerse students in a range of engagements, that encourage their active exploration of the inquiry focus and increase their knowledge through providing access to resources and experiences. Invitations often take the form of guided inquiry, in that the teacher has determined particular lines of inquiry related to the unit focus, that are significant for students to gain a strong depth and range of knowledge about that focus.

In offering invitations, we found that it's important to be selective and to remember that the emphasis is not on covering the inquiry focus, but on expanding knowledge to build understanding and raise tension. There are always many interesting and worthwhile activities and projects to consider; engaging students in all of these takes over the entire unit, leaving no time for in-depth investigation. The key is to select the most significant lines of inquiry *as connected to the conceptual frame*, instead of covering the content; for example, choosing engagements that highlight making choices that affect our health, not covering nutrition.

Another consideration is to choose engagements that actively involve students, such as text sets or exploration centers, where they have time to explore and observe as well as have the opportunity to make choices and engage in conversation. These engagements should start closest to the students rather than at the farthest historical point. A unit in which students compare systems of government, family, and school in ancient civilizations to their own lives, for example, may be more effective if the engagements start with their lives and then move back in time.

Also, while informational books and websites are important resources, powerful pieces of fiction, including both novels and picture books, are significant in moving students from information to conceptual issues. The careful choice of a chapter book to read aloud as students engage in these explorations, can keep the focus on the conceptual frame, helping to prevent students becoming lost in gathering information.

In the Human Rights inquiry, we immersed students in read alouds and text sets to expand their knowledge of human rights to the global context. We put out text sets containing fiction and non-fiction picture books, and newspaper articles around issues such as child labor, discrimination, freedom/government, violence, basic needs, education, and the environment.

Students had time to read from these books as well as to talk with each other and web the issues that were emerging. We also read aloud and discussed picture books such as *The Carpet Boy's Gift*,¹⁸ a story based on child labor in carpet mills in Pakistan. Student interest in the boy who led a movement against this practice led to choosing *Iqbal*¹⁹ as a chapter book read aloud. Students struggled with judging parents who sell their children to work in these mills and in understanding the tremendous poverty that led to such a difficult decision.

Tension

As students expand their understanding about the inquiry focus, tensions emerge that are significant and compelling and that they want to pursue in greater depth. These tensions may be expressed as wonderings or issues, not questions. They signal a shift from information, fact-based questions to issues that students find compelling and from teacher-guided inquiry to student-driven inquiry. In order to know when this shift has occurred, some system of keeping track of students' wonderings and issues needs to be in place in the classroom throughout invitations, such as individual 'I Wonder' journals or class charts that are added to on a daily basis through reflection on particular invitations.

In the human rights inquiry, we regularly gathered for reflection after read alouds or text set browsing for students to share their observations and add to a chart of issues about human rights. In addition, after reading for several weeks in the text sets, students worked in small groups to web their understandings and tensions about human rights.

Our initial plan had been to see what area of human rights emerged as a strong interest and move into investigations around that area, looking both locally and globally. We were surprised to find, however, that the most compelling issue for students was how kids can be involved in taking action. They had not believed on the they could make a difference as kids and much of their discussion focused on the strategies that Iqbal and other children, in books, were using to take action for social change.

At that point our focus shifted to taking action on violations of rights and we realized that taking action in their own school context was most compelling to

them. They cared about the ways human rights were playing out in global contexts but they needed to experience taking action in their own context. Also, they did not have enough in-depth knowledge about particular global issues to take action in thoughtful ways. They were clearly still at an exploration stage with these issues, but ready to investigate how to take action in the school.

To highlight strategies for taking action, we engaged in several dramas around books in which children took action on social issues, in particular homeless people and undocumented immigrants from Mexico. In these dramas, they took on the roles of characters from within these stories and interviewed each other in pairs, with a reporter asking a character questions about the action that child took within the story.

Investigation

Investigation is a shift to problem-solving and in-depth investigation on a particular issue or question, with students often working as partners or in small groups to support each other through dialogue and research. Their focus is unpacking complexity, not developing simple solutions to complex problems. The teacher's role involves a major shift because the nature of these investigations cannot be determined ahead of time if they truly reflect the tensions that are significant for students.

If several classes are engaged in the same unit of inquiry, this is also the point where those classes *should* look different from each other since the focus is on what is compelling for students. If the classrooms look the same during investigations, that is a strong signal of teacher-guided projects rather than collaborative inquiry. These differences will also be evident within a classroom across students with different tensions that they want to pursue.

Teachers play a key role in planning structures for supporting students in organizing their investigations but not in determining their focus. One of those roles is helping students create plans for their investigations by reflecting on questions: Why are we interested in this issue? What are our related questions? What do we really want to know? What will we do to investigate our question? What is our plan for investigation? What materials and resources do we need to gather to implement our plan?

Students in the human rights inquiry returned to their unfair school maps and webbed the problems they still saw as significant within their school context. Their original webs of problems were somewhat self-serving, without consideration of how their desires would affect other students. We hoped that when students returned to their maps after the global exploration of human rights and taking action, they might have a different understanding of the balance between individual needs and responsibility to the group.

This shift was evident in that issues the students had raised earlier that would benefit a few at the expense of others, such as specific playground rules or when to do classroom work, were no longer raised. Each small group chose the top one

or two problems from their list to share with the class and each class engaged in a discussion to determine, through consensus, the problem they wanted to take on as a class. They talked about their experiences with that problem and brainstormed a list of people who had perspectives on the issue. They then invited several to come to the classroom for an interview with the whole class. They also individually conducted other interviews. Based on these interviews, they came to a consensus on a strategy for taking action.

Both classrooms involved in this study focused on taking action about a school issue because the same tension was evident; however, their webs of problems and the problem they decided to focus on differed. They decided to come to a consensus on one problem as a class, instead of breaking into small groups on different problems, because they recognized the difficulty of taking action with adults in school contexts. One group was concerned about the quality and options for school lunches, particularly the lack of fresh vegetables and fruit. After interviews with school personnel, they found out that their lunches were made in a central district location and then trucked to schools. They realized that the problem was district-based and worked on a petition (that they asked parents, children and teachers to sign) for delivery to the district head of food services and the superintendent.

The other class was concerned with their lack of voice in decisions about the many rules that governed their play on the playground. Upon interviewing their parents, they realized that there was a tremendous difference of opinion and reasons for and against why children should have a voice in school rules. Their interviews with playground monitors gave them insights into why adults made rules, who was making the rules, the haphazard nature of how rules were created in response to a situation, and differences between older and younger students' views of the rules.

Demonstration

During investigation, the role of the teacher shifts from offering invitations based on the lines of inquiry to supporting student investigations through demonstrations that respond to students' needs. Demonstrations offer students possibilities for what they might do, rather than modeling what they must do. These demonstrations are often research strategies or tools, such as note taking, internet searches, or skimming to locate information. In the human rights inquiry, demonstrations included developing questions and taking notes in interviews.

Re-vision

As students engage in inquiry, they need opportunities throughout the process to pull back and reflect on their learning. Our minds seek unity and investigation upsets that unity as we attend to difference, to what is new or unlike from what we already know. Students need to continuously reflect and make sense of what they are learning, not the information, but on connections between these ideas and their thinking – they create a new unity or vision of the understandings that guide their inquiry.

This re-vision can be encouraged by an ongoing learning log or other device for reflecting on learning. In our case, we used small group and whole group webs as well as class reflections at the end of research sessions to engage in this re-visioning of understanding.

Representation

Inquiry is never-ending; there are always new questions and issues to pursue. At some point, however, learners pull together their learning and go public with what they have learned. While not final, these public representations support them in recognizing how much they have learned as well as what they still need to know.

These representations take a variety of forms as appropriate to particular investigations, such as reports, skits, murals, and posters. Often that form varies from group to group within a classroom. In one classroom in the human rights inquiry, the representation took the form of signed petitions and a formal letter that were sent to the district food services director and superintendent.

In the other classroom, students developed a proposal for a committee with several students from each grade level, who would meet with the principal and playground monitors once a month to review new rules and issues on the playground. The students spent a great deal of time developing structures for who would be on this committee, and when the committee could meet, as well as how students could become advisors to the adults on rules affecting children in the school.

Valuation

Representing what has been learned to an audience opens an opportunity for learners to pull back even further to reflect on what is of value from their learning for themselves and the world. They consider their learning of content, process, and intentions/goals to determine the value of this learning for future inquiries and to reposition themselves in the world. In our case, students brainstormed a class web of what taking action meant to them conceptually, as well as created individual sketches in which they symbolically depicted the meaning of taking action. This summative assessment connected to the central idea and conceptual frame for the unit.

One common misconception is that the summative assessment should be a major project that addresses the lines of inquiry and so the time needed for investigation is taken over by summative assessment. Instead of student-driven inquiry, students engage in another guided inquiry. The summative assessment focuses on the broad conceptual frame of the unit, the central idea, and can be a reflective engagement that does not require large amounts of time.

Action

Any research needs to address the 'So what?' question of the kind of action that is now possible, given the investigation. What difference does this study make in the broader context of the inquirer and the world? The learner has gained new understandings from this inquiry, but what action will now be taken because of

those understandings? What are the new questions or tensions to pursue based on these understandings? If action is not addressed, then the artificial separation of action knowledge from school knowledge is continued.²⁰

In our case, the action was built into the investigation in that the representations involved taking action in the school setting. The issue of thoughtful ways of including students' voices in adult considerations of school decisions was one that continued to be raised across a range of contexts within the school across the year and was the source of continued action.

Conclusion

Inquiry is not merely a 'new' set of instructional practices, but a theoretical shift in how we view curriculum, students, learning and teaching. Inquiry as a stance influences how we teach and create learning environments for students. More importantly, however, a stance of inquiry influences who learners become as human beings.

Indigenous educators argue that the difference between western and indigenous perspectives is that western societies emphasize *schooling* students to become good citizens while indigenous societies emphasize *educating* students to become good human beings.²¹ Inquiry as a stance brings together these perspectives to argue that we have a responsibility to help students to become good citizens *and* good human beings – to develop wisdom as well as knowledge. Inquiry transforms education from learning *about* to learning *to be* – to the process of becoming.

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Chapter 2

Communities of inquiry

Simon Davidson

The International Baccalaureate's Primary Years Programme (PYP) is an inquiry-based programme. However there are many definitions and facets to inquiry, and many layers to the PYP. It can be hard to see their connections and relate them to the actual processes of learning. Therefore I investigated some of these aspects, and how they combine in PYP classrooms.

I looked at inquiry as a creative process; a community pursuit of new understanding by applying, adapting and recombining different concepts and skills. As such, the process requires and develops a set of powerful ways of thinking, the *tools of inquiry*. These tools are given meaning and purpose by the social and intellectual life of the class.

I first considered these tools of inquiry. As a cultural species, we have many tool systems to master.¹ In didactic teaching, they form the core of traditional subject-based learning. In inquiry they are building blocks that will be integrated and used creatively to understand complex ideas. Some of these are *physical tools*, like pencils and computers. Others are *psychological tools*: a broad range of mental constructs and processes as diverse as addition, note taking, and the scientific process.

Children also learn to use a variety of *languages and sign systems*, such as the many different forms of English or Chinese; or the languages of various domains such as music, visual representation or mathematics. As they learn these tools, students acquire a range of *component skills*,² overcome misconceptions, and learn the ways of thinking of different disciplines. As in didactic learning, much of this happens through processes of internalisation, in which social activities become part of students' individual mental functioning.

The greatest differences between inquiry learning and didactic teaching are not in the tools themselves, but in how the class functions as a community to develop and use these tools in the pursuit of new insights. Several social aspects are involved: the classroom community is underpinned by shared purposes and values; there are shared classroom routines and approaches; there are shared ways of talking that support the main purposes; the students have varied and changing roles and relationships. It is useful to think of these community aspects of learning as processes of transformation.³

These elements together give a multi-dimensional model of inquiry that spans the life of the class, which develops into a Community of Inquiry at the beginning of the year, and develop as a community over the year. As a community, students and teachers explore complex areas, by applying tools from 'stand alone' units and