

# **The How of Teaching and Learning**

**Mobile Critical Thinking Tools  
for Sustaining Change**

**Robert Seth Price**



***Education is a Human Right***

*United Nations Declaration of Human Rights*

***Critical Thinking Tools and Skills  
for Equity with Learning and Education***

This guide and my work is rooted in the privilege of collaborating and learning with many people globally. I am always learning from a wide range of professions, interests and experiences. While many of my influences are in education, the wider breadth of learning have come from my connections with the arts, social work and other professions that keep my mind opening and heart understanding.

The inspiration of this guide and my collaborations forward are rooted with the extraordinary vision of Jacquelyn C. A. Meshelemiah, PhD whose authenticity and sensitivity as a learner, thoughtfulness as an activist and caring heart is guided by human rights. I am grateful for your confidence in mine. Dr. Meshelemiah's contribution on Human Rights for this guide provides a grounding and guiding beacon of education with and of equity for all children and youth.

And I thank my mom Janice, who looks from above reminding me 'there is so much to learn and not enough time', and my inspiration above whom reminds me always 'life is short'.

Robert Seth Price  
July 2019



Ethiopia

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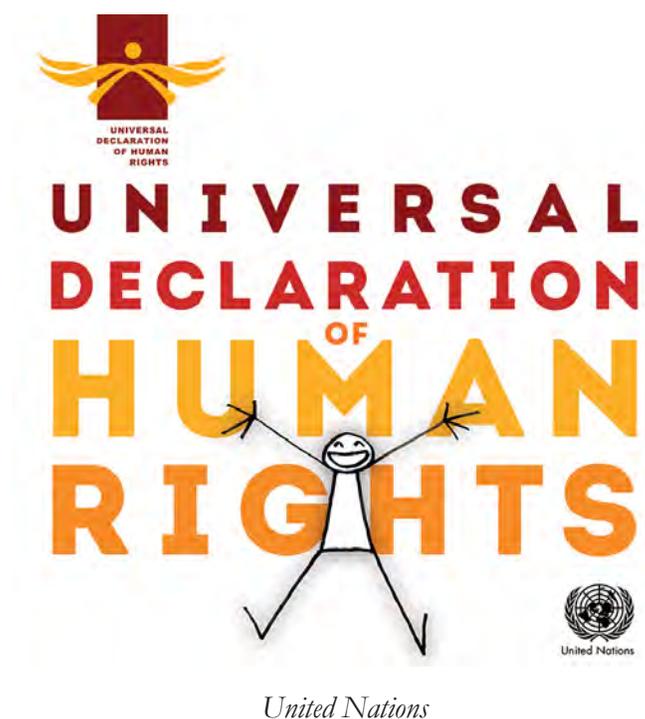
## **Preface**

To be added —connect human rights with purposeful teaching of ‘the how’. Expectations. Equality.  
Practical tools. Research.

# Human Rights

Fostering and protecting global human rights require macro-level innovative methodologies. The use of mobile thinking tools is a state of the art methodology that is applicable to a multitude of diverse settings and social problems. Not only would mobile thinking tools allow grassroots organizations to mobilize people and advance their agendas, but they would also allow for an integration of an organization's sociopolitical actions with policy. For instance, human rights is a term that many understand on the surface, but few understand how to actually define, preserve, and advocate for them. Thinking tools, however, allow people to methodically identify, strategize, and take action to protect human rights, for example, by using an inclusive methodology. This methodology allows for persons (top-down and down-up) to engage, interact, critically think, problem solve, and implement ideas as a community. The resulting process is formulated to yield results related to policy change and subsequent implementation of such policy.

The authors of this work will offer a discussion on mobile thinking tools, how it looks in a societal community, and it how could be used to address challenges related to protecting and preserving human rights on a global stage. Specifically, mobile thinking tools will be explicated in a manner that allows the reader to conceptualize and visualize how they could be implemented by offering a case study of such using both a large educational and hospital setting in Mekelle and Addis Ababa, Ethiopia respectively, and a school in the USA. The versatility of mobile thinking tools will be demonstrated in an effort to highlight the methodological applicability of this method.



# Human Rights and Social Justice

In 1948, the United Nations General Assembly issued the Universal Declaration of Human Rights (UDHR) in an attempt to bring attention to the inalienable rights of all people in all nations as agreed upon by its signatories (United Nations, 1949). Human rights are broadly defined as the “basic rights and freedoms that all people are entitled to regardless of nationality, sex, national or ethnic origin, race, religion, language or other status” (Amnesty International USA, 2015, para.



1). The Universal Declaration of Human Rights contains 30 articles that address civil, political, economic, social, and cultural rights of people worldwide (United Nations, 1949). Article I of the UDHR states that all humans are equal in dignity and worth. Articles 2 -15 address political and individual freedoms (e.g., right to life, right to liberty, right to live free of enslavement, right to live free of torture, right to equal protection of the law, right to seek asylum, right to a nationality, etc.). Articles 16-27 address economic, social, and cultural rights (e.g., right to marriage as adults, right to own property, right to religious expression, right to freedom of opinion and expression, right to social security, right to work, right to an education, right to a just standard of living, etc.). Articles 28 and 29 address collective rights among and between nations (i.e., right to a social and international order; right to live a full life within the confines of the law). Last, Article 30 states that no one can take away a person’s human rights (United Nations, 1949).

## Article 28

**Everyone has a right to live in the kind of world where their rights and freedoms are respected.**



# Human Rights and Mobile Critical Thinking Tools

Article I of the United Nations Universal Declaration of Human Rights states: All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

All humans deserve to have and enjoy equality in dignity and rights. For equality, all humans must have equal access and opportunity to practical tools and methods for critical thinking with their daily actions. Critical thinking methods and skills provide equality for the full realization of participation in the greater human community locally and globally. Methods and tools that assure each human an equal opportunity for active and high impact participation in education, with healthcare and for their greater community. The purpose of this guide on Mobile Thinking Tools is to model the importance of putting theory into practice with practical methods, how to learn the methods, and models of excellence. Concurrently the guide connects the research behind the practical methods thoughtfully using them in practice for understanding both the tools (the how) and the research (the content).

Grass roots mobile thinking tools respectfully honor the gifts of all humans. These tools must be practical different types of settings for all people. Tools that are powerfully fulfilling for personal and collaborative engagement while believing and growing one's personal human capacity. Tools that are supportive individually and for collaborations for the greater community. Education is a human right: Practical critical thinking tools and skills make high quality education possible for everyone.

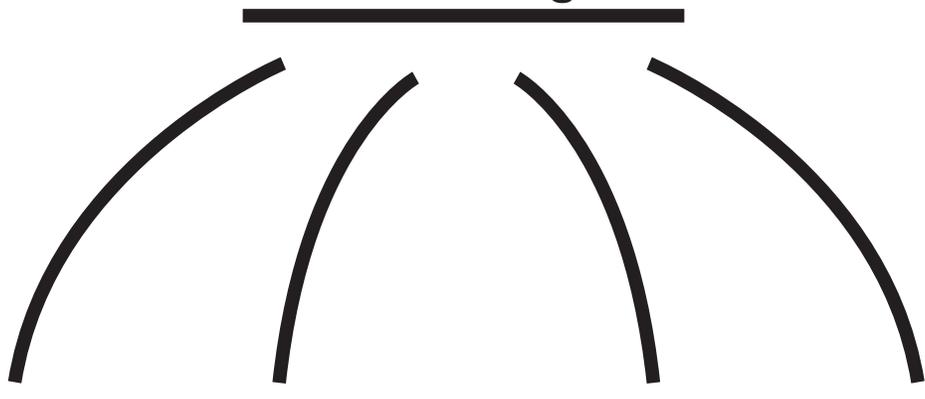
The Thinking Tools proposed in this article are respected for their potential with critical thinking and problem solving, practical to be used and implemented in rural settings as much as urban environments, as important with and without technology, and have the potential of successful use in all places globally. These tools have been implemented globally, including with education, healthcare and textile workers in Eastern Africa, the USA and other global locales.



*Photo - United Nations*

# Mobile Critical Thinking Tools: An Overview

## Critical Thinking Tools



### Collaborative Communities

*Community Building Exercises*

*Collaborative Learning*

*Peer to Peer Coaching*

### Visual Tools

*Visual Maps*

*Frame of Reference*

### Thinking Environments

*People*

*Objects*

*Materials*

### Questioning Methods

*Powerful Questions*

*Guiding Questions*

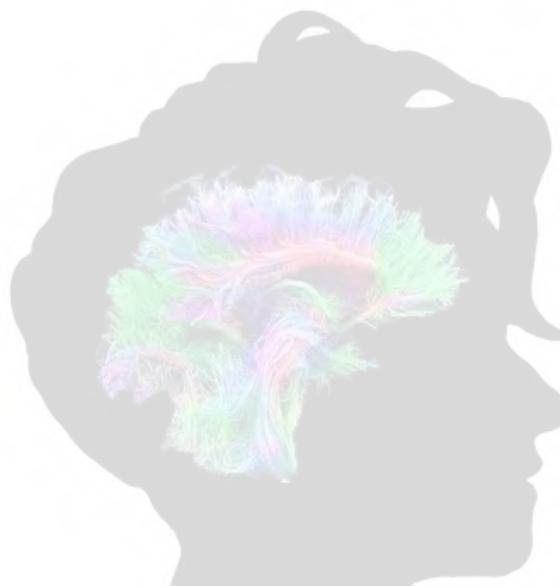
*Socratic Method for Shared Dialogue*

## Defining Critical Thinking: The Tools for Skills

What exactly is critical thinking? How do we define critical thinking? What are the practical tools to put research and theory into practice? What is the educator's role in teaching and modeling critical thinking in a learning community? How do we foster critical thinking with equity for all students of all ages, diversity and in all classrooms?

It is vital to examine current research on Critical Thinking to provide context and understanding. Recent research from several publications with different perspectives and educational audiences are shared to consider the importance of life long critical thinking tools and skills. It is recommended to read and collaboratively explore each research abstract on the following pages: first individually, then as a team together. Below is a suggested method of exploring each research abstract using the critical thinking tools in this guide.

1. Select a key word(s) and/or phrase from the research and use that word(s) as an anticipatory set to develop background knowledge, surface assumptions and learn from questions.
2. Use Powerful Questions and/or Collaborative Questioning (see both in this guide) to surface background knowledge and curiosity. In small groups put individual questions on small papers to develop an inductive sorting of the different questions into categories (see section on inductive and categorization mapping).
3. Everyone reads the research abstract individually or in pairs. Have each group frame their categorization map (see Frame of Reference in this guide) of the questions with observations from reading the abstract.
4. How does this research connect with our student's success? What do we as teachers need to implement, practice and model to develop our student's critical thinking?
5. How will we assess our needs and progress?



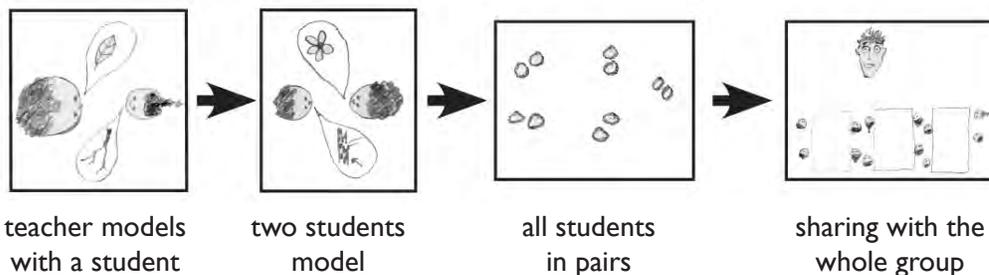
# Defining Critical Thinking: The Tools and Skills

## An Example of a Group Study

1. Select and use a key word/phrase from the abstract: e.g. 'cognitive exercises'

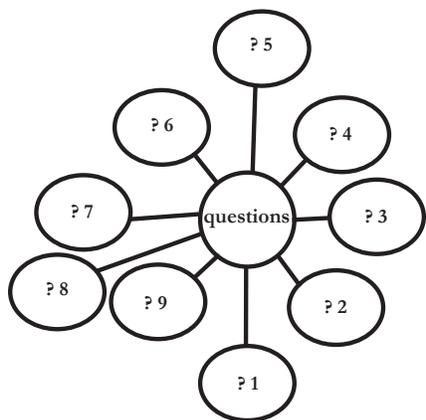
- *Questioner A: What cognitive processes are important?*
- *Questioner B: How do we make cognitive processes into exercises?*
- *Questioner A: How often should we do the exercises?*
- *Questioner B: How do we practice the exercises?*
- *Questioner A: Are the cognitive processes best learned together?*

### Collaborative Questioning



2. Sort the questions. While sorting the questions, the dialogue in each group bringing their background knowledge together and learning collaboratively.

### Brainstorming the Question



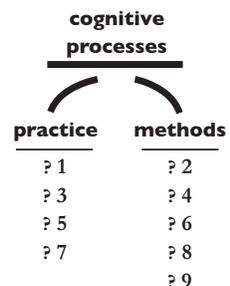
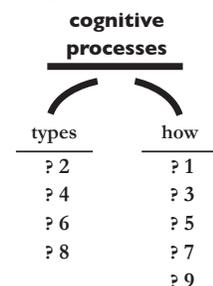
### Sorting by Category

different small groups can sort differently

? 2	? 1
? 3	? 4
? 5	? 6
? 7	? 8
	? 9

? 2	? 1
? 4	? 3
? 6	? 5
? 8	? 7
	? 9

### Category Headings



? = question

# Defining Critical Thinking: The Tools and Skills

## 3. Read the Research Abstract

### Developing Critical Thinking Skills: Assessing The Effectiveness Of Workbook Exercises

*Journal of College Teaching & Learning – Second Quarter 2015*

Elise D. Wallace, The Citadel: Military College of South Carolina, USA

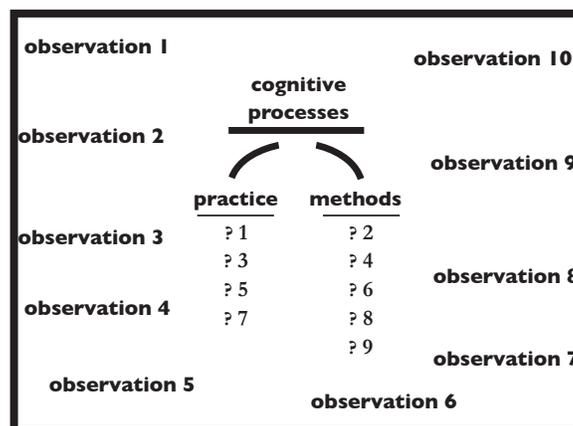
Renee N. Jefferson, The Citadel: Military College of South Carolina, USA

#### Abstract<sup>1</sup>

To address the challenge of developing critical thinking skills in college students, this empirical study examines the effectiveness of cognitive exercises in developing those skills. The study uses *Critical Thinking: Building the Basics* by Walter, Knudsvig, and Smith (2003). This workbook is specifically designed to exercise and develop critical thinking skills. The authors use it as the intervention tool. Freshman students enrolled in a first-year experience course participated in the study; one group used the book, the other did not. Students spent a few weeks in class working through the problems, and at the end of the semester, both groups completed the Critical Thinking Skills Test. Analysis of final test scores prove the effectiveness of exercises on improving the critical thinking skills of college freshmen.

*Keywords: Critical Thinking; Exercises; College Students; Assessment*

## 4. Frame of reference with observations from the abstract.



5. How does this research connect with our student's success? What do we as teachers need to implement, practice and model to develop our student's critical thinking? Add this to the Frame of Reference in the Categorization Map.

# Research on Critical Thinking Tools and Skills

## Critical Thinking in University

### Developing Critical Thinking Skills:

#### Assessing The Effectiveness Of Workbook Exercises

*Journal of College Teaching & Learning – Second Quarter 2015*

Elise D. Wallace, The Citadel: Military College of South Carolina, USA

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**Abstract<sup>1</sup>:** To address the challenge of developing critical thinking skills in college students, this empirical study examines the effectiveness of cognitive exercises in developing those skills. The study uses *Critical Thinking: Building the Basics* by Walter, Knudsvig, and Smith (2003). This workbook is specifically designed to exercise and develop critical thinking skills. The authors use it as the intervention tool. Freshman students enrolled in a first-year experience course participated in the study; one group used the book, the other did not. Students spent a few weeks in class working through the problems, and at the end of the semester, both groups completed the Critical Thinking Skills Test. Analysis of final test scores prove the effectiveness of exercises on improving the critical thinking skills of college freshmen.

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<sup>1</sup> Note. From “*Developing Critical Thinking Skills: Assessing The Effectiveness Of Workbook Exercises*,” by E.D. Wallace and R.N. Jefferson, 2013, *New Review of Academic Librarianship*, 19.3, p. 246-255. Copyright 2013 by Routledge.

## Elementary School Critical Thinking

### Program Development for Primary School Teachers' Critical Thinking

International Education Studies; Vol. 10, No. 2; 2017, ISSN 1913-9020 E-ISSN 1913-9039

Published by Canadian Center of Science and Education

Waraporn Boonjeam<sup>1</sup>, Kowat Tesaputa<sup>1</sup> & Anan Sri-ampai, Faculty of Education, Mahasarakham University, Mahasarakham, Thailand

**Abstract:** The objectives of this research were: 1) to study the elements and indicators of primary school teachers' critical thinking, 2) to study current situation, desirable situation, development technique, and need for developing the primary school teachers' critical thinking, 3) to develop the program for developing the primary school teachers' critical thinking, and 4) to study the findings of usage in development program for primary school teachers' critical thinking by using Research and Development. The samples were 384 primary school teachers, and 34 volunteered teachers to participate in development by using questionnaire, evaluation form, and tests. The statistic using for data analysis included the percentage, mean, standard deviation, modified priority needs index (PNI<sub>modified</sub>), and t-test. The research findings found that: 1) the elements and indicators of primary school teachers' critical thinking consisted of 3 elements and 12 indicators of critical thinking ability, and 6 elements and 24 indicators of critical thinking disposition, 2) the current situation of primary school teachers' critical thinking was in “High” level, for desirable situation, it was in “The Highest” level, 3) the development program, consisted of: the principles, objectives, contents, and development activities included 4 Parts, Part 1: the readiness preparation, Part 2: training, Part 3: integration with work practice, and Part 4: posttest, and measurement and evaluation. 4. The post test score was significantly higher than the pretest score at .01 level.

*Keywords: critical thinking, primary school teachers, development program*

# Research on Critical Thinking Tools and Skills

## School Librarians are Well Positioned...

### Focusing on the Integration of Critical Thinking

**Traditional Literacy and Critical Thinking:** *American Library Association, Volume 44, No. 5 | May/June 2016*

Priscille Dando, Coordinator of Library Information Services, Fairfax County (VA) Public Schools, AASL.

**Excerpts:** School librarians should welcome this shift away from the “student as vessel” model of teaching to a more constructivist model intent upon developing critical-thinking skills that enable students to make their own meaning for deeper understandings (Rainie 2014). How students show what they can do with that knowledge and how they demonstrate application of learning processes in real-world situations are the best indicators of their future success. Research shows interactive read-alouds as part of a balanced literacy approach increase comprehension, support students’ content background knowledge, boost vocabulary, and assist in development of independent reading and writing of similar texts (Cummins and Stallmeyer-Gerard 2011). A significant benefit of interactive read-alouds is how they encourage students to think actively before, during, and after reading. When students engage in a meaningful conversation about a book’s ideas and presentation, they are empowered to articulate connections and make their thinking visible to others (Hilden and Jones 2013).

*Key Words: Extend Students’ Thinking by Encouraging Them To Make a Connection, Use Text, Practice, Self-Monitor, Think Aloud, Explore*

## Critical Thinking and Education Systems

### Scrutiny of Critical Thinking Concept

*International Education Studies; Vol. 8, No. 3; 2015*

*ISSN 1913-9020 E-ISSN 1913-9039, Published by Canadian Center of Science and Education*

Ali Mohammad Siah Atabaki<sup>1</sup>, Narges Keshtiaray<sup>1</sup> & Mohammad H. Yarmohammadian<sup>1</sup>

<sup>1</sup> Department of Educational Sciences, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

**Abstract:** Learning critical thinking skills are the goal of educational systems so the term “critical thinking” (CT) is frequently found in educational policy documents. Despite this frequency, however, precise understandings among teachers of what CT really means do not exist. The present study is designed to answer the following question. We can classify critical thinking concept in a conceptual framework. A qualitative content analysis with deductive categorization was used to classify critical thinking concept in a conceptual framework. The research field (statistical population) included all available digital and written sources related to critical thinking. The research sample was a purposeful homogeneous sample. It is used to describe the sample that includes information based on the qualitative research goals. The results showed that critical thinking concept could be investigated in fields of both psychology and philosophy. While philosophers emphasize on the nature and quality of critical thinking, psychologists focus on cognitive process and components used to investigate the practical problems. So philosophers emphasize critical thinking attitudes while psychologists focus on critical thinking skills.

*Keywords: critical thinking, educational goals, thinking skills, thinking attitudes*

## Critical Thinking Models: The Four Pillars

The following four pillars of critical thinking are models that are practical methods that are the core of developing critical thinking skills.

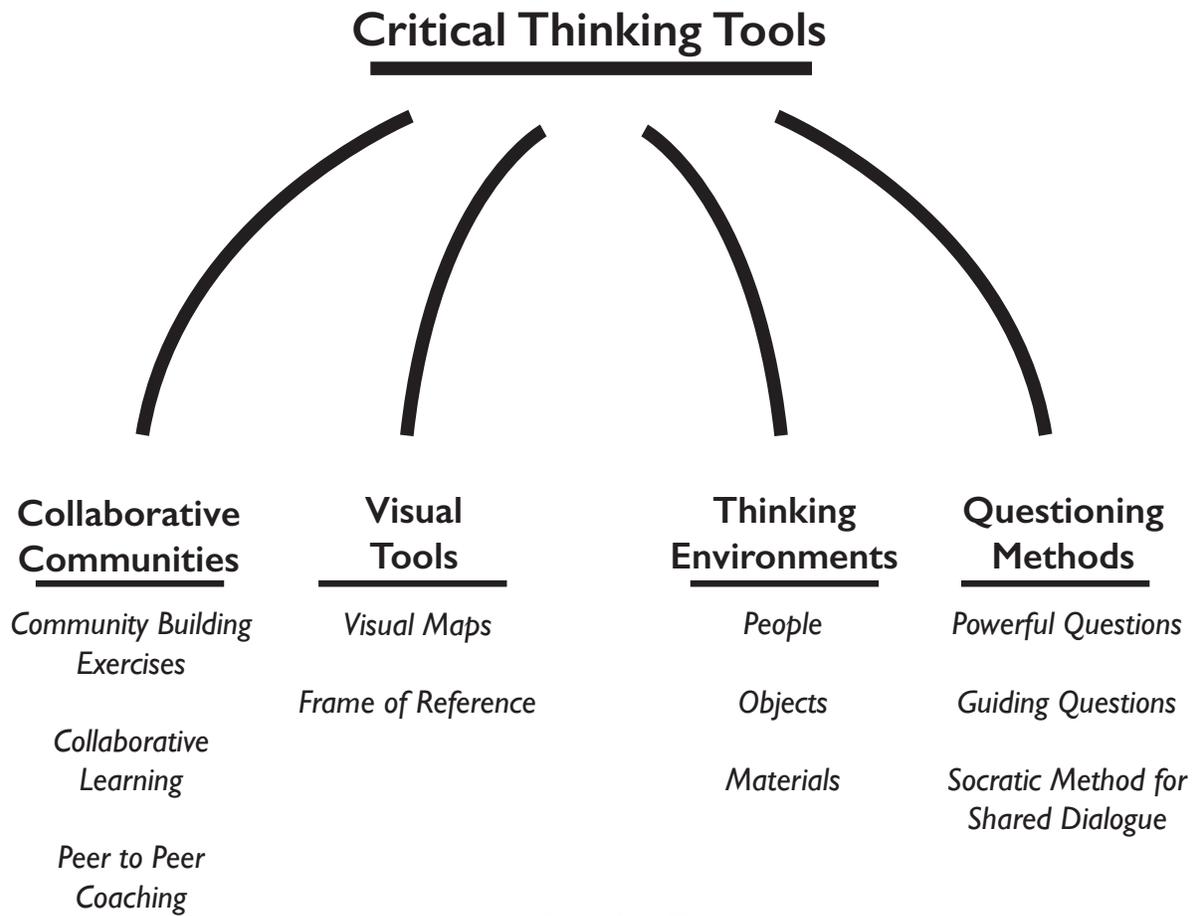
- **Collaborative Communities** are three supporting methods of collaborative tools for individual and collaborative success. These include: community building exercises and models, collaborative learning methods and peer-to-peer coaching.
- **Questioning Methods** are used to engage students in curiosity, exploration, discovery and discussions. This includes effective methods for developing questioning skills leading to inquiry based shared inquiry.
- **Open Source Visual Mapping** is for organizing and understanding thinking individually and collaboratively. The maps support recognizing patterns of thinking along with the frame of reference to understand different perspectives.
- **Thinking Environments** is an awareness, understanding and a process focused on the design, interface and impact of the environment including a person's use of space, materials, and objects.



*Sculpture - Ghana*

# The Four Pillars of Critical Thinking Tools

Each of the Four Pillars of Critical Thinking Tools with the categories within and a frame that has questions regarding implementation.



# Critical Thinking Models: The Four Pillars

## Collaborative Communities

A collaborative community learns with and from one another. Like any experience, intentionality of actions and practice are imperative with the methods of collaboration. The collaborative process are three key areas:

### Community Building Exercises

Building community exercises is developing the whole community together for understanding one another, learning how to collaborate collectively, developing listening for learning, and other methods for the whole school community collectively learning with one another.



### Peer to Peer Coaching

Peer to Peer Coaching is teachers creating their own professional coaching community. It is regularly observing each other throughout the whole school with a focused protocol to support seeing each other's professional skills. The goal is learning professionally from one another in quest of the finest craft and pedagogy for student outcomes.

### Collaborative Learning Methods

Collaborative learning is a relationship among students (and teachers with teachers) that requires positive inter-dependence (a sense of sink or swim together), individual accountability (each of us has to contribute and learn), interpersonal skills (communication, trust, leadership, decision making, and conflict resolution), face-to-face promotive interaction, and processing (reflecting on how well the team is functioning and how to function even better).

## Questioning Methods

The use of questions are used in many fields including the sciences, journalism and many more. They are a gateway of curiosity with learning, and an insightful and effective way of understanding. Questioning is a key means by which teachers and students find out what they already know, identify gaps in knowledge and understanding, and scaffold the development of their understanding to enable them to close the gap between what they currently know and the learning goals.



We ask questions regularly. There are several types of questions:

- factual
- evaluative
- interpretive

### *Statements and Questions*

Statements are 'answers' that signal a stop in thinking with a final answer. Questions are a driving force in the process of thinking. One asks questions to stimulate thinking. The art of questions like any skill takes practice of the finer points to achieve mastery. We will focus on bringing questioning into the classrooms critical thinking by scaffolding supportive strategies:

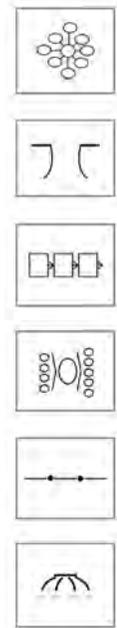
- Powerful Questions including The Question Game and Questioning in Depth
- Guiding Questions
- Socratic Method for Shared Dialogue with Classroom Discussions

# Critical Thinking Models: The Four Pillars

## Open Source Visual Mapping

Visual tools are a means of graphically and visually representing ideas, conceptual relationships and progression paths. They range from the simple spider diagram, flow chart or time line – to more sophisticated models of concept mapping which can be used to explore complex relationships and perceptions. Open Source Visual Maps is a language that provide students with choices of six visual maps that represent how humans think cognitively (brainstorming; cause/effect; sequence; compare/contrast; categorization; relationships). Each map can be further developed with a frame of reference. Open Source Visual Maps are a critical thinking tool that is most effectively used when students have the ownership of choosing the Visual Map(s) that best represent their cognitive choice. Open Source Visual Maps organize thinking for understanding, writing, creating presentations, video and to understand each other's thinking. The steps of implementation in a classroom include:

- Introducing all six Open Source Visual Maps to learn the tool using pictures, words and other representations for all grade levels.
- Introducing the Frame of Reference for all six Open Source Visual Maps.
- Learning hand symbols for each of the Open Source Visual Maps.
- Students choosing the Visual Map that best represents how they are organizing their thinking (student centered ownership).
- Integrating Open Source Visual Maps across all subjects and content.



## Critical Thinking Environments

Critical Thinking Environments, is an awareness, understanding and a process focusing upon the design, interface and impact with the environment of the physical learning space. An awareness with **intentionality**. The environment is **The Third Teacher** where we focus on designing the physical space with the **Frame of the Student** as a root understanding. The **in the eyes of the student** respects and understands the **children's frame of reference** in regards to how children see, sense, use and interface within the environment, and how the teacher is intentional with their choices, decisions and actions in respect to student engagement and successes with learning. The key components of focus for a successful teaching environment include:

- **People** including proximity of the teacher with students and how we choreograph the flow of people.
- **Objects** in the classroom including furniture, lighting and all objects that influence in regards to their design and use.
- **Materials** used including choices and use of natural and recycled things.



The teacher's decisions with intentionality impact the classroom and school's environment. They are crucial to the quality outcomes of the children and youth's learning experiences and how they model with the children, and become a model to how students learn.

# Chapter I: Collaborative Processes

## Community Building Exercises

### Peer to Peer Coaching

## Collaborative Learning Methods

“In order for this to happen, your entire frame of reference will have to change, and you will be forced to surrender many things that you now scarcely know you have.”

—*James Baldwin, The Fire Next Time*



# Collaborative Processes and Communities

A collaborative community opens the learning community to building relationships with and from one another. Like any learning, intentionality is important with implementation for the methods of learning. The collaborative process includes three key areas:

## Community Building Exercises

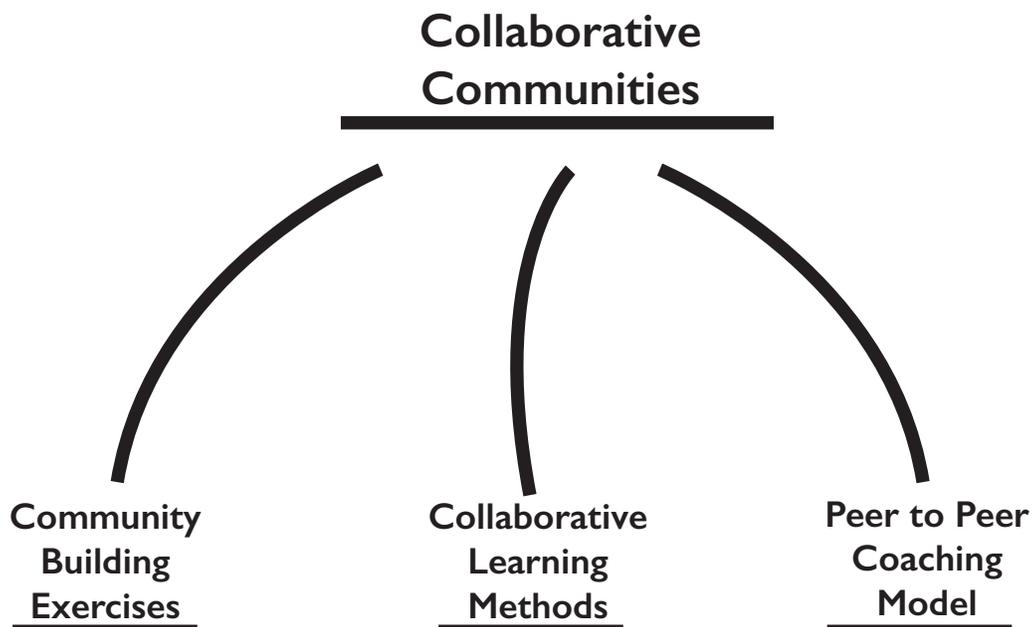
Building community exercises is about building the whole community for understanding one another, learning how to collaborate together, developing listening for learning, and other methods for the whole school community collectively learning with one another.

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# Research on Relationships in School Communities

Read the following article on research on building relationships for Collaborative Communities:

Why relationships – not just money – are the key to improving schools - Study finds social capital has 3-5 times the impact of funding.

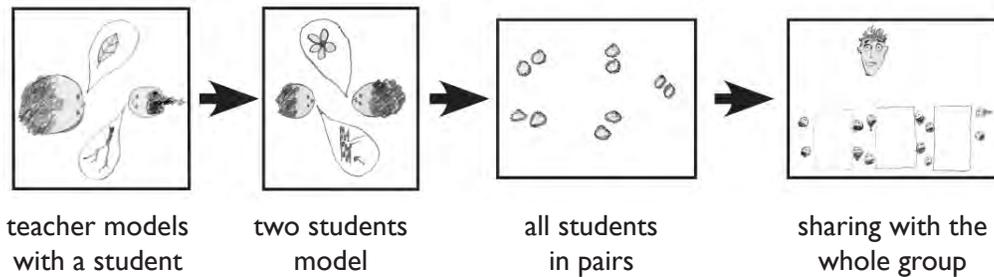
## Guiding Questions

- What are your questions from reading this research?
- How does this research apply to your school?
- How would you map out a plan to implement practical tools and practices to support the quality of the school's social capital?

## Research in Action

1. Use Collaborative Questioning (see in this guide) to respond to: What are your questions from reading this research? Then in small collaborative groups write several questions from the Collaborative Questioning exercise with each question on a separate piece of paper to sort (see the categorization map and section on inductive sorting). Sort the questions into categories. Label a top question for each category.
2. Use a visual tool to map: How does this research apply to your school? Possible maps include brainstorming, cause and effect, comparing or a map that supports your thinking.
3. What are the steps and parts of the steps to implement a plan? Use a sequence map to create a timeline.

### Collaborative Questioning





## **Research on Relationships in School Communities** **Why relationships –not just money– are the key** **to improving schools**

*Study finds social capital has 3-5 times the impact of funding*  
by Jeff Grabmeier, *The Ohio State University News*

Strong relationships between teachers, parents and students at schools have more impact on improving student learning than does financial support, new research shows.

Serena J. Salloum, Roger D. Goddard & Dan Berebitsky (2018):  
Resources, Learning, and Policy: The Relative Effects of Social and Financial Capital on Student Learning in Schools, *Journal of Education for Students Placed at Risk (JESPAR)*, DOI:10.1080/10824669.2018.1496023

Social capital is the name scientists give to the network of relationships between school officials, teachers, parents and the community that builds trust and norms promoting academic achievement. The study found that social capital had a three to five times larger effect than financial capital on reading and math scores in Michigan schools.

“When we talk about why some schools perform better than others, differences in the amount of money they have to spend is often assumed to be an explanation,” said Roger Goddard, co-author of the study and Novice G. Fawcett Chair and professor of educational administration at The Ohio State University. “We found that money is certainly important. But this study also shows that social capital deserves a larger role in our thinking about cost-effective ways to support students, especially the most vulnerable.”

Goddard conducted the research with Serena Salloum of Ball State University and Dan Berebitsky of Southern Methodist University. The study appears online in the *Journal of Education for Students Placed at Risk* and will be published in a future print edition. The study involved 5,003 students and their teachers in 78 randomly selected public elementary schools in Michigan. The sample is representative of the demographics of all elementary schools in the state. Teachers completed a questionnaire that measured levels of social capital in their schools. They rated how much they agreed with statements like “Parent involvement supports learning here,” “Teachers in this school trust their students” and “Community involvement facilitates learning here.”

State data on instructional expenditures per pupil was used to measure financial capital at each school. Finally, the researchers used student performance on state-mandated fourth-grade reading and mathematics tests to measure student learning. Results showed that on average schools that spent more money did have better test scores than those that spent less. But the effect of social capital was three times larger than financial capital on math scores and five times larger on reading scores.

## Research on Relationships in School Communities



“Social capital was not only more important to learning than instructional expenditures, but also more important than the schools’ poverty, ethnic makeup or prior achievement,” Goddard said. While social capital tended to go down in schools as poverty levels increased, it wasn’t a major decrease. “We could see from our data that more than half of the social capital that schools have access to has nothing to do with the level of poverty in the communities they serve,” he said. “Our results really speak to the importance and the practicality of building social capital in high-poverty neighborhoods where they need it the most.”

The study also found that the money spent on student learning was not associated with levels of social capital in schools. That means schools can’t “buy” social capital just by spending more money. Social relationships require a different kind of investment, Goddard said.

The study can’t answer how to cultivate social capital in schools. But Goddard has some ideas.

- One is for schools to do more to help teachers work together. “Research shows that the more teachers collaborate, the more they work together on instructional improvement, the higher the test scores of their students. That’s because collaborative work builds social capital that provides students with access to valuable support,” he said.
- Building connections to the community is important, too. School-based mentoring programs that connect children to adults in the community is one idea.
- “Sustained interactions over time focused on children’s learning and effective teaching practice are the best way for people to build trust and build networks that are at the heart of social capital,” Goddard said.
- “We need intentional effort by schools to build social capital. We can’t leave it to chance.”

### Research Paper Abstract

In this paper, we note the contrasting positions occupied by social and financial capital in state and federal education policy and compare their relative impacts on student learning. To make such a comparison, we analyzed data from a representative sample of Michigan’s elementary schools using multilevel structural equation modeling to examine the relationships among social capital, instructional expenditures, and student achievement. We found that the level of social capital characterizing schools was not a function of instructional expenditures. We also found that both social and financial capital had a positive and significant relationship with reading and mathematics student achievement. However, the effect of social capital was three and five times larger than that of financial capital on mathematics and reading, respectively. We discuss the implications of these findings for education policy and programs that might improve student learning by strengthening social relationships.

*Keywords: social capital, community, student achievement, relationship, education policy*



### Complete Research

Serena J. Salloum, Roger D. Goddard & Dan Berebitsky (2018):  
Resources, Learning, and Policy: The Relative Effects of Social and Financial Capital on Student Learning in Schools, *Journal of Education for Students Placed at Risk (JESPAR)*, DOI:10.1080/10824669.2018.1496023

# Collaborative Learning Methods

Collaborative Thinking is a relationship among co-workers and students developing:

- **positive interdependence** (a sense of sink or swim together),
- **individual accountability** (each of us has to contribute and learn),
- **interpersonal skills** (communication, leadership, decision making, & conflict resolution),
- **face-to-face promotive interaction, and processing** (reflecting on how well the team is functioning and how to function even better).

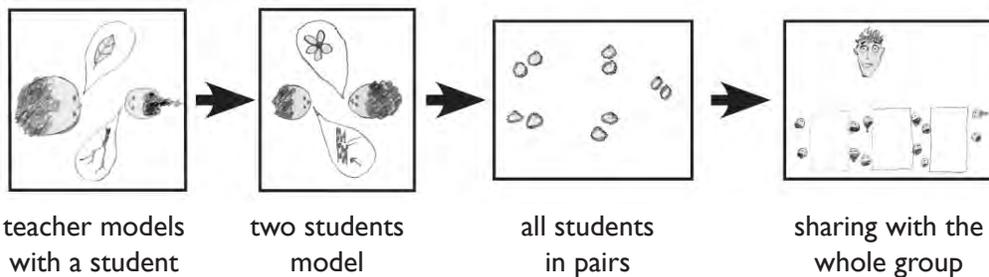
## Think-Pair-Share

With Think-Pair-Share the teacher poses a question or topic, preferable one demanding analysis, evaluation, or synthesis, and gives a person about a minute to think through an appropriate response. One person then turns to a partner and they share their responses.

## Think Pair Share in Action

- **facilitator models with participant** — The facilitator / teacher can model behaviors such as what to do when you don't know ideas, how to thread an idea from your partner.
- **two participants model** — The two students model understanding of the process and the classroom will be more attentive with the process watching their peers.
- **all participants paired up** — All involved holding all accountable.
- **whole group shares** — Have one person share one thing, then pick a student from a different location in the room.

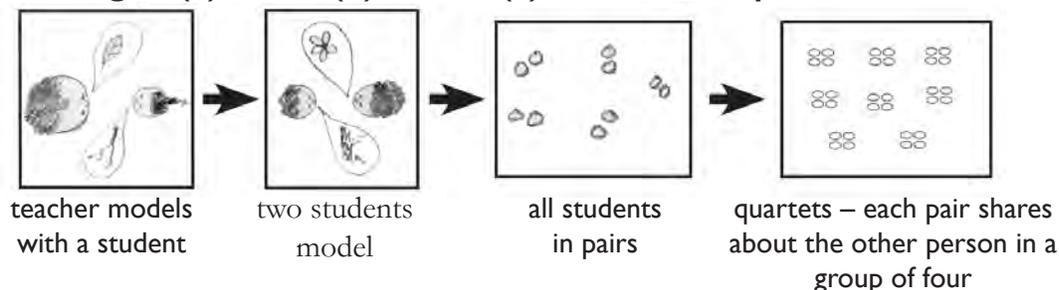
## Collaborative Questioning



*Doing Think Pair Share video as in the diagram.*

In the extension below with quartets, when participants A&B join C&D, A shares something learned from B, B from A, C from D, D from C, back to A from B, and so forth...

## Sharing in (a) Pairs, (b) Fours, (c) Whole Group



*Think Pair Share First Grade Video*



*Think Pair Share Third Grade Video*

# Collaborative Learning Methods

## Three-Step Interview

Common as a team-building exercise, this structure can also be used also to share information such as hypotheses or reactions to a film or article.

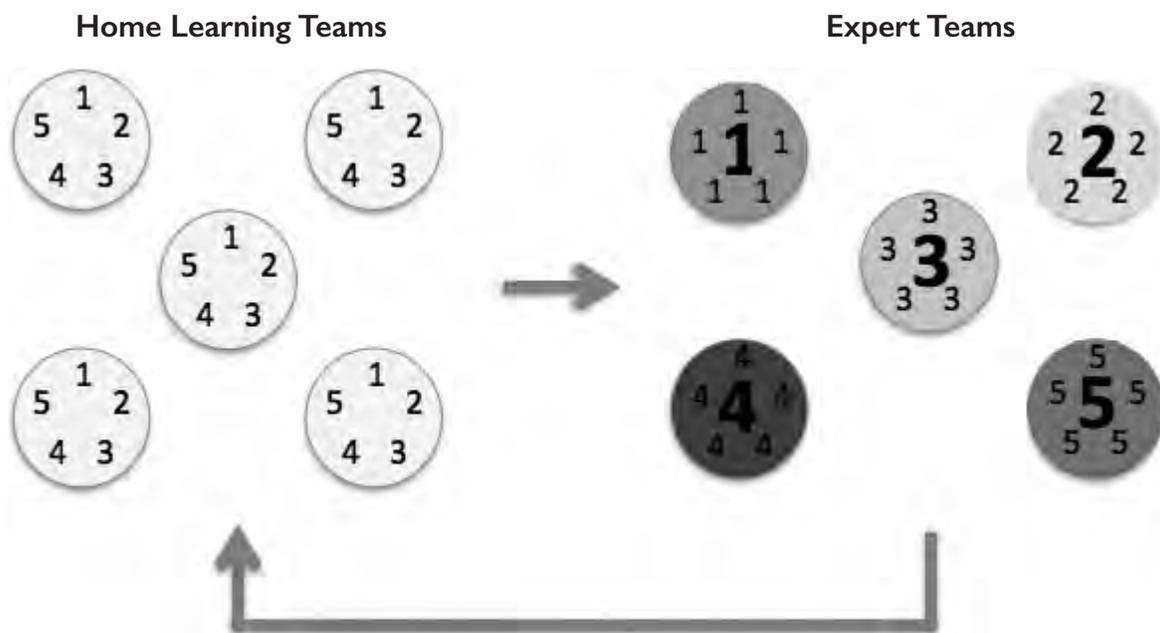
- People form pairs; one person interviews the other.
- People switch roles.
- The pair links with a second pair. This four-member learning team then discusses the information or insights gleaned from the initial paired interviews.

## Learning Teams

Members of learning teams, usually composed of four individuals, count off: 1, 2, 3, or 4. The instructor poses a question, usually factual in nature, but requiring some higher order thinking skills. People discuss the question, making certain that every group member knows the agreed upon answer. The instructor calls a specific number and the team members originally designated that number during the count off respond as group spokespersons. Because no one knows which number the leader will call, all team members have a vested interest in understanding the appropriate response. The verbalization and the peer coaching helps all learners become actively involved with the material.

## Simple Jigsaw

The facilitator divides an assignment or topic into four parts with all people from each Learning Team volunteering to become “experts” on one of the parts. Expert Teams then work together to master their fourth of the material and also to discover the best way to help others learn it. All experts then reassemble in their hHome Learning Teams where they teach the other group members.



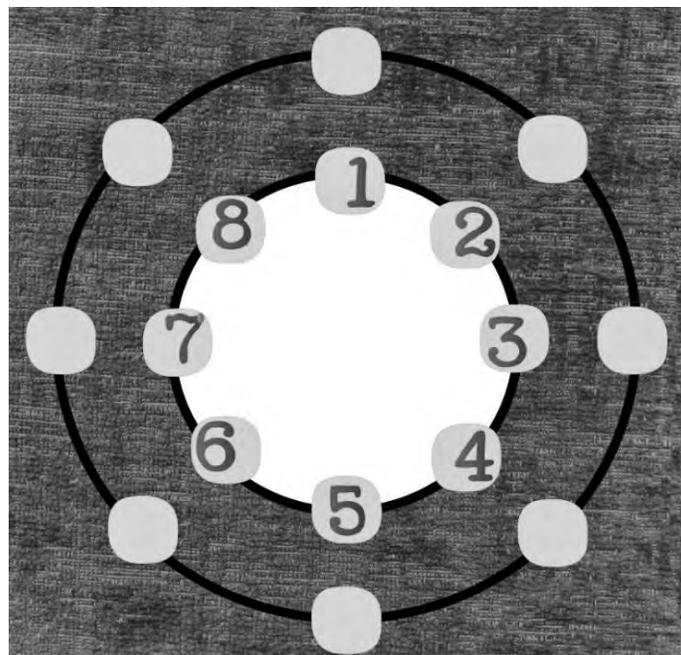
# Collaborative Learning Methods: Fishbowl

## How It Works:

- Divide your class in half:
  - one half will form the center circle, facing inward.
  - the other half of the class will form the outer circle, facing inward as well.
- The students in the inner circle will discuss a predetermined topic.
- The outside circle will be listening to the discussion, taking notes and developing questions. They are only quiet observers at this point.
- The inner and outer circles then switch positions and repeat the steps above.

## Why It Works:

- Eases Discussion Management: because only half the class is discussing at a time, this makes it much easier to manage than a whole-class discussion.
- Promotes Active Listening: half the students have the specific role of listening to the inner circle. They understand that their turn to talk will come, which focuses them on active and attentive listening.
- Great for Discussion: the physical position of students makes it very clear when it's time to listen and when it's time to talk. You can switch through the roles a number of times during the discussions, and students have more incentive to listen when they are in the outer circle so that they can appropriately counter the points made from the inner circle.
- Peer Evaluation and Modeling: This model presents a valuable opportunity for students to evaluate their peers. Successful student presenters also serve as models to other students who are learning skills with class discussions.



# **Collaborative Learning**

## **References and Futher Reading**

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Kamp, RJA, Dolmans, DHJM, van Berkel, HJM & Schmidt, HG, 'The relationship between students' small group activities, time spent on self-study, and achievement', *Higher Education*, vol. 64, no. 3, pp. 385-397, 2012.

# Building Community Methods: Team Building

## Overview

Team building exercises build community, develop listening skills and support student engagement. They are a great way of improving communication, morale, motivation, productivity, helping students and educators to get to know each other better, and learning about one's strengths and weaknesses. Community building is the foundation of a student centered classroom.

Community building methods have their roots in theater and the stage. In theater, the team must be collaborative with no one 'dead to the scene'. Drama and street theater can teach and enlighten us thoughtfully with team building. Augusto Boal is the Brazilian dramatist who, during over forty years of work in different parts of the world, has developed the techniques of Theatre of the Oppressed. His successful building of community is a model for a successful classroom. Boal begins with the principle that theatre, like language, can be appropriate to anybody so long as the methods are passed on to them. It is this teaching role that Theatre of the Oppressed sets out to achieve. Through series of exercises, games, techniques and drama forms (of which Forum Theatre is the most commonly used), the aim is to understand social reality, and to then be able to change it (for equality and positive outcomes).

In classrooms drama games, what we call community team building exercises, are used to:

- develop a classroom team.
- have students and educators aware of each other.
- learn to focus on each other.
- learn the social manners and reality of the classroom.
- change for the positive the classroom team.
- have students become the autonomous leaders of the classroom.

The goal is to have everyone involved with the community team building exercises with a focus upon student engagement using the exercises as a foundation for the classroom.

While many community building exercises score high on the fun factor and do create some shared memories, they must also deliver an outcome of a stronger team. It is important to be meaningful and challenging with exercises that often is completely outside our context and comfort zone to really elevate the classroom community as a team of learners both individually and together.

The examples of team building exercises in this guide are an introduction. It is recommended to seek out more exercises in published books, on the Internet and by taking classes locally including with theater and improvisation classes.

# **Building Community Methods: Team Building**

## *Learning About Each Other Together*

### **Mingle**

The group mingles around, casually talking to each other. As they continue mingling, you call out a name of a category, like pets. The players then have to find other people who have that in common with them. Other categories you can try are: someone with the same number of brothers and sisters as you, someone with the same color eyes as you, someone with one of your hobbies. Let one of the players take your place and be the leader who can call out the categories.

### **People to People**

Everybody mingles around, greeting one another normally (thus the title “People to People”). You, as the leader, stop movement by proclaiming “elbow to elbow!” or “knee to ear!” The group must form whatever configuration you say by finding someone to touch elbows with or a knee to put an ear on. When you say “people to people,” the mingling and greeting begins again. The game becomes more creative when you announce animal configurations, like “Elephant to Elephant!” or “Snake to Snake!” or “Alien to Alien!” These can lead to “Trunk to Trunk!” and “Tail to Tail!”

### **In Common • Commonalities**

Participants face the inside of the circle on their individual spots. One person (start with the lead facilitator modeling several times, then each person will do it once) will state something true about themselves. An example might be “I have taken guitar lessons.” Then everyone who has this “In Common” with the person who stated “I have...” will leave their spots and trade with someone else. This is followed by another person sharing something true about themselves. Then everyone who has this “In Common” with the person who stated “I have...” will leave their spots and trade with someone else.

### **I Love My Neighbor**

Participants face the inside of the circle on their individual spots, except for one person, for example Langston, who is “It” and stands in the middle. Langston starts by saying “I love my neighbor who...” finishing with a characteristic or description, such as, “I love my neighbor who has an older brother.” Then all the participants to whom this is true leave their spots and trade with someone else. Langston then scrambles for the open spaces, and whoever is left without a seat is the new “It” and must begin again saying “I love my neighbor who...” Each person who is “It” is not allowed to repeat any of the other things previous “Its” have said.

### **Trust**

Participants are in pairs. They will connect with hands (you could also do it with elbows, fingers, etc.). One person will close their eyes and the leader will keep their eyes open. They will then start walking together. It is the responsibility of the leader with the eyes open to lead the other person who is trusting them on a safe path while they are walking around. Initially do for short segments (e.g. 30 seconds), then have the pairs switch who is the leader.

# Building Community Methods: Team Building

## Focus and Concentration I

### Zoom

In a circle students orally pass the word *zoom* around from one person to another. The exercise moves rapidly to build and sustain community involvement. Extensions include switching directions, multiple zooms at one time, students leading zoom, use of different polygons to form the 'circle' (e.g. square), & other words to build vocabulary. Initially introduce with students sitting in a circle with their legs crossed, sitting up straight, and their hands in their laps. The students are modeled and asked to have their knees touching their neighbors knees to form a tight circle.

Changing it up: Instead of voice, use a gesture and/or sign language.

### Zoom - EEK

In a circle students orally pass the word *zoom* around from one person to another. Introduce the word EEK to everyone—means stop and go the other direction. When the leader says EEK whoever has the zoom changes direction.

### Movin' in Rhythm

Everyone forms a circle. It is helpful to hold hands when first learning Movin' in Rhythm. When in the circle everyone starts moving clockwise (or counter clockwise) together. The goal is to be moving like a smooth wheel going in a circle. The leader can be *at the controls* to control the speed of the wheel or turn it on and off.

### Movin' Zoomin'

Everyone forms a circle. Movin' Zoomin' combines Zoom and Movin' in Rhythm together. First have the group Movin' in Rhythm, then start Zoom. When these two elements are successfully combined, add EEK.

### In-Motion

Combines elements of mirroring and zoom that includes movement, sounds and moving in a circle. One person (initially the teacher) does a motion (movement and sound), then everyone repeats the modeled motion. Then another person in the circle does a motion followed by everyone repeating the modeled motion. The order could be determined from a caller who selects the next person or in order around the circle. In the beginning a suggested rule is to keep your feet on the ground and stay where you are standing.

# **Building Community Methods: Team Building**

## *Focus and Concentration 2*

### **Pass the Rhythm**

Everyone stands in a circle. One person begins by modeling a clap (the rhythm), then turns to a person next to them (we'll say to the left) and they must clap the rhythm together while looking at each other in the eyes. The person who just received the rhythm now turns to their left and does the same action with the person on their left. This continues until the rhythm returns to the person who began the rhythm.

### **Pass the Pulse**

Everyone stands in a circle holding hands with their eyes closed. The leader is the generator of the pulse. The leader starts with passing the pulse by squeezing the hand of the person to their right or left. The person who just received the pulse is now the conductor and passes the pulse to the person on the other side by squeezing that person's hand. The pulse should travel around the circle a couple of times, with the leader passing it just like everyone else. When this pulse is traveling, you can send a new pulse. Then game ends when the leader progressively stops all of the pulses.

### **Pass the Motion (The Wave)**

The group gathers into a circle and sits facing in. To begin, everyone extends their hands to the center of the circle with their palms up. The leader slowly curls their fingers, one by one, from the left to the right. Then, the person to their right curls their fingers up in the same manner, and then the next person in the group, and then everyone continues around the circle. The motion should pass smoothly and fluidly. After the wave returns to the leader, you can pass another motion (perhaps uncurl the fingers) and add a sound. Then, you can pass any other motions, like standing up, raising your hands above your head, jumping, or whatever you think of. As leader, you are in control of the energy level. If things get a bit too energetic, you can return to the original finger rolls.

### **Pass the Face**

Everyone stands in a circle. Starting with the leader, they make a quietly face to the person next to them. The second person mirrors the face back to the first person. Then, the second person turns from the first person melting away the mirrored face and making a new face as they face the third person. The third person mirrors the face of the second person. This continues around the circle. As the group improves, there should be no lag time between each passed movement.

### **Pass the Object**

Everyone stands in a circle. The leaders begins with a single imaginary object. You establish, through physically modeling, what the object is. You then pass it to the person on your left (or right), who then continues passing it in the same direction.

# Building Community Methods: Team Building

## Whole Group Focus

### Machine

The objective of the game is to create an abstract machine using people as parts. One person begins by making a simple motion and sound. The leader selects another person to join the machine - this person adds another motion that works in rhythm with the first person. The leader continues to select people who continue making simple motions and sounds that work in rhythm with the machine. The leader (or a person in the group) is *at the controls* that can turn the machine off and on, or speed the machine up and slow it down. The leader can be specific on what the machine does or makes.

### Fruit Basket

The class sits in a circle on chairs. One person stands in the middle. The participants are equally divided between three fruits (e.g. apple, orange, and pineapples). When one fruit is called by the middle person (e.g. apples), all the apples change chairs including the middle person. The person 'out' becomes the next caller. If a *caller* says fruit basket all participants have to change.

### Frozen-in-Motion

The leader and participants sit on their chairs. Initially have the participants feel the floor, feel the chair, and feel the space they are in. This can be done with eyes open or closed. The participants are then directed to feel and replicate an emotion (e.g. boredom, surprise, mad, etc.). The leader (teacher or student) then says *freeze*. Everyone then freezes as a statue. The leader now says 'we are now in the museum of \_\_\_\_.' Everyone is then asked to focus on one person who remains a statue. Have the viewers focus on a particular part of the *statue person*. Elicit vocabulary to describe different body emotions of the statue person. The vocabulary could be recorded to use on a word wall. This is an excellent exercise leading to a tableau for recreating a part(s) of a story to stimulate and generate discussion.

### Group Rhythm

Form a circle and stand in a relaxed position. Everyone holds their arms out to the side in such a way that each person's index finger is touching the next person's index finger. In this way the whole group is connected fingertip to fingertip. The object of the exercise is for everyone to clap at the same time.



*Community exercises with students.*



*Community exercises with educators.*

# Building Community Methods: Team Building

## Pantomime Games

Participants mirror each other in silence. This exercise has the participants focusing on each other to mirror the actions of the person modeling the movements. Initially, and periodically the teacher leads the mirroring activity to model effective movements. It is very important to regularly have students lead the mirroring. These exercises are very effective community builders that build collaboration and the ability to focus. They are excellent for transitions.

## Group Mirror

One person stands facing everyone in the class. They can stand anywhere in the class. It is important everyone has a clear view of the person leading the movement. All participants should stand clear of any objects or furniture. The order of modeling could be: moving arms; moving arms and hands; moving arms, hands, and fingers; moving arms, hands, fingers, and head; moving arms, hands, fingers, head, and torso; moving arms, hands, fingers, head, torso, and elements of the head (e.g. the eyes). The person who is the *mirror* leads the participants for approximately 30 seconds, then says freeze, with all the *reflections* now a stop motion of their movements. Then upon hearing continue they continue the reflection of the mirror. Group mirror is very effective to quickly start with the students participating from wherever they are in the class.

## Circle Mirror

The class, including the teacher stand in a circle allowing room for arm movement. The teacher can initially take the lead as the *mirror*. The person who is the *mirror* leads the participants for approximately 30 seconds (one student can be the timekeeper), then says freeze, with all the *reflections* now a stop motion of their movements. The mirror then selects another person to become the new *mirror*. The *reflections* now imitate the motions of the new *mirror*. The *reflections* now have a full view of the *mirror* allowing additional motions beyond those listed in Group Mirror including: moving up and down; moving legs and feet; and whole body movement. Circle mirror is excellent as a collaborative community builder with equal focus upon each other. It is very effective when students will be changing their location in the room. The circle could be formed at the location of the next classroom activity.

## Duet Mirror

Very similar to exercises and actions in Circle and Group Mirror. The students stand up and face a partner. Everyone, including the teacher (model), pair with someone in the classroom. They select a mirror person in each pair. They then start until they hear the word freeze in approximately thirty seconds (student timekeeper). The reflection now becomes the mirror. If there are an odd number of people in the class, there can be one group of three.

## Detective

Conducted similarly to Circle Mirror. One person who is chosen as the *detective* turns around (or leaves the room). A person is selected to be the *mirror* without the detective hearing or seeing the selection. The *detective* is invited back into the circle and/or room, where they will try to determine who the lead *mirror* is.

# **Building Community Methods: Team Building References and Further Reading**

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Amherst, 2010.

# **Building Community Methods: Team Building**

## **Implementing**

While the idea of building community is a systems thinking approach of the whole classroom, an important process to building the community is with the exercises and games in this section (or other ones from many sources). Begin with one that you are comfortable with, and then sketch out what you need to do, how you will introduce it, and then start doing the exercise.

## **Practicing**

Like everything we do, practice will bring success. I recommend that you practice the same exercise multiple days in a row. This will provide you to improve on the implementation, for the students to practice and for you to be reflective on the process. I highly recommend video taping the community exercises in action to watch and learn from the experience.

## **Changing It Up**

If we did exactly the same thing the same way all the time, we would become bored. While we do want to practice a particular community exercise multiple times for developing understanding and expertise, it is important to change up what we are doing for interest and success. This can be adding an element to an exercise (e.g. with Zoom adding Eek) and/or combining different exercises together (e.g. Zoom and Moving in Rhythm) after introducing them separately.

## **Student Centered**

As you are regularly doing community building exercises, ask the students to take the lead with exercises you the teacher has introduced. The next step will have a student take the lead on a community exercise they know, have found in a book or they have seen on the Internet.

## **Reflection**

After doing community building exercises, ask the students what was the purpose of the exercise, what were the steps, and how would you modify and/or change it up?

# Peer to Peer Coaching

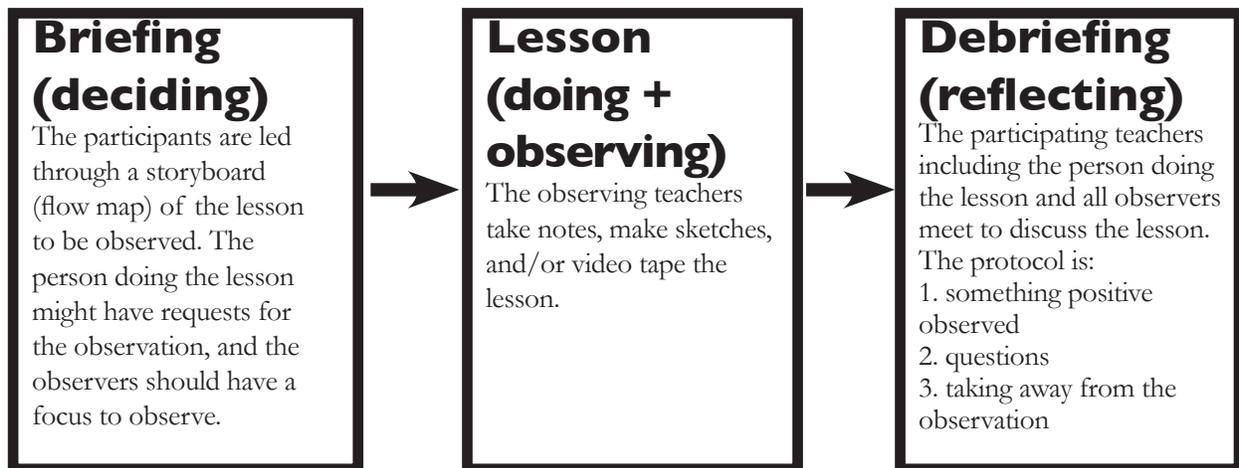
The Peer to Peer Coaching model focuses on teachers regularly observing each other to learn, understand, and improve their pedagogy (teaching methods and the art of teaching). This model works best in small groups with a minimum of three - one teacher demonstrating a lesson while two other teachers observe. The observed lessons are generally in the 15-30 minute range to provide a focus on particular teaching methods. The model includes a briefing, lesson and debriefing. It is recommended to group teachers from different grade levels and subject areas so they are focused on the teaching methods and not only content.

This model is a multi-directional process: everyone has gifts and skills to share and learn from one another. This differentiated process allows everyone to progress at a rate consistent with their skills. The model is an ongoing process for both new and experienced teachers.

Systems Model: This model is equally effective with administrators coaching administrators; facilitators coaching facilitators.

Ongoing Development: Teachers regularly participant with the Peer to Peer Coaching model throughout the school year.

## Peer Coaching Process (Teachers Coaching Teachers)



# Peer to Peer Coaching: Implementing

## Steps

Implementing Peer to Peer Coaching school wide develops the whole staff professionally. The key foci of successful implementation include:

- Thoughtful, consistent, creative scheduling by the leadership.
- Begin with several teacher teams of 3 to creating patterns of successful collaborations, develop Models of excellence, and get any concerns and needs solved.
- They will meet once every week preferably on the same day and time for 30-40 minutes.
- Add several more teacher teams of 3.
- Add all the teachers into groups of 3.
- After each group has done 6 peer to peer coachings a change of teacher groupings to expand the Learning and community building.
- Teachers will share regularly at staff meetings their experiences, reflections, positive thoughts, Needs and questions with Peer to Peer Coaching.
- Support staff participates in the peer to peer coaching model.

It is recommended to have teachers participate in a staff reflection with the whole staff using visual mapping to share successes and questions.

## Modeling

Prior to starting the peer to peer coaching model, it is recommended modeling the process with the whole staff observing each of the three steps of briefing—lesson—debriefing. I would recommend doing this in a fishbowl setting with teachers doing it with students.

## Tools

It is recommended to use a notepad to take notes with all observations. The use of visual maps or a similar method of organizing observations is recommended in the notepad. Video taping coaching deepens the coaching so the actual lesson can be reviewed and referenced at the debriefing. Without video you ‘think you thought what you think you saw’. With video you can review, reflect and refine your observations. It is best to have the video on the students as they will tell the story. The video clip is kept by the teacher who did the lesson.

## Research

Use the research on the following two pages in staff meetings and/or professional development with the whole staff (teachers and support staff):

1. Powerful Questions on a key word or phrase
2. Sort the questions (Categorization Map)
3. Read the short abstract and/or introductions.
4. Add key observations in a Frame of Reference around the Categorization Map.
5. How does this research connect with our student’s success? What do we as teachers need to implement, practice and model to develop our student’s critical thinking? Add this to the Frame of Reference in the Categorization Map.

# Research on Peer to Peer Coaching in School Communities



## Peer Coaching for Improvement of Teaching and Learning

Journal of Interdisciplinary Research in Education (JIRE) ISSN 2232-0180, Vol. 6, Issue 1, 2016, pp. 64-70, Liew Wai Yee, Taylor's College Sri Hartamas, Malaysia.

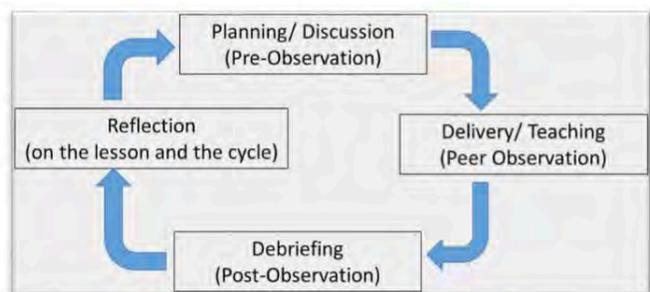
**Keywords:** Peer Coaching, observation, self-reflection, professional development, mentoring

### Abstract

This report reflects on the experience of conducting peer coaching for improvement of teaching practices and student learning. Peer coaching was first conducted by the Science Department offering Cambridge A-Level Programme on two Semester One classes. The observed lesson was targeted on engaging students through collaborative learning. Another experience on peer coaching was conducted by a group of teachers from different subjects and programmes, and targeted on learning by using formative assessment. The model attempted was the collegial peer coaching, and it included three main processes: pre-observation planning and discussion, two consecutive peer observations, and post-observation discussion. Peer coaching was found to be an impactful tool for professional development, because it offers teachers the opportunity for self-reflection, sharing of classroom experience, and mutual growth in teaching.

### Introduction

Teachers nowadays face challenges, such as to improve student-centered teaching, to integrate technology into teaching and learning, and to implement higher-order thinking skills just to name a few. Traditionally, the improvement of teaching practices has been left to individual teachers to work out on their own. Lack of support, feedback or follow up has led to slow and insignificant progress. Peer coaching, which is also called instructional coaching, peer mentoring or lesson study, is a model of professional development that can be used to improve student learning by improving teaching. Peer coaching requires that the teachers who are involved to reflect on practice, share successful practices and suggestions, and/or learn from and with colleagues. It helps to engage not only the beginner teachers, but also the seniors, in learning collaboratively and professionally, to address common and mutual challenges in teaching.



**Complete Research Paper:**  
**Peer Coaching for Improvement**  
**of Teaching and Learning**  
*Journal of Interdisciplinary Research in Education*

# Research on Peer to Peer Coaching



## Peer Coaching That Works:

### The Power of Reflection and Feedback in Teacher Triad Teams

By Robin Jarvis, Kathleen Dempsey, Grace Gutierrez, Dale Lewis, Kris Rouleau, and Bj Stone

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#### Why Peer Coaching

In their work, Bruce Joyce and Beverly Showers (2002) focused on identifying what components a professional development (PD) program must have for it to impact student achievement. Looking at three potential outcomes of PD—knowledge, skill, and transfer—they concluded that transfer is required for the PD to truly impact student learning. In their efforts to determine what components of PD were essential to achieve this transfer of learning to the classroom, Joyce and Showers found that PD must include four components— study of theory, demonstration, practice, and peer coaching—for teachers to actually impact student achievement by implementing what they have learned in the classroom. To provide a more concrete representation of the impact of PD on participants, Joyce and Showers estimated the percentage of participants who would be able to demonstrate knowledge, skill, or transfer following their PD (Table 1). Their estimates suggest that with the addition of peer coaching, 95 of 100 teachers can be expected to apply the PD in their classrooms where it can impact student performance. If we were to include every component but peer coaching, the best we can expect is that 5 of those 100 participating teachers will transfer.

Table 1. Percent of participants achieving specific outcomes by PD component

Components	Outcomes		
	Knowledge	Skill	Transfer
Study of Theory	10	5	0
Demonstrations	30	20	0
Practice	60	60	5
Peer Coaching	95	95	95

(Joyce & Showers, 2002, p. 78)

#### The Power Of Three: Peer Coaching In Triad Teams

Drawing from their experiences leading the Action Improvement Zone (AIZ) initiative in the Northern Metropolitan Region (NMR) of Melbourne, Australia, our colleagues David Hopkins and Wayne Craig (2015) advocate for a peer observation and coaching model that uses a triad of teachers who collaborate regularly, learning and embracing the four phases of Joyce and Showers' PD model— theory, demonstration, practice, and coaching—to plan and monitor their professional learning work. (Hopkins and Craig also added a fifth phase: feedback.) Teachers worked in assigned or self- selected groups of three and took turns participating in three distinct roles: coach, coachee, and observer. The role of observer added perspective that might be lost if teachers worked solely in pairs. The observer provided descriptive feedback on the process for the coach and coachee, asking skillful questions that encouraged more reflective processing and helped each team member to learn and grow from the experience.



#### Complete Research Paper: Peer Coaching That Works

*Journal of Interdisciplinary Research in Education*  
2017, McREL International.

# **Peer Coaching: Teachers Coaching Teachers**

## **References and Further Reading**

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# **Chapter 2: Questioning Methods**

**Powerful Questions**

**Guiding Questions**

**Questioning for Inquiry Collaboratively**



# Questioning Methods - Overview

When problem solving and/or visioning, it is important to ask interpretive questions that develop understanding upon one another. Interpretive questions are effective with well planned formal discussions and in spontaneous informal settings of discussion. Interpretive questions develop ideas, communication, understanding and problem solving. Most importantly the interpretive questions are best when they are well organized, open to facilitating interest and discussion, and lead to further understanding of the topic(s) and idea(s) being discussed.

## Types of Questioning Methods

- **Powerful Questions**
- **Guiding Questions**
- **Socratic Method** - is a form of cooperative argumentative dialogue between individuals, based on asking and answering questions to stimulate critical thinking and to draw out ideas and underlying presumptions. The Socratic Method is a series of questions formulated as tests of logic and fact intended to help a person or group discover their beliefs about a particular topic.
  - **Discussing Things That Matter - Philosophy for Children** - <https://p4c.com/>
  - **Shared Inquiry - Great Books Foundation** - <https://www.greatbooks.org/>

## Types of Questions

- **Factual** - A factual question has only one correct answer.
- **Evaluative** - An evaluative question asks the participants to decide if s/he agree with the ideas or point of view (frame of reference). The answer to an evaluative question depends on the person's prior knowledge, experience, and opinions.
- **Interpretive** - An interpretive question has more than one answer that can be supported with evidence from background knowledge and research. Interpretive questions keep discussions going requiring the participants to refer to experiences, knowledge, text evidence and research.

## The Socratic Method for Shared Inquiry is a Philosophy for Children

Shared Inquiry is a method of teaching and learning that enables people of all ages to explore the ideas, meaning, and information found in everything they read. It centers on interpretive questions that have more than one plausible answer and can lead to engaging and insightful conversations about the text. It is recommended learning more about Shared Inquiry at The Great Books Foundation website and the concept of students being philosophical at the Philosophy for Children website.

## Powerful Questions

The Powerful Questions technique is used to build comprehension, inferential thinking, listening skills, understanding, and interest. Either an object or image are used as the focal point for questions. After the object or image have been revealed, the students initially observe the object or image, then share questions from their observations. This technique develops inquiry skills while enhancing observation abilities. It is important that no questions are answered during the exercise. Ultimately quality questions frame deeper answers and understanding. The questions can be written down and then sorted into categories by the students to use for a shared discussion.



### *Object or Photographic Image*

Either an object or an image work well for this exercise. When presenting an object refer to it as a common object (or similar generic term). This stimulates enhanced observation skills, especially when an object might be several different things. With an image or photograph, it is best to choose one that has some unknown to it (e.g. a half built igloo - is it being built or taken apart?). It is an excellent tool to use an image from a text or book that is being studied as an introduction. Newspapers are also an excellent source of images which becomes an excellent anticipatory set prior to reading the article.



*In Action*

### *Order of Technique*

State you will be shown a common object (or image) which we'll ask questions about. The object and/or photo should connect with what is being studied to provide interest and curiosity. Initially they will be shown the object (or image) and quietly observe it. The students could closely gathered around the object, the teacher could be walking around the room, or each small group could have one of the objects or images. The students are informed we will only ask questions—they then start presenting their questions. It is best the teacher doesn't repeat the questions, instead having the students repeat their own questions so the focus is on them while they hone their presentation skills. They will be able to see the object or image throughout the time they are sharing questions.

If the object or image is something they are studying, the questions might be recorded on poster paper. In higher grades two students would write the questions and in lower grades the teacher would write the questions. The person(s) who asked each question might also be noted next to their question to honor them when using the questions during a later study.

The teacher never provides answers and only occasionally asks a question themselves. They might ask a question to offer a new direction, different frame of reference or a deeper extension. e.g. about the perspective of who took the photograph or who invented/designed an object. Reread all the presented questions to that point several times during Powerful Questions. This recap honors the presented questions while stimulating ideas for deeper inquiry.

# Powerful Questions: Collaborative Questioning

To start *Collaborative Questioning* the two participants must initially decide on a topic to question. One person starts with an open ended question, then the other person responds with a related open ended question. This continues back and forth with the two participants. The process can start from an object, a topic, or a photograph. An example is an object in the room such as a light bulb:

- *Questioner A: How does a light bulb work?*
- *Questioner B: Who designed the current light bulb?*
- *Questioner A: Who invented the light bulb?*
- *Questioner B: Why would someone invent the light bulb?*
- *Questioner A: What inspired the inventor to think of creating a light bulb?*
- *Questioner B: How can we improve the light bulb?*



## Using a Photograph

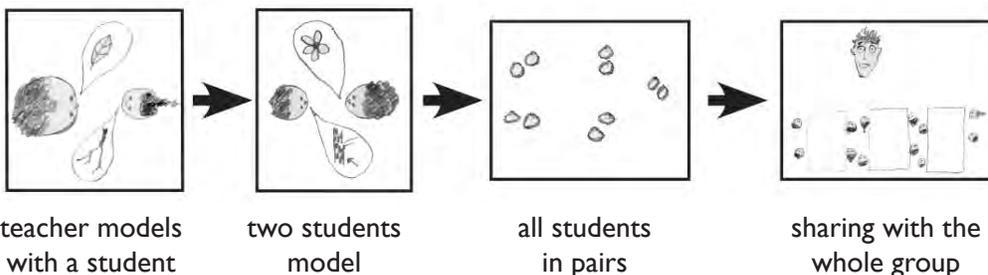
- *Questioner A: Is the photo actual size?*
- *Questioner B: Where does it live?*
- *Questioner A: How long does it live?*
- *Questioner B: What does it eat?*
- *Questioner A: Does it sleep?*



## Process of Teacher Modeling with Students

- *Facilitator models with a student;*
- *two students model;*
- *all students paired up to pair / share;*
- *whole group shares. After one student shares, the student picks another student.*

## Collaborative Questioning



# Guiding Questions

To be added

# Guiding Questions

To be added

# Questioning for Inquiry Collaboratively

## The Socratic Method in Action

When exploring any type of text (fiction, non-fiction, poetry) it is important to ask interpretive questions that develop understanding and further lines of questions for depth. Interpretive questions are effective both with well planned discussions and in spontaneous situations. Interpretive questions stimulate comprehension, oral language, and written language.

## Types of Questions

- **Factual** - A factual question has only one correct answer.
- **Interpretive** - An interpretive question has more than one answer that can be supported with evidence from the text. Interpretive questions keep discussions going and require the reader to refer back to the text.
- **Evaluative** - An evaluative question asks the reader to decide if s/he agree with the writer's ideas or point of view. The answer to an evaluative question depends on the reader's prior knowledge, experience, and opinions.

## Writing Interpretive Questions

Interpretive questions are open-ended, text-based questions having multiple responses that are based on evidence from the text. Unlike a factual question that's looking for a specific, often short response, an interpretive question is open-ended that usually requires a more in-depth response that is supported with evidence from the text.

- **Questions to Interpret the Text:** Identify aspects of the text that are open to multiple interpretations. For this question, you'll want to focus on the ideas, characters or plot in the text as opposed to the author's methods.
- **Questions to Analyze the Author's Methods:** Identify anything unique, interesting, or unconventional about the author's writing style, use of language, grammar, word choice, structure, etc. Another consideration in designing a question to analyze the author's methods is to think about students' own writing. What about this text might be helpful to students' own writing? Is there something this published author does that students might try in their own writing?

## Testing the Questions

- **There should be genuine doubt about the answer(s) to the question.** If a question is open to different possible answers students will be more willing to share their thoughts.
- **You should have genuine interest in the question.** Students will 'read' your interest (or lack of) in the question and story.
- **The question should stimulate discussion.** The question should create an interest in revisiting the text for evidence.
- **The question should be clear.** The participants should easily understand the question.
- **The question should be specific.** The question should fit the story and not generic to any story.
- **Use the text.** When you are constructing questions use key words from the text.

# Questioning for Inquiry Collaboratively

## The Socratic Method in Action

### Leading a Discussion

Here are the basic ground rules for leading a discussion:

- Participants must have read or heard (read aloud) the story.
- Discussion is focused on the selection everyone has read or heard.
- Opinions should be supported with evidence from the story.
- Leaders only ask questions – they do not answer them.

For a discussion based on interpretive questions to be successful, student interest needs to be encouraged and valued.

### Prepared and Spontaneous Questions

To create effective questions and questioning techniques it is very important to develop and test the questions prior to discussing the story with the class. To facilitate quality questions it is beneficial to take notes when initially reading the story. Writing Interpretive Questions provides a template of the types of notes to help develop quality questions. After writing questions from your notes have another person read the story and try the questions out on them. This will provide an opportunity to test the Testing the Question criteria.

Spontaneous interpretive questions are an important part of all discussions. Experience with preparing questions and using interpretive questioning techniques support spontaneous questioning in support of your tested questions. It is important to learn how to use the text vocabulary within the questions. An example is the book *Where the Wild Things Are*. If you are asking about the Wild Things then phrase the question ‘Why did the Wild Things...?’, not ‘Why did the monsters...?’ as using monsters is your view, and open to interpretation with evidence from the text.

### Students Create the Questions

To create effective questions for a shared discussion (Socratic Seminar), and create buy-in from the students, have the students develop the questions. One method of doing this is:

- Before reading based on an image from the book have the students do *The Questioning for Inquiry Collaboratively* to develop ideas for questions. This can be repeated after reading each chapter or a portion of the book.
- The students write questions they have down on small individual papers (e.g. the size of a stick note) while in small groups of 3-5 students. They should write 3-6 questions each.
- The students in each small group then sort the questions to categorize them by similarities. See the section in this guide on Inductive Reasoning and Inductive Mapping.
- The students come up with a top level question for each category. They refine the top level questions by using phrases from the text.
- The top level questions are used by the students for Socratic Seminar.

# Research on Questioning Methods and Inquiry

Read the following articles on research on inquiry and problem based learning.

## Guiding Questions

- What are your questions from reading this research?
- How does this research apply to your school?
- How would you map out a plan to implement practical tools and practices to support the quality of the school's social capital?

## Research in Action

1. Use Collaborative Questioning (see in this guide) to respond to *What are your questions from reading this research?* Then in small collaborative groups write several questions from the Collaborative Questioning exercise with each question on a separate piece of paper to sort (see the categorization map and section on inductive sorting). Sort the questions into categories. Label a top question for each category.
2. Use a visual tool to map: How does this research apply to your school? Possible maps include brainstorming, cause and effect, comparing or a map that supports your thinking.
3. What are the steps and parts of the steps to implement a plan? Use a sequence map to create a timeline.



## Socratic Circles in Professional Development Sessions: Negotiating Peripheral Participation and Membership in Building a Community of Practice

Hayriye Kayi-Aydar & Christian Z. Goering ORCID Icon

Pages 154-171 | Received 01 Dec 2016, Accepted 20 Nov 2018, Published online: 11 Jan 2019

### Abstract

Effective professional development occurs in learning communities where teachers co-construct knowledge with peers about teaching and learning by engaging in meaningful activities. However, only a few studies have examined the complex nature of discourse, participation, and learning in professional development contexts. Grounded in the notion of “communities of practice,” this study investigated how middle and high school teachers who participated in a series of professional development activities on implementing Socratic circles in Grades 7–12 classrooms negotiated participation and membership in building a community of practice in and through Socratic circles. Twenty-three teachers were audio- and video-recorded when they participated in 10 discussions as part of a semester-long experience. The discourse analysis demonstrates how the participants negotiated different forms of participation in Socratic circles, and implications for teacher educators and teachers are offered.

*Keywords: communities of practice, professional development, socratic circles, teacher identity*

# Research on Questioning Methods and Inquiry



## Problem-Based Teacher-Mentor Education: Fostering Literacy Acquisition in Multicultural Classrooms

Hartman, P. , Renguette, C. , & Seig, M. (2018). *Problem-Based Teacher-Mentor Education: Fostering Literacy Acquisition in Multicultural Classrooms*. *Interdisciplinary Journal of Problem-Based Learning*, 12(1). Available at: <https://doi.org/10.7771/1541-5015.1659>

### Abstract

We designed a professional development (PD) teacher-mentor program that used problem-based learning (PBL) to accomplish two goals. First, teachers explored how PBL could be used effectively in their classrooms to change the way they think about teaching to include literacy development in content areas. Second, PBL was the basis for PD training to help them improve their own knowledge of PBL, become mentors to other teachers, and implement PBL in their schools across content areas.

Educators in the United States are challenged to teach linguistically and culturally diverse (LCD) students with differing literacy levels. The demographics of U.S. classrooms require a rigorous attempt to engage LCD students through collaborative, active learning opportunities (McGroarty, 1998; U.S. Department of Education, 2015). Research shows that literacy learning for all students improves in classroom settings that take a cooperative, student-centered approach (McGroarty, 1988, 1989; NCSS, 1991; Shumway, Saunders, Stewardson, & Reeve, 2001). PBL provides opportunities for students to engage in active learning and allows students with multiple learning styles to negotiate contextualized meaning through a variety of collaborative tasks. PBL has also been shown to be an effective method for teaching learners to be self-directed problemsolvers. However, in the absence of PD and ongoing support, teachers are often resistant to the implementation of PBL.

In our program, we used PBL to help teachers learn more about literacy and PBL while providing opportunities for PD and support. As a result, the teacher reflections, discussions, presentations, and self-evaluations demonstrated how, by using PBL in their classrooms while immersing themselves in evidence-based content, they observed enhanced student collaboration. Teachers felt that they were better able to foster a learning environment in their classrooms that would allow students to develop literacy skills in a content-rich context both because of the incorporation of PBL and because of the support they provided for each other. This idea can be easily adapted to foster teacher development and mentoring programs in other fields.

*Keywords: problem-based learning, literacy, linguistically, culturally diverse, student-centered*

## **Questioning Methods: References and Further Reading**

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Shanahan, T., Fisher, D., & Frey, N. (2012). The challenge of challenging text. *Educational Leadership*, 69(6), 58–62.

Therrien, W. J. (2004). Fluency and comprehension gains as a result of repeated reading: A metaanalysis. *Remedial and Special Education*, 25(4), 252–261.

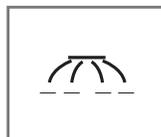
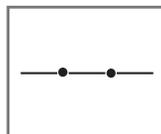
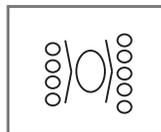
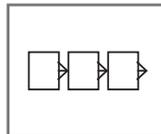
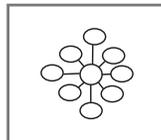
Waters, K. C. (2010). Literacy initiatives in the urban setting that promote higher level thinking. In Collins, J. L., & Gunning, T. G. (Eds.), *Building struggling students' higher level literacy: Practical ideas, powerful solutions*. Newark, DE: International Reading Association.

# Chapter 3: Visual Tools

## Visual Tools and Mapping

### Frame of Reference

#### Deductively and Inductively



## Visual Tools

Visual mapping is a means of graphically representing ideas, conceptual relationships and progression paths. They range from the simple spider diagram, flow chart or time line – to more sophisticated models such as Buzan’s Mindmap, Edward de Bono’s Flowscape, Joseph D. Novak & Alberto J. Cañas Concept Maps, and David Hyerle’s Thinking Maps which can be used to explore complex relationships, perspectives and perceptions. Visual representation are thought to aid understanding and memory because it better fits with the brains method of processing information than standard note-taking, as the brain stores information in patterns and associations, not linearly.

Visual tools also have the capacity to be used to stimulate meta-thinking skills. Tony Buzan, who pioneered the use of mind maps back in the 1970s, argues that mind maps encourage creativity. The process of graphically organising information on the same page stimulates the mind to make associations, and it is through making such associations that the creation of new ideas occur.

### Brainstorming

Brainstorming is a diagram used to visually organize ideas on one concept. An example is mindmapping which is hierarchical that shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and ideas branch out from those.

### Concept Maps and Diagrams

A concept map is a conceptual diagram that depicts suggested relationships between concepts. It is a graphical tool that instructional designers, engineers, technical writers, and others use to organize and structure knowledge. A concept map typically represents ideas and information as boxes or circles or similar shapes, which it connects with labeled arrows in a downward-branching hierarchical structure. The relationship between concepts can be articulated in linking phrases such as causes, requires, contributes to, categories, comparing, or relationships.

### Graphic Organizers

A graphic organizer is a pedagogical tool that uses visual symbols to express knowledge, concepts, thoughts, or ideas, and the relationships between them. The main purpose of a graphic organizer is to provide a visual aid to facilitate learning and instruction. Graphic organizers are usually selected by the facilitator to use for a specific concept understanding.

### Visual Language

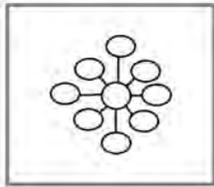
A visual language connects the ideal of mindmapping, graphic organizers and concept mapping to have a language that represents cognitive processes. Each visual map represents a cognitive process (e.g. comparing, categorizing) to organize our ideas.

### Frame of Reference

Frame of Reference is a set of ideas, conditions, or assumptions that determine how something will be approached, perceived, or understood (Merriam Webster Dictionary). Frame of reference is a set of ideas or facts that a person accepts and that influences the person’s behavior, opinions, or decisions (Cambridge Dictionary).

# Open Source Visual Mapping

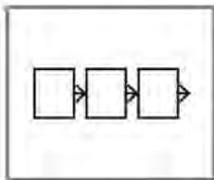
The six maps of Open Source Visual Mapping represent six cognitive processes to organize thinking. They are processes we use as humans in our thinking. The maps provide a way to organized our thinking so we see our own patterns of thinking, and others when working collaboratively. Each map can expand our thinking with further details, evidences and perspectives with a frame. The six maps are as follows:



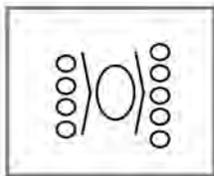
**Brainstorming** is a visual map used to visually organize ideas on one concept or idea. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. The Frame around the Brainstorming Map is for expanding information on the ideas including details, evidence and different perspectives.



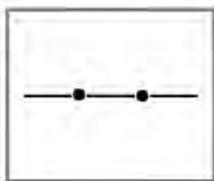
**Comparing and Contrasting** is a visual map used to visually organize ideas on



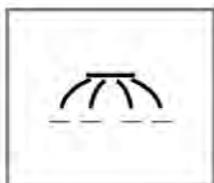
**Sequencing** is a visual map used to visually organize ideas



**Cause and Effect** is a visual map used to visually organize ideas



**Analogies** is a visual map used to visually organize ideas



**Categorizing** is a visual map used to visually organize ideas

# **Open Source Visual Mapping**

## **Why Six Different Maps?**

about their thinking.

## **Introducing All Six Maps**

about their thinking.

## **Students Owning the Maps**

about their thinking.

## **Other Visual Tool Representations**

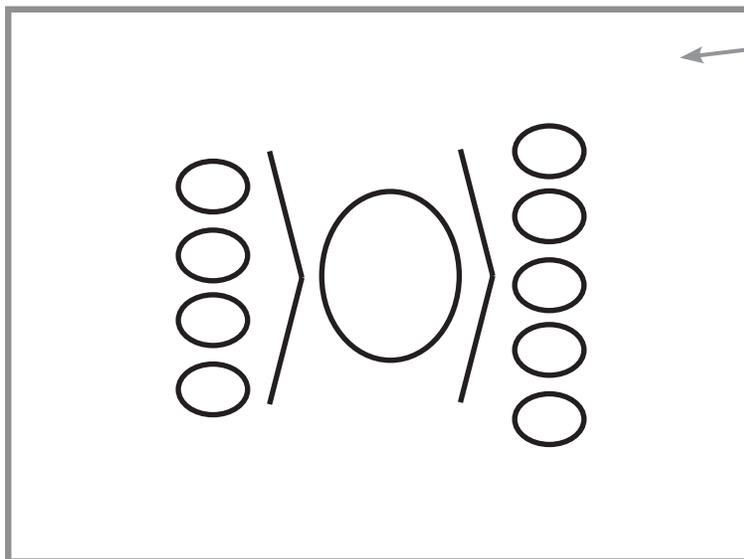
about their thinking.

# Frame of Reference for Visual Mapping

A frame of reference can be used with any map. It is a meta-cognitive frame asking participants to think about their thinking. They will be asked to step back from the map they created to think about what influenced their thinking.

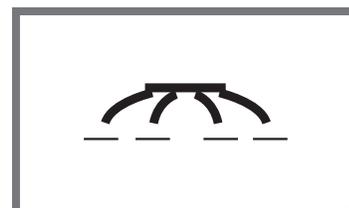
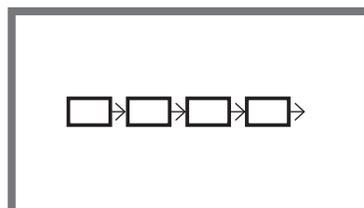
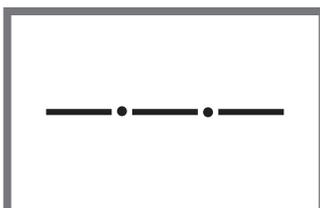
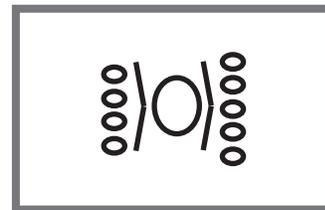
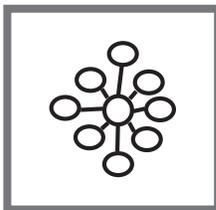
The following questions could be asked to know the frame.

- How do you know what you know about the topic?
- Did your information come from a specific source?
- Is this information being influenced by a specific point of view?
- Who could use this information?
- Why is this information important?



← *Reflective Frame of Reference:  
What are sources of information you  
can access to assist you?*

*What is each person's role in the  
organization?*



# Depth and Complexity with Frame of Reference

The Depth and Complexity model provides depth of thinking as a critical thinker, as a problem solver and considerations for all aspects of multiple perspectives with collaborations and understanding.



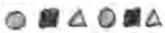
## Note Details

elaborate; identify attributes; note the parts; important factors



## Identify The Rules

state the explicit or implicit factors that affect an area of study; the structure; the order; the hierarchy; the elements that set the standards



## Observing Patterns

identify reoccurring elements and events; determine the order of events; predict what comes next



## Recognizing Trends

note factors that cause events to occur (social, political, economic, geographic); identify patterns of change over time



## Identify Ethical Considerations

determine elements that reflect bias, prejudice, discrimination; state observations and arguments in terms of ethics



## Questions for Inquiry

use questions to: identify unclear ideas or missing information; discuss areas yet to be explored or proven; note conclusions that need further evidence or support



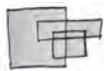
## What is the Generalization, Principle, Theory or Big Idea

identify a rule or general statement that summarizes information or draws conclusion based on evidence drawn from a collection of facts or ideas



## Relationships Over Time

describe relationships between past, present and future; relationships within a time period; how or why things changed or remained the same



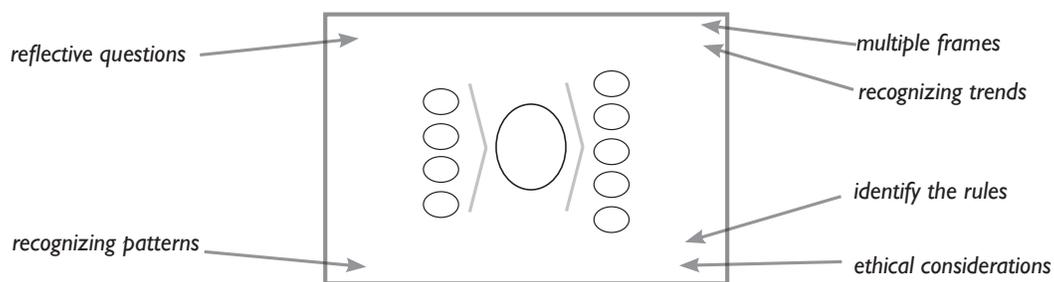
## Multiple Frames of Reference (Perspectives)

discuss multiple perspectives related to area of study; explore different viewpoints; reflect on diversity within a society



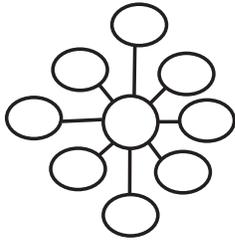
## Interdisciplinary Connections

relate and integrate the area of study to include the methodology of other disciplines



# Open Source Visual Mapping

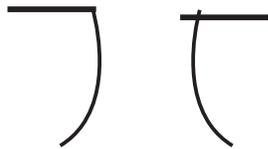
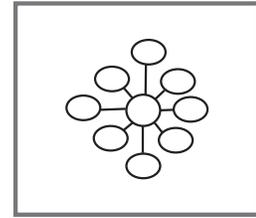
## Visual Map



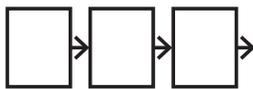
## Cognitive Process

**Brainstorming**

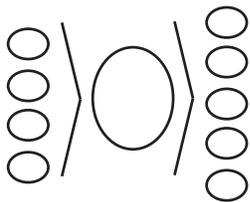
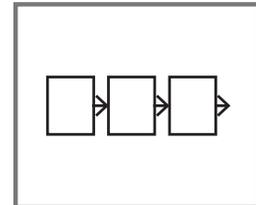
## With Frame



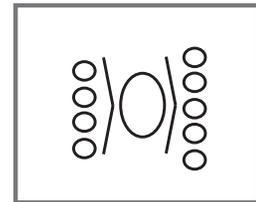
**Compare & Contrast**



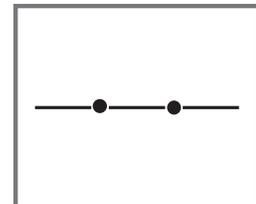
**Sequencing**



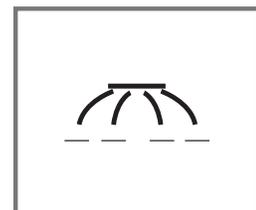
**Cause & Effect**



**Analogies & Relationships**

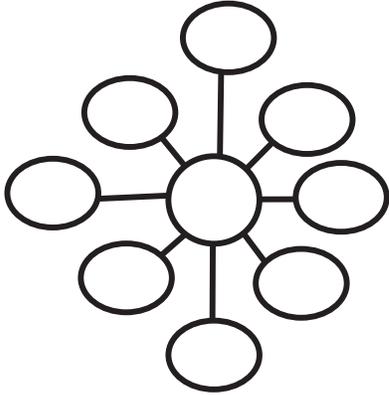


**Categorizing**

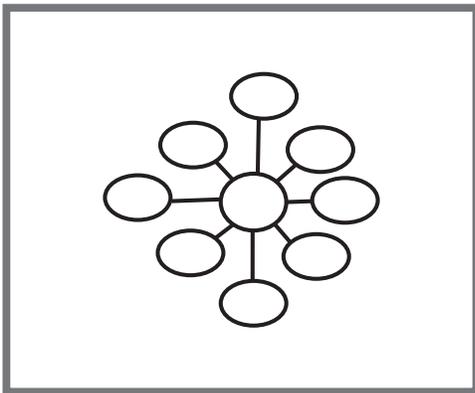


# Brainstorming Map to See and Organize Ideas

Brainstorming ideas for a topic



Frame of Reference for details, evidences and/or questions of ideas.



See How To and In Action of using the Brainstorming Map.



How To Video



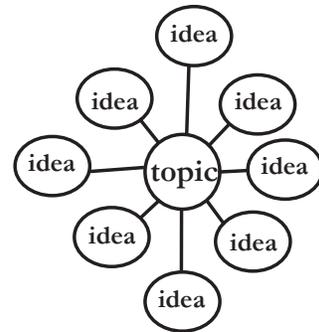
In Action Video

Steps to Use the Brainstorming Map.

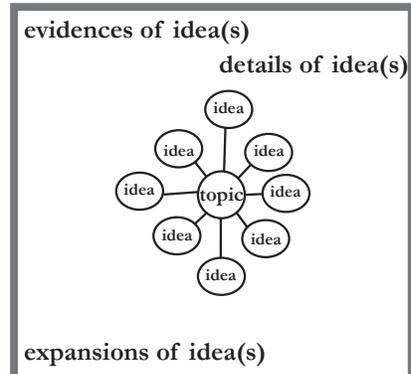
1. Decide, write and/or draw the topic in the center with a circle around it.



2. Brainstorm ideas in words and/or phrases with a line from the topic.

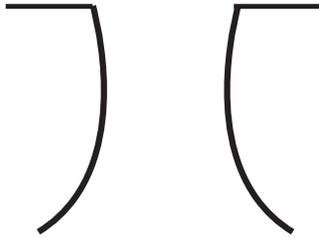


3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.



# Comparing and Contrasting Map

Comparing ideas for a topic



Frame of Reference for details, evidences and/or questions of ideas.



How To and In Action Video Clips using the Comparing Map.

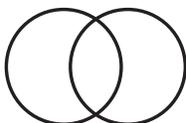


How To

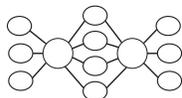


In Action

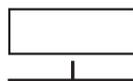
## Variations



Venn Diagram



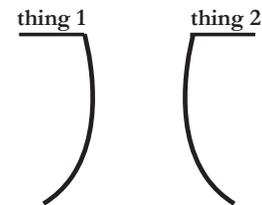
Double Bubble Map®



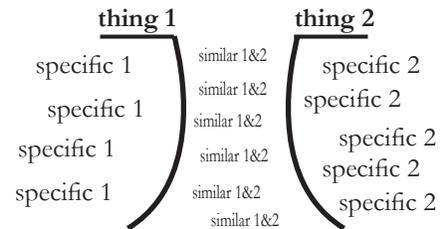
T Chart

Steps to Use the Comparing Similarities & Differences Map.

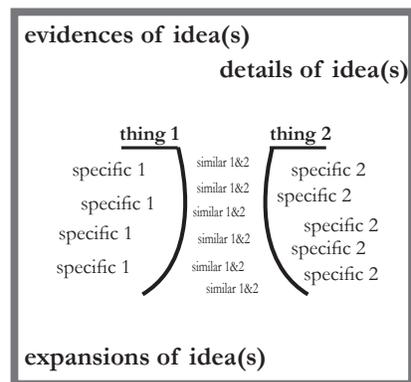
1. Decide, write and/or draw the two things or topics to compare in the two boxes.



2. Add ideas specific to each side, and similarities in the middle.

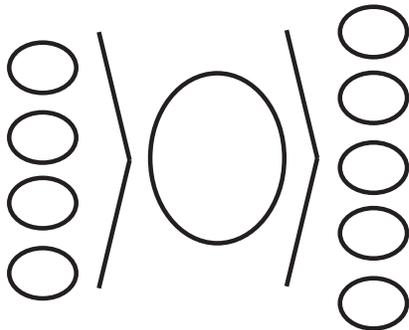


3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.

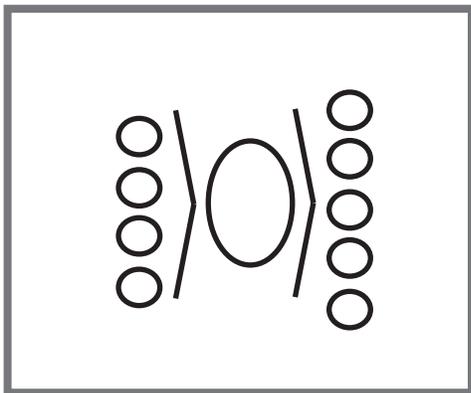


# Cause & Effect Map

Cause & Effect for an event.



Frame of Reference for details, evidences and/or questions of ideas.



How To and In Action Video Clips using the Cause / Effect Map.

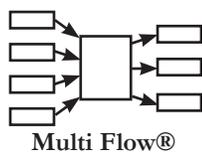
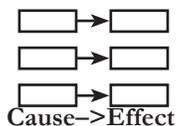
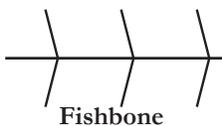


How To



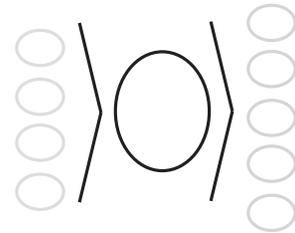
In Action

## Variations

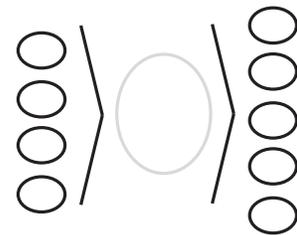


Steps to Use the Cause and Effect Map.

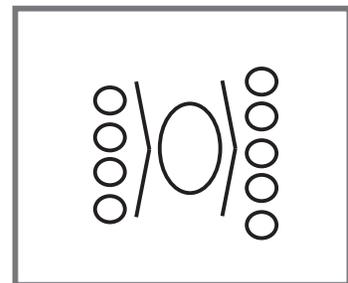
1. Decide, write and/or draw the event in the middle oval.



2. Write causes in the ovals on the left and effects in the ovals on the right.



3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.

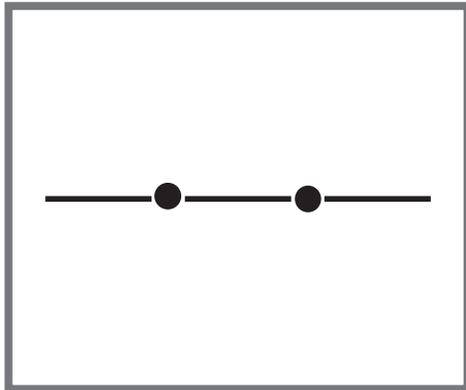


# Analogies and Relationships Map

Analogous Patterns for relating factors.



Frame of Reference for details, evidences and/or questions of ideas.



How To and In Action Video Clips using the Analogous Patterns Map.

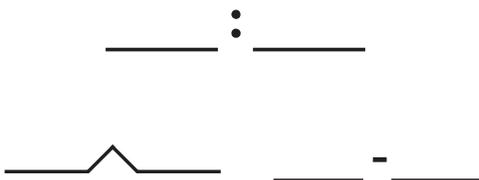


How To



In Action

## Variations

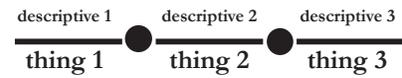


Steps to Use the Analogous Patterns Map.

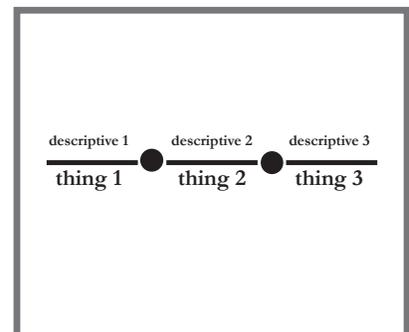
1. Decide, write and/or draw below the line similar things, places or events.



2. Decide, write and/or draw above the line a descriptive word (or visual of) that connects with the bottom and is a relating pattern with the other words (or visuals).

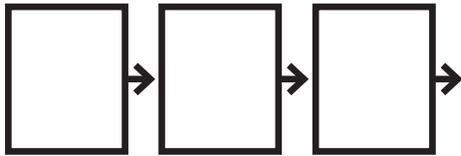


3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.

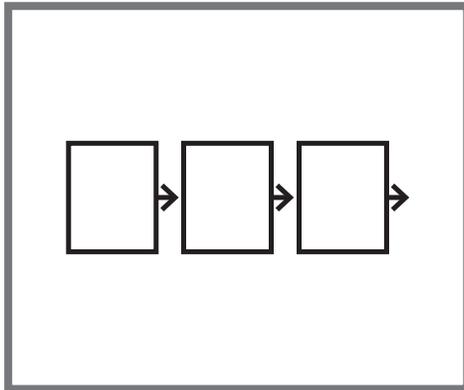


# Sequencing Map

Sequencing for order.



Frame of Reference for details, evidences and/or questions of ideas.



How To and In Action Video using the Sequencing the Storyboard Map.



How To



In Action

## Examples

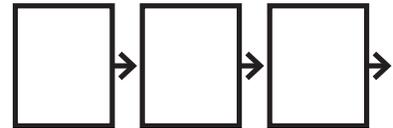
**Storyboard**

**Timeline**

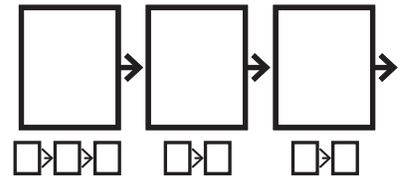
**Beginning-Middle-End**

Steps to Use the Sequencing Map.

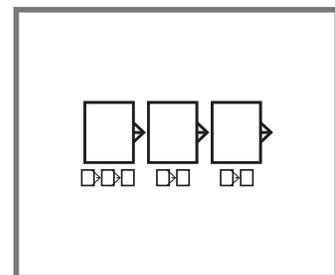
1. Decide, write and/or draw the parts of the sequence in each of the rectangles.



2. Add and sequence sub parts for each of the main parts of the sequence.

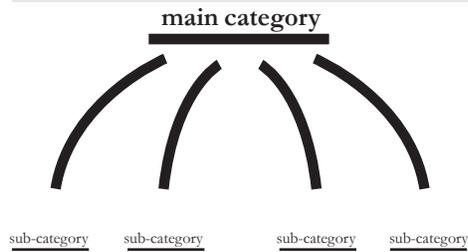


3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.

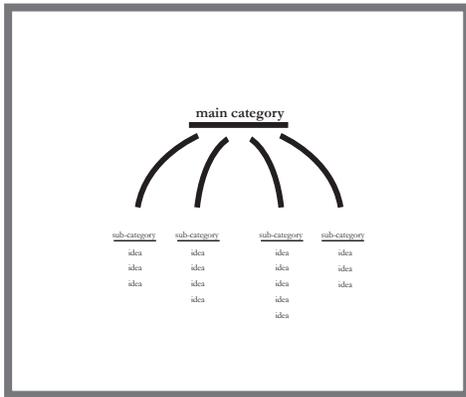


# Categorizing Map

Classifications sorted.



Frame of Reference for details, evidences and/or questions of ideas.



See How To and In Action of using the Classifications Sorted Map.



How To



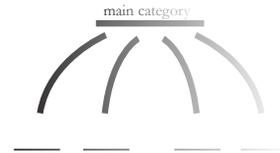
In Action

## Possibilities

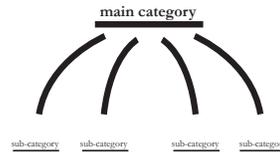


## Steps to Use the Categorizing Map.

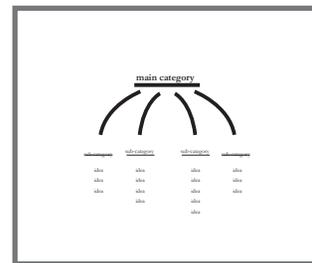
1. Decide, write and/or draw the main category on the top line.



2. Decide, write and/or draw the sub-categories below the main category.



3. Frame of Reference for expanding ideas with details, evidences, and/or expansions.



# Visual Mapping Collaboratively

## Why?

Visual mapping provides a way to organize, explore and discover each person's thinking by using different visual maps representing how we think cognitively. The frame provides a tool to consider each person's background and thinking to building upon organizing and understanding each other. Doing visual maps together provides a collaborative learning method to:

- learn collaborating together.
- learn another person's viewpoint.
- learn how to process different ways from each other.

The visual maps are a tool for thinking that supports organizing thoughts to write succinctly, thoughtfully and successfully.

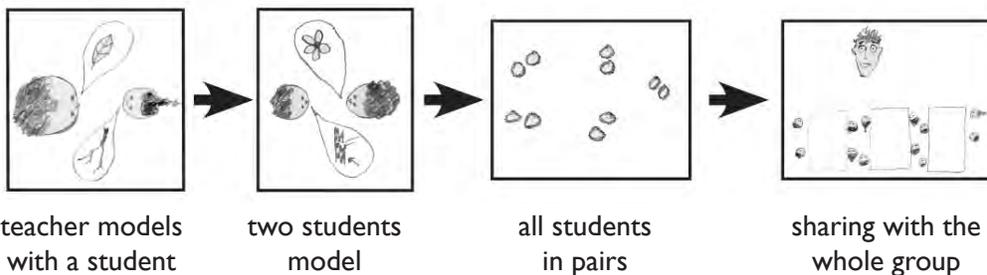
## How to Model and Implement

The teacher has an opportunity when using visual maps to

- model how to think with the maps,
- model how to collaborate with another person,
- model what to do when you don't know what to do,
- share the how one thinks aloud while working together.

Review the Think-Pair-Share methods in Collaborative Learning to implement the Visual Mapping in a collaborative manner.

### Modeling Visual Maps in Pairs



## Assessing

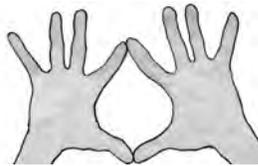
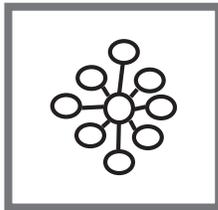
The Visual Maps are a tool that we can assess how a student is thinking, making connections and organizing thinking for writing and presenting. If a student keeps their mapping in a notebook, we can see their progress with use of visual mapping over time.

To assess implementation of visual maps we have a goal of the students knowing all six Visual Maps and the students becoming autonomous in choosing and using the map that best supports their needs.

## Symbols to Share Thinking and Understanding



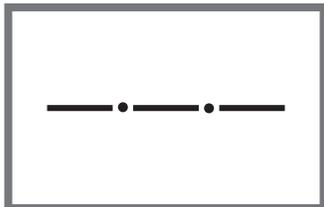
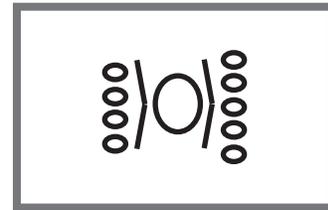
brainstorming



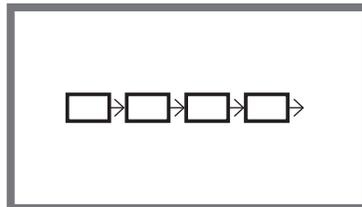
comparing & contrasting



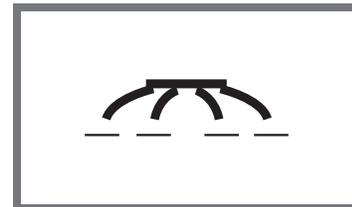
impacting: cause & effect



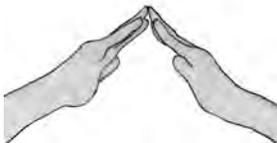
connecting patterns



sequencing



categorizing



The purpose of the hand symbols for the six different open source visual maps of six different cognitive processes is for students to show their thinking with a hand symbol on a particular topic in a group setting, then have students share their thinking on how they were using the visual map to represent a cognitive process they were showing. An example of the process:

- The students know all six visual maps and their representative hand symbols.
- The class just read a chapter from a book (fiction or non-fiction).
- The class is asked to consider how they would organize their thinking in regards to the chapter they just read.
- The students would be given approximately one minute to determine which map representing which cognitive process they would use (which they could sketch).
- The class would each show their choices at the same time.
- Students would share their thinking - this could be done whole class, teaming students with similar maps, teaming students in small groups with different processes.
- The students then represent their thinking on a map with paper and pencil/pen.

# Open Source Visual Mapping

## Inductive, Deductive and Abductive Reasoning

Inductive reasoning moves from specific instances into a generalized conclusion (bottom up), while deductive reasoning moves from generalized principles that are known to be true to a true to provide direction with specific instances (top down). Abductive reasoning usually starts with an incomplete set of observations and proceeds to the likeliest possible explanation for the group of observations. We will focus on inductive and deductive reasoning.

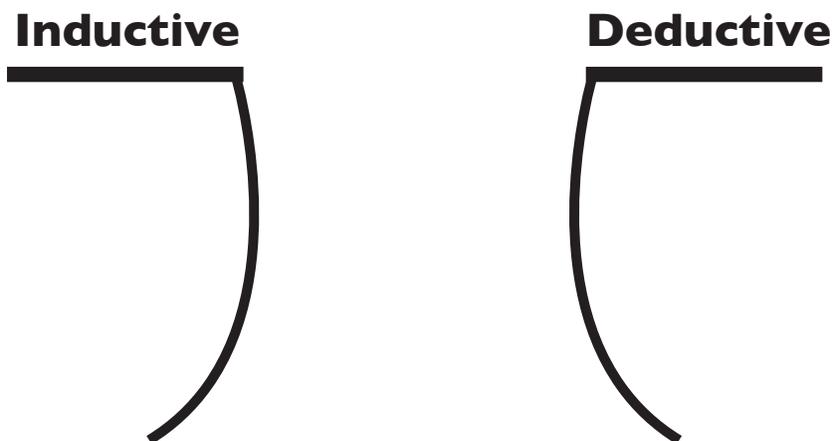
Lets keep it simple with an example. We will use a Sorting for Classifications Map to model. This map can be created 'top down' or 'bottom up':

- Top down requires starting with the top categories to sort the things and/or ideas being categorized.
- Bottom up starts with the things and/or ideas being categorized being sorted into similar categories, then determining the top categories.

Both have a purpose:

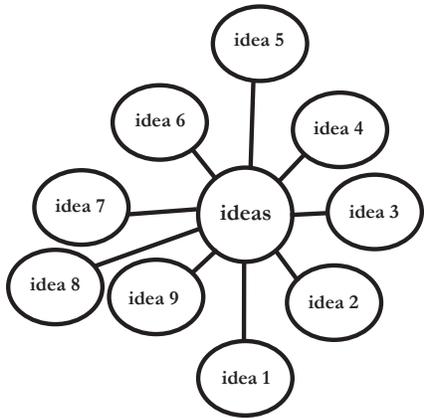
- Doing it from 'bottom up' requires thinking what are the connections and patterns are of the things and/or ideas being categorized, and from that determining what the top categories are. In small groups this increases the level of discussion in regards to synthesizing information and comprehending connections.
- Doing it from the 'top down' is begins with and follows a predetermined design and order to sort the different things and/or ideas to be categorized. This assumes everyone has the same frame for categorizing.

While the different processes are modeled on the opposite page for a Sorting for Classifications Map, this process is applicable for ALL visual maps, and all explorations of things and ideas.



# Inductive Mapping

Brainstorming the Ideas



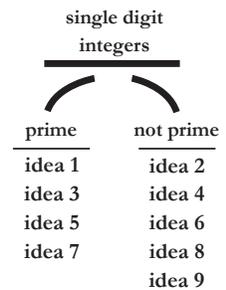
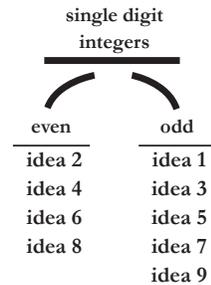
Sorting by Category  
different small groups can sort differently

idea 2	idea 1
idea 3	idea 4
idea 5	idea 6
idea 7	idea 8
	idea 9

idea 2	idea 1
idea 4	idea 3
idea 6	idea 5
idea 8	idea 7
	idea 9

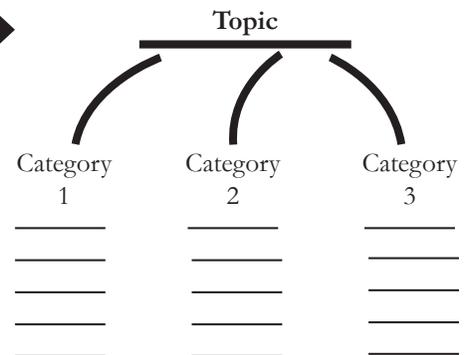
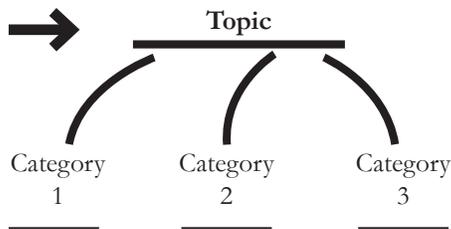


Category Headings



# Deductive Mapping

Topic



# Research and Studies on Visual Mapping



## Scientifically

“Neuroscientists tell us that the brain organizes information in networks and maps” (Wolfe, P., & Nevills, P. (2004). *Building the Reading Brain*).

## It is What We Pattern in the Brain

The moment I knew that the visual tools described in this book were deeper than the facade of the boxes, ovals, and arrows that we have seen for years was during a return visit to a school in Mission, Texas, in the early 1990s. I had been leading the implementation in this school over time, using a language of visual tools that I developed as a foundation for facilitating thinking skills, and for directly improving teachers’ instruction and students’ performance. During a previous workshop at the school, a participant had asked a question that stopped me in my tracks. At first the question seemed to indicate a resistance to change that we have all felt at one time or another, but then the question turned to a deeper level: “These visual tools may work for most students, but not for my students.” I asked, “Why not?” She hesitated and then spoke softly, “They are blind. How would you use visual tools with blind students?” As quiet settled across the crowd (and “wait time” proved to be no great strategy at that moment), all I could do was respond with a promise to return with the question in mind.

When I did return a month later the teacher who had asked the question handed me the answer: a videotape and several pale yellow, bumpy pages. And then I knew: her students were using a Braille machine to generate visual tools on this special paper. We popped the video into the machine, and the whole faculty watched with a focused fascination rarely found in a workshop setting. One of her students, particularly taken by “visual” tools, had created several Braille maps for generating context information about a writing topic using a Circle Map and then prioritizing the ideas into a Flow Map for sequencing. On the video, this boy led his seeing peers in a discussion about the use of the maps and a reading of his description about a visit to a beach as his hands moved over the pages, sensing the spatial display of the bumps. The product was a beautifully descriptive piece of writing. The teacher was delighted with the outcome, and the student was improving his writing and thinking abilities. Of course, his “seeing” peers had been using the same array of visual tools: they could see the patterns . . . but he could feel them.

*David Hyerle, Visual Tools for Transforming Information Into Knowledge, Corwin Press, 2009.*

# Research and Studies on Visual Mapping



## Nonlinguistic and Linguistic Representations

David Hyerle, *Visual Tools for Transforming Information Into Knowledge*, Corwin Press, 2009.

In what has become a landmark research study cited in many journals and by word of mouth in many schools around the country—*Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*—Robert Marzano, Debra Pickering, and Jane Pollock identify nine strategies that directly impact student achievement (Marzano et al., 2001):

1. Identifying similarities and differences
2. Summarizing and note taking
3. Reinforcing effort
4. Homework and practice
5. Nonlinguistic representations
6. Cooperative learning
7. Setting objectives and providing feedback
8. Generating and testing hypotheses
9. Cues, questions, and advance organizers

The authors, with the Mid-continent Research for Education and Learning Institute (McREL), used a meta-analysis process for analyzing and synthesizing classroom-based research studies to make key generalizations about what works. (For a discussion of the meta-analysis process, which combines results from studies to find “average effects,” refer to pp. 4–6 of their book.) One of the top nine instructional strategies they identified is nonlinguistic representations. Following is the authors’ background theory and definition of this instructional strategy: Many psychologists adhere to what has been called the “dual-coding” theory of information storage (see Paivio, 1969, 1971, 1990). This theory postulates that knowledge is stored in two forms—a linguistic form and an imagery form. . . . The imagery mode of representation is referred to as a nonlinguistic representation. The more we use both systems of representation—linguistic and nonlinguistic—the better we are able to think about and recall knowledge.

This integration and direct use by students of linguistic and nonlinguistic forms is the essence of visual tools. Integrating drawings or pictures in a visual map along with words creates a rich mental bond within the brain and mind for remembering information. This bond is constructed by the learner and thus offers a process for conceptualizing and transforming information into a meaningful visual display of the knowledge base of the learner on paper or computer screen. The maps become an external memory for the brain and mirror for mental reflection and self-assessment for the learner.

The authors continue to both distinguish between linguistic and nonlinguistic forms, and also link the forms, as they represent a range of graphic organizers that represent how to effectively translate research and theory into classroom practice:

Graphic organizers are perhaps the most common way to help students generate nonlinguistic representations. . . . Graphic organizers combine the linguistic mode in that they use words and phrases, and the nonlinguistic mode in that they use symbols and arrows to represent relationships.

*Keywords: nonlinguistic, linguistic, cooperative learning, recall knowledge, advance organizers, graphic organizers*

# Research and Studies on Visual Mapping



## Mapping for Justice: How One Community Transformed GIS into a Tool for Educational Change

by Verónica Vélez, *Equity Alliance Blog*, Oct 28, 2013

It is important to note that while the mothers collectively worked to employ GIS as a transformative practice, they were also quick to note its limitations and possible dangers. Similar to feminist, postcolonial, and other critical geographers who question GIS' lack of attention to issues of positionality, power, and the politicized nature of representation in maps (Kwan, 2002; Knigge and Cope, 2006; Crampton and Krygier, 2006), the mothers pushed back on filtering their story through legitimizing technologies that made real what their own voice should have accomplished but hadn't – the result, they argued, of being racialized as “unfit” to sit at the decision-making table. We engaged in these difficult conversations, and the more we did, the more the mothers became convinced that GIS, when applied critically, could bolster advocacy efforts and catalyze new partnerships to address the geographic footprint inherent in all educational inequity. By redefining GIS mapping as a community-based praxis, the mothers “ground-truthed” the maps, making visible spaces and spatial relationships that otherwise would go unnoticed.

The lessons learned were powerful. The opportunity to collaborate with the mothers on this project has since motivated me to continue exploring the potential of GIS to expose and analyze educational inequities across space that is more critically attuned to map-making. They made clear that GIS cannot be reimagined as a transformative tool for both policy and practice, without the following considerations:

Local expertise. The mothers' experiential knowledge was key in the development of the maps. Their understanding of the local context drove how we “bounded” space and defined neighborhoods, what types of data we mapped, and which spaces mattered for exploring concerns connected to educational inequity. Youth, parents, community members, and other local experts are essential for employing GIS to explore complex geographies of opportunity.

Maps are a point of departure, not the end goal. GIS maps are incredibly persuasive on their own. Therein lies one of its greatest dangers. The ability of GIS maps to convince at first glance masks the intentionality of the map-maker(s) and their socially constructed view of space and key spatial relationships. If GIS is to be re-purposed for transformative ends, the map-making process needs to be foregrounded and made transparent. Furthermore, the goal should rest in the collaborative inquiry and analysis, of which GIS is only a part. The maps should support and help illuminate a much broader narrative, or rather counter-narrative, driving the overall project.

Developing critical partnerships with GIS access is essential. GIS is expensive and, in most cases, inaccessible to the very communities that are working to enact change on the ground. Partnerships between community groups and key allies with access to the technology are critical. Ultimately, the goal is for communities to employ the technology on their own without depending on outside institutions that can often dictate the terms of the partnership. Until then, though, critical GIS allies committed to a community-based mapping praxis are needed.

*Keywords: justice, mapping GIS mapping, expertise, critical partnerships*

# Open Source Visual Mapping

## References and Further Reading

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Buzan, T. (1996). *The mind map book*. New York: Plume/Penguin.

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# **Chapter 4: Thinking Environments**

**People**

**Objects**

**Materials**



# Critical Thinking Environments

Critical Thinking Environments, is an awareness, understanding and a process focusing upon the design, interface and impact with the environment of the physical learning space. An awareness with intentionality. The environment is *The Third Teacher* where we focus on designing the physical space with the Frame of the Student as a root understanding. The in the eyes of the student respects and understands the children's frame of reference in regards to how children see, sense, use and interface within the environment, and how the teacher is intentional with their choices, decisions and actions in respect to student engagement and successes with learning. The teacher's decisions:

- with intentionality impact the classroom and school's environment;
- are crucial to the quality outcomes of the children and youth's learning experiences and how they model with the children;
- become a model to how students learn to consider using and creating their critical thinking environment: in school, home and the greater community.

## *About, In and With a Critical Thinking Environment*

How we think about and frame our vision for a critical thinking environment begins with:

- *Learning ABOUT a Critical Thinking Environment*  
Creating school-wide and classroom conditions that support thinking environments including how we structure a room, the materials chosen, how we are thoughtful to proximity in the classroom.
- *Learning IN a Critical Thinking Environment*  
Facilitating students in the methods and strategies of learning in thinking environments.
- *Learning WITH a Critical Thinking Environment*  
Learning an awareness of our own and others' thinking environments for use in real-life situations for real life problems and solutions.

The key to developing a Critical Thinking Environment is being attentive with intentionality to the impact of decisions with the classroom and school's critical thinking environment.



Location and use of space video.



1 Students thinking on structuring a critical thinking classroom environment in Ethiopia.

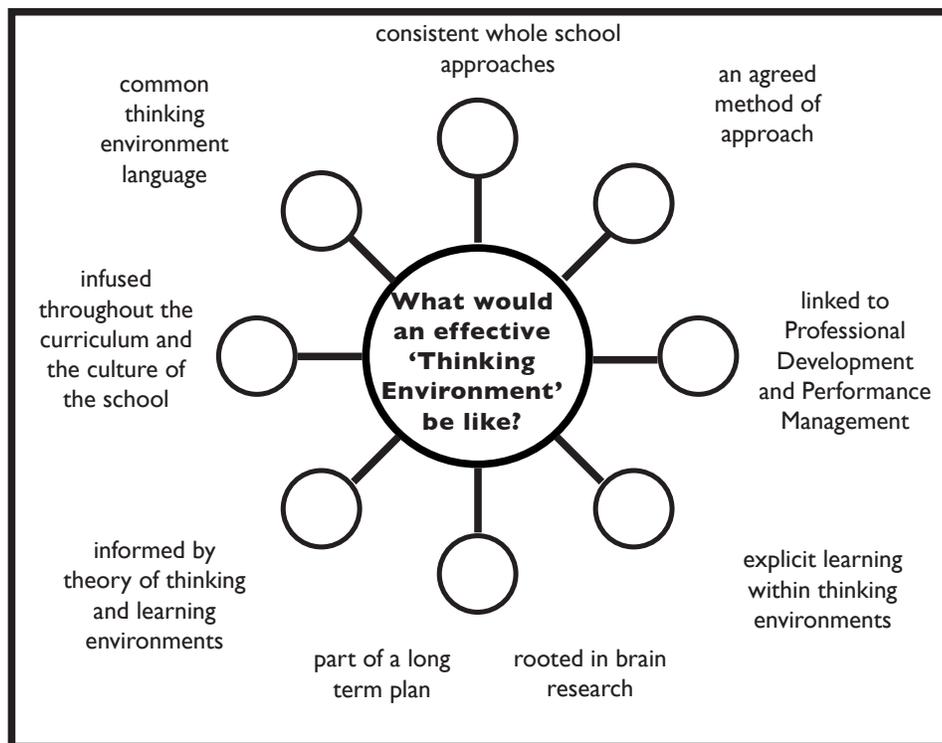
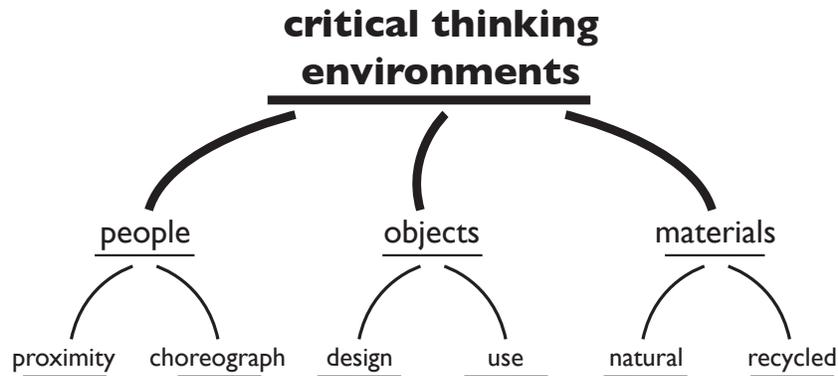


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# Critical Thinking Environments

The key components of focus for a successful teaching environment include:

- **People** including proximity of the teacher with students and how we choreograph the flow of people.
- **Objects** in the classroom including furniture, lighting and all objects that influence in regards to their design and use.
- **Materials** used including choices and use of natural and recycled things.



In the above visual map, consider and add descriptive words and/or phrases in the empty circles. Think about the ideas framing the empty circles when developing descriptive (attributes) words and/or phrases.

# Critical Thinking Environments

## People

The teacher is the lead *choreographer* on how they influence the use of the thinking environment including where they are located with intentionality, how they communicate, how they use their voices in level and tone and generally interface with the classroom. Their modeling will influence students becoming aware and thoughtful with their decisions on the human interfacing in the classroom, and as a life long learner. Their modeling will influence how their students become equally attentive and sensitive to effectively interfacing with people and their environment.

## Objects

Objects are the furniture, lighting and other elements that we use in our room environment. The selection, use and re-use of the objects are a foundation of the classroom environment. How we as humans and a community of learners interface with the objects is foundational in our learning experiences. It is not about furniture from a specific place is better, it is about making choices which are both effective in use and thoughtful to the origins. Lighting quality will influence our effectiveness and quality of life. It all begins with having a purposeful plan.

## Materials

Materials are loose parts that can be moved, carried, combined, redesigned, lined up, and taken apart and put back together in multiple ways. They are materials with no specific set of directions that can be used alone or combined with other materials. Materials can be natural or recycled.

## Intentionality

Intentional teaching involves educators being thoughtful, purposeful and deliberate in their decisions and actions. Intentional teaching is an active process and a way of relating to the students that embraces and builds on their strengths. Teachers embed intentional teaching strategies in the decisions they make:

- with the materials they select and how they use the materials.
- organizing the objects of the physical learning environment.
- using the space with their movement and intentional locations in the room in respect to students and what the students are doing.
- including student voice and decisions as part of their intentional practices.

Teachers recognize that children's learning occurs in social contexts and make deliberate, well-planned decisions to support learning through children's social interactions with a range of student partners.

## People: Critical Thinking Environments



How does a teachers proximity in the classroom impact the learning environment?

How do students seating arrangements influence their learning?

How do decisions of proximity become understood and implemented?

I think of an architect- as a civil servant, and school design as a social act. You're working with a community, and reflecting their needs. I'm really interested in making sure that the mission and the culture of a school shines through in the architecture, that it becomes a mirror of what the teachers, the students, the parents, and the administrators are trying to do there in their daily lives.

The architectural design of the Leadership Academy for Girls was our response to Oprah Winfrey's dream and mission. This is a college preparatory school, a place to challenge local girls to go to college, and to take their knowledge either back to the town where they're from or to other parts of the world. The school aims to foster the girls' respect and appreciation for their own cultures and for the cultures of others. We went into the communities the girls would be coming from, visited schools, talked to kids. We made sure that the architecture responded not only to the dream and the mission but also to who the girls are.



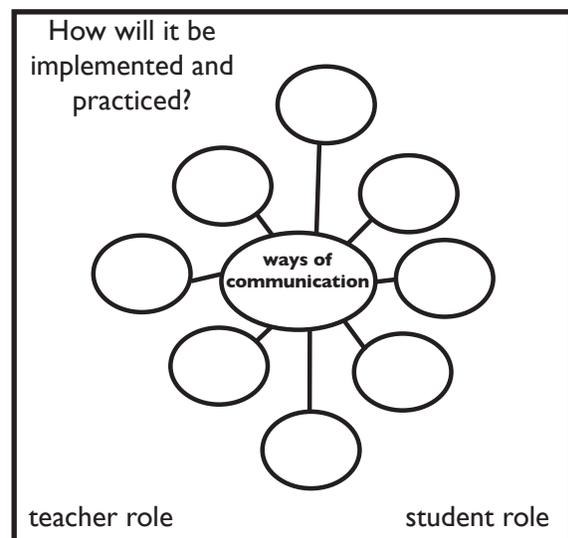
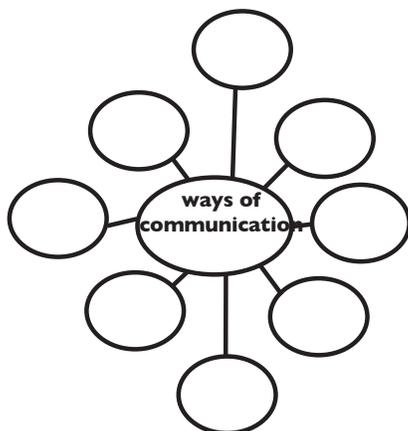
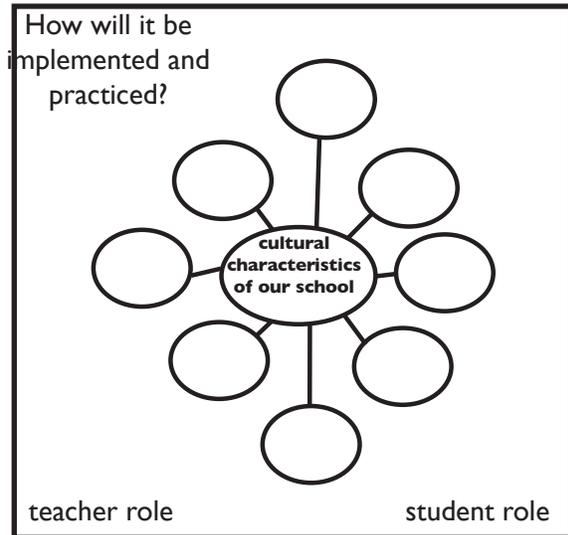
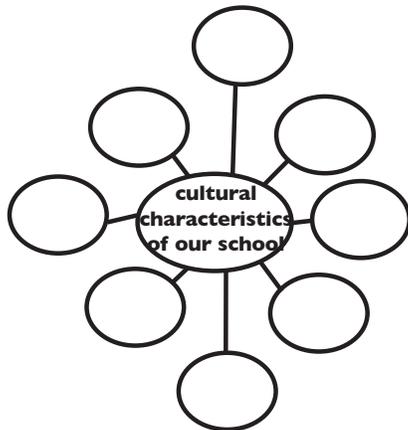
Girls in South Africa, at this age, sit in circles. Boys sit in lines. Girls love circles, for singing and dancing too. They start chanting, and it becomes really rhythmic and contagious. So, on the campus, the buildings wrap around, like arms hugging, to make outdoor living rooms, spaces that encourage the country's future leaders. The girls to feel comfortable in circular gatherings. Every classroom opens onto a garden. It fans out, and beyond it are trees. We've mounded the earth under them into small hills that will seat at least 20 people, so that classes can be held outside. This takes advantage of the climate, and embraces the beauty of the South African landscape.

We want the school to be emblematic of South Africa because we want the girls to be proud of their heritage. We used scratched plaster, which is very common in the countryside here: Incredible patterns are scraped into the mud floors and walls of the roundevalls, the traditional houses, so we did scratching here too, in a modern way. The girls are coming from 10 different cultural groups. Each culture has beadwork associated with it-anyone who is from South Africa can look at beadwork and say, "that's Zulu," or "that's Tsoto." In the middle of the campus, right in front of the dining hall, which is a popular place to sit, we put 10 columns. Each of the columns is decorated with one of the 10 culture's beadwork, translated into mosaic. It's become a landmark, a place of respect showing each girl that she's important, no matter where she's coming from.

*Creating a Community for South African Schoolgirls - Michelle Sakayan*

## People: Critical Thinking Environments

The teacher is the lead 'choreographer' on how they influence within the use of the thinking environment including where they are located (with intentionality), how they communicate, how they use their voices and generally interface with the classroom. Their modeling will influence children becoming aware and thoughtful with their decisions on the human interfacing in the classroom.



# Objects: Critical Thinking Environments



What key design principles can create a classroom that intrigues, invites & stimulates senses?

How do design principles, when integrated, impact the overall feeling of a room?

How do grounding design principles come to life to impact learning?

## principle 1: nature inspires beauty

Just as you are immersed in a natural world of sights, sounds, tastes, smell, and textures. Classrooms should reflect the wonders of nature that surround you. As children interact with nature, they deepen their understanding and appreciation of their places and roles as caretakers of the planet.

*What local natural elements are culturally significant to incorporate in your classroom(s)?*

## principle 2: color generates interest

Color can be a powerful design principle both in positive and negative ways. Proper use of color can create a mood, define a space, and reflect children's homes and communities. Used negatively, color can be overpowering, confusing, and over-stimulating. A neutral background for your classroom with a few well-chosen accent colors will create interest that is focused on the children and adults who inhabit the space.

*How can the use of color be integrated into classroom thinking methods?*

## principle 3: furnishings define space [and use of space]

Furnishings are used to identify classroom areas such as dramatic play, blocks, art, music and science. When these furnishings are authentic and sized and placed properly, children's play will increase in quality and depth.

*How do we research and plan furnishings that reflect the image of the child (their frame of reference)?*

## principle 4: texture adds depth

Texture in the environment offers visual interest and depth and provides children with unique tactile experiences. As children interact with sensory elements, they sharpen their observational skills and fine motor abilities through the languages of weaving, sculptures and textiles.

*Look around the room you are in and map things you notice that are three dimensional in texture.*

## principle 5: displays enhance environment

By eliminating clutter, arranging storage materials, and highlighting children's work, the classroom becomes a backdrop to honor all who occupy the space.

*Reflective Question: How will you develop a system to understand the ideal of organizing materials and the ideas to actually enhance the environment?*

## principle 6: elements heighten ambiance

Multiple sources of light create an ambiance of relaxation and contemplation. By using light in supportive ways, children are able to interact creatively with others and the environment.

*How do you best access multiple sources of light?*

## principle 7: focal points attract attention

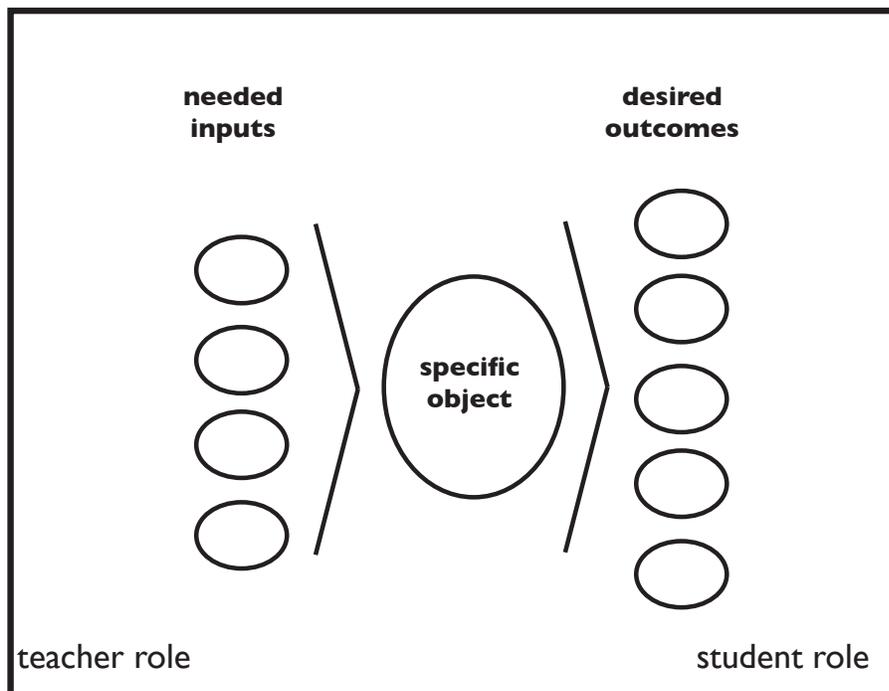
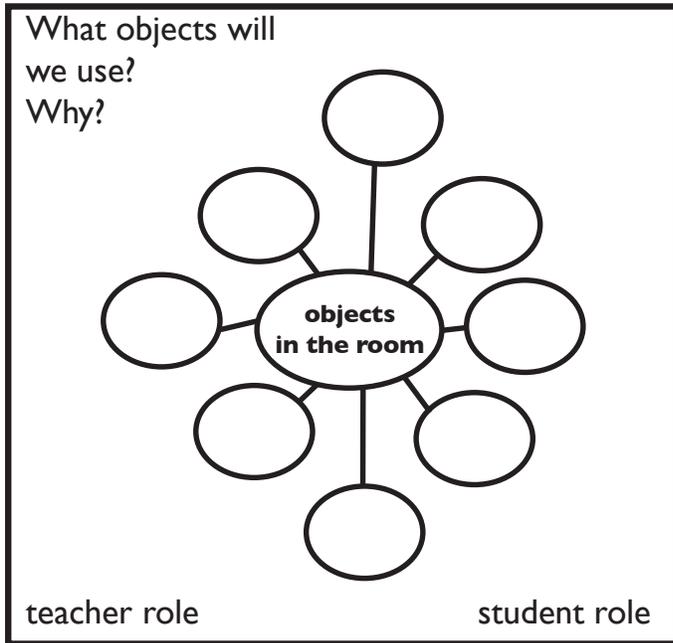
When entering the classroom, a distinct focal point can highlight interactive learning centers, children's work an architectural element, and/or a beautiful artifact. Focal points invite children to actively engage and participate in the Environment.

*Take an environmental walk with a colleague observing and writing down observations of elements that capture you attention and interest.*

*from Inspiring Spaces for Young Children by Jessica DeViney, Sandra Duncan, Sara Harris and Mary Ann Rody*

# Objects: Critical Thinking Environments

*Using critical thinking tools to consider and implement.*



# Materials: Critical Thinking Environments

What materials do we use with learning?

How do we select the materials?

What is our thinking and intentionality with the materials we use?



## The Theory of Loose Parts

An important principle for design methodology and how we look at *materials* in our classrooms.

It does not require much imagination to realize that most environments that do not work (i.e. do not work in terms of human interaction and involvement in the sense described) such as schools, playgrounds, hospitals, day-care centers, international airports, art galleries and museums, do not do so because they do not meet the 'loose parts' requirement; instead, they are clean, static and impossible to play around with. What has happened is that adults in the form of professional artists, architects, landscape architects and planners - have had all the fun playing with their own materials, concepts and planning-alternatives, and then builders have had all the fun building the environments out of real materials; and thus has all the fun and creativity been stolen: children and adults and the community have been grossly cheated and the educational-cultural system makes sure that they hold the belief that this is 'right'.

All these things have one thing in common, which is variables or 'loose parts'. The theory of loose parts says, quite simply, the following: By allowing learning to take place outdoors, and fun and games to occur indoors, the distinction between education and recreation began to disappear.

The introduction of the discovery method has been accompanied by intense research into the documentation of human interaction and involvement; what did children do with the loose parts? What did they discover or re-discover; What concepts were involved? Did they carry their ideas back into the community and their family? Out of all possible materials that could be provided, which ones were the most fun to play with and the most capable of stimulating the cognitive, social and physical learning processes?

Children greatly enjoy playing a part in the design process:

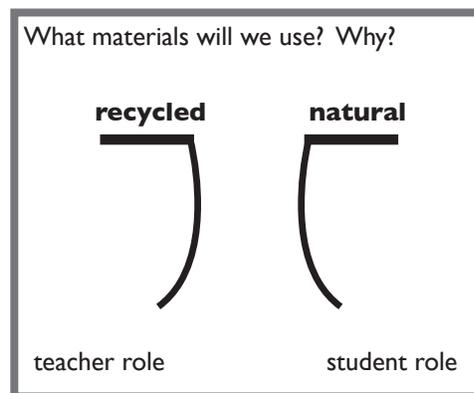
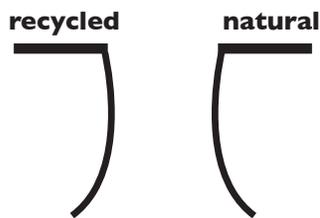
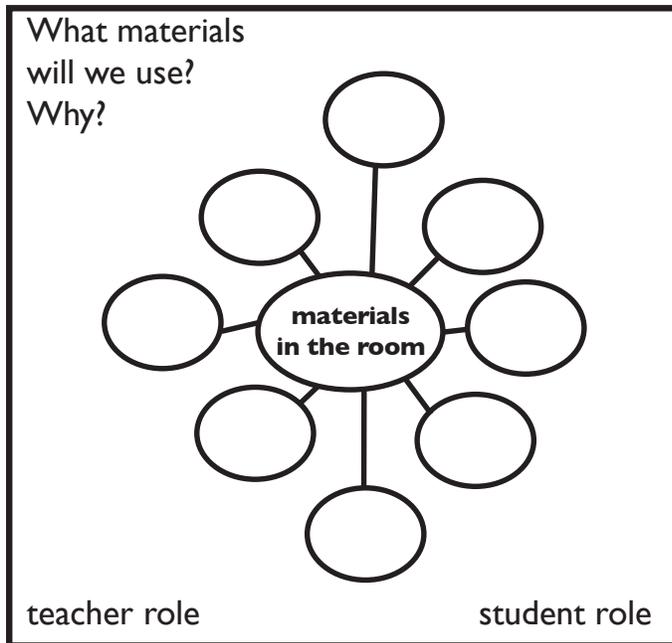
- this includes the study of the nature of the problem;
- thinking about their requirements and needs;
- considering planning alternatives; measuring, drawing, model-making and mathematics;
- construction and building; experiment, evaluation, modification and destruction.

The process of community involvement, once started, never stops: the environment and its parts is always changing and there is no telling what it will look like. Contrary to traditional parks and adventure playgrounds, the appearance of which is a foregone conclusion, the possible kinds of environment determined by the discovery method and principle of loose parts is limitless. The children in the neighborhood will automatically involve all their brothers, sisters and families: this is design through community involvement, but in the total community the children are the most important. It is not enough to talk about a design methodology - the methodology must be converted into three-dimensional action.

*The Theory of Loose Parts - Simon Nicholson*

# Materials: Critical Thinking Environments

Materials are loose parts that can be moved, carried, combined, redesigned, lined up, and taken apart and put back together in multiple ways. They are materials with no specific set of directions that can be used alone or combined with other materials. Materials can be natural or recycled.



# **Developing Critical Thinking Environments**

## **References and Further Reading**

Jessica DeViney, Sandra Duncan, Sara Harris and Mary Ann Rody, Inspiring Spaces for Young Children

HBO, Mighty Times - Children's March, Documentary Film, Teaching for Tolerance.

Ann Lewin-Benham, Possible Schools: The Reggio Approach to Urban Education, Teachers College Press, 2006.

Simon Nicholson, The Theory of Loose Parts

Michelle Sakayan, Creating a Community for South African Schoolgirls

Claire Simon, Récréations, Documentary Film.

# **Chapter 5: Support Processes**

# Schema

## Rationale

Schema theory explains how our previous experiences, knowledge, emotions, and understandings affect what and how we learn (Harvey & Goudvis, 2000). Schema is the background knowledge and experience readers bring to the text. Good readers draw on prior knowledge and experience to help them understand what they are reading and are thus able to use that knowledge to make connections. Struggling readers often move directly through a text without stopping to consider whether the text makes sense based on their own background knowledge, or whether their knowledge can be used to help them understand confusing or challenging materials. By teaching students how to connect to text they are able to better understand what they are reading (Harvey & Goudvis, 2000). Accessing prior knowledge and experiences is a good starting place when teaching strategies because every student has experiences, knowledge, opinions, and emotions that they can draw upon. Keene and Zimmerman (1997) concluded that students comprehend better when they make different kinds of connections: Text-to-Self; Text-to-Text; Text-to-World.

### Text-to-Self

Text-to-self connections are highly personal connections that a reader makes between a piece of reading material and the reader's own experiences or life. An example of a text-to-self connection might be, "This story reminds me of a trip we took to my grandfather's apple orchard."

### Text-to-Text

Sometimes when reading, readers are reminded of other things that they have read, other books by the same author, stories from a similar genre, or perhaps on the same topic. These types of connections are text-to-text connections. Readers gain insight during reading by thinking about how the information they are reading connects to other familiar text. "This character has the same problem that I read about in a book last year," would be an example of a text-to-text connection.

### Text-to-World

Text-to-world connections are the larger connections that a reader brings to a reading situation. We all have ideas about how the world works that goes far beyond our own personal experiences. We learn about things through television, movies, magazines, and newspapers. Often it is the text-to-world connections that teachers are trying to enhance when they teach lessons in science, social studies, and literature. An example of a text-to-world connection would be when a reader says, "I heard a program on the radio that talked about things described in this article."

Cris Tovani (2000) offers reasons why connecting to text helps readers:

- It helps readers understand how characters feel and the motivation behind their actions.
- It helps readers have a clearer picture in their head as they read thus making the reader more engaged.
- It keeps the reader from becoming bored while reading.
- It sets a purpose for reading and keeps the reader focused.
- Readers can see how other readers connected to the reading.
- It forces readers to become actively involved.
- It helps readers remember what they have read and ask questions about the text.

# Schema

## How to Use the Strategy

To effectively use this strategy, spend time doing Think-A-Louds modeling for students how to make meaningful connections. The easiest connection to teach is *Text-to-Self*. Initially model *Text-to-Self* connections with selections that are relatively close to the student's personal experiences. A key phrase that prompts *Text-to-Self* connections is, "this reminds me of...." Next, model how to make *Text-to-Text* connections. Sometimes when we read, we are reminded of other texts we have read. Encourage students to consider the variety of texts they have experienced which will help them understand the new selection. Finally, model how to make *Text-to-World* connections. Building the necessary background knowledge is a crucial means for providing *Text-to-World* support and may be used to pre-empt reading failure. Harvey and Goudvis (2000) caution that merely making connections is not sufficient. Students may make tangential connections that can distract them from the text. Throughout instruction, students need to be challenged to analyze how their connections are contributing to their understanding of the text. Text connections should lead to text comprehension.

## Examples of connecting statements to use as a reference or as prompts for discussion

- This part reminds me of....
- I felt like...(character) when I....
- If that happened to me I would....
- This book reminds me of...(another text) because....
- I can relate to...(part of text) because one time....
- Something similar happened to me when....

## Examples of questions that can be used to facilitate student connections

### **Text-to-Self**

- What does this remind me of in my life?
- What is this similar to in my life?
- How is this different from my life?
- Has something like this ever happened to me?
- How does this relate to my life?
- What were my feelings when I read this?

### **Text-to-Text**

- What does this remind me of in another book I've read?
- How is this text similar to other things I've read?
- How is this different from other books I've read?
- Have I read about something like this before?

### **Text-to-World**

- What does this remind me of in the real world?
- How is this text similar to things that happen in the real world?
- How is this different from things that happen in the real world?
- How did that part relate to the world around me?



*First graders in their classroom sharing about Thinking Maps and talking schema video.*

# Benjamin Bloom's Taxonomy of Educational Objectives (Cognitive Domain)

Benjamin Bloom developed the taxonomy in the 1950s in the United States. It is a hierarchy of six types of thinking which become increasingly complex and demanding.

Though the “levels” have increasing complexity, at any age level or at any time within a classroom context a teacher or student may move between different levels. There is no linear sequence required for use of this taxonomy.

The levels of thinking can be applied to developing curriculum units and courses with assessments. This taxonomy is often used for structuring questions at different levels across all levels of schooling and in all areas of learning.

In 2001 Lorin Andersen, et al, made some significant changes to the original taxonomy. Here is the original model with the revised model by Anderson. Notice that the nouns were changed into verbs to reflect the fact that thinking is an active process.

## Original Bloom

Evaluation  
Synthesis  
Analysis  
Application  
Comprehension  
Knowledge

## Revised By Anderson

Creating  
Evaluating  
Analyzing  
Applying  
Understanding  
Remembering



# Student Voice

In education, student voice refers to the values, opinions, beliefs, perspectives, and cultural backgrounds of individual students and groups of students in a school, and to instructional approaches and techniques that are based on student choices, interests, passions, and ambitions. Generally speaking, student voice can be seen as an alternative to more traditional forms of governance or instruction in which school administrators and teachers may make unilateral decisions with little or no input from students.

—*Glossary of Education Reform, www.edglossary.org*

## Goal

The goal of Student Voice is to have students explore, understand and share the How of Learning. By learning how they learn, the students become responsible and effective as autonomous learners across all content areas in all grades. To initiate Student Voice thoughtfully, succinctly and effectively students will effectively use the critical thinking tools being implemented with the teachers for effective use in the classroom. The students will use the same tools to explore the guiding question: How do we learn? The focus is on the process and how of learning and not the content learned. The how is what we use with all our learning in school and life. The goal for the students is to learn the how of learning while teachers, staff and leadership have a greater insight to the students as learners and who they are in determining the best methods for the school's learning environment.

## Process

The students will use critical thinking methods to determine what the How of Learning means and reflectively supports their learning. They will then continue use of the critical thinking methods to develop how they will use video to document the How of Learning in their classrooms and schools. The critical thinking methods to be used and explored include:

- Collaborative Communities are three supporting methods for a systemic structure for collective and individual success. These include: community building community exercises, collaborative learning methods and peer-to-peer coaching.
- Questions for Inquiry is the use of questioning methods to engage students in education and communities with dialogue. This includes effective methods for developing questioning skills leading to inquiry based discourse.
- Visual Mapping is for organizing and seeing thinking individually and collaboratively to understand patterns of thinking with different cognitive processes along with the frame of reference to understand different perspectives.
- Thinking Environments is an awareness, understanding and a process focused upon the design, interface and impact with the environment of the physical learning space including a person's use of space, materials, and objects.

**Student Voice** — Students are among the first to recognize that there is an enormous gap between their performance and potential. That is why we should give students a voice in professional development, instruction and classroom management. *QR Code to initial pilot Student Voice project designed and implemented for National Urban Alliance in East Allen Public School District by Robert Seth Price.*



## Student Voice

The students will use the critical thinking tools as part of the process of storyboarding and recording their story. They will be modeled examples and shown models of excellence to guide their own development of storyboards and video recording. Several potential implementation methods include:

- **Mini Documentary About Their School**  
Students will brainstorm ideas on how students learn at their school. The students will collaboratively develop a storyboard to complete a 1-2 minute video on their idea of how they learn. The video will begin with a reflective question on the video idea.
- **Reflective Learning Practices Learning Centers**  
Students will collaborate in groups of three to record themselves reading, performing or presenting for a 1-4 minute recording. They will then watch the video together (peer to peer coaching model) with observations on what they did well and questions using a visual tool (Visual Map).
- **How We Do What We Do (DIY – Do It Yourself)**  
Students will storyboard a short learning video on how to do a particular HOPs Critical Thinking method. They will brainstorm their idea with a visual tool and develop a storyboard (Sequence Map) to sequence the video.
- **Culturally Speaking**  
Students in collaborative groups will use a quote, hip hop, poetry or key fact about historical backgrounds to storyboard with visual maps and develop questions in developing a book, poster, media presentation, and/or video. They will create with spoken word, poetry, music, hip hop and other forms of expression.
- **What Do You Stand For?**  
Students brainstorm things about their community that interest them that are of social concern (homeless, parks...), then they interview a representative for the community of interest (e.g. a woman's shelter director for homeless) with questions they develop while also taking photographs and creating drawings. They ask each interviewee what they stand for. Students develop an understanding to consider what they stand for themselves.

### Monitoring Progress and Determining Success

Students use of critical thinking methods to develop their student voice projects will provide an assessment of the thinking, and the video recordings or media presentations will provide a means of determining progress and success. The video recordings will initially be used with teachers to see what they learn about the students.

### To Consider

To begin incorporating youth voices, educators should think beyond the student council, welcoming a range of student opinions in decisions about academic content, discipline, school culture, free time, the physical space of the school, and family partnerships. They should even consider an individual student's wishes about which adults in the building will best teach and counsel him.

## Student Voice

Five Ways to Welcome Student Input from Giving Students a Voice in a Harvard Graduate School article in 2016 are:

- Regularly solicit student feedback.
- Engage students in studying and assessing their school.
- Include authentic student representation on leadership teams.
- Invite students to any discussion related to their own learning.
- More broadly, consider young people as stakeholders and partners in their schools.

### Equipment Needs

For video a smart phone or tablet with video is fine, as is a digital camera that has video capabilities. It is important that the video is easily edited with software on the device (e.g. imovie with iphones or ipads). If planned well, editing should be at a minimum.

### What Makes Roosevelt Excellent: Students Documenting Their School

A fifth grade classroom of 34 students created their documentary of the school over three half-day sessions. The first day focused on video exercises. The second day the young filmmakers used Thinking Maps to storyboard their mini productions. The whole class then observed one filmmaking group do a film. Each group was four to five students including a director, camera person(s), and interviewer(s). The third day had the remainder of the groups filming. All questions for the interviews were developed by the students. The video includes The Documentary by the students; the video exercises (thaumatrope, introduction exercises, rotating in rhythm), and documenting the documentary.

<https://vimeo.com/user12997522/student-voice-documenting-the-school>

School Portfolio: Interviewing on Video and Documenting in Print.

The following are examples of project documentation include action research, use of video, reflective print material and more.

Roosevelt UFSD in the New York City area. This includes interviews with students, teachers, school leadership and supporting professional development mentors. The video clips are short and the print materials are transcribed from the video interviews.

- Video: <https://vimeo.com/user12997522/roosevelt>
- Print: <http://www.eggplant.org/pdf/roosevelt-poster-collection1.0.pdf>



students



video



print

## Research Connecting to Student Voice

Read the following articles on research on *Situating Learning in the Lives of Students* and *Deconstructing Race*. A suggested sequence of methods to discuss the articles includes:

### Guiding Questions

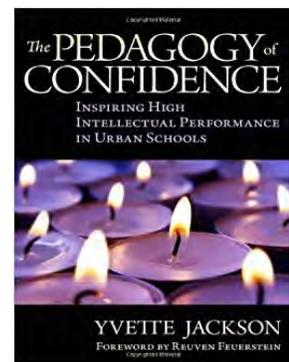
- What are your questions from reading this research?
- How does this research apply to your school?
- How would you map out a plan to implement practical tools and practices to support the quality of the school's social capital?

### Research in Action

1. Use Collaborative Questioning (see in this guide) to respond to *What are your questions from reading this research?* Then in small collaborative groups write several questions from the Collaborative Questioning exercise with each question on a separate piece of paper to sort (see the categorization map and section on inductive sorting). Sort the questions into categories. Label a top question for each category.
2. Use a visual tool to map: How does this research apply to your school? Possible maps include brainstorming, cause and effect, comparing or a map that supports your thinking.
3. What are the steps and parts of the steps to implement a plan? Use a sequence map to create a timeline.

### Pedagogy of Confidence: Situating Learning in the Lives of Students

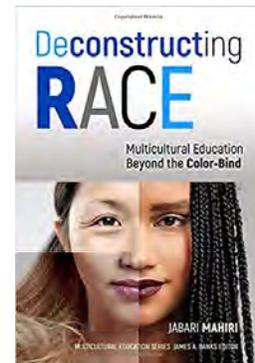
Situating learning in the lives of students engages student participation by facilitating their discovery of relevance and meaning in academic learning. It has long been established that engaging anyone in learning requires connecting to that person's cultural context or frame of reference (Feuerstein et al., 1980, 2006; Vygotsky, 1978). Lave and Wenger (1990) extended this understanding by pointing out that learning is a function of the activity, context and culture in which it is situated. However, most classroom learning activities that involve abstract knowledge occur out of context, hampering cognition and learning. This lack of contextualizing is an instructional reality for school-dependent children. Most often, the examples and connections they are provided come from the cultural context of the teacher or from a community to which they do not belong (Lave & Wenger, 1990). Like all students, these individuals have vast knowledge from their life experience that is organized into elaborate networks of abstract mental structures (schemata) that represent their understanding of the world. When they must assimilate new conceptions of understanding or schemata that seem to contradict their existing understandings in relation to their life experience enables them to recognize the connections to what is being introduced and what they already know and suppositions they have already formulated, minimizing internal conflict and maximizing comprehension (Lave & Wenger, 1990 SIL International, 1999). Working from the personal cultural context of students engages and heightens their attention because the engagements are perceived as meaningful.



Jackson, Y. (2011). *The Pedagogy of Confidence: Inspiring High Intellectual Performance in Urban Schools*. New York: Teachers College Press.

## Deconstructing Race: Key Concepts

We are all born into a social position and with physical features that contribute to our sense of who we are. But social positioning and physical features are not (or should not be) determinative of identity. Against the grain of social constructions, this book reveals how people's identities are ultimately determined by a wide range of personal-cultural practices, choices, and perspectives. The practices engaged in throughout our lives are tied to major and minor life choices as well as perspectives we develop about ourselves and others at the intersection of personal, social, material, and spiritual worlds. The lives of the interviewees provided evidence for how the intersections and interactions of these components reflected the actual identities of individuals, rather than the essentialized racial categories that Brodwin (1998) noted are "assigned" by white supremacy.



"Micro-cultures" (with a hyphen) is a key concept that captures the numerous components of positioning, practices, choices, and perspectives that make up the unique identities of each individual. This idea builds upon, but is distinguished from, Banks' (2013) concepts of "microcultures" (without a hyphen) and "multiple group memberships," as discussed in Chapter 9. I describe micro-cultural identities and practices as being mediated by language, and, like language, as being both acquired and learned. But they are also constituted and mediated through digital texts and tools that dramatically increase the range of how they can be engaged or enacted. At any moment, the vertical axis of these virtually limitless combinations of components—like fingerprints—reflect and define the ultimate uniqueness of individuals. On multiple horizontal axes, alignments of components also reflect similarities of individuals to specific others in shared or connected experiences within histories and geographies-within time and space. Unlike fingerprints, the combinations of micro-cultural components are dynamic and constantly changing (Mahiri, 2015; Mahiri & Kim, 2016; Mahiri & Ilten-Gee, 2017). From this perspective each life might be seen as a river fed by many distinct tributaries flowing into the sea of humanity.

The core argument of this book is that the continually emerging, rapidly changing micro-cultural identities and practices of individuals cannot be contained in the static racial categories . assigned by white supremacy.

Mahiri, J. (2017). *Deconstructing Race : Multicultural Education Beyond The Color-Bind*. New York: Teachers College Press.





# **Chapter 6: Case Studies**

# Case Study: Thinking Schools Ethiopia, Tigray

## Overview

The collaboration with Tigray Development Association and Thinking Schools Ethiopia began through social media leading to a multi year collaboration. The collaboration was a grass roots initiative that developed support from SIDA through Initiative Africa (girl empowerment funding) and Thinking Foundation. The Thinking Schools Ethiopia project was started by Robert Seth Price that was preceded by collaborations with the Education Bureaus in Addis Ababa and SNNPRS.

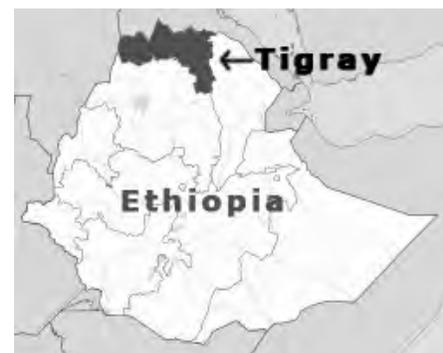


## Goals

The goals were creating a strategic Thinking Schools model with two primary and one secondary school from each of twelve Woredas (similar to counties in the USA). Training a significant number of trainer of trainers to build capacity to sustain the initiative. A relationship with the Tigray Education Bureau, Tigray Development Association and Mekelle University (in Tigray) were key stakeholders to develop and sustain the Thinking Schools Ethiopia: Tigray initiative.

## Implementation

- Initially training 60 experts from the Tigray Education Bureau who oversee the Tigray region.
- Training Two Trainer of Trainers (equal number of women and men) from each of 36 schools for four days. The 36 schools were from twelve Woredas with two primary and one secondary school from each Woreda.
- Divided the trainings across the Tigray region into three strategic locations with equal sized groups. Each pair of Trainer of Trainers then brought one half of the staff from each school to one location for a two day training.



The trainer of trainers were guided by Thinking School Ethiopia trainers (Robert Seth Price, Atsede Tsehayou, and Dagim Melese) to lead their schools in the training. The two days whole staff training was undertaken for approximately 400 teacher educators in each of the three locations (1200 total teachers) under the leadership role of the Trainer of Trainers (ToT). The ToT trainers played a key role in effectively transferring through modeling the essential components of the training to ALL educators from their school and region. After the two days training teachers from 2 primary and 1 secondary schools from each Woreda came up with their plan (in a Sequence Map) of whole school implementation of Critical Thinking in their respective schools. The training halls chosen at each site contributed immensely to the success of the overall training. It was important they were superb in space, excellent in sound, and sufficient quality chairs and tables for the large groups.

- Ongoing site visits to all schools multiple times by the lead Ethiopian Country Trainers Atsede Tsehayou and Dagim Melese. Documentation of their site visits in text, still photos and video clips is online at [www.thinkingschoolsethiopia.com](http://www.thinkingschoolsethiopia.com) website.

# Case Study: Thinking Schools Ethiopia, Tigray



## Outcomes and Learnings

The goals



Video providing an overview of the collaboration with Thinking Schools Ethiopia in Tigray Ethiopia (2015). The Tigray project included 37 model schools in 12 Woredas in collaboration with Tigray Development Association and administered by Initiative Africa for a Girl's Empowerment Whole School Change grant from SIDA (Swedish Development Agency).. Tigray, Ethiopia 2015

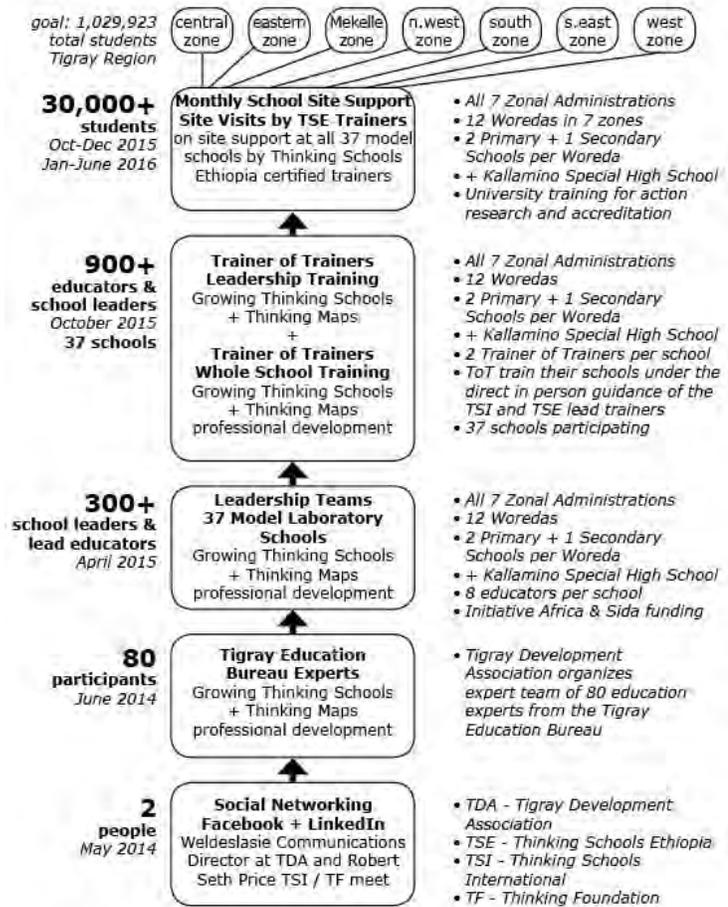


Video of collaboration in Hossana, Ethiopia prior to the Tigray project. The Hossana video includes student demonstration lesson in including community; think-pair-share; think-quartet-share; Thinking Maps; student reflections. The demonstration lesson was part of the two day professional development with teachers, administrators, and local government representatives on the Thinking Schools approach. The sessions were held at Children's Home Academy in Hossana.

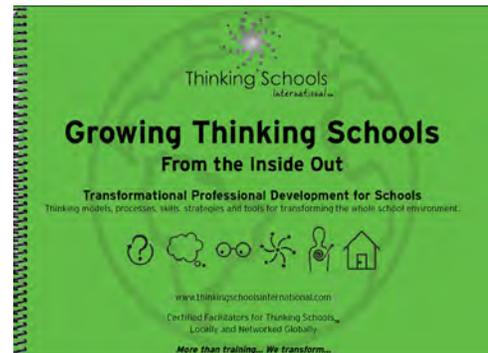


Hossana, Ethiopia 2010

Visual Model of the Thinking Schools Ethiopia, Tigray implementation.



Growing Thinking Schools Guide (English)  
The whole guide is available online at:



Growing Thinking Schools Guide Translated to Tigrinya by  
Professors at Mekelle University.  
The whole guide is available online at:



## Case Study: Thinking Design Healthcare, Ethiopia

**Overview:** Thinking Design Healthcare Ethiopia is a systems approach that uses practical research based methods to assure a healthy organization that supports and grows effective communication with and between leadership and the whole organization. The focus is Student Centered and Patient Centered Critical Thinking with both the hospital and the medical college. It uses tools that thoughtfully and effectively communicate ideas within and outside organization to create collaborations. Previous collaborations including with St. Paul's Millennium Medical College and Hospital in Ethiopia, and a professional mental healthcare association. The facilitation of the week training was a collaboration with my colleagues of six + years Atsede Teshayou and Dagim Melese. The key contacts with Mekelle University were Vice Provost Dr. Loko and Dagim Ali who was the coordinating project manager for the university who were extraordinary to collaborate with.

**Goals:** The goal of the Thinking Designs collaboration with Mekelle University Health Sciences departments is to integrate a patient centered (hospital and clinical) and student centered (medical college) approach throughout the university and hospital. The goals include supporting the universities vision of becoming a top 25 university of health sciences in the continent of Africa, and creating an environment of critical thinking medical professionals, staff and students to improve their successes within the healthcare field.

**Implementation:** The initial Thinking Designs training included:

- Training all Heads of Departments and other key university and hospital people (2 days)
- Training further staff with Heads of Departments and other key people supporting in a Trainer of Trainer capacity (2 days)
- Demonstration lessons with students by the Thinking Designs facilitator trainers (1 day)

The training is conducted in a participant centered approach which mirrors and models the goals of a implementing and sustaining a patient centered (hospital and clinical) and student centered approach (medical college) across all of health sciences.

**Outcomes:** The first two days of trainings were with the Heads of Departments and staff who are selected to be Trainer of Trainers. The third and fourth day of trainings had the Heads of Departments and Trainer of Trainers leading staff members as the leaders of Thinking Design. The goal is to model the transfer of understanding the Thinking Designs pedagogy into sustainable mastery of doing. The fifth day was to model the importance of observing our practice as educators with a focus on pedagogy, the art of teaching to maximize understanding learning across all content areas and disciplines.

The participants were professional, very involved, reflective, and deeply involved in the idea and ideal of going from a 'teacher centered' / 'doctor centered' approach to deeply understanding the theory and practical with hands on experiences with a student centered / patient centered approach.

### Online

- University Online: <https://www.linkedin.com/pulse/student-patient-centered-critical-thinking-healthcare-price/>
- Mental Healthcare Online: <http://blog.thinkingschoolsethiopia.com/?p=2383>
- St. Paul's Online: <http://blog.thinkingschoolsethiopia.com/?p=2437>



# Case Study: Critical Thinking with Visual Tools, USA

Roosevelt Union Free School District  
New York City, NY

The Roosevelt Union Free School District project was with Thinking Foundation. I documented with interviews of teachers, students, district leadership and consultants on this district wide Thinking Schools and Thinking Maps project. I was cinematographer, interviewer, video editor and implementation of use with the video clips. The documentation included video and 2D print posters that were developed from transcribing text from the video interviews. These interviews were conducted multiple times over a two year period.

The qualitative process provided insights with implementation of the multi year project to the educators, students and leadership. Leadership included the different buildings and with the central office. Additionally compilation video cliops were edited and shared with the school board.

Ideas implemented included the print documents to post and kiosks to share the video clips. The purpose was for qualitative analysis as much as affirmation to support implementation of the initiative.



Roosevelt  
Video  
Collection



Roosevelt  
Print (PDF)  
Collection

## ROOSEVELT UFSD



ROOSEVELT UFSD • THINKING MAPS® • COMPILATION • JANUARY 2014

[www.vimeopro.com/user12997522/roosevelt](http://www.vimeopro.com/user12997522/roosevelt)

### Thinking Maps®: Developing Confident & Competent Thinkers & Learners - Roosevelt UFSD



#### Thinking Maps® for Organizing Thinking

Roosevelt High School Students and Teachers share their reflections on the use of Thinking Maps® in Social Studies and other Disciplines

**Students**

**Sean:** I find it an effective way using Thinking Maps because it's all your ideas right there...

**Ann:** Thinking Maps make writing the essay easier. You just move your ideas from a Thinking Map to the essay.

**Katie Ann:** The Thinking Maps give us a head start, gets our brain functioning and helps us on writing the essay.

**Bitly:** Thinking Maps make you organize your work. On the Global Regents you have to write a DBQ essay. You can write a Thinking Map that will bring outside information which will add more points.

**Delores:** The Thinking Maps are very helpful, not only helpful for essays, but also for projects... you get a higher grade for projects... it makes you organized and gives you a head start.

**Katie Ann:** The Frame of Reference is where you put where you get your information from...

**Delores:** You can also add the Frame of Reference information to your essay...

**Bitly:** Now that we learned how to use Thinking Maps in Social Studies, it can help us out in English, science...

**Delores:** In English I used a lot of Tree Maps in my essays, something that is very helpful for me...

**Ann:** Before I was using the Thinking Maps I used to write essays and I used to panic because I didn't know what to say next. Now the Thinking Maps make it easier for you to see what you have to say, and your process faster...

**Teachers**

**Ms. Incao-Rogers:** The Circle Map was our starting point, then we would decide what kind of thinking was involved in the lesson and from there we would create another map... from the second map the students would write the essay - maybe even two or three maps depending on what tasks were asked of the essay. Sometimes the essay might ask to categorize [Tree Map] something and then to describe cause and effect [Multi-Flow Map]...

**Ms. Squillante:** I like the Frame of Reference... it is a great jumping point to make connections, to predict and go further. And go deeper into what the discussion is about...

**Ms. Incao-Rogers:** We often used the Frame of Reference for citations. The students are working on DBQ essays and you definitely need to cite your documents and prove your evidence from your citations. We integrated Thinking Maps with Frame of Reference into the common core. The students always would refer back to the citations...

**Ms. Squillante:** The student's essays need to go deeper than just the surface. The Thinking Maps Frame of Reference forced the students to think and question what was on their Thinking Map...

**Ms. Incao-Rogers:** That is interesting to hear Delores used Thinking Maps in English because the English teachers haven't been trained on Thinking Maps yet...

And for myself, now what I am doing is using the Tree Map, on the Multi Flow Map for planning my teaching. I am truly using the Thinking Maps just as the students would use it...

**Ms. Squillante:** The students are actually handing in homework on their own with the Thinking Maps on it already done without me even saying you have to use the Thinking Maps. As a teacher it has taught me a new and effective way for students to approach an essay.

**Ms. Incao-Rogers:** Another point with the maps it was a very quick assessment of what they know. I can see the student's understanding including their thinking and the content.



Contact Designs for Thinking for information regarding the video containing the above excerpts of Roosevelt UFSD students and educators.  
[www.designsforthinking.com](http://www.designsforthinking.com) • [support@designsforthinking.com](mailto:support@designsforthinking.com)

[www.eggplant.org/pdf/roosevelt-poster-collection1.0.pdf](http://www.eggplant.org/pdf/roosevelt-poster-collection1.0.pdf)



# UN Declaration of Human Rights: The 30 Articles

In 1948, representatives from the 50 member states of the United Nations came together under the guidance of Eleanor Roosevelt (First Lady of the United States 1933-1945) to devise a list of all the human rights that everybody across the world should enjoy.

On 10 December 1948, the General Assembly of the United Nations announced the Universal Declaration of Human Rights (UDHR) - 30 rights and freedoms that belong to all of us. Seven decades on and the rights they included continue to form the basis for all international human rights law.

*Amnesty International, UK*



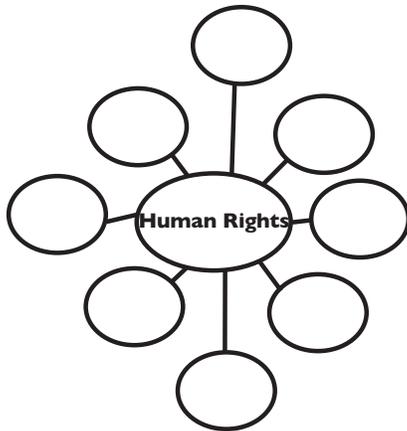
*Eleanor Roosevelt and the United Nations Universal Declaration of Human Rights, November 1949 © Wikimedia Commons*

- |            |   |
|------------|---|
| Article 1  | Right to Equality   |
| Article 2  | Freedom from Discrimination   |
| Article 3  | Right to Life, Liberty, Personal Security                               |
| Article 4  | Freedom from Slavery  |
| Article 5  | Freedom from Torture and Degrading Treatment                            |
| Article 6  | Right to Recognition as a Person before the Law                         |
| Article 7  | Right to Equality before the Law  |
| Article 8  | Right to Remedy by Competent Tribunal                                   |
| Article 9  | Freedom from Arbitrary Arrest and Exile                                 |
| Article 10 | Right to Fair Public Hearing  |
| Article 11 | Right to be Considered Innocent until Proven Guilty                     |
| Article 12 | Freedom from Interference with Privacy, Family, Home and Correspondence |
| Article 13 | Right to Free Movement in and out of the Country                        |
| Article 14 | Right to Asylum in other Countries from Persecution                     |
| Article 15 | Right to a Nationality and the Freedom to Change It                     |
| Article 16 | Right to Marriage and Family  |
| Article 17 | Right to Own Property   |
| Article 18 | Freedom of Belief and Religion  |
| Article 19 | Freedom of Opinion and Information                                      |
| Article 20 | Right of Peaceful Assembly and Association                              |
| Article 21 | Right to Participate in Government and in Free Elections                |
| Article 22 | Right to Social Security  |
| Article 23 | Right to Desirable Work and to Join Trade Unions                        |
| Article 24 | Right to Rest and Leisure   |
| Article 25 | Right to Adequate Living Standard                                       |
| Article 26 | Right to Education  |
| Article 27 | Right to Participate in the Cultural Life of Community                  |
| Article 28 | Right to a Social Order that Articulates this Document                  |
| Article 29 | Community Duties Essential to Free and Full Development                 |
| Article 30 | Freedom from State or Personal Interference in the above Rights         |

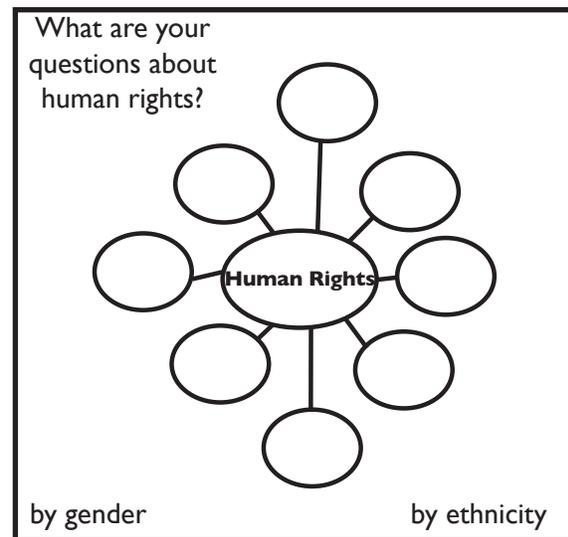
# Human Rights: Learning About the Articles

## Prior Knowledge

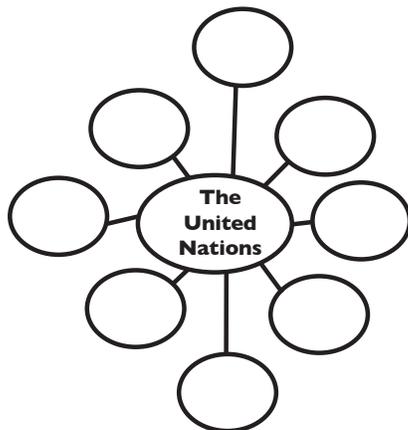
What do you know about Human Rights?



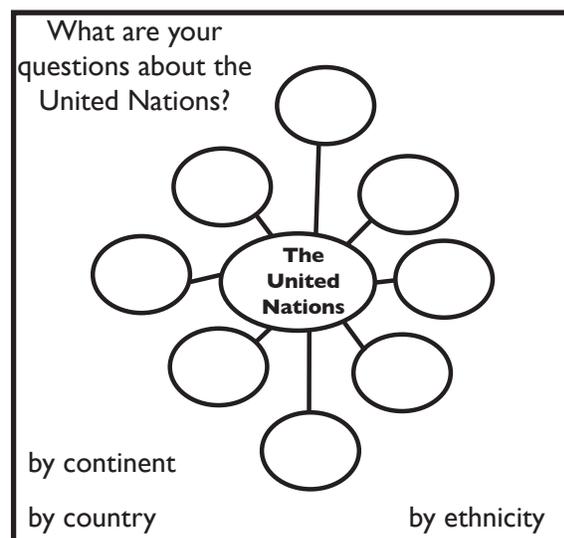
What are your questions in the Frame of Reference about human rights? Consider different perspectives.



What do you know about the United Nations?



What are your questions in the Frame of Reference about the United Nations? Consider different perspectives.



# Human Rights: Learning About the Articles

## Sorting the Articles Inductively into Categories

Article 1	Right to Equality
Article 2	Freedom from Discrimination
Article 3	Right to Life, Liberty, Personal Security
Article 4	Freedom from Slavery
Article 5	Freedom from Torture and Degrading Treatment
Article 6	Right to Recognition as a Person before the Law
Article 7	Right to Equality before the Law
Article 8	Right to Remedy by Competent Tribunal
Article 9	Freedom from Arbitrary Arrest and Exile
Article 10	Right to Fair Public Hearing
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Article 16	Right to Marriage and Family
Article 17	Right to Own Property
Article 18	Freedom of Belief and Religion
Article 19	Freedom of Opinion and Information
Article 20	Right of Peaceful Assembly and Association
Article 21	Right to Participate in Government and in Free Elections
Article 22	Right to Social Security
Article 23	Right to Desirable Work and to Join Trade Unions
Article 24	Right to Rest and Leisure
Article 25	Right to Adequate Living Standard
Article 26	Right to Education
Article 27	Right to Participate in the Cultural Life of Community
Article 28	Right to a Social Order that Articulates this Document
Article 29	Community Duties Essential to Free and Full Development
Article 30	Freedom from State or Personal Interference in the above Rights

For further information see the section on Inductive processing in the Open Source Visual Maps section of this guide.

- In small groups of 4-6 write each of the Articles on separate pieces of paper.
- In small groups then sort the different Articles by similarities.
- After sorting, each group then puts a title above each of the sorted categories.
- Do a gallery walk to for the whole group to see each small groups sorting.
- Return to small group to consider any changes from the gallery walk.
- With a Frame of Reference add questions to your Categorizing Visual Map.

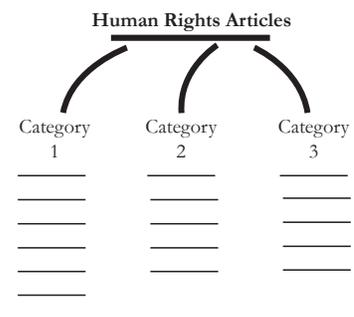
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Article 1	Right to Equality
Article 2	Freedom from Discrimination
Article 3	Right to Life, Liberty, Personal Security
Article 4	Freedom from Slavery
Article 5	Freedom from Torture and Degrading Treatment
Article 6	Right to Recognition as a Person before the Law
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Article 30	Freedom from State or Personal Interference in the above Rights

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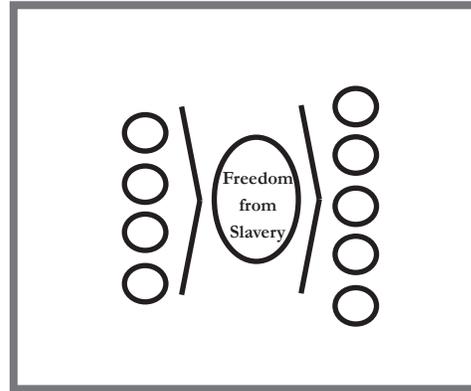
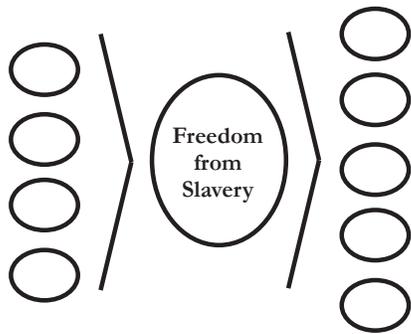
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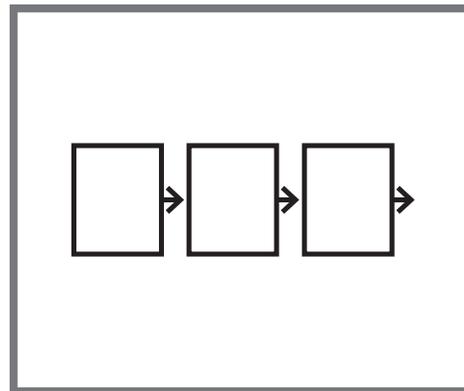
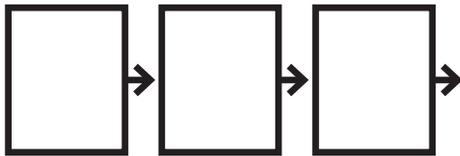
The number of categories can vary by group.

# Human Rights: Learning About the Individually

## Cause & Effect of How & What Happens Map



## Historical Sequence of an Article's Human Right



# Research and Studies Related to Equity and Human Rights

## An Anticolonial Framework for Urban Teacher Preparation

Jamila J. Lyiscott, Limarys Caraballo & Ernest Morrell

*Journal of The New Educator, Volume 14, 2018 - Issue 3*

Pages 231-251 | Published online: 07 Feb 2018

### Abstract

Our contemporary apprenticeship model of teacher education often places preservice teachers in learning environments where they never witness the types of dynamic and engaged practice they desire to emulate. Either there are structural limits within the classroom placed by school or district leadership or there are preselected veteran mentor teachers who do not value the same kinds of critical practice. These challenges necessitate a radical rethinking of how and where preservice teachers learn their craft. We pose an anticolonial model of teacher development, one that situates teachers and students in collaborative networks where they work powerfully together via Youth Participatory Action Research on projects that have significant social, cultural, and digital relevance. The purposes of this article are (a) to propose the essentiality of anticolonial approaches to reimagine the preparation of preservice teachers and (b) to demonstrate how these approaches are enacted in our own practice within critical, project-based clinical experiences with preservice educators toward the development of an anticolonial model for urban teacher preparation.



**Complete Research Paper:**

**An Anticolonial Framework for  
Urban Teacher Preparation**

*Journal of The New Educator, Volume 14, 2018 - Issue 3*

# **Research, Studies, Books Related to Equity and Human Rights**

**An Indigenous Peoples' History of the United States**

*By Roxanne Dunbar-Ortiz*

*Beacon Press, 2014*

**An African American and Latinx History of the United States**

*By Paul Ortiz*

*Beacon Press, 2018*

**A People's History of American Empire (A Graphic Adaptation)**

*By Howard Zinn, Mike Konopacki, Paul Buhle.*

*Metropolitan Books, 2008*

**A People's History of the United States: 1492 - Present**

*By Howard Zinn*

*HarperCollins, 1999*

**Illustrated Version of the Universal Declaration of Human Rights**

*Illustrations By Yacine Ait Kaci*

*United Nations*

*<https://www.un.org/en/udhrbook/>*

**A History of Ethiopia in Pictures: From Ancient to Modern Times**

*By Geoffrey Last, Richard Pankhurst, Eric Robson*

*Arada Books, 2014*



## Robert Seth Price

[www.eggplant.org](http://www.eggplant.org)

Robert Seth Price's experiences include teaching grades 1-3 for ten years. He designed and taught elective courses at a public arts high school and taught classes for literacy, art and technology at the university level for elementary teachers in Los Angeles and Brooklyn. He currently facilitates full day and multi-day trainings on domestic and international stages. He designs and facilitates professional development trainings with whole school districts, individual schools, hospitals, and non-profit organizations.

Robert understands the power of lived stories. He uses the student's and participant's voices as part of his integration. He incorporates technology, social media, art, and music into his trainings. He understands networking; system development; grass roots project development; progressive education implementation; and facilitating professional leadership development.



Robert's background and strengths include a focus on K-6 with:

- writing and reading in the classroom
- vocabulary and spelling development
- visual tools for organizing thinking
- collaborative methods and community building for student engagement
- creating a pro-active critical thinking environment
- collegial coaching with the whole school
- expertise with visual tools, questioning methods, collaborative processes, developing classroom environment for student engagement

“There is so much to learn, and not enough time.”

*Janice Price (my mom)*