

Mekelle University

College of Health Sciences



Thinking Design:

Models and Methods for Patient Centered and Healthcare Student Centered Practices

grass roots critical thinking tools are a human right

**For Healthcare Professionals, Support Staff,
Health Sciences Faculty and University Students**

International Trainer: Robert Seth Price

Ethiopia Country Trainers: Atsede Tsehayou, Dagim Melese

website: www.eggplant.org



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We Really Care!



**November 2016
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Thinking Maps™: A Language for Leadership; A Language for Learning

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Inquiries should be addressed to:

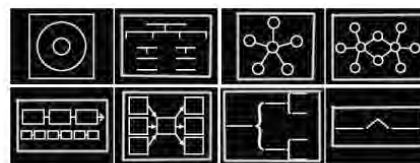
Thinking Maps, Inc.

401 Cascade Pointe lane

Cary, North Carolina 27513

(800) 243-9169

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Thinking Design:

*Models and Methods for Patient Centered & Student Centered Practices
For Healthcare Professionals, Healthcare Educators and Students*

Mekelle University College of Health Sciences

Introduction and Background

Thinking Design is a systems approach that uses practical research based methods to assure a healthy organization supporting and growing effective communication with and between leadership and the whole organization. It uses tools that thoughtfully and effectively communicate ideas within and outside organization to create collaborations. It honors and understands the abilities and gifts of all members of an organization.

Thinking Design training uses the *Thinking Design* research based methods that include:

- **Collaborating Community:** collaborative thinking; collegial coaching and community building methods;
- **Questioning for Inquiry:** high quality use of questions and shared inquiry;
- **Visual Tools:** the use of visual tools to map out ideas;
- **Designing a Thinking Environment:** how the physical space, human interaction and resources are organized, integrated and used.
- **Developing Dispositions:** characteristics, dispositions, habits of mind;

Thinking:
*The Most Important
Human Resource
for Life Long
Visioning, Problem
Solving, and
Decision Making*

To live fulfilling lives, people benefit from the knowledge, skills and dispositions shaping the lives they can imagine for themselves professionally and personally with their families. Critical thinking tools are instrumental in guiding and knowing oneself, connecting with others, and exploring ideas and methods of successful collaborations. This supports a healthy and productive organization including leaders, professional staff, support staff, volunteers and the greater community.

The training has sequential stages:

Introduction for learning, practicing for mastery, and mastery for sustaining.

Objective of the Consultancy

The objective of *Thinking Design: Methods for Patient Centered* consultancy training is to provide a participant-centered approach to learn, share and think best with one's personal capacity while supporting quality practices for the whole organization. The specific objectives include:

- knowing ourselves;
- understanding thinking individually and as a collaborative organization;
- introducing to Thinking Design methods including collaborating community methods, inquiry, dispositions, visual tools, thinking environment; and
- developing a sustainable sequential plan that supports the hospital and medical teaching college with implementation of the thinking organization approach within the organization.

The consultants will support the whole organization implementation including developing a team of *Trainer of Trainers* to assure sustainability with the Thinking Designs model.

Learning Outcomes

The Thinking Design approach is recommended for the whole organization including the organizations leadership, teaching faculty, professional staff, support staff, students, and volunteers. The Thinking Design model are life long tools and skills for communication, understanding each other's perspective, problem solving and development of a quality collaborative sharing and learning environment. The Thinking Design approach is concurrently student centered (medical college) and patient centered (hospital professionals and support staff) that promotes active critical thinkers, thoughtful collaborators and problem solvers.

Training Outcomes

The Thinking Designs trainers will build understanding, mastery and capacity within the hospital and medical college with the methods of thinking. This will include:

- personal mastery
- building a shared vision
- team learning
- developing mental models
- creating a systems thinking organization

Consultants

Robert Seth Price has experience with whole organization (NGOs, universities, foundations) and school change through a transformational design process. Simply, how can we collaboratively and thoughtfully affect learning outcomes as a process individually, for our whole community and creating our vision. Robert's work is build upon the belief: 'grass roots critical thinking skills and tools are a human right'.
www.eggplant.org • www.thinkingschoolsethiopia.org

Atsede Tsehayou has a background that includes classroom teaching, facilitator of professional development training, coaching, and tutoring students at different levels. She has given trainings extensively on comparative and developmental education topics with an emphasis on higher order thinking levels.
www.thinkingschoolsethiopia.com/?page_id=1474

Dagim Melese is highly motivated to better understand how the human brain learns and to put that to practical use helping children and students learn more efficiently which he believes is fundamentally important in terms of creating a thoughtful, healthy, prosperous, caring and sustainable society. His experiences include teaching, facilitating professional development nationally for Thinking Schools Ethiopia.
www.thinkingschoolsethiopia.com/?page_id=1680

Guide

The participants will use a guide that includes:

- Thinking Design Implementation
- The Models: Collaborating Communities, Questioning for Inquiry, Visual Tools, Thinking Environments, Dispositions

Video

Video will be modeled and used to develop a library at the university of best practices.

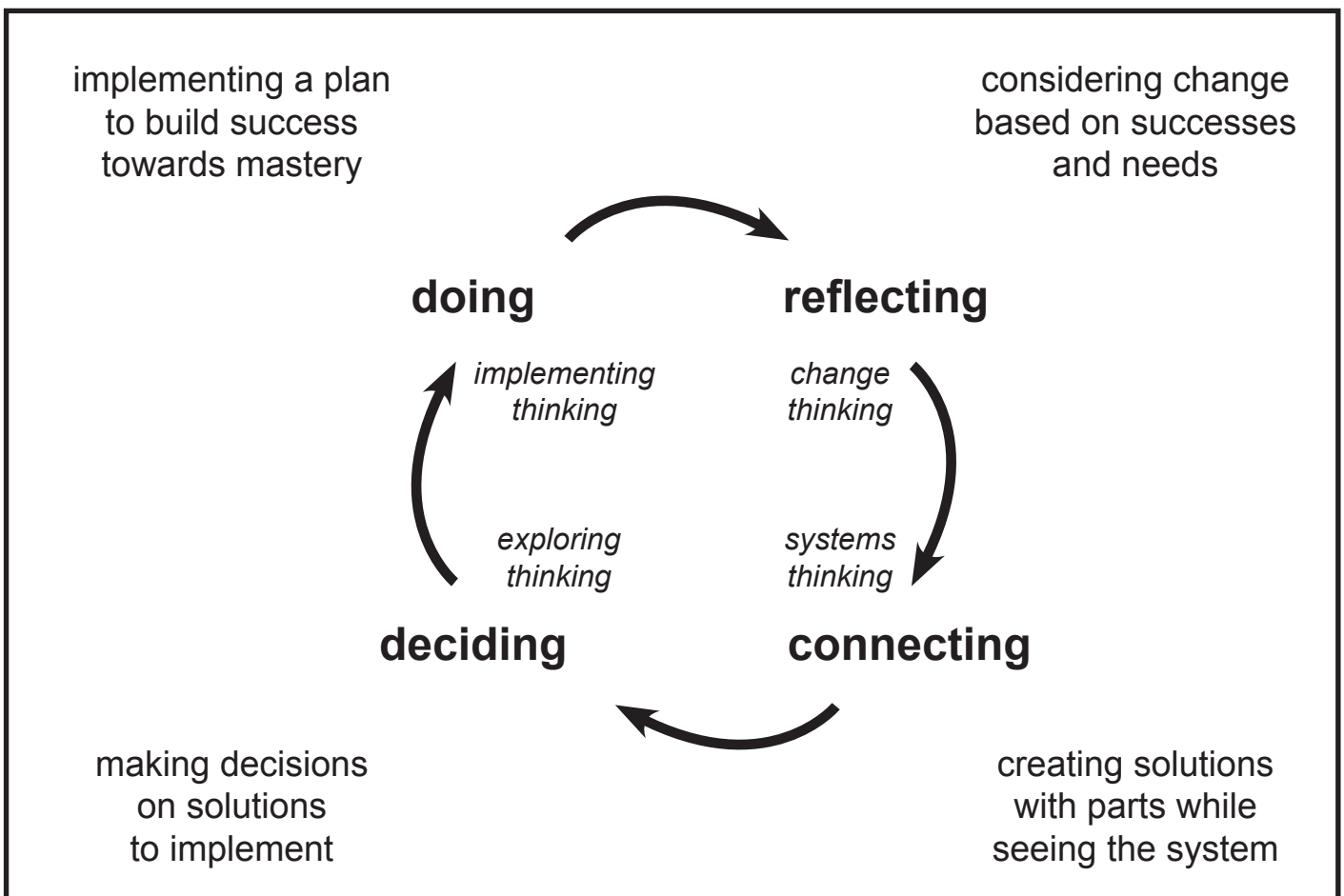
Change

Kotter's Change Model

Professor John Kotter, Harvard Business School.

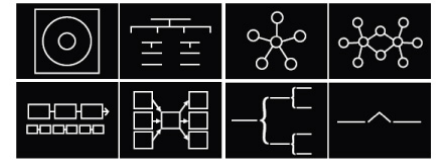


Change Process



Training Methodologies

The Thinking Design training is participant-centered learning with hands-on application using content that is relevant to the participants. One model of the training is visual tools: *Thinking Maps®* which is a cognitive visual mapping language providing a concrete foundation to organize one's thinking, understand each other's thinking and each other's perspectives (frame of reference). This maximizes an organization's capacity to think, understand, and perform effectively to succeed individually as well as collaboratively.



Thinking Designs Models and Methods

Visual Tools

Thinking Maps®

Collaborating Communities

collaborative learning
collegial coaching
community building

Questioning for Inquiry

guiding questions
guiding thinking

Thinking Environments

interacting with intentionality

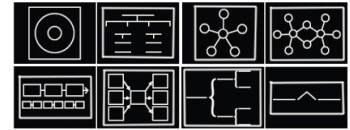
Dispositions

Open Minds



Training Methodology: Visual Tools • Thinking Maps®

Thinking Maps® are consistent visual patterns linked directly to eight specific thought processes. By visualizing our thinking, we create concrete images of abstract thoughts. These patterns help the whole organization reach higher levels of critical and creative thinking individually and collaboratively. Thinking Maps® establish a consistent language for critical thinking individually and collaboratively..



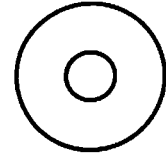
Thinking Maps®



How are we defining this topic?
What is the context? What are our frames of reference which influence our points of view?

DEFINING IN CONTEXT

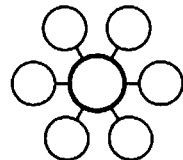
Circle Map



Let's describe the topic. Using adjectives and adjective phrases, what are the sensory, logical and emotional attributes present?

DESCRIBING QUALITIES

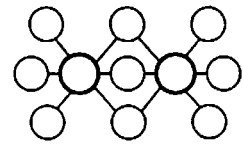
Bubble Map



Let's compare our ideas. Where are the similarities? and differences?
How does the present situation compare to our identified goal?

COMPARING and CONTRASTING

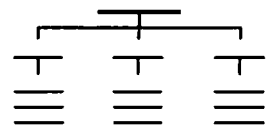
Double Bubble Map



How could we classify these ideas into groups or categories?
What are the main ideas, supporting ideas and details this information?

CLASSIFYING

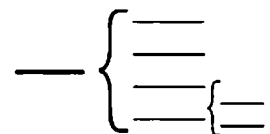
Tree Map



Are there any physical, component parts and subparts that we need to analyze?

PART TO WHOLE

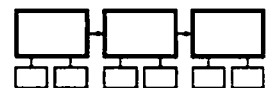
Brace Map



What do we think happened?
What is the sequence of events?
Let's prioritize our solutions and then create a sequential plan of action.

SEQUENCING

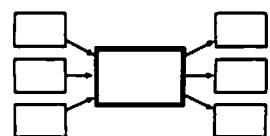
Flow Map



What are the short and longterm causes and effects of this event?
What are the feedbacks in the system? Given our solution, let's predict what will happen over time.

CAUSE AND EFFECT

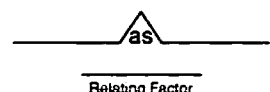
Multi-Flow Map



How is this situation related to other experiences we know? What analogy is guiding our thinking?

SEEING ANALOGIES

Bridge Map

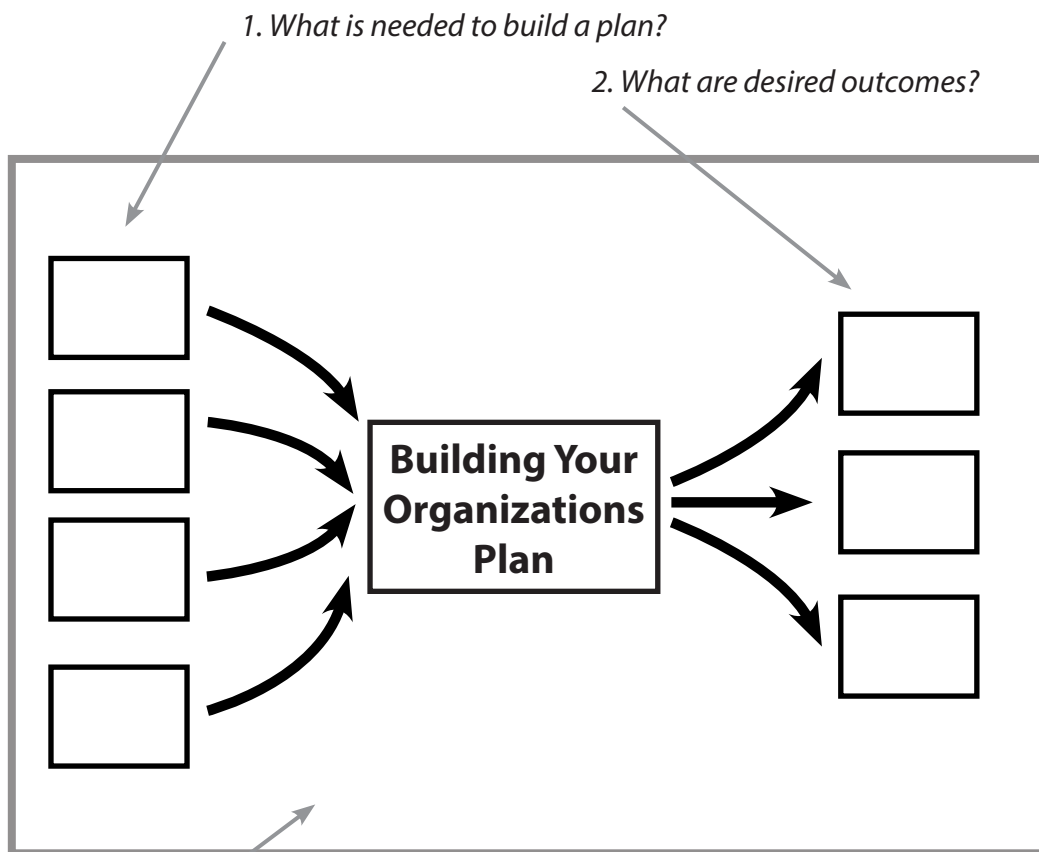


Training Methodology: Thinking Maps® and Frame of Reference

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.

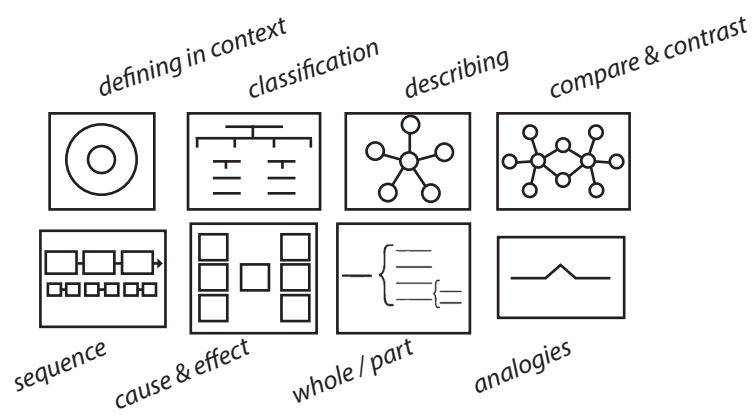
- How do you know what you know about the topic?
- Did your information come from a specific source?
- Is this information being influenced by a specific point of view?
- Who could use this information?
- Why is this information important?



Reflective Frame of Reference:

What are sources of information you can access to assist you?

What is each person's role in the organization?



Training Methodology: Depth and Complexity with Frame of Reference

The Depth and Complexity model provides depth of thinking as a thinker, as a problem solver and with collaborations. The following process is effectively used as part of our thinking with reflective questioning, visual mapping, collaborative networking, dispositions and structuring a thinking environment. Depth and Complexity is very effectively used with the Frame of Reference.



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



Reflective Questions

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



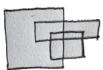
What is the Generalization, Principle, Theory or Big Idea

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



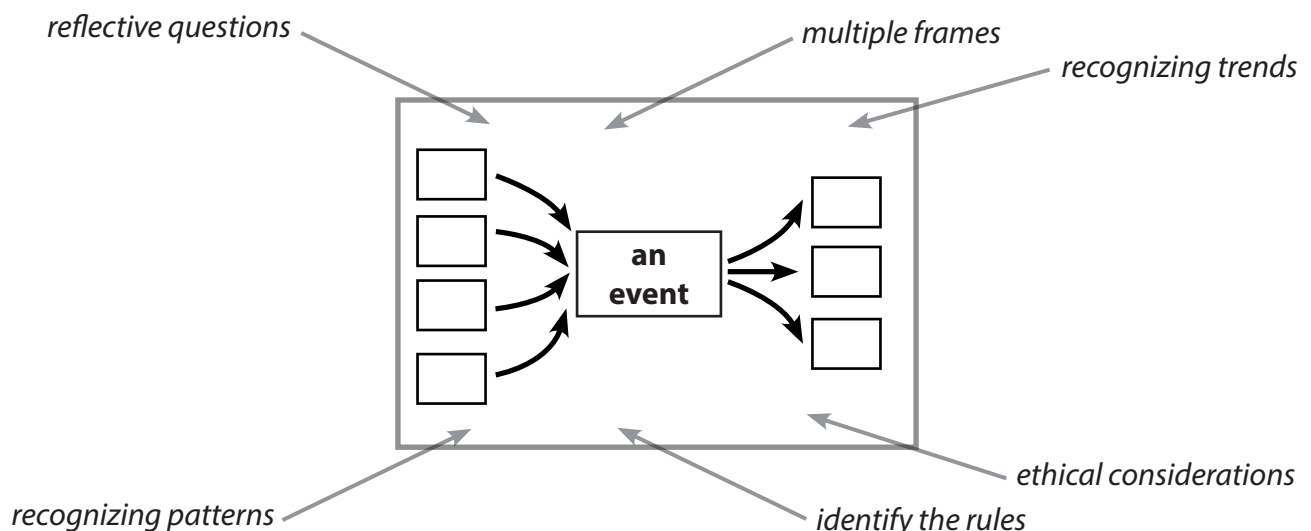
Multiple Frames of Reference (Perspectives)

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



Training Methodology: Questioning for Inquiry

Powerful Questions

The Powerful Questions technique is used to build understanding, 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 participants 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. An extension is *Questions in Depth* as used by journalists.

Object or Image

Either an object or an image work well for this exercise. 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 stimulate discussion and dialogue.

Order of Technique

1—State *you will be shown an object (or image) which we'll ask questions about*. Initially they will be shown the object (or image) and quietly observe it. The participants could closely gathered around the object, the facilitator could be walking around the room, or each small group could have one of the objects or image.

2—If the object or image is something they are doing further research on, the questions might be recorded on poster paper. 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.

3—The facilitator never provides answers and does not ask questions themselves. They might reference a question to offer a new direction, different frame of reference or a deeper extension. e.g. *the perspective of who took the photograph or how an object was designed*.

4—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.

5—Powerful Questions are also excellent used with visual mapping to see, reflect, and assess the thinking of the group and participants.

Questions in Depth

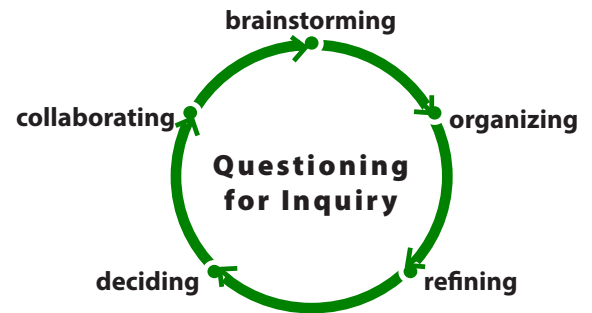
To start *Questions in Depth* the two participants must initially decide on a topic to question. One person starts with an open ended question, then the other person responds with a related open ended question. This continues back and forth with the two participants. The process can start from an object, 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: How can we improve the light bulb?*

Training Methodology: Questioning for Inquiry

Questioning for Collaborative Questioning for Inquiry

- brainstorming questions
- organizing questions
- refining questions
- deciding questions
- collaborating with discussions



Shared Inquiry

When problem solving and/or visioning, it is important to ask interpretive questions that build upon one another. Interpretive questions are effective both with well planned discussions and in spontaneous situations. Interpretive questions stimulate ideas, communication, understanding and problem solving.

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 and require the participants to refer to experiences, knowledge and research.

Writing Interpretive Questions

Developing quality interpretive questions to guide visioning and problem solving begins with understanding the thinking process. This guides practice and mastery of inquiry to create interpretive questions that guide effective and productive discussions for problem solving.

Testing the Questions

If a question is open to different possible answers collaborators will be willing to share their input:

- *You should have genuine interest in the question.*
Collaborators will 'read' your interest (or lack of) in the question.
- *The question should stimulate discussion.*
The question should create an interest in revisiting the vision and/or problem solving for further understanding.
- *The question should be clear.*
The collaborators (or patients) should easily understand the question.
- *The question should be specific.*
The question should fit the topic and not generic to any idea.



Training Methodology: Collaborative Community

Collaborative Learning, Collegial Coaching, Building Community

Collaborative Thinking Learning Methods

Collaborative Thinking Learning Methods is a relationship among co-workers 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).

Collegial Coaching

Collegial Coaching is a model that focuses on healthcare professionals and health sciences educators regularly observing each other to learn, understand, and improve their patient centered methods and pedagogy (the art of teaching). This model works best in groups of three or more - one professional demonstrating while two or more professionals observe. The observed demonstrations are generally in the 15-30 minute range to provide a focus on a particular method(s). The model includes a briefing, demonstration and debriefing.

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 professionals, staff and health sciences educators.

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

Ongoing Development: Professionals regularly participant with the Collegial Coaching model throughout the year.

Building Community

Building Community is developing authentic relationships between people to better understand each other's gifts, respect collaborations as part of the greater community, and learn from one another to develop a greater whole. Building community begins with specific methods and exercises that the whole group (and sub-groups) regularly participates together.

The above three models of **Collaborative Learning, Collegial Coaching, Building Community** are focused on:

- personal mastery
- building a shared vision
- team learning
- developing mental models
- creating a systems thinking organization



Collaborative Thinking Methods

Collaborative Thinking is a relationship among co-workers 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).

Think-Pair-Share

- The instructor 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. This “think-time” can also be spent writing.
- One person then turns to a partner and share their responses.
- During the third step, a person’s responses can be shared within a four-person learning team, within a larger group, or with an entire health team or medical class during a follow-up discussion. The caliber of discussion is enhanced by this technique, and all participants have an opportunity to learn by reflection and by verbalization.

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 home Learning Teams where they teach the other group members.

Collaborative Visual Mapping

Using visual cognitive maps as a collaborative tool for thinking and understanding concepts, ideas and frames of reference.

Building Community • Team Builders • Getting To Know You

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 ballet 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 Ashenafi, who is “It” and stands in the middle. Ashenafi 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. Ashenafi 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.

Collegial Coaching: Medical Professionals Coaching Medical Professionals

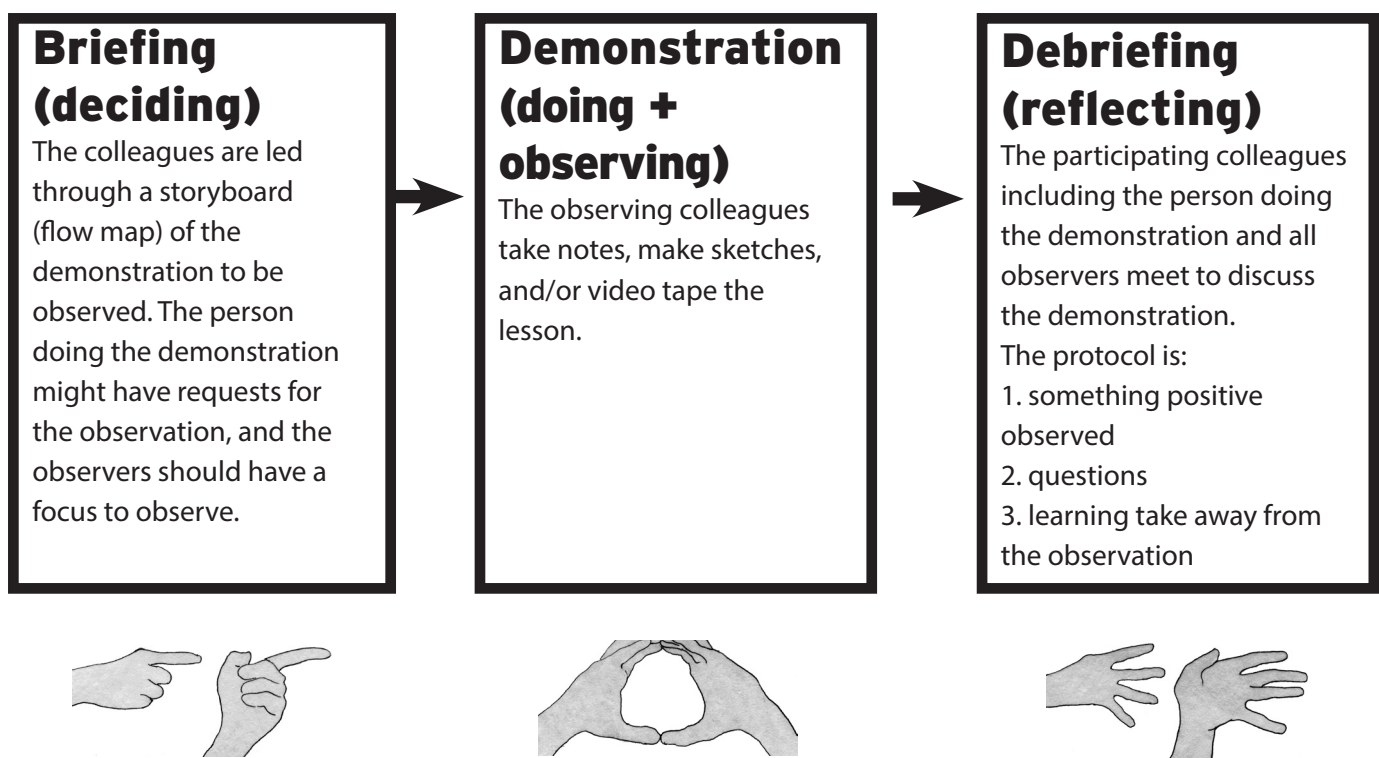
The Collegial Coaching Healthcare Professionals model focuses on professional colleagues regularly observing each other to learn, understand, and improve their methodology (demonstrations, procedures and practice with patients) and/or pedagogy (teaching methods with the College of Health Sciences faculty). This model works best in groups of three or more professional colleagues with one colleague demonstrating a method while two or more other colleagues observe. The observed methods are generally in the 15-30 minute range to provide a focus on particular methods. The model includes a briefing, demonstration, and debriefing.

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 healthcare professionals.

Systems Model: This model is equally effective with administrators coaching administrators; facilitators coaching facilitators, health sciences faculty coaching healthsciences faculty, support staff coaching support staff. This is also effective with a multi disciplinary approach.

Ongoing Development: Healthcare Professionals regularly participant with the Collegial Coaching model throughout the school year.

Process



Dispositions for Developing an Open Mind of Mindful Habits

The Open Mind Dispositions Model

The Open Mind model is the view of offering a participant centered model for dispositions learning and understanding. The dispositions are categorized into 5 key ways of developing and sustaining a listening and collaborating mind. Here is a summary:

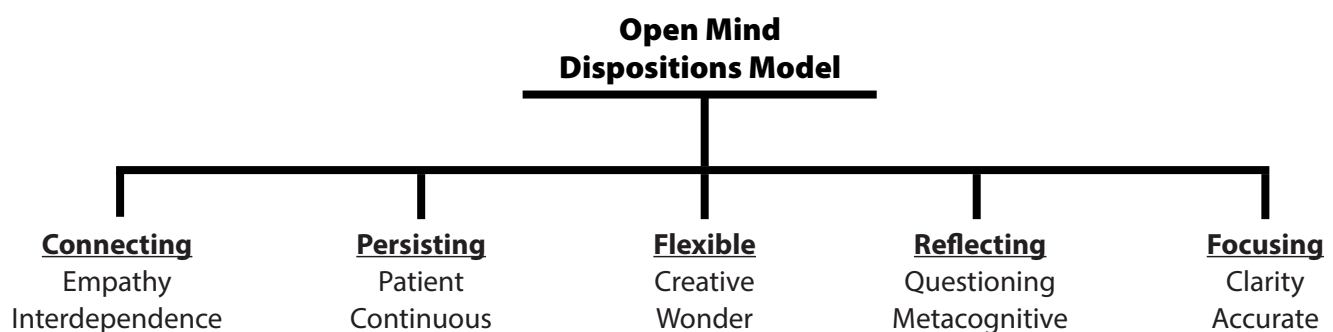
Connecting is keeping an open mind to how we “connect” with other people as well as with ideas. Connecting includes looking for interdependencies between people, including the development of empathy. It also means remaining open minded while connecting prior knowledge to new information.

Persisting is keeping an open mind by not giving up when faced with a difficult or long term problem or project. To persist is to engage patiently in tasks as well as staying open to new learning, rather than remaining stuck on your ideas.

Flexibility is keeping an open mind to different ways of seeing a problem and having a understanding of the generative, creative dimension of thinking, problem solving, and decisions with future effects. It is also meaning being open minded to a world that is ambiguous and full of unexpected events.

Reflecting is keeping an open mind to questioning and investigating your thinking. Metacognition involves looking at what you are thinking as well as how you are thinking. For example, a person may recognize that he or she is thinking about eating an apple (what) and also see that he or she is thinking using causes and effects reason about eating an apple (how)!

Focusing is keeping an open mind about focusing while also being as accurate as possible when solving problems or completing work. This disposition is also about people being able to do systematic searches while drawing upon the environment around them.



Training Methodology: Developing a Thinking Environment

Thinking Environments is an awareness, understanding and a process focused upon the design, interface and impact with the environment of the physical work and learning space. The healthcare professional and health sciences educator's decisions — *with intentionality* — impact the organization's and learning environments. The decisions are crucial to the quality outcomes of the whole organization. In the research about learning and the physical environment, three points stand out:

- Physical environments influence how we feel, hear and see. Those factors, in turn, influence cognitive and affective performance.
- Some variables exert a much greater influence on the professional's achievement than others.
- Better awareness, smarter planning and simple changes can be made in every environment to improve communicating and learning.

The purpose of Thinking Environments professional development is for developing an appreciation and understanding of the physical environment's impact while having practical interventions that can elevate the learning potential of the whole organization and learning community. Thinking Environments is a process of thinking through the development of specific elements that impact the learning environment. The goal is to understand the approach, outcomes and reflectively develop pathways of action that focus on mastery with environment impact.



Our Process

The approach and process recognize three key elements in regards to what, where, how and when they are used:

- **Materials:** the use and choice of natural and recycled materials
- **Objects:** the design and human interface with furniture, lighting and other objects
- **People:** how we as people interface with the environment including space, timing, communication and collaboration

The above elements recognize the focus of using our 'place in space' in regards to local assets and intentionality respectful of local culture.



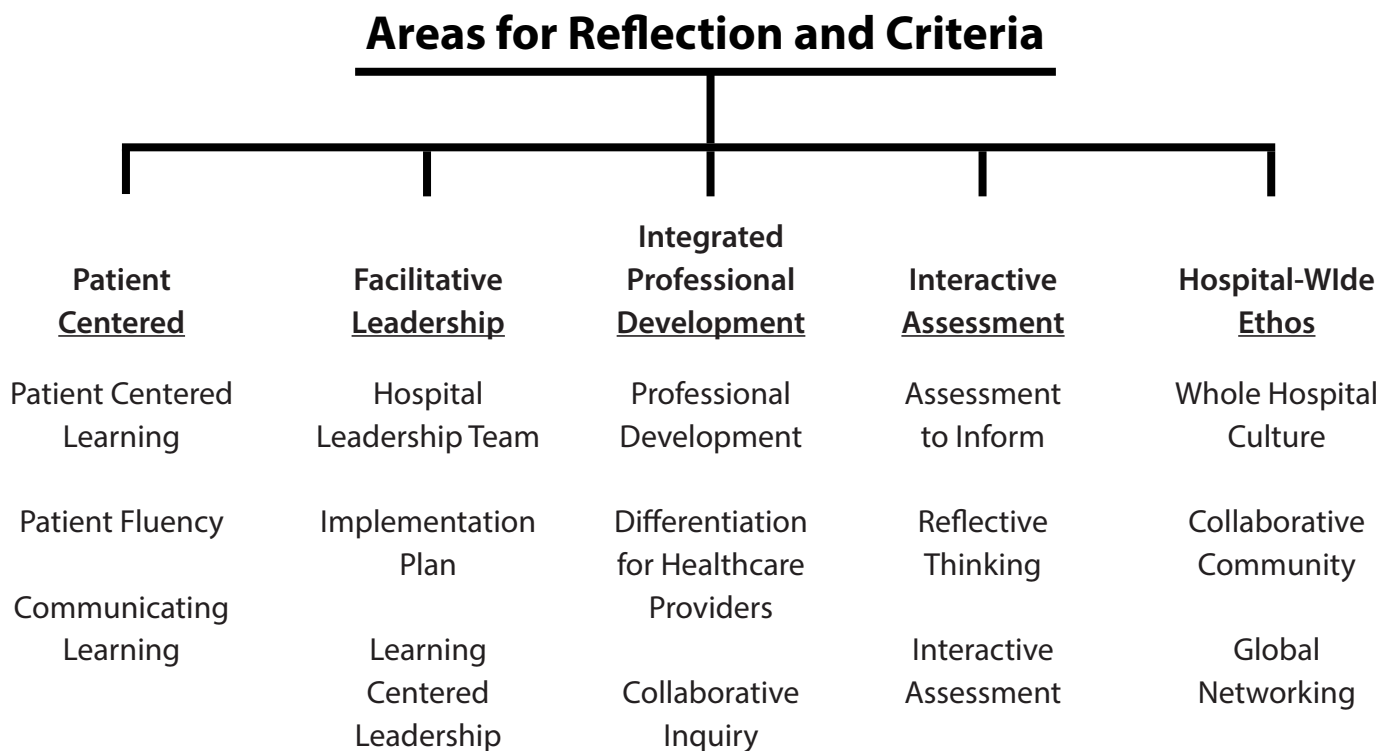
Certification and Accreditation

All participants will receive certification through participation of the various trainings as recognized by the university. This will acknowledge their involvement with professional development of, for and about the hospital learning the methods, skills and approach of Thinking Design.

The various hospital divisions (e.g. emergency room) and health sciences departments will be part of the Areas for Reflection and Criteria Accreditation. This process will be facilitated by the university to assure the whole division, whole hospital and college of health sciences are developing into a 'Thinking Design' organization that best provides for the patients and greater community. Mekelle College of Health Sciences will be a model of this process with a goal of becoming the accrediting institution in Ethiopia both regionally and country-wide.

The Five Areas for Reflection and Fifteen Criteria

The Mekelle healthcare community will focus on five areas for reflection as they develop and think about their own transformative design for the journey towards becoming a Thinking Design organization that is Patient Centered Thinking (and student centered with the medical college), Facilitative Leadership, Integrated Professional Learning, Interactive Assessment, and Hospital-Wide Ethos. There are 15 basic criteria and related reflective questions associated with these five areas that are used by hospitals and/or health sciences department of the university to engage in a process of self-study to assess their progress toward becoming a thinking design hospital and College of Health Sciences. The same 15 criteria and reflective questions are used by an accrediting partner to grant accreditation to divisions in the hospital, the whole hospital, and the health sciences that have met their own vision and objectives as set forth in their transformative design.



Guiding Questions for Implementation

Who should participate?

- faculty? professional staff? support staff? students? hospital staff?

How do we build, grow and sustain the Thinking Design model?

How do we assess outcomes of the Thinking Design model?

- successes?
- needs?
- as a reflective process?

We will develop a set of questions that are asked prior to training, after training, during the emerging use of the tools, during the process, and so forth --- action research

We will use of video interviews to capture the thinking which could be done in small groups.

What is a patient-centered (student centered in the medical college) model?

- look like?
- attributes of it happening?

How do we support healthcare professionals and healthcare faculty effectively changing from a medical-centered model to a patient centered approach?

How will the healthcare leadership, faculty, support staff and medical students benefit from the use of:

- Visual Tools (Thinking Maps)?
- Questioning for Inquiry (effectively and expertly)?
- understanding dispositions?
- and knowing methods for collaborative learning?
- thinking environments?

The frame of reference is important with visual mapping. It is important to understand we all have a frame of reference.

- Why is it important to understand each other's 'frame of reference' (perspective)?
- What tools do we use to understand our individual and collective 'frames of reference'?

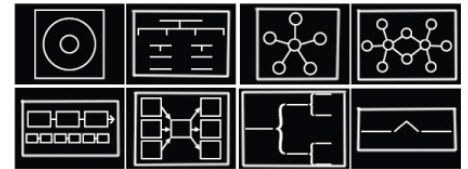
The use of visual tools and inquiry can be used as a means of assessment of our practices.

Visual Mapping • Frame of Reference

Perspective, Point of View

The Frame of Reference is the lens through which we view things including:

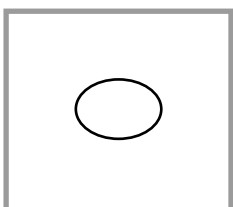
- How do you know what you know?
- Where did you get your information?
- Who are your influences?
- What are your experiences



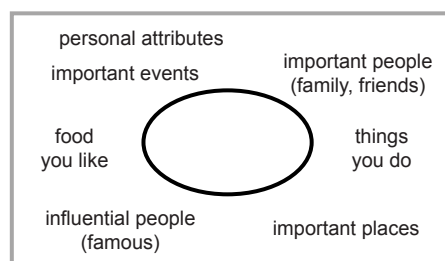
Thinking Maps®

My Frame: Frame of Reference

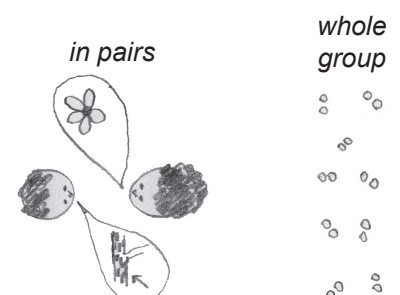
1 Use the space above and draw a circle and frame. This process can also be done in sand with a stick.



2 Write and/or draw things that describe things about your life. Your frame of reference including important people, events, places, attributes and things about you.

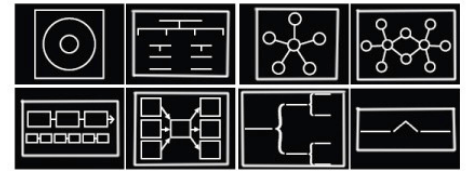


3 Pair with another person to share your personal frames.

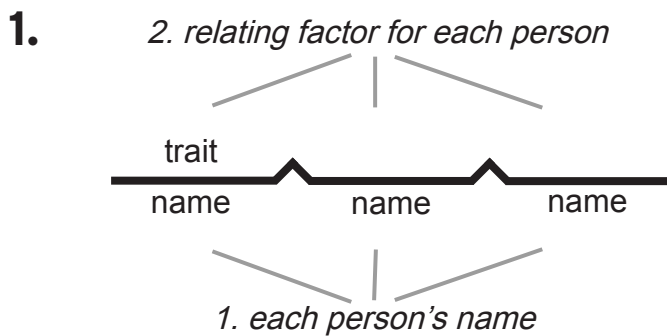


Visual Mapping - Connecting and Learning Of, For and About Each Other

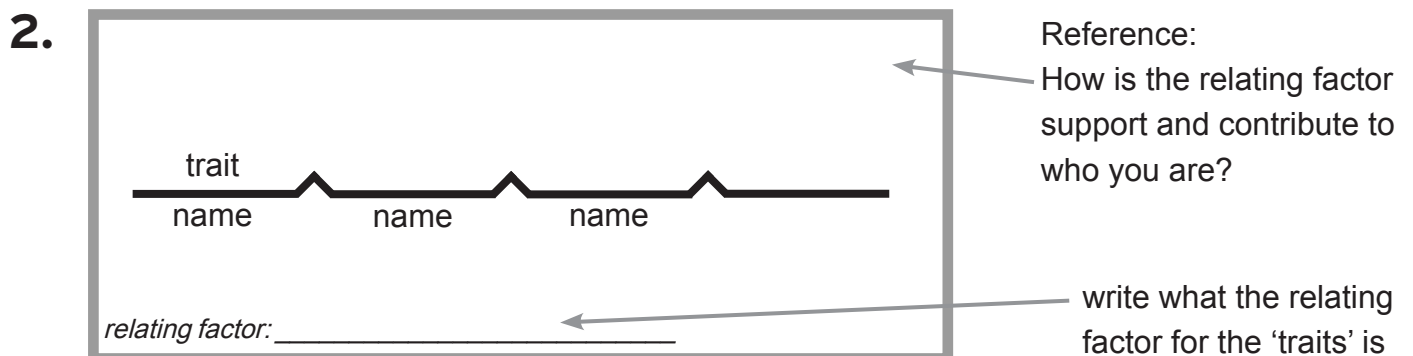
We will continue with a visual mapping process called a Bridge Map (Thinking Maps®) with a Frame of Reference. This process will support us in being reflective of our personal experiences along with others in our small group.



Thinking Maps®



- use a A4, or similar blank paper, or naturally on the ground in soil
- construct a Bridge Map as modeled
- use a pen, marking pen or stick
- use words (any language), drawings and/or photos
- write each person's name (bottom)
- write a corresponding factor for each person that 'relates to one another'



3. After you and small group have completed your Bridge Map with the frame of references, gather with another small group and share your ideas by asking:

What are some of the similar and different bits of information in the maps?

We will then share the most important information to the collaborating small groups.

For, Of and About Thinking

A thinking healthcare organization is one of a medical community in which all members share a common commitment to giving regular, careful thought to everything that takes place. This will involve learning how to think reflectively, critically and creatively, and to employ these skills and techniques in the co-construction of meaningful implementation and practices. Benefits will also be shown by the ways in which all members of the community interact and show consideration for each other, and in the positive psychological well-being of both patients and hospital staff, the medical college students, the medical college faculty and the medical college support staff.

Learning FOR Thinking

Creating organization-wide and department conditions that support thinking development.

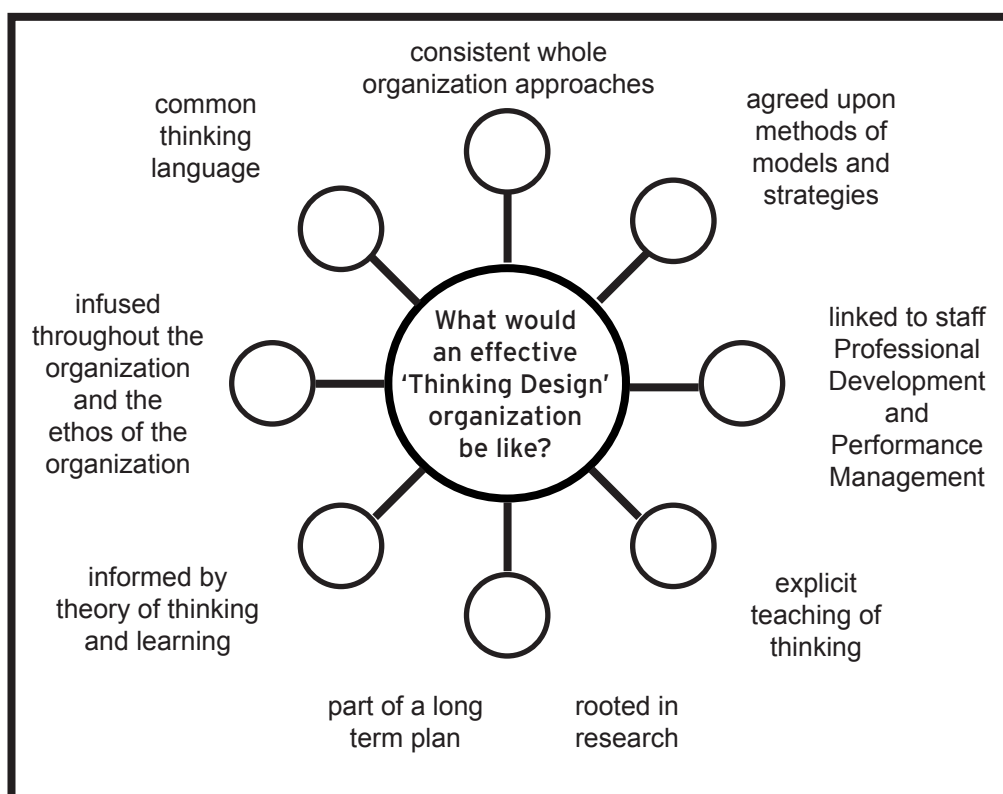
Learning OF Thinking

Providing all leadership, professional and support staff in the skills and strategies of thinking directly and/or implementing thinking processes.

Learning ABOUT Thinking

Helping the whole staff become aware of their own and others' thinking processes and use in real-life problem solving situations.

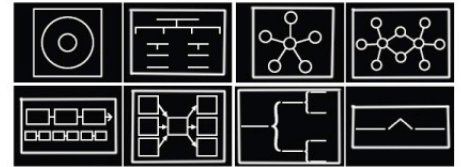
Each of these broad areas of development can happen at the same time while a focus may be on developing a sequential plan. If you had to prioritize a starting point, which learning area would YOU start with: FOR, OF or ABOUT? What would come second and third?



Circle Map

Defining in Context • Brainstorming

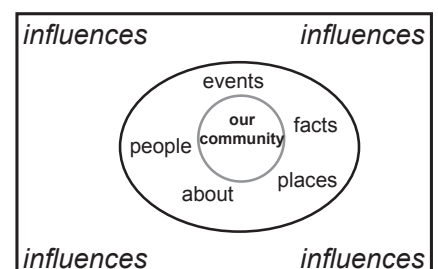
The Circle Map is used for brainstorming ideas and thoughts about a topic or a concept.



Thinking Maps®

Our Community: Circle Map

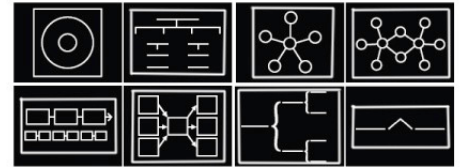
- 1 Write your name and draw a circle around your community name.
- 2 Write and/or draw things about your community around the circle with your community name.
- 3 Draw a circle around your information.
- 4 Draw a frame of reference around your community map. Write influential people, places and events of your organization in the frame.



Bubble Map

Describing

The Bubble Map is for describing using adjectives; Identifying the sensory, logical and emotional qualities of any topic or concept.



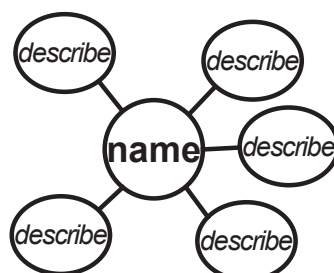
Thinking Maps®

Our Community: Bubble Map

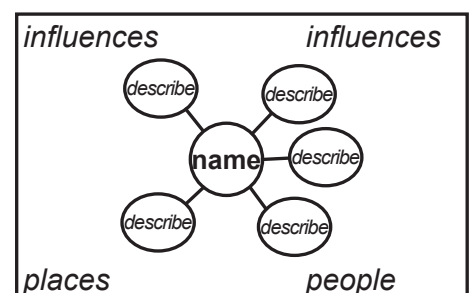
1 Write your community name and draw a circle around our community name.



2 Write and/or draw things that are descriptive words about your community in the bubbles around our community name.



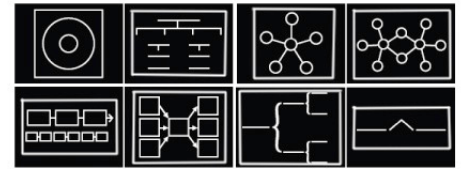
3 Add a frame of reference around your map. Write and/or draw influential people, places and events of our community in the frame.



Double Bubble Map

Compare and Contrast

The Double Bubble Map is used for comparing and contrasting any two things.



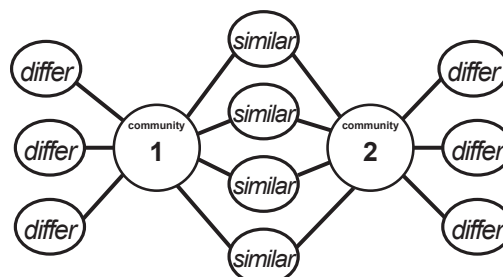
Thinking Maps®

Our Community: Double Bubble Map

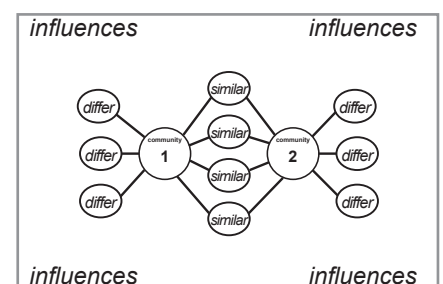
1 Pair with another colleague, then write our community and another community with a circle around each of your names (or draw your faces with a circle around them).



2 Write and/or draw similarities in the middle, and identify how you differ with one another on the outside bubbles.



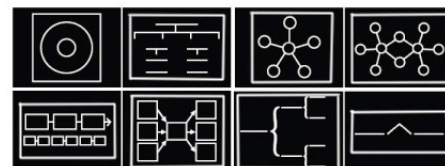
3 Draw a frame of reference around your community map. Write influential people, places and events for each community in the frame.



Tree Map

Classification

The Tree Map is for classifying or sorting things and ideas into categories or groups. Under each category (group) there is a list of details.



Thinking Maps®

Our Community: Tree Map

1 Write our community's Important Things on the top line.

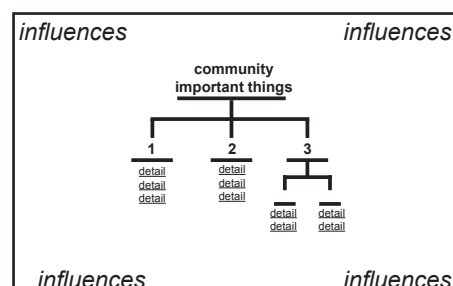
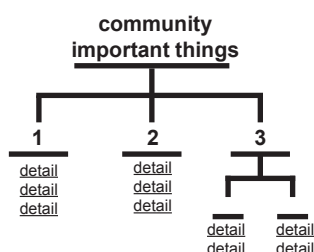


2 Think of 2, 3 or 4 categories to classify important things about your community. Write the name of these categories on the next lines. Under each category, list examples of each favorite thing within that group.



3 Draw a frame of reference around your map. Write influential people, places and events for your community in the frame.

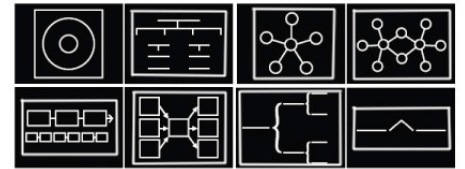
community important things



Brace Map

Whole Part Relationship

The Brace Map is for analyzing the component parts of physical objects; identifying the spatial relationship of parts to the whole or “structural analysis.”



Thinking Maps®

Our Community: Brace Map

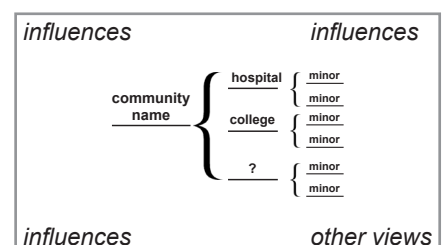
1 Write 'our community name' on the line.



2 Write or draw pictures of the three physical parts of 'our community'. Then write minor parts for each major part.



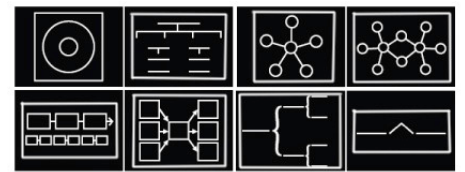
3 Draw a frame of reference around your map. Write or draw what is influencing your community and/or other peoples' views in the frame.



Flow Map

Sequence

The Flow Map is for sequencing the stages and sub-stages of an event including identifying the steps in a process and ordering information.



Thinking Maps®

Our Community: Flow Map

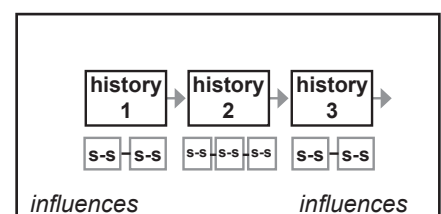
1 Write and/or draw the history of your community. Write 3-6 historical events and sequence them in order.



2 For each step write any of the substages (s-s) for each of the historical events.



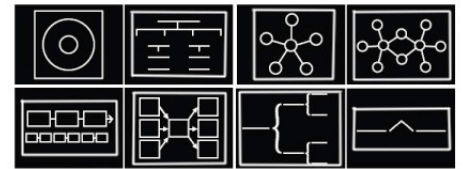
3 Draw a frame of reference around your Flow Map. In the frame write or draw who and/or what influences your community.



Multi-Flow Map

Cause and Effect

The Multi-Flow Map is used for identifying the causes and effects of an event.



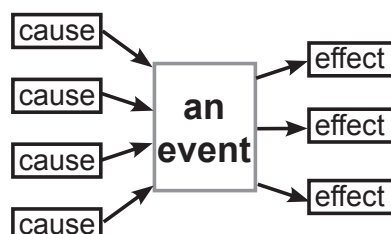
Thinking Maps®

Our Community: Multi-Flow Map

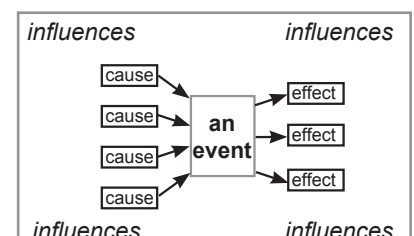
1 Write and/or draw a community event or procedure that happened or will happen. Draw a rectangle around it.



2 In the left boxes write or draw 'causes' of the event. On the right boxes write the 'effects' of the event.



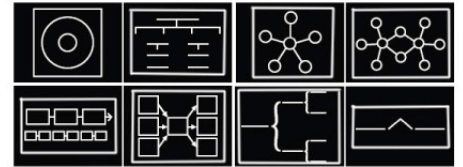
3 Draw a frame of reference around the map and write or draw the experiences of different people involved with the event.



Bridge Map

Classification

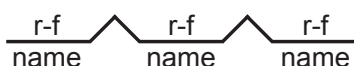
The Bridge Map is used for identifying similarities between relationships and creating analogies.



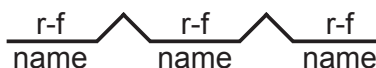
Thinking Maps®

Our Community: Bridge Map

1 Write or draw names of key people in the community on the bottom. Add a key attribute or descriptive for each person.



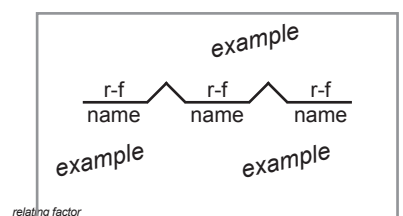
2 Write what the 'relating factor' (r-f) is for all the key people in regards to their common attributes.



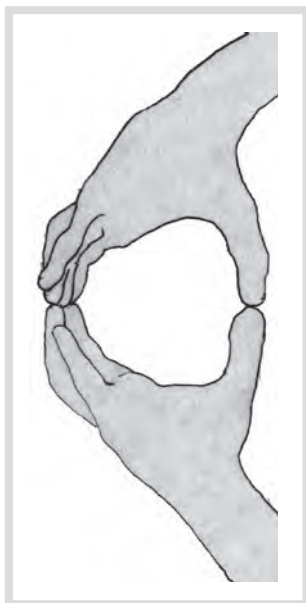
relating factor _____



3 Draw a frame of reference around your map. Write or draw examples for each person's relating factor attributes.



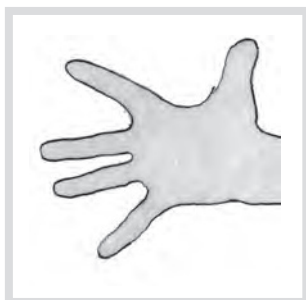
circle map



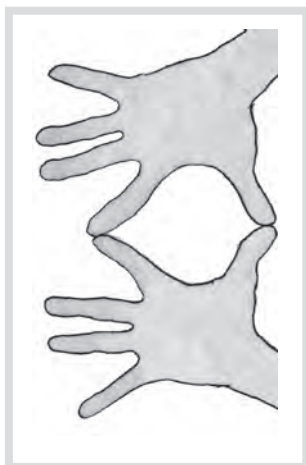
tree map



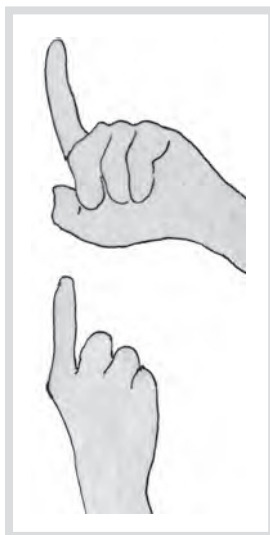
bubble map



double bubble map



flow map



multi-flow map



brace map



bridge map
relating factor _____



Visual Tools for Transforming Information Into Knowledge - Second Edition

By David Hyerle, ©2009, Corwin Press

Visual tools have the unique capacity to communicate rich patterns of thinking and help students take control of their own learning. This second edition of A Field Guide to Using Visual Tools shows teachers of all grades and disciplines how to use these tools to improve instruction and generate significant positive changes in students' cognitive development and classroom performance.

Expert David Hyerle describes three basic types of visual tools: brainstorming webs that nurture creativity, graphic organizers that build analytical skills and help process specific content, and concept maps that promote cognitive development and critical thinking. Updated with new research and applications for three kinds of Thinking Maps®.