



Teaching for Excellence

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Find Your Way with Thinking Maps®

What's the big deal?

Time and time again, after working with my middle school students with learning disabilities on a particular skill or concept, I would watch them walk into their general education classrooms and "lose" that skill with another teacher or subject matter. When we focused our attention on a thought process such as comparing and contrasting, the students would analyze beautifully any situation I threw at them. Yet, when their science teacher asked to compare and contrast during a class discussion, or the social studies teacher asked them to do the same on a unit exam – nothing!

We quickly realized that all the graphic organizers, directed lessons, and varied examples were useless unless our entire team spoke the same language about the skill. We

One critical feature of effective instruction of students with learning needs is the inclusion of strategies that students can use independently and take with them to many different classroom environments.

were not doing that. We put our heads together and came up with a plan. We all agreed for a marking period that when I was working directly with a thinking skill in my resource classroom, each classroom teacher would require that thinking process at some point the same week as it applied to their content. Furthermore, we agreed to use the same graphic organizers and the same language. Now, that was not all it took to put an end to some of the difficulties my students had in the general classroom, but it certainly was a start; and it helped.

Thinking Maps

Where were you when I needed you?

The strategy we discovered by trial and error was one example of how we could support the needs of our students

by using a common language with our instruction. David Hyerle has addressed this very issue with his creation of the Thinking Maps® program. In this program, teachers school wide adopt a series of eight graphic organizers that each represent a thinking process. The model combines the open-ended creative thinking facilitated by brainstorming webs, the organizational structures of graphic organizers, and the metacognition capacities inherent in thinking process maps. This cognitive tool, generated on a blank sheet of paper, chalk board, or white board is used for teaching, learning, and assessing both linear and nonlinear patterns of knowledge.

For example, there is one map (Multiflow) that is always used when representing the cause/effect thought process. There is a different map (Double Bubble) that represents the comparison/contrast thought process, and others that assist with the skills of defining in context, seeing analogies, sequencing, identifying part/whole relationships, describing qualities, and classifying. Teachers in an entire school agree to use these maps consistently and accurately during instruction. This agreement goes beyond just using graphic organizers (beneficial within itself) and addresses the need of students who require language connections and consistency to master a thinking skill. In this way, teachers can focus on the instruction of new content instead of constantly reteaching a thinking process in addition to the content.

What are the advantages for students with special learning needs?

The use of Thinking Maps and other such organizers holds several advantages for students with learning needs.

- *Organization Support* — *Graphic organizers* provide an organizational framework for students. Many students with learning disabilities and other learning problems, including slow learners, have a difficult time organizing

information in their thoughts and on paper (Lerner, 2000).

Graphic organizers offer a concrete vehicle for doing this.

- **Limited Space** — Graphic organizers generally have a fairly limited amount of space to use for writing each idea. This forces teachers and students to break things down to the main idea. This focus on the most important information may assist students in using these organizers later as they study.
- **Strategy Ownership** — One critical feature of effective instruction of students with learning needs is the inclusion

Graphic organizers overtly address the brain's need to form patterns and see relationships with new material to be learned.

of strategies that students can use independently and take with them to many different classroom environments. The metacognitive skills required to control and direct their own thinking and learning are problematic. The connection of each map to a specific thinking skill helps to address this difficulty. Each time students are engaging in that thought process (e.g. compare/contrast) they can use a thinking map to organize their ideas. The thinking map becomes a strategy that the student "owns", and can use in any environment. After initial instruction, the Thinking Maps become student tools and do not have to be imposed by the teacher.

- **Patterns and Connections** **Graphic organizers overtly address the brain's need to form patterns and see relationships with new material to be learned.** According to Caine and Caine (1995), the brain learns new information by detecting patterns and perceiving relationships. Thinking Maps are tools to help establish these relationships in a very direct, visual manner for students who may not make these connections without such explicit strategies.

How do students and teachers use Thinking Maps?

The key for the Thinking Maps program is that, when selected, it is used school wide so that all teachers are using

the same organizers for the same purpose. This consistency is a key part of the potential power of the program. Once students "own" the maps, teachers use them as tools to support curriculum being taught, not as additional curriculum. Students then learn to use the maps to organize basic thought processes even when they have not been directly told to do so.

Teachers and students can use a variety of maps during a period of study. For example, students can be taught to use the Circle Map (defining) to brainstorm ideas for what they will include in an assigned essay. They then can transfer the thoughts they have generated into a Tree Map (classification) that organizes the many ideas they have produced. A Flow Map (sequencing) would then be a tool for deciding in which order the information flows in the paper. After completing this process, a rough draft of the paper has basically been completed for the student to transfer to the essay. More information about Thinking Maps® and school-wide training opportunities can be found at: Innovative Learning Group, 1011 Schaub Drive, Suite 200, Raleigh, North Carolina, 27606, phone 800-243-9169.

In Conclusion

As special needs students are spending more time in the general classroom, teachers are working to expand their strategies for meeting the diverse needs of students in the classrooms. Thinking Maps are not magical. They will not be all it takes to meet the needs of students with special learning needs in the classroom. However, they do offer tools that can be used across teachers, across settings, and **across content areas that can help students generalize what they learn from one setting to the next.** Thinking Maps are useful tools for general and special education teachers, but more importantly they become tools for students – students who often otherwise have difficulty approaching learning situations strategically.

The mind is not a vessel to be filled but a fire to be kindled.

— Plutarch

References

- Caine, R.N. & Caine, G. (1995). *Making connections: Teaching and the human brain*. Alexandria VA: Association for Supervision and Curriculum Development.
- Hyerle, D. (2000). *A Field Guide for Using Visual Tools*. Email Dr. Hyerle at designs.thinking@valley.net.
- Lerner, J. (2000). *Learning Disabilities: Theories, diagnosis, and teaching strategies*. Boston, MA: Houghton Mifflin.

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