Empowering Students From Thinking to Writing

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KEY CONCEPTS

- Writing as thinking from a developmental viewpoint
- The Tree and Flow Maps as organizing structures for developing written expression
- Results from Thinking Maps® schools using a common language for thinking and writing

According to the business community and those in higher education, it is time for a writing revolution in American schools. In September 2002, the College Board—composed of more than 4,300 schools and colleges—established the National Commission on Writing in America’s Schools and Colleges. The decision to create the commission was motivated in part by a decision by the board to make a writing assessment an additional component of the new SAT beginning in 2005. However, a greater impetus for the study was a growing concern within the education and business communities regarding the quality of student writing.

In April 2003, the commission issued a report, The Neglected “R,” that revealed disturbing findings regarding the writing proficiency of students in the United States. Among those findings was the fact that most fourth graders spend less than three hours per week writing. This is 15% of the amount of time they spend watching television each week. In grades 4, 8, and 12, only 50% of students assessed met basic requirements for writing, while only 20% were considered to be proficient. In addition, 66% of high school seniors do not write a three-page paper as often as once a month for their English teachers. Further findings revealed that 50% of college freshmen are not able to produce papers that are relatively free of language errors. It is estimated that these writing weaknesses of incoming college students cost campuses up to $1 billion annually for remediation. Unfortunately, this writing deficiency is spilling over into the business
world as business leaders complain about the writing skills of new employees. This grim picture was the motivation for numerous recommendations presented in The Neglected "R."

The commission called for a major effort to improve teacher training in writing to include all discipline areas, as well as a greater allocation of time devoted to student writing instruction both during the school day and in the form of daily homework assignments. The commission acknowledged that our problems regarding writing proficiency did not occur overnight and that to fix the problem "the amount of time and money devoted to student writing must be dramatically increased in school districts throughout the country, and state and local curriculum guidelines must require writing in every curriculum at all grade levels." In addition, the commission report suggested that writing has been shortchanged in the school reform movement launched 20 years ago and, since writing has not received the attention it deserves, the acquisition of proficient writing skills now must be put squarely in the center of the school agenda beginning in elementary school.

Eight years later, the business community is still focused on the ability of its future employees to communicate well, both orally and in writing. According to an article in USA Today (Marklein, 2010), 89% of those surveyed regarding what they want most from future employees said "effective communication, both orally and in writing." In other words, just having a college degree is not the most important concern; rather, the degree must have value. The results of these two surveys reflect the need for quality instruction in written communication that spans from the early grades through college.

As elementary and high schools prepare to develop greater writing proficiency among their students, they must find a high-quality writing approach and a professional development plan that systematically supports the writing process from idea generation to the final product, as well as writing development from the early grades through high school. Currently, schools across the nation have improved whole-school writing performance through comprehensive training in a developmental K–12 writing framework: Write . . . from the Beginning (Buckner, 2000) and Write . . . for the Future (Buckner & Johnson, 2002). Both frameworks use Thinking Maps as the foundational tools to teach the thinking patterns and processes involved in composing in the narrative, expository, and other domains of writing, thus uniting writing explicitly with thinking.

DEVELOPING COMPOSITION

Child development experts contend that writing proficiency begins with oral communication well before the elementary grades. From the moment of birth, children use their newly developed lungs to communicate with those around them. Caregivers soon learn to distinguish among the different cries of an infant and to associate those cries with the specific needs of their young charges. As children grow into toddlers, language begins to develop, and the early babbles and coos become decipherable verbiage through which the child learns to communicate. At approximately the same time that language is developing, fine motor control is developing, thereby enabling these youngsters to make their first written marks on the world, often in the form of crayon scribbles in inappropriate places.

By the age of three, a child's scribbles become more decipherable, yet primitive, drawings that represent something or someone in the child's world. For a developmental period, drawing actually becomes the child's form of written communication. Once the child is exposed to picture books, environmental print, and the opportunity to observe adults engaging in writing, an awareness of the distinguishing attributes of written communication develops, and the child comes to the understanding that a message is communicated through the written word as well as through pictures. At this point, the child seeks to imitate what he has observed.

The earliest attempts to imitate writing often appear to be squiggles and nonsense to the untrained eye. However, the value of these scribbles and squiggles has been documented as
an indicator of early developmental stages in writing. Marie Clay (1975), among others, has studied extensively these early writings of children and has described certain principles children must master to make marks that resemble writing. Clay maintains that seven basic principles must be learned by children before they can be said to write, and that many of these principles may be seen emerging in the scribbles of children before anyone notices that they are trying to produce real writing. With repeated writing practice, children will produce marks, according to Clay, that resemble more and more the writing they see in print around them. At first the child’s writing will appear as a form of “mock” writing. Over a period of time, and with opportunities for practice, the writing becomes decipherable. For this reason, children in preschool and kindergarten should be encouraged to engage in writing throughout the school day. In some instances the teacher will provide a model for writing, while in other instances the teacher will facilitate spontaneous and self-selected writing engagement.

Once students have begun to communicate with confidence through the written word and can produce several sentences using inventive spelling, they are ready for formal instruction in writing in much the same way that they become ready for formal instruction in reading. Just as a teacher’s manual serves as a valuable resource to provide a guide for the how-to of reading instruction, Thinking Maps can be and have been used by teachers to facilitate, enhance, and expedite the acquisition of writing proficiency for students from the primary grades through high school. Reading and writing share common text structures, and for this reason each is taught most effectively through a step-by-step cumulative process, vertically aligned from one grade level to the next.

WRITING AS THINKING

In an effort to alleviate the writing fears of their students, teachers have been known to tell their charges that writing is just “talk written down.” This statement is a gross oversimplification of a complex process—writing is actually “thinking written down.” Perhaps one reason for inefficiencies in student writing is connected to this misunderstanding. To write well, one must first think well about what is to be communicated. The foundation of formal writing instruction begins with the essential understanding of the purpose for writing, as well as the various organizational patterns that can be used to accomplish this purpose. These patterns correspond to the types of thinking that are involved for a reader to be able to comprehend the writer’s message. Each organizational pattern needed for writing can be visually represented by one of the eight Thinking Maps, depending on the specific purpose for writing. For example, the purpose of narrative writing is to entertain through relating a story or memorable experience in sequential order; therefore, a Flow Map would be used to organize the writing. Teachers who consistently model the use of Thinking Maps for organizing writing have witnessed increased writing proficiency in their students and in their schools.

Within the past several years, more and more states have begun to implement an assessment to ensure writing proficiency in their students. In Florida, for example, all fourth-grade students are assessed annually on either narrative writing or expository writing “to explain why.” A passing score is a 3.0 on a 6-point holistic scale. In 1999, the percentage of fourth-grade students passing the Florida Comprehensive Assessment Test (FCAT) at Brookshire Elementary School in Orange County was approximately 84%. The goal of the teachers and administration at this site was to move their overall school grade of C to an A by targeting improvement in their writing scores. Kindergarten through fifth-grade teachers participated in training at the beginning of the school year in the use of Thinking Maps in all curriculum areas. Follow-up sessions focused exclusively on using Thinking Maps for organizing and modeling writing. Teachers were taught the specific attributes of both narrative and expository writing, as well as the thought processes and Thinking Maps to use with each.
Following the training, a spiraled curriculum plan for teaching writing using consistent visual tools was implemented school-wide. Grade-level training sessions for writing were held to ensure that teachers knew how to model the use of the Thinking Maps for organizing writing with their students and how to demonstrate taking the information “off of the map” and onto the page. All teachers had the opportunity to observe demonstration lessons using Thinking Maps for student writing. The administration monitored and supported the teachers’ efforts, providing individual assistance as needed. Within one year, the number of students passing the writing assessment had risen to approximately 97%. At the end of the second year, every student taking the FCAT writing assessment scored at least a passing 3.0, and the school achieved a state grade of A.

Principal Ken McGuire and his staff at Bluebonnet Elementary School, part of the Keller Independent School District in Fort Worth, Texas, led their students to outstanding writing achievement on the Texas Assessment of Knowledge and Skills (TAKS) in 2008. Following two full years of implementing Write . . . from the Beginning (Buckner, 2000), the number of students scoring a 4 (the highest possible score) rose from 3 to 75. The same year, 81% of fourth-grade students received “commended” status on the TAKS writing test. This was one of the highest levels of commended performance in the state of Texas, which had a 30% state average for commended performance that year.

At Euclid Elementary in Ontario, California, Principal Rhonda Cleeland and Literary Coach Monica Ibarra Ayala led their school in a school-wide implementation of Thinking Maps and Write . . . from the Beginning (Buckner, 2000). Within two years, the school’s Academic Performance Index on the California Standards Test had risen from 624 to 735. In addition, 90 out of 100 fourth-grade students passed the state writing assessment. Of the 90 students, 50 exceeded the state expectations. According to Ayala, “The difference was having the right tools and a common language.”

This same escalation of writing scores can occur all the way through secondary school as students are taught to plan and organize their writing using Thinking Maps. In 1995, Melba Johnson, a high school English teacher in Brunswick County, North Carolina, attended Thinking Maps training and immediately used the maps in her classroom to teach her students how to organize for writing. Within one semester, the scores of her students taking the 10th-grade state English II Writing Examination on literary analysis rose 5 points. One year later, Johnson attended training on the use of Thinking Maps specifically for the teaching of writing, and for the last five semesters of her teaching career, 100% of her students have passed the high school English II Writing Examination. The only difference in her instruction was teaching her students how to use Thinking Maps to plan and organize for writing based on the specific purpose and thought processes involved in the assignment. In addition, Johnson experienced the same success with her 11th- and 12th-grade advanced placement students by using this same process.

STRUCTURES FOR ORGANIZATION

While single classrooms can experience success, the most effective use of Thinking Maps for teaching writing involves whole-school commitment and vertical alignment of writing instruction. The “nonplagiarized,” authentic research report that is difficult for many upper elementary and secondary students can be made easier if, beginning in first grade, students learn how to use a Tree Map to organize information by categories prior to writing. For example, a first-grade student has written a report about his favorite vegetable. Prior to writing, the student organized his information on a Tree Map (see Figure 7.1) according to the categories of information about which he would be writing. Note the correlation between the categories on the Tree Map and the organization of the writing.
By organizing in this manner, the writer ensures better comprehension by his reader since the writing is set up like a familiar reading text structure. Another familiar text structure found in literature is the presentation of a series of events in sequential order to establish a story line. Another first-grade student used a Flow Map to organize her writing to tell a story about what her grandmother did when she came home (see Figure 7.2). The sequence of the Flow Map will become the sequence of the writing. Writing to explain why requires the writer to take a stance or make a choice that is supported with reasons. This type of writing has yet another organizational pattern that can be represented with a partial Multi-Flow Map. Figure 7.3 is a sample of writing by a first-grade student to explain why a certain food is her favorite snack.
Figure 7.3 Writing-to-Explain—Why Multi-Flow Map

purple grapes
purple grapes are my
favorite snack. They have
a sour peel and a sweet
inside. They are small
too eat them in one
bite and seedless there
pretty, shiny and smooth.
They feel good in your
mouth when you eat them
you’ll want more!

The teacher had modeled how to use a Circle Map and a partial Multi-Flow Map to
develop reasons (the initial thinking part of writing) and then to organize for writing. The
student began by brainstorming all of her favorite snacks in a Circle Map. Once this was
done, the student was instructed to make a choice regarding the food about which she
would write and to compose a sentence about her favorite snack and write it in the center
box of the partial Multi-Flow Map. Next, the student engaged in thinking about “what
causd me to select this snack as my favorite” or “what are the reasons why this snack is
my favorite” and then recorded her thoughts in the small boxes on the left-hand side of the
map. The teacher had explained that when others read her writing, they will be thinking
about her choice and her reasons for that choice. The readers should “see” her thinking as
they read.

An example of narrative writing by a second-grade student who used Thinking Maps to
help him plan and organize for writing shows that this student has combined two Thinking
Maps to help with his plan (see Figure 7.4). He used a combination of the Flow Map for
sequencing events and the Tree Map for recording details related to those events. The flexibili-
ity of the maps allows students to combine maps as needed when engaging in a task that
requires more than one thought process. Had the student used only the Flow Map, his writing
could have become nothing more than a sequence of events that reads like a list. The elabora-
tion or details related to each event were planned on lines borrowed from the Tree Map and
located just under each of the stages or events. Note also that the Flow Map is nonlinear in
appearance, allowing the student to plan a beginning and an ending to his story.

As students mature, the Thinking Maps used for writing become more sophisticated in
appearance; however, the correlation between the maps, the thinking, and the writing is still
apparent. Figure 7.5 is a re-creation of a visual representation of eight-year-old Cagney’s think-
ing about her favorite summer vacation and the reasons why it is her favorite. She began with
a partial Multi-Flow Map to develop her reasons; she then used a combination of a Flow Map
and a Tree Map to organize the parts of her writing, to decide the most appropriate sequence for presenting her reasons, and to plan the elaboration of her selected reasons. By the time Cagney wrote her essay, the hard part of the thinking had already been done. It is important to notice in this example how multiple patterns of thinking—based on common, well-defined, and flexible graphic structures—are adapted by the student to progress to more complex thinking and more elegant writing.

Thinking Maps for writing can be valuable to the global learner as well (see Chapter 4, "Tools for Integrating Theories and Differentiating Practice"). In every classroom, there are those students who do not grasp the concept of putting together a piece of writing from the parts to the whole as it is often modeled by teachers. With these students, teachers can use a process referred to as “reverse mapping,” in which the teacher assists the student in analyzing his essay from the whole to its parts. The teacher provides a blank template of the Thinking Map that is used for organizing the particular type of writing, and the student cuts apart a copy of his essay and places the parts on the template. The student can immediately see the “holes” that represent the parts of the essay that are underdeveloped. At this point the student
Figure 7.5 Using a Multi-Flow Map, a Flow Map, and a Tree Map to Plan Expository Writing

My favorite vacation place is at the beach with my grandparents. There are lots of reasons why I like it.

To begin with:
- Good Food
  - Grandmother fixes my favorites
    - Macaroni and cheese, pork chops, biscuits and gravy

Another reason:
- Activities With Pa
  - He takes time off work to be with us
    - Carnival rides, putt-putt, movies

The most important reason:
- Water Sports
  - It is a time for the family to have fun together
    - Boat riding, swimming, playing in the sand

No vacation is as fun as the beach with my grandparents. I can hardly wait until the summer!
can create the needed information and fill the "holes." The flexibility of the Thinking Maps empowers teachers to adjust instruction to the individual needs of students.

Eight-year-old Alecia was a student who needed individualized assistance in her understanding of the components of narrative writing. She was attentive in class and conscientious about completing her assignments correctly. However, as she tried to use the Thinking Maps modeled by her teacher for organizing writing, she often produced an underdeveloped story. Using the reverse mapping procedure, the teacher was able to instruct Alecia in how to develop her story more fully. Alecia's work has been reverse mapped with teacher assistance (see Figure 7.6).

Figure 7.6 Reverse Mapping for Revision and Elaboration

One day my teacher, Mrs. Hay came into the classroom.
All she said was "Good morning," laid a brown paper bag
on her desk and left.

A few minutes later "Ahhh" the bag moves. I wonder
what could be in this bag? All of the sudden I hear
something go "Sweek sweek" and the bag tips over and out
pops a mouse. Mrs. Hay comes back in the room and
says "This is Garry, our new class pet."

I never thought a class pet could be so
SCARRY!
PRECISION OF THOUGHT AND LANGUAGE

Learning the organizational structure for different domains of writing is a first step for students. However, there must be a focus on the quality of the content of that writing as well. Word choice as well as clear, precise language gives life, color, and voice to a piece of writing. One of the 16 Habits of Mind for developing thinking is defined as precision of language (Costa & Kallick, 2000). Many of the Thinking Maps have proven to be effective in helping students to achieve this goal. For example, when a student is contemplating how to describe a noun such as cactus in his writing, he must consider two things: the words he could use and the words he should use. As Mark Twain said, “The difference between the right word and almost the right word is the difference between lightning and a lightning bug.”

Understandably, upon first sight teachers often construe the Bubble Map as just another brainstorming web, but as defined within the Thinking Maps model, this tool is based on the cognitive process of identifying and describing the attributes of things, not the cognitive process of defining all of one’s associated ideas (which is easily accomplished using the Circle Map). This precision of definition of the cognitive skill of identifying attributes using the Bubble Map guides students to more precise word usage and vocabulary development that then can be used effectively to help the students with this task. In this example, the word cactus is placed in the center of the Bubble Map, and the student records adjectives and adjective phrases in the smaller bubbles surrounding it. The immediate goal for the student is to think of as many adjectives as possible that could be used to describe the word cactus. The next step is for the student to evaluate the adjectives selected and to determine the most appropriate, unique, and precise one to use. The quality of writing will improve when the student uses tools and strategies that help him to ponder and wrestle with language in the same way that a sculptor, a singer, or an athlete wrestles to develop a particular skill.

QUALITY ASSESSMENT TOOLS

As governors and legislators incorporate writing into their state school standards, a new commitment to measuring writing quality is sure to follow. Multiple-choice tests used in the past are likely to disappear, as a new commitment to measuring writing quality will result in requiring students to produce a piece of prose that someone reads and evaluates for quality. Also on the education horizon lies a swing away from current assessments that dictate the type, or domain, of writing a student must use to respond to a prompt, thereby requiring that the student have a repertoire of writing domains from which to select.

Not too long ago the state of Texas implemented just such a writing assessment that allows students the choice of how to respond to a given prompt. When given either an “on demand” or an “extended time” writing task, success for these students lies in the knowledge of various visual tools for organizing the information they wish to present. Through extended exposure and practice, the student will acquire a range of organizational tools for writing and will be able to select appropriately the organizing tool that best accomplishes the purpose of the writing task. In addition, with practice in the thought processes related to the quality of the content of writing, an overall improvement in writing proficiency will occur.

While Thinking Maps have been used as effective tools for improving writing, the greatest proficiency occurs when the students also understand how to assess quality in their own writing. Most state assessments are scored using a focused, holistic scoring guide. The holistic score that is given assesses a “general impression” and is useful as a snapshot of writing achievement. However, holistic scoring provides little information that can be used to plan and develop successive instruction geared to improving writing proficiency. According to a publication of the International Reading Association, analytic scoring, unlike holistic general
impression scoring, looks at multiple elements or characteristics associated with effective writing and provides the most information from which to draw conclusions about writers and writings. As an assessment system, analytic scoring offers information that can best assist instruction because each element in the writing is evaluated separately, with each characteristic marked on a scale that indicates how well it has been presented.

Students who are trained in analytic scoring rubrics and understand the meaning of “quality content” have a better chance to be successful on writing assessments. The tools of Thinking Maps to organize their writing and a means to self-evaluate the quality of their content are the very least that teachers should provide during writing instruction.

**SHARING THE LANGUAGE OF WRITING**

For years there have been those in education who have believed that writing is a special language owned by English teachers. We know, however, that this can no longer be the case. Writing must now become the responsibility of all grade levels and all curriculum areas. If we view writing as intimately linked to teaching thinking and recognizing organizational patterns in text structure, then teachers of all subjects teach writing. The Thinking Maps provide teachers and students with a visual language for transferring both writing and thinking skills into every content area. Precise language, transition words, and reasons of elaboration are part of expository writing in textbooks that students need to comprehend while reading. If students transfer these reading skills from one subject to another, writing can improve as they replicate what they have seen in text. While this is not an easy task, it is one that can be accomplished with appropriate teacher training and commitment. Teachers must be empowered with knowledge about writing before they can be the most effective models for their students. If we expect students to write effectively, then our job as educators is to model how to build a bridge between what is within the heart and mind of the student and the written word. This bridge can and should be in the form of visual tools that help students construct the information they wish to relate.

Writing is not an easy task; it is a skill that takes time to develop in both teachers and their students. It involves becoming aware of patterns of thinking and knowing how to build a strong organizational structure. It engages students’ creative and analytical minds as they audition words for themselves and for their readers. The goal of writing should be always to “go for better” and not settle for red when crimson is the word you need. Most important, writing is an act of courage, a willingness to share oneself with others. It is that skill that allows us to leave a part of ourselves in the world when we are gone; it is that symphony of sounds that allows us to understand the hearts and minds of those who have gone before us; it is that essential skill that we must give to those students who are entrusted to us.

**REFERENCES**


