Writing as a Thinking Tool

With do-it-yourself energy and enthusiasm, the faculty at Bernards High School, Bernardsville, New Jersey, developed their own approach to thinking skills.

The furor over thinking skills goes hand in hand with deep and widespread concern over writing skills. At a time when processing and manipulating information rather than amassing and regurgitating it are essential to our economic survival, it is not merely a coincidence that these two skill areas have been viewed as deficient. Clearly, thinking and writing are inextricably connected.

It is this connection that led our junior-senior high school faculty to initiate a staff development program called "Writing as a Thinking and Learning Tool." With no additional expenditure for materials and no burden of added content for teachers, we designed this program to tackle head-on the task of improving students' critical and creative thinking through writing. We agreed that thinking requires something to think about and that the "something" could easily and most beneficially be the subject matter of any class in the school.

Program Design
Together we identified and reviewed basic principles describing the connection between writing and thinking. Then, building on these principles, we designed a program to address three purposes:

- to train any interested teacher of any subject area, grades 7-12, in strategies to improve thinking through the use of writing;
- to assist the trained teachers in implementing and refining the strategies through peer coaching and in-service workshops;
- to conduct formal and informal evaluation activities to determine the effect of these strategies on the quality of student thinking, both oral and written.

We organized the training to reflect the three phases of the thinking/writing process: exploration, expression, and refinement. First we introduced techniques for creating a thinking environment in the classroom, an environment that reduces students' fear of failure and encourages their willingness to take risks. In this cli-
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teachers relax the tight limitations of form but refuse to accept thoughtless answers or mere regurgitation. They encourage students to keep probing, not only in spite of, but because of, the fact that they do not know where they are going (Ziegler 1981). To support this persistence, accountability must sometimes be suspended in favor of experimentation. That is, teachers learn to accept alternate and imaginative forms of writing and to refrain from rigid grading practices; they create opportunities to explore choices, to communicate ideas, and evaluate formatively.

Two members of our staff, well versed in the process approach to writing, created the manual and conducted a series of eight training sessions. The initial group of 18 participants included teachers of social studies, math, foreign language, English, science, business education, remedial reading, special education, home economics, and art; the librarian; and the vice principal for curriculum and instruction.

First, Produce Ideas
During the first phase, we focused on strategies aimed at producing ideas that allow for later revision. We showed how such simple tools as talk, if stimulated by the teacher but dominated by the students, can be used to promote thinking. This kind of talk and the process of free writing can lead to writing tasks that develop specific thinking skills such as brainstorming, classifying and prioritizing, inferring, predicting, and evaluating. Our trainers employed models and examples from all content areas to demonstrate application to any subject.

In this exploration phase we also included strategies designed to enhance higher-level thinking skills. Teachers learned how to use such techniques as free association and finding similarities between unlike objects to push students into intuitive thinking that goes beyond logical, linear reasoning. To stimulate new ways of looking at any topic and to aid in practicing the skills of inventing and comparing, we presented techniques like cubing and the particle-wave field exercise (Graser 1983). Exercises in changing perspectives were also included to help students analyze assumptions and recognize bias and inference. And, as a means of encouraging students to make connections and develop metacognition, we introduced mind maps and clustering. Always putting the emphasis on content, we worked on strategies that would encourage students to explore their own thinking and to express that thinking freely.

Second, Express Ideas
In the second phase, we emphasized expression; we presented writing activities designed to teach students to prioritize, classify, elaborate, and connect ideas. All of the activities extended beyond the traditional modes of reports and essays on teacher-selected topics. We knew that when the teacher maintains control over the written product, the student loses the essence of the thinking process: initiative and involvement (Draper 1979, Emig 1971, Healy 1984). Consequently, the training in phase two was designed to prompt students to pull topics from their own minds and thereby accept responsibility for their own thinking and its expression.

Three, Refine Expression
Phase three, refining expression, concentrated on the development of a finished product, if desired. In our training we stressed the use of checklists, peer conferences, and oral reading to pinpoint errors of expression or unclear thinking. The criteria for judging the thinking/writing assignments, always dependent upon the purpose of the task, were to be developed cooperatively by students and teachers. Throughout this phase, however, we emphasized that writing is thinking; therefore, its value in encouraging students to explore, classify, compare, invent, clarify, and evaluate ideas is not diminished even when the teacher does not require a final product.

Beginning with Enthusiasm
We implemented the program immediately after the training. In fact, once training had begun, teachers were eager to try out the strategies and share their results at subsequent sessions. Now we are incorporating this program into our existing staff development scheme and supporting it through peer coaching. We anticipate the involvement of most teachers by the end of the second year.

Teachers learned how to use "think" writing, such as journals and logs, to help students understand new material, ask relevant questions, clarifying concepts, and elaborate their ideas. We also presented discourse modes such as practice essays, serial writing, oral composing, and group essays, which could stimulate ideas and encourage collaborative effort. In order to help students react to their own thinking and diagnose problems, teachers were trained to intervene as students expressed ideas. Techniques such as conferring and questioning emphasized the importance of teachers' asking reflective questions rather than answering or telling automatically. We hoped teachers could create a collaborative workshop in class: students talking through their ideas and constantly assessing their own thinking.
The enthusiasm of the initial participants remains high and contagious. They report the following results:

- Students are clarifying their thoughts and improving their problem solving.
- Writing down their ideas gives students immediate feedback on their thinking.
- Students delight in sharing ideas and opinions; they yearn for opportunities to express their thoughts in creative ways.
- As students become accustomed to these processes, they are transferring thinking skills from one subject to another.

Producing a significant and lasting impact on students' thinking skills depends on every teacher in every content area. One of the best ways to achieve that impact—a way that not only improves thinking but enhances subject matter learning—is to enlist teachers in the use of writing as a thinking tool.

References


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