Developing a classroom culture of thinking

A whole school approach

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One of the primary objectives of schooling should involve the teaching of tools for life-long learning. As a result, many educators place a high priority on empowering students with thinking skills such as the ability to reason, to make informed judgements, to critically evaluate information, and to think both creatively and caringly. Immersion in high order thinking, therefore, should be an integral aspect of learning. This paper discusses the need for a framework that ensures this occurs in every classroom, every day.

As a consultant visiting schools it became obvious that whilst they had clearly articulated guidelines and policies for a vast array of factors connected to student learning, the teaching of thinking skills across the school was a common exception. It became clear that teachers need a manageable framework for the explicit teaching of thinking skills that will equip students with thinking tools to use throughout their schooling and in the years beyond. Support for this position was enhanced by the work of Dr John Hattie and his team when they undertook a meta-analysis of research on student learning. They noted that the explicit teaching of thinking was one of only two interventions to reach an effect size of 0.8 or better, that being double the average of all interventions considered (Hattie, Biggs & Purdie, 1996).

Pohl (1997) maintains schools would benefit from having a framework for *a whole school approach* to the explicit teaching of thinking skills across the primary grades and in the middle years of schooling. This framework for a whole-school approach forms the basis of this discussion. Schools undertaking this approach devise and adhere to a prescribed *scope and sequence* for the teaching of thinking that immerses students in a wide range of strategies aimed at developing higher order thinking skills.

What is meant by a thinking culture?
A classroom thinking culture may be best described as a supportive environment in which specific factors

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work together in a synergetic fashion to bring about and reinforce the enterprise of productive thinking (i.e. in a critical, creative and caring sense).

An essential element in developing a classroom culture of thinking is the explicit teaching of thinking skills to all students. Developing a thinking culture requires teaching and learning activities that:
- empower students with the language, tools and strategies to engage in a wide range of analytical, critical, creative and caring thinking tasks;
- provide on-going opportunities for developing, practicing and refining the skills of thinking;
- provide instruction and practice in managing, organising and recording thinking; and
- assist in the transfer of skills to everyday life as tools for life-long learning.

Achieving a culture of thinking requires more than a few teachers occasionally using one or two thinking strategies as a part of their normal classroom practice. A whole-school approach that provides a scope and sequence for the introduction of thinking skills at specific year levels or across faculties has a much greater chance of success.

Developing a thinking culture within a school requires that all teachers:
- establish and use an appropriate language of thinking in their classroom;
- are familiar with a diverse range of thinking strategies; and
- make extensive use of graphic organisers to assist students to better manage, organise, record and recall their thinking.

Furthermore, within a thinking culture, it is expected that all students will be progressively exposed to a range of thinking strategies that develop their skills in a range of types of thinking, including: analytical thinking, critical thinking, creative thinking, caring thinking, responding to a wide range of question types, framing questions, using question-generating tools, using graphic organisers to record thinking and to present the products of their thinking, and making decisions and solving problems.

The scope of the modules in *Teaching thinking skills in the primary years* (Pohl, 1997) provides the opportunity for students to receive explicit instruction in seven distinct aspects of thinking (all of which are applicable for use in the middle years context).

Six Hat thinking—De Bono's strategy to ensure deferred judgement until the problem / issue has been considered from different viewpoints. This strategy can be applied as a shared language of thinking in junior primary classrooms.

Extended brainstorming—An eight-part process that goes beyond brainstorming for fluency (numerous ideas) and aims to build flexibility, originality and elaboration of thought. Thinking can then be extended beyond cognitive components to include affective components of curiosity, complexity, risk taking and imagination.

Questioning techniques—A pre-requisite skill for inquiry-based learning topics that require students to create their own worthwhile questions for investigation.

Thinkers keys—Tony Ryan's set of thinkers keys are simple but deceptively powerful thinking tools with a strong high-order and affective thinking focus.

Graphic organisers—Enhance retention and recall as well as provide a means for recording thoughts more efficiently.

Bloom's Taxonomy—This list includes the simplest form of thinking—remembering—followed by understanding, applying, analysing, evaluating and finally, creating (Anderson & Krathwohl, 2001).

Planning / decision-making / problem solving—Provides an opportunity for students to apply previously taught strategies within a framework for working with real or real-to-life problems.

Framing these models and strategies into a sequence for explicit teaching at specific year levels and / or by different faculty groups ensures that *all* students become familiar with *all* approaches to thinking in a systematic fashion. This allows senior secondary students to enter this phase of their education with an extensive range of tools, skills and strategies that enhance their ability to work more effectively and efficiently.

Developing a whole-school approach

In developing a whole school approach, teachers decide when it is most appropriate to introduce specific strategies. Modules that introduce tools students need to revisit many times throughout their schooling should appear early within an agreed sequence. Explicit teaching of the more complex thinking frameworks and strategies should be delayed until the later years.

Although teachers will attend to the explicit skilling of students in accordance with the agreed scope and sequence for their school, they are not precluded from using tools or strategies outside of their particular year level / faculty.

There are a number of key issues to be addressed in developing a whole school approach to the teaching of thinking (e.g. staff training and development, tracking students' understanding of thinking strategies, and implementing indicators of successful intervention). A recent publication, *Developing a thinking curriculum at your school* (Pohl, 2007), outlines how some schools in Australia and New Zealand have tackled these issues.

Conclusion

A culture of thinking is a double-sided coin. One side is what teachers do to develop the culture while the other is what students do within that culture of thinking. Most importantly, both occur within an environment that:

- does not see the teaching of thinking as an add-on to an already overcrowded curriculum;
- enables students to reason, think and solve problems that go beyond routine types of operation to engage in complex thinking that can be applied to new situations and unfamiliar problems;
- relates thinking and learning strategies to discipline-based knowledge;
- encourages students to learn how to learn and to become motivated, self-regulated, lifelong learners; and
- infuses thinking into every teaching and learning activity—every lesson, every day.

TEACH

References

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of cognitive objectives* (Complete edition). New York: Longman.

Hattie, J., Biggs, H., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research, 66*(2), 99–136.

Pohl, M. (1997). *Teaching thinking skills in the primary years*. Melbourne, Vic: Hawker Brownlow Education.

Pohl, M. (2000). *Learning to think, thinking to learn*. Melbourne, Vic: Hawker Brownlow Education.

Pohl, M. (2007). *Developing a thinking curriculum at your school*. Melbourne, Vic: Hawker Brownlow Education.

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