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Tools for Integrating Theories and Differentiating Practice

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KEY CONCEPTS

- Differentiating instruction through student-centered tools in New Zealand
- Using a Flow Map for simultaneously enriching Habits of Mind, multiple intelligences, and learning styles
- Facilitating emotional and cognitive development using Thinking Maps®

There are a number of ways in which we enrich the experiences our students have in our class-rooms in any given year and over time in our schools. As we grow as teachers and administrators through these changes, we also enrich our learning community. In the short term, new techniques and theories implemented in schools may leverage new learning, but ultimately a long-term question may remain below the surface and undermine change: In what ways do these practices and theoretical models integrate with the existing approaches we have in place so that the individual efforts are unified? A school may react to yearly changes and become additive but not integrative. Sustaining a larger vision while creating a coherent educational experience for students requires constant orchestration of the overlapping teaching strategies, student tools, and various theories introduced into the school.

If the leadership of the school community does not address this question, then new processes may not be used together by teachers and students. The educational program risks becoming perceived by all concerned as merely a jumble of discordant instruments sounding off, rather than a richly synchronized, high-quality performance. As the headmaster of St. George's School, a K–8 private school in New Zealand, for 18 years, I had the opportunity to bring many practices and theories together and help facilitate conversations with our

faculty, school board, and parents to make sense of this integration. I was equally concerned about both the practical and the theoretical integration of models. Over the years of my service, I have become particularly intrigued by how Thinking Maps have helped integrate the theories and practices of Goleman's views on emotional intelligence, Gardner's multiple intelligences, the Dunns' learning styles model, and Costa's Habits of Mind in our school.

INTEGRATING TOOLS FOR DIFFERENTIATION

The greatest advantage we as educators can give the wide, diverse range of students we teach is to enable them as learners. The drive toward the twin goals of common content and differentiated processes for individuals is one of the key educational challenges of the 21st century. For many school communities this dilemma can become a point of conflict, driving well-meaning people apart rather than functioning as a point of departure or an opportunity for growth.

In order to maximize learning for all students, individual differences must be sought out and explicitly developed in each of us as teachers and learners. To accomplish this, there is a need not only for the teacher to know how each individual learns but for the student to know that as well. Such information must be raised to the consciousness level. For example, while Thinking Maps are valuable in their own right as flexible tools for differentiating and unifying learning in a classroom, these tools become more useful for learners when they are connected to the other current learning theories and practices. As we found at our school, there are many connections to be made between the use of Thinking Maps in classrooms and emotional intelligence, multiple intelligences, learning styles, and Habits of Mind. When used together, they develop a synergy that truly benefits both the teacher and the student.

For a very long time now, seeking these connections has been the lifeblood of our school. This is because our school faculty has been particularly influenced by thinkers such as Alvin Toffler, Charles Handy, and Peter Senge. St. George's School has come to perceive itself as a learning organization preparing our students, our teachers, and even our parents for lifelong learning where the only constant is change and perhaps paradox. We want to go beyond teaching the curriculum and attaining high standards, important as they must be, to teaching behaviors that allow our teachers and our students to be confident problem solvers in areas where they do not know the answers; in areas where they have to ask their own questions; and in areas where, as Toffler has offered, they are required to learn, unlearn, and relearn.

THEORIES INTO PRACTICE

Over a dozen years our faculty has gone through extensive training in the theory and practices mentioned above. None of the training and other forms of professional development were isolated; instead they were brought into an ongoing conversation about the connections between approaches. Teachers' professional portfolios were an essential place for educators to muse, research, document, and reflect on how new processes integrated with existing structures. A large part of my investigation of how all of these processes worked together was to move in and out of classrooms on a regular basis.

During a span of time when I was observing a middle-grade class, the students were studying World War II and the Holocaust. I began focusing on two boys as a way of looking at how the learning styles approach worked.

One student, Harry, would be described in the Dunn and Dunn (1992) learning style profile as a near-extreme global learner. He always has his shirt out and constantly chatters, and thus it is no surprise that the sociological line in his profile states that he likes working with peers. As well, he is in constant motion and appears to avoid work. His teacher grasped the important point that it is not work as such that he avoids but analytic work, the factual stuff in

encyclopedias and textbooks. Another student, Douglas, is the opposite. As an analytic learner, he prefers factual nonfiction, less emotive articles, and encyclopedic information. He wrote up the fact file on Auschwitz and drew the geographical map of Europe with great attention to detail. Harry would have none of this. He started by drawing a barbed wire border—anything to avoid or at least delay getting on with the work. He did read excerpts from *Anne Frank: The Diary of a Young Girl*, nonfiction reading, but not in the cold-hard-fact form. It was the emotional content that motivated him. He wrote a very good emotive poem. Harry constantly discussed research with Douglas that Douglas had found, but the teacher worried at times that neither was really learning because Harry seemed to be interrupting Douglas all the time.

However, both Harry and Douglas were learning, and they were using a common tool—a Flow Map—that served to focus their widely ranging styles (see Figure 4.1). One of them was engaged at the global, emotive level and the other at the analytical, factual level, but the information appeared together on their map. The map became a reference point and place that brought their two styles together. When it came time for the formal presentation to the class, Harry was quite verbose and could recall fully the information that was required in the study and shown explicitly in the map. This success story is a starting point for investigating, albeit in short form, the linkages made below between the Thinking Maps and very complex theories of emotions, intelligences, habits, and styles. A wider understanding may come about as we consider how teachers and students are becoming conscious and conversant about how these models work together to support deeper learning.

Figure 4.1 The Holocaust Research Flow Map
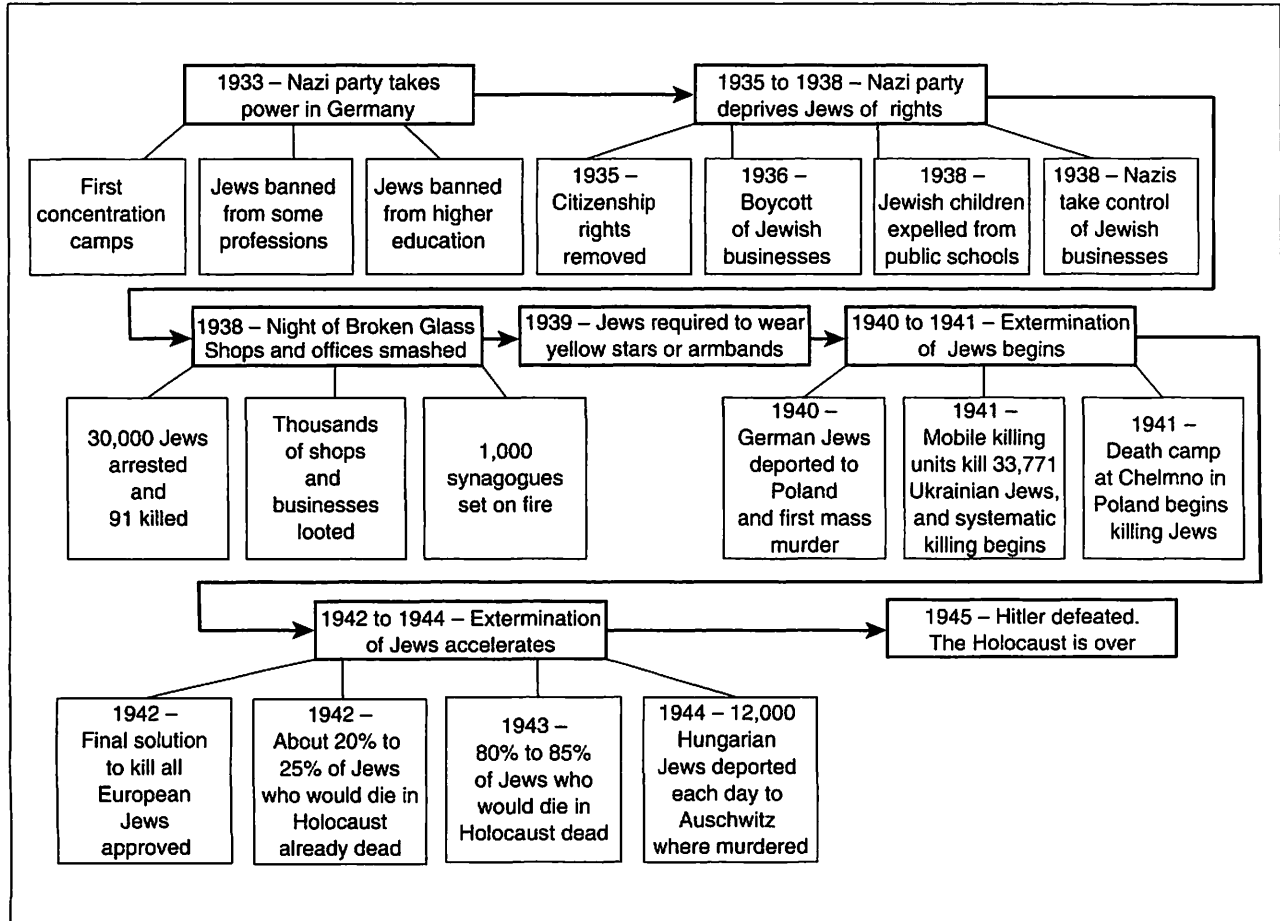
LINKING TO EMOTIONAL INTELLIGENCE

Confidence is necessary for both teachers and students in order for learning to occur, and it can be seen as a by-product of emotional intelligence (Goleman, 1995). Self-awareness and self-management, the first two components of emotional intelligence, are expressed by our abilities to manage ourselves effectively. The teacher of the two boys demonstrated this by having the self-confidence to try something with a risk attached. She did not know the ultimate outcome of allowing two opposites, as Harry and Douglas were, to work together. Many teachers would group kids together who seem to work in similar ways, not dissimilar ways. However, it was what Costa and Kallick (2000) call a responsible risk. Confident in her knowledge of the way the boys learned, the teacher was able to seize opportunities and turn the apparent weakness in the divergent learning style preferences of the boys into a strength. She made the connections by combining her understanding of the boys' learning styles and her internal thought processes with the use of Thinking Maps as the animating center for the boys' work.

Managing relationships effectively is a second component of emotional intelligence. The teacher's knowledge about how individuals learn gave her empathy for the learning styles of both boys, divergent as they were. She made the required organizational changes within the classroom to facilitate these styles, but she also had the social skill to do this effectively. Her empathy was not passive commiseration but active participation. As for the boys, they, too, demonstrated self-awareness. They knew their learning styles as learning strengths, because that was how the learning style profiles were openly referred to in the school. Consequently, the students had developed a strong and positive sense of self-worth. This aided their ability to self-manage and to adapt and seize a new and quite different working relationship—using a common visual tool—and use it in a way that made it work for each of them.

## LINKING TO MULTIPLE INTELLIGENCES

There is a range of multiple intelligences, but the focus of this discussion is on intrapersonal and interpersonal forms, linking with Goleman's work. Intrapersonal intelligence is associated with the internal self. Howard Gardner (1993) defines it as "involving the capacity to understand oneself, to have an effective working model of oneself—including one's own desires, fears, and capacities—and to use such information effectively in regulating one's own life." A key word here is *capacities*, both for teachers and for students. It is a teacher's available repertoire, or the knowledge of the available tools and models, that will enable students to work more effectively. Interpersonal intelligence is more concerned with relationships, a key intelligence for teachers as they create a collaborative learning environment. Gardner's definition states that interpersonal intelligence is "to understand the intentions, motivations, and desires of other people and, consequently, to work effectively with others."

The teacher needs to understand how each individual student learns and to use that knowledge to enable the students to effectively use their individual learning strengths in groups. In so doing, the students, too, need to become aware of their personal intelligences by metacognitive reflection and teacher and peer feedback. The use of Thinking Maps as an open space for co-construction provided a mediating frame for the two boys to act out their styles toward a product that united their styles. The map was a safe place for collaboration. It was evolving and structured, mirrored their thinking, and had no one right answer. The boys were drawing out detailed information in a holistic form and together could evolve the ideas between them on paper.

LINKING LEARNING STYLES

Learning styles (Dunn & Dunn, 1992) are the way in which individuals begin concentrating on and then processing, internalizing, and, finally, retaining new and difficult information that they are taught. Integral to this is the realization that learning is individual—that students learn in many different ways, and teaching and learning are most efficient when these differences are taken into account. Just as theories of intelligence are complex, so, too, is the Dunn and Dunn learning styles model, having 21 different categories. However, there is a smaller subset of the whole, where learners are divided into global or analytic learners. It is this subset that Douglas and Harry were clearly exhibiting and their teacher was supporting, as displayed in summary using the Double Bubble Map in Figure 4.2.

Figure 4.2 Analytic and Global Learner Comparison Double Bubble Map
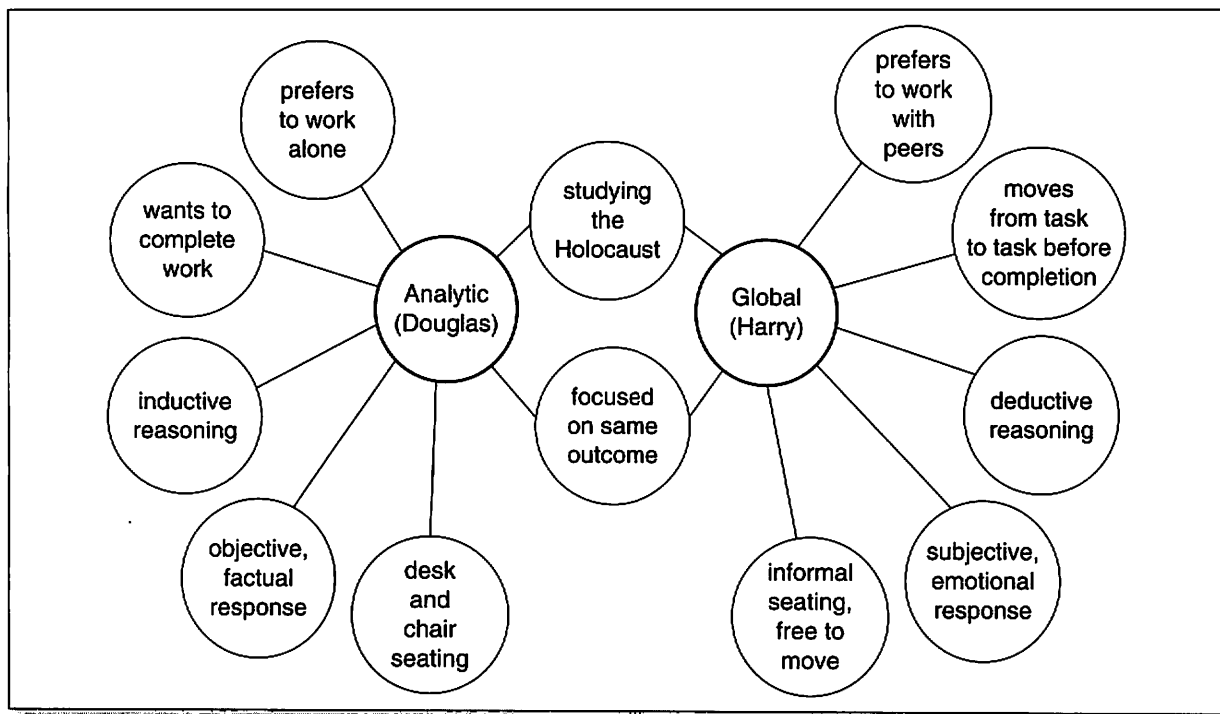
Harry, the analytic learner, was the conventional model pupil. He preferred being seated formally; he worked carefully and methodically through factual detail, completing each piece before moving on. Eventually, the details that he had compiled would become the whole—the complete picture. His work was also characterized by persistence, in the sense that he liked to complete what he was doing before moving on. Douglas, the global learner, was the conventional problem pupil. He needed a more informal seating arrangement, such as soft furniture or being allowed to sprawl on the floor rather than sit at a desk. He needed to be free to move. He focused on the emotional side of things by seeking the big issues, dashing about in this search rather than methodically working from the bottom up. Thus he could be said to lack persistence in that he did not complete what he was doing before turning his attention to something else, searching for the next big picture. Not even his barbed wire border around the Flow Map, an artistic touch, was completed before he was off doing another task. However, in the end, in his own time, he got it completed with Harry.

It was because of the teacher's awareness of and action on these understandings—personal intelligence in action—that these two diverse learning styles were able to be reconciled so successfully.

LINKING HABITS OF MIND

A wide range of Habits of Mind (Costa & Kallick, 2000) were also activated through this activity, especially when considering this situation from the teacher's perspective. It was the teacher who created this learning pair and took the risk of bringing these boys together with the Flow Map in hand.

One key Habit of Mind, metacognition, was formally undertaken by the teacher in her professional development portfolio. She brought to a conscious level the personal, practical knowledge that she developed and articulated as it flowed from her classroom interactions. She was thinking flexibly, listening to her students with understanding and empathy, taking responsible risks, asking questions, and above all remaining open to continuous learning. The students were doing likewise. The teacher noted in her portfolio that through this activity the students were beginning "to understand why they worked the way they did." This was clearly facilitating both their intrapersonal and their interpersonal intelligences. The understandings of how they learn increased their ability to understand the motivation and abilities of the other students and respond to them in such a way that they achieved a positive outcome. They were learning to self-manage and to manage their relationships—attributes that produce positive results far beyond the classroom walls. As the teacher noted in her portfolio, "It not only helped them individually, but it also helped them to understand, tolerate, and work with one another."

There is a strong match here between the theories of Goleman and Gardner and the Dunns' learning style models. As the students' capacities increased through their understanding of the learning styles of their partners, this internal, intrapersonal growth was transferred to interpersonal relationships so that they grew as well. This is ongoing, continual improvement of Habits of Mind through intrinsic rewards of learning. Jonathan Cohen (1999) describes it this way: "Awareness of ourselves and others provides the foundation for social and emotional competencies: a sense of self worth; the ability to solve problems and make responsible and helpful decisions, to communicate and collaborate with others, to become self motivating."

THINKING MAPS: A UNIFYING SET OF TOOLS

Given the short description above of the intersection of emotional and interpersonal intelligences, global and analytic learning styles, and Habits of Mind, we may begin to see how Thinking Maps provide a unique, unifying language across these four approaches, each of which is theoretically rich. The Thinking Maps provide the how-to tools that may be both linear and nonlinear, as well as detailed and holistic. Importantly, they are problem-solving tools used for executive processes (see Chapter 3, "Leveling the Playing Field for All Students"), not just information processors, and in the situation investigated above the teacher retreated to the background after creating the learning environment. Harry and Douglas did their work and problem solving, in this case with only the one Flow Map as the immediate, mediating agent. By their very nature, Thinking Maps are not content or task bound. They are adaptable and can be easily customized to suit individual learning styles and interdisciplinary problems.

There is considerable appeal in these tools for the global learner because the purpose of the map and the thinking process required are always emphasized. This immediately gives the big picture that global learners need. It becomes a large canvas of one or several thinking processes or multitasks such as comparing and contrasting, describing attributes, categorizing, and so

on. Thus, the global mind is able to avoid rushing about looking for an organizing purpose as it settles in on it quickly and can then proceed to work deductively down into the detail.

The same map is flexible enough to provide the detailed structure that an analytical mind needs to build inductively, detail by detail, in order to arrive at the main idea. For example, the Flow Map for sequencing a complex event such as a war can be started with an overarching rectangular phase with smaller boxes expanding as stages, leading to ever more refined details shown as substages within each major stage. In the same way, the Tree Map for categorizing can be built with details from the ground up by the analytic learner, while the global learner is creating the same map from the top down.

However, there are extra spin-offs from this flexible, evolving, visual structuring of content and processes. The Habit of Mind Costa calls persistence is one of the major areas separating analytical and global learners in the Dunn and Dunn learning style model. At one end of the persistence continuum are those learners high on responsibility, who do not want to stop until they have completed their task. These learners are last to leave the classroom as they copy the homework fully and accurately. They are the students whose parents complain that there is too much homework because they spent two hours completing the half hour's work the teacher thought had been assigned. They are driven to be perfect. Part of that perfection is making sure that the task is completed exactly, with all the details in place. Each of the Thinking Maps has an adaptive structure and consistency so that students who are high on persistence can complete steps before moving on, or they can easily chunk the maps in order to provide for closure when there are time constraints. When several maps are being used in sequence, each map can be completed as a single unit in an overall project. In this way, closure is there at the end of each map, which satisfies those who see completion as an attribute of responsibility and removes the frustration of not completing an assignment.

For global learners, who are often low on persistence, moving from task to task is facilitated. Interestingly, the low-persistence student can keep on working for an extended period just as the high-persistence student can. The difference is that the low-persistence student often needs multiple tasks to work on, thus creating an interplay between focal points, but focusing nonetheless. Thinking Maps provide an alternative way of progressing through assignments. Continuity of task is not essential, so leaving off the work at any stage and then coming back later works. Where a sequence of maps is being used, the global learner can move through the sequence bit by bit, developing single ideas as they arise and moving back and forth between maps. In this way, the multitasking that provides optimum learning for the global learner is also made possible.

REFLECTIONS: EMERGENT THINKERS AND LIFELONG LEARNERS

The integrated Habits of Mind, emotional intelligences, and learning styles discussed above are obviously evolving well before a child steps into our school and becomes a student. It has become our responsibility, however, as an organization, to integrate these theories so that from the beginning and over time our students come to appreciate their capacities and learn how to use them to work effectively with others in the classroom.

The importance of Thinking Maps as a vehicle by which students are able to discover this is evident. However, the benefits do not stop there. By making these connections, positive attitudes toward learning are nurtured within boys like Harry who are often pigeonholed as difficult pupils. The maps become a way to get to the holism of their thinking. As a result, these students gain persistence, self-management, and self-efficacy as foundations for differentiated, lifelong learning. The added benefit is that we as educators learn more about ourselves and our students.

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