THINKING Classroom

A Journal of Reading, Writing and Critical Reflection

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MISSION STATEMENT

Thinking Classroom serves as an international forum of exchange among teachers, teacher educators and others interested in promoting democratic teaching practices. The publication encourages professional development, research and reflection. *Thinking Classroom* features articles that foster learner-centered teaching strategies including critical and creative thinking, active and cooperative learning, and problem solving. The journal also publishes articles about the institutional structures that support these practices.

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ABOUT THE INTERNATIONAL READING ASSOCIATION

The International Reading Association is a nonprofit service organization dedicated to improving reading instruction and promoting the lifetime reading habit. The Association publishes professional books and five professional print journals: *The Reading Teacher* (about learners ages 1–12), the *Journal of Adolescent & Adult Literacy, Reading Research Quarterly, Lectura y Vida* (in Spanish), and *Thinking Classroom* (also published in Russian as *Peremena*). The Association also publishes the electronic professional journal *Reading Online* (http://www.readingonline.org) and a bimonthly newspaper for members, *Reading Today.*

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Departments

Features

Letter from the Editor

Time goes by, time rushes on, time flies… But it can also tick by slowly, drag, or come to a standstill. We are all familiar with this phenomenon. After a well-planned, interesting class the students will ask, "Is the class already over?" But sometimes there's a different picture: an enthusiastic teacher leaves the classroom followed by bored, sleepy students.

If we ask teachers what they need more of, most would agree that time is their biggest problem—there never seems to be enough of it. What, then, is really worth spending time on? How can we leverage students' curiosity and potential for learning outside the classroom? How much can we rely on them to work independently? These and many other questions are discussed in Li-Te Li's article "Carl Rogers and Me: Revisiting Teaching" (Taiwan, China) [page #]. The author shows how her own teaching philosophy and methods were shaped by Carl Rogers's humanistic approach to psychology, including such ideas as learner-centered teaching and the "teacher as facilitator." We encourage others among you to share your thoughts about theorists—both old and new—whose ideas have changed your own teaching practice.

It is no secret that many teachers run into serious difficulties when they try to use modern interactive teaching methods. We sincerely hope that William Brozo's new column, "Strategic Moves," will help you introduce new strategies to spark your students' curiosity and motivate them both in and outside the classroom. The first column, in this issue [page #], offers suggestions for using role-playing in a variety of subjects, from chemistry to literature.

It was the problem of insufficient time that led U.S. teacher Nancy McDonough to look for a fresh approach to her teaching. In her article "Fitting It All In: How Sea Stars Taught Me To Integrate the Curriculum" [page #], she describes how integrating the curriculum enables her to arouse students' interest in the theme, connect her class with real life, save time, and also solve other problems in her elementary school class.

All teachers would agree that motivating students is a big part of their jobs, one that often requires considerable effort and energy. But is there any way to measure the level of a student's involvement in class? How can we determine what helps and what hinders motivation? Romanian author Daniela Cretu offers the results of her collaborative research on this problem [page #].

Time and patience are the two things a teacher needs in order to find a way to the hearts of extremely shy, quiet students, like those in the article "Working With the 'Quiet Ones'" by Kazakh teacher Rysaldy Kaliyeva [page #].

Yuri Vasilyev [page #], a physics teacher from a small town in the south of Kyrgyzstan, has taken the notion of clustering to a new level, with a strategy designed to help students not only consider separate facts from many perspectives, but also organize those facts into a system, a "network" of concepts and facts.

Like Vasilyev, most teachers search and strive for success, and are ready to share the results of their efforts with their colleagues in print. But how often do we hear what the students think of their teachers' efforts? In this issue you will hear from Vasilyev's students as well, about their achievements, reflections, and concerns [page #]. Time is important to them, too, but for entirely different reasons. They know they will have to live and work in a new and different era, and they feel an urgency to prepare for this, their future, right now.

We hope that these and other materials you find in this issue will be both interesting and useful to you. And if you want to share your own pedagogical "secrets," the editors, as always, will be happy to receive your articles and letters.

Inna Valkova

In Response

In response to the "Look Who's Talking" question in vol. 4(1): "What have you read recently in the field of education that has really made an impression on your thinking and your work?"

My philosophical "diamonds" are often found not in theoretical manuscripts but in the articles, diaries, and letters of scholars and artists. These messages speak not only to the historical period in which they were written, but to the future as well.

Last summer while rereading Chekhov's notebooks, I came across an idea that amazed me in its depth and timeless relevance: "The power and salvation of a nation is in its intelligentsia, in those people who are able to think and feel honestly, who know how to work". (Chekhov, A.P., 1985. **Sobranie Sochinenie v 12 t. [Collected Works in 12 vols.]. 11***, 372. Moscow: Pravda.)*

If we divide this idea into two parts, the second one would exactly correspond to what we now call "critical thinking." It says that thinking shouldn't be separated from a human being's moral core, his dignity and honor. It is honor in particular that gives birth to empathy, to mental anguish over the situation in the world, in one's country, in one's neighborhood and family. Moreover, empathy and understanding motivate action and work.

The first part of Chekhov's assertion defines the goal of critical thinking—why we need it! It is needed to rescue humanity from coming disasters, from the deliberate manipulation of thinking that occurs when, ostensibly for "the protection of human rights," whole cities and countries are being bombed, and the death of innocent women and children is called "collateral damage."

Everything a man does he does twice. First in his mind, and then in reality. Humanity has already progressed in this respect, in that rulers and governments now try to enlist the support of the whole nation—or at least the part of it that thinks—before taking any important step. That is why they go to the trouble of indoctrination. And, accordingly, that is why it is so urgent, and so vitally important, to resist indoctrination by developing the ability to think honestly.

The world has changed. In his time Francis Bacon proclaimed, "Knowledge is power." History has shown that any knowledge can be molded into either constructive or destructive power. Only "thinking and feeling honestly, and knowing how to work" will enable us to restrain the destructive power, and it will increase the constructive power of knowledge tenfold.

In the 20th century, strength of thought gave birth to strong industries, strong states, and super states. In the 21st century, it will be moral strength that determines the true grandeur of a nation.

Prof. S. Lipin
Head of the Cultural Studies Department, Vyatka State University, Kirov, Russia

Photo: PhotoDisc, Inc.

In response to "Reading, Writing, Critical Thinking, and Elephants" by Ondrej Hausenblas (Issue 4, spring 2001, 26–31)

"I love so many things, but the main thing is that I love life!" reads an essay by one of my fifth graders. I catch my breath. I run to share my delight with a colleague.

I like life, too! Life is a delicious thing. I can savor each day as a bite of a delightful dish. One day I discover a like-minded colleague, the next day I am renewed by a poem, or insights garnered from the fable "Elephants" by Milos Macourek.

And how did I come upon this fable? First I skimmed Ondrej Hausenblas' article in *Thinking Classroom*, then I was astounded by the fable itself. Rereading the article carefully, I began to think:

Wouldn't it be fascinating to compare fifth- and tenth-graders' readings and discussions of the tale? Hausenblas himself had mentioned that he would be interested in such a comparison.

To be honest, I was both excited and worried. I did not know what to expect. Despite the enticing simplicity of Macourek's narration, despite his straightforward tone and his way of addressing the reader directly ("and you have no idea how much they suffer"), the children, especially the younger ones, might miss the main points: the elephants' despair ("They would like to have a conversation, but they cannot hear one another") and the pain of the adult elephants who are powerless to change the world around them. They suffer so much from the noise! They hear everything: "the noise of a lift, and shouting in a corridor, loud radios, crockery being broken, crying and reproaches, a door slamming, a baby crying, swearing, gun shots, and an ambulance wailing." But these are our sounds, human sounds! The sounds of violence and trouble! The sounds that make your heart stop in fear. This is the human world with all its imperfections. Children, please understand, this is not a story about elephants. When you are small the world seems wonderful, and it really is wonderful from your perspective. But what about us, the adults? Is it possible to learn the truth about the world and still keep one's soul intact? Can we avoid giving way to despair? Can we face each new day with a smile when there is no way to "escape the sound"? Of course, I will never share these thoughts with the children. They need not feel my anxiety. Each of them will discover the world for himself some day. Not today. They still have time.

So for now these fifth graders are just answering the question: What could be done to help the big elephants?

—You should take the elephants somewhere far away without many people.

—It would be good if the elephants lived on a very big island, or in a reserve in the jungle, so that no one would build houses nearby. There should be no planes flying overhead, and no trains nearby.

—You could perform surgery on the ears of each newborn elephant. Or send all the elephants far away, away from all humans… Also, a fine of 1,000 rubles should be levied for every disturbance or shout.

—People need to be quieter because they are not alone on the Earth; there are animals here too.

—We should make less noise.

In the tenth-grade class, we took time at the end of the lesson to compare the moral of the fairy tale with the predictions the students had made at the beginning. The teenagers commented,

—I think it teaches us not to be in a hurry to grow up, because adults don't really have it so good. They know a lot, but what they know is not necessarily good. Children believe in fairy tales and magic, while adults explain everything scientifically. Adults have lots of problems. Macourek uses the elephants, and the noise that spoils their life, to represent those problems.

—I think the author is saying that we should not take minor problems to heart, but should learn to value and listen to those close to us; not to confuse secondary issues with the main ones. We must go forward without looking back, and we shouldn't compare the past with the present. It is important to learn to enjoy life.

I want my students to take pleasure in reading, to think about the text, to express their opinions and to communicate with each other. I find the RWCT program very helpful in achieving these goals.

Last May I met Ondrej Hausenblas, the author of the *Thinking Classroom* article, at a seminar in Novosibirsk, and this meeting inspired me to write about my own experience with Macourek's "Elephants." This academic year I have a new class. I look forward to reading the tale with them.

Anna S. Yaduta
Assistant principal and teacher
of Russian language and literature
at Yevsino secondary school
in Novosibirsk region, Russia

TC Web Connections

The full text of Hausenblas's article is available online at http://www.reading.org/publications/tc

What's New?

Lifelong Learning in Europe: Sofia International Conference on Adult Education

Two hundred delegates from Europe, North America, and Central Asia participated in an international conference on ***Lifelong Learning in Europe: Moving Towards EFA Goals and the CONFINTEA V Agenda*** in Sofia, Bulgaria, 6–9 November 2002. Participants included government ministers, parliamentarians, officials from government and multilateral organizations, representatives of non-governmental organizations, researchers, and adult education practitioners. The Conference was supported by the Ministry of Education and Science of the Republic of Bulgaria, UNESCO and its Institute for Education (UIE), the European Commission Directorate General Education and Culture, the European Association for the Education of Adults (EAEA), and the Institute for International Cooperation of the German Adult Education Association (IIZ/DVV).

Editorial representatives of *Thinking Classroom* and coordinators of RWCT programs from various countries participated in the conference. RWCT representatives from Croatia, Kosova, Kazakhstan, Bulgaria, Kyrgyzstan, Albania, and Slovenia offered a session introducing the RWCT program, the RWCT national journals, and *Thinking Classroom*. They also conducted a workshop on the fundamental principles of critical thinking, and presented interactive teaching methods that have proven effective in adult education.

At the conclusion of the conference, participants adopted a statement outlining fundamental positions, principles, and directions for lifelong learning, as well as a "Call to Action" on adult education. (See http://www.unesco.org/education/efa/news_en/CONFITEA_Vagenda.shtml)

CEP-RWCT Joint Initiative

In September 2002 RWCT representatives from Bulgaria conducted the first of three workshops for Civic Education Project (CEP) fellows from Bulgaria, Romania, and Moldova, as part of the CEP Training Development Program. The Civic Education Project, an international voluntary organization, works to support sustainable education reform in societies engaged in political and economic transition, by supporting indigenous scholars and professionals in the social sciences to teach and do community outreach. Joint CEP-RWCT workshops were held in Bulgaria in September and November 2002, and in Romania in March 2003.

Bulgaria: Yambol Center for Critical Thinking

A new Center for Critical Thinking, located in Yambol's Georgi Rakovski Public Library, opened October 31, 2002. The Center is used for professional development courses for area teachers, with seminars in critical thinking skills conducted by the Bulgarian Reading Association. The Center also offers computer equipment for use by the local community,

Photo: Thinkstock LLC

including wireless Internet access that will provide a "virtual library" of texts from all over the world. Yambol students plan to use the facilities to create an Internet site devoted to Bulgarian literature, analyzing and promoting the work of Bulgarian writers.

The Center, the first of its kind in Bulgaria, represents the combined initiatives of the public library, the Yambol Board of Education, and the municipal government. It is financed by the United States Agency for International Development and the United States Peace Corps.

Kazakhstan: Third National Conference on Reading

The Center for Democratic Education (which recently became the Kazakhstan Reading Association) held its third National Conference on Reading 13-15 August 2002 in the historic city of Turkestan. The theme of the conference was "Writing: Past and Present." Session topics included flexible teaching strategies, collaborative inquiry, cultural issues in education, new technologies, writing in history classes, using prior knowledge, and raising a generation of seekers.

Conference participants were encouraged to tour Turkestan, one of the oldest cities in Central Asia. The city was founded in the 5th century, and was home to the 12th century Sufi poet Khodzha Akhmed Yasavi, whose mausoleum (built in the 14th century) is sometimes called the eighth wonder of the world. Nearby is the ancient Otrar library, founded in the 10th century by the great scholar, philosopher, and poet al-Farabi. Visiting these sites provided a vivid reminder of the historic importance of the Conference theme of writing.

International Reading Association

In January 2002, James Wile became the new Director of the International Reading Association's International Development Division. Mr. Wile has worked in Kyrgyzstan, Albania, Romania, and Kosova as a volunteer teacher educator in the RWCT program, and is involved in the development of the Active Learning Initiative in Tanzania. He has also participated in the Association's annual conventions, the European Conference on Reading, and the World Congress on Reading.

Previously, Mr. Wile was a professor of teacher education at Miami University in Oxford, Ohio, USA, where he worked with preservice and in-service teachers. He has also worked as a classroom teacher, curriculum developer, and research scholar.

As International Development Director, James Wile hopes to "build on the success of the RWCT model and extend the [International Reading] Association's active engagement in collaborative professional development and capacity building worldwide."

www.ReadWriteThink.org: New Educational Website

In October the International Reading Association, in collaboration with the (U.S.) National Council of Teachers of English (NCTE) and the Marco Polo Education Foundation, announced the launch of ReadWriteThink.org, a new website that integrates computer technology with literacy learning. ReadWriteThink.org delivers lesson plans, peer-reviewed Web resources, and classroom-tested activities for teaching reading and language arts to elementary and intermediate level students (grades K–8). All the resources on the website are free, providing educators with quick access to sound, practical teaching ideas.

More than 100 Association members have contributed to the site's development. Lesson plans are written by teachers and developed from research-based journal articles and books. All of the lesson plans on ReadWriteThink.org are easy to follow and contain clear objectives, procedures, and assessment strategies. In addition to lesson plans, ReadWriteThink.org provides hands-on classroom strategies, links to quality instructional and student websites, and Web-based student activities. To access these resources go to http://www.readwritethink.org

Look Who's Talking

THE QUESTION:

I hate it when students ask me, "Is this going to be on the exam?" The implication is that if it's not, they won't bother to learn it! I want them to see their learning in the context of larger, personal goals. How can I help them set their own goals?

Paata Chorgolashvili

Georgia

I believe that we can best help students set their own learning goals by linking their educational goals with their life goals. All too often students are "made" to study (by the school and by their parents) for the sake of grades alone. Naturally, they are apt to resist. That is why the first thing for us to keep in mind is: To what extent does the child need what we are teaching him? How does it correspond to his personal goals, and to the demands of our time? We and our children have to live in a world that is changing radically and extremely rapidly. So the most important thing for the children is their quest for personal development, self-assertion, and self-realization. What questions are we confronted with in life? How to find a rewarding job? How to make more money? How to be successful? It would be good if we could show our students that the goals set by the school do not contradict what they themselves hope to achieve through their education. For example, children need to recognize that, in our time, collaboration is one of the most important skills, essential for success in various spheres of human activity. The task of the school then is to teach students to work together in class, so that later they can apply this skill in real-life situations.

If a child sees that his or her own goals are in harmony with those set by the school, it will be easier for him or her not only to set personal goals but also to achieve those goals.

Olga Kotelnikova

Assistant Professor of Physics, Moscow State University, Russia

Motivation is essentially a private, even intimate thing. So the teacher's task is to avoid scaring off those who come to class ready to learn, and to entice those who think that a subject is boring or too tough for them.

How do we do it? Actually, it's hard to put it into a step-by-step formula. Certainly, the teacher needs to be interested in the subject him/herself. However, when we have 30—or even 200—students in front of us, we need something more, a surprising, puzzling, or shocking "hook" to catch their attention.

My physics classes include both university students and continuing education students. For this audience it's good to start with an everyday situation and develop it into a "scientific" problem. Or vice versa, to take a

problem from the textbook and reflect on how it might look in real life. This way students get past their erroneous assumption that physics is an abstract science, and learn to make connections with their own experience and their own goals.

*When we study "*Work*" I usually offer a simple example:*

I am walking along. I am not carrying anything. Common sense would suggest that I am not doing any work. But there is sweat on my forehead, which means I am expending energy. So doesn't that mean that I am performing some kind of work? What is going on here? How is work measured?

It's important for the students to ask these questions themselves. That is where learning begins. Later, each of them will be asked to come up with a similar example. Examples that are relevant to their own experience help students overcome their alienation from "boring physics assignments." They learn to ask themselves questions, which will help them solve even the most complex problems, and help them set their own goals, in science and in life.

Martha Rekrut

English teacher and English department chair, Warwick Veterans Memorial High School, Rhode Island, USA

Students often have difficulty seeing the forest for the trees; they may focus on memorizable details and thus may be unable to see larger concepts. One response to "is this going to be on the test?" is to ask the students to determine what seems to be relevant or irrelevant by demonstrating why material might or might not be on a test in a given area. In this way, they may gain a more thorough understanding of the material, and may begin to see that information or concepts they consider unimportant are building blocks for significant ideas. This approach can become part of an individual inquirer's learning, too, especially if s/he is willing to reflect on what s/he has said and to consider his or her motivation for asking the question. A student's attempt to do less work is quite different from a genuine interest in the material on which a test might be given.

That said, perhaps the best way to deal with this issue is to recognize the importance of all three elements of an instructional triangle: what is to be learned, the teacher, and the students. None of these elements exists without the others. The teacher establishes goals at the outset, perhaps even in consultation with the students, and/or provides students with justification as instruction takes place ("We're reading this section, dealing with this issue, examining this point in detail because…"). The teacher may also ask his or her learners to perceive and explain the importance of what is being taught. Students who know why they are learning what they are being taught are more attentive, find the material more interesting, and participate more readily because they have been actively involved in the process of instruction.

A question for the next issue:

There are a couple of students in my class who are painfully shy. They never volunteer to answer a question, and they seem completely overwhelmed by the other students when we are working in groups. How can I get them to participate in class activities?

Readers are invited to respond to this question, or to suggest questions for future issues. The editors will select items for printing. Please e-mail your answers and suggestions to: bmichaels@reading.org

Fitting It All In: How Sea Stars Taught Me To Integrate the Curriculum

Nancy H. McDonough

My personal curriculum catharsis came about nine years ago, after a particularly brutal day. My second-grade children and I had all worked mightily for 6 hours and yet nothing was finished! Our day was spent doing a little of this and a little of that—and at the end of the day, it all added up to a little of everything. I began by looking at my schedule:

9:00-10:45 Reading Block (3 groups reading fiction 85% of the time)

10:45-11:45 Writing Block (conferences yielding narratives 80% of the time)

12:00-1:00 Lunch

1:00-2:00 Math

2:00-2:45 Social Studies, Science, Birthday Parties, Announcements etc., etc., etc.!

The problem became apparent immediately! Trying to crush all of my content teaching into the last 45 minutes of the day was just unworkable. No wonder I couldn't "cover the curriculum"! I realized that I had only two choices: 1) work faster or 2) begin teaching more than one subject at a time. I determined that both the children and I were already working just about as fast as we could, so in order to "fit it all in," I would have to integrate the curriculum.

Now, nine years later, I preserve my sanity by putting science content at the core of my teaching. I unify knowledge, skills and processes by wrapping them around and through science concepts, facts and processes. Integration happens when all the parts of something are joined into a whole. This notion of teaching "calls upon the teacher, initially, and later the students, to identify the connections or overlaps between content areas, between similar processes or applications of skills, and then to build upon those connections" (Lindquist, 1995, p. 7).

I think the best way to explain what I mean by *curriculum integration* is to describe a unit of study on "Oceans" that my 24 second-grade students recently completed. This unit was packed with ideas and information that captured the attention of 8-year-old scientists, but it also invited the children to develop those skills and habits of mind used by all active learners: the ability to read with good comprehension, to write with clarity, to observe carefully, to find information efficiently, to exchange ideas openly, to build purposefully on prior knowledge. I wanted my second graders to wonder, to infer, and to ask questions. In short, I aimed for *understanding*.

Understanding is achieved through focused, intensive study of a topic. It is, in John Donne's words, "To know a thing as well as that thing can be known." Time on task, a variety of resources, and a community with whom to share information is critical to the development of understanding. So, with the exception of a daily math period that I continued teaching separately, for couple of months the class spent the entire day, every day reading, writing, speaking and listening, thinking and learning about oceans.

Launch

Beginnings are important; "launches" they are sometimes called—and what a handy image for an Oceans unit! The launch for this unit was one of the more exciting days of the whole year because it was marked by the arrival of a collection

of saltwater invertebrates that lived in our classroom for the next eight weeks.

Several days beforehand, the children prepared the aquarium that would serve as the home for the animals. As we mixed salts and minerals into ten gallons of water, the children were amazed at how much material was needed to simulate the ocean. Most of them had thought ocean water was the same composition as salted pasta water, so we discussed the differences. "But, they do taste the same," I was told by one of my kitchen-savvy second graders.

We bought our creatures from the Woods Hole Oceanographic Institute in Cape Cod, Massachusetts, USA, and they arrived in a chilled packing crate complete with sea lettuce. Children shrieked with delight and excitedly jostled for position to hold sea stars, anemones, sea cucumbers, mussels, snails, crabs, and urchins. As children passed each creature from hand to hand before plopping it into the water, they got the first of many chances to understand these fascinating intertidal animals.

With interest high, the children were eager to begin observing the animals and learning as much as they could about them. It is worth noting that a quick start was important, because, in addition to demonstrating many other scientific principles, the creatures in the tank also form a food chain. That means that in order to observe a mussel or a snail, you had better get there before the hungry sea star does!

Observation

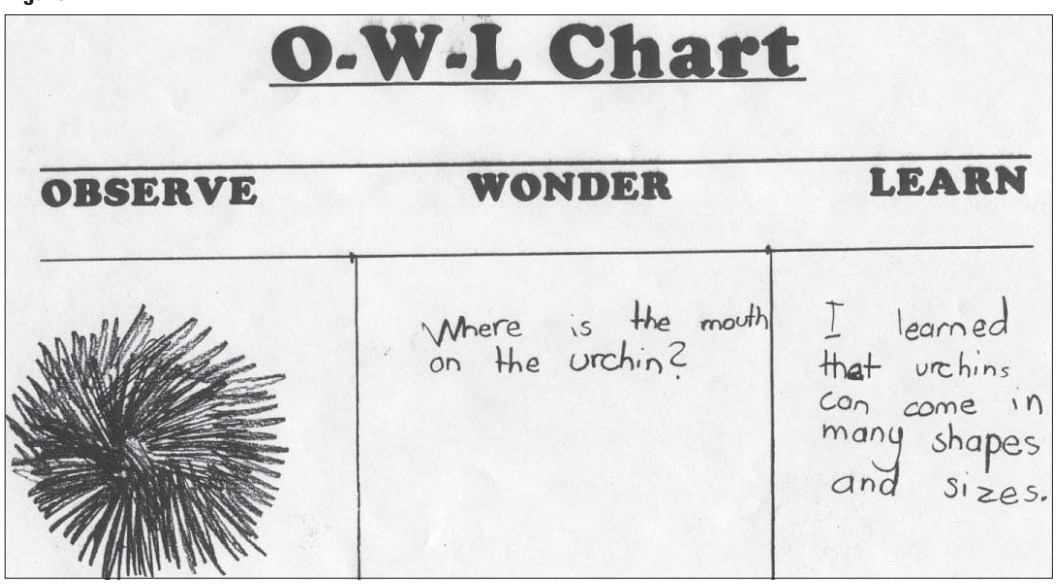
Direct observation is a significant source of scientific information (Graves, 1989). Data gathered through thoughtful, first-hand inspection form a knowledge base that serves as a foundation for future learning.

Despite the children's keen interest in the animals in the tank, the notion of detailed examination was foreign to them. They were most familiar with the "glance and go" method of inspection, so I modeled for them how I might observe a sea star.

I began by teaching the children that careful observation often takes place over time, frequently focusing on details and changes that occur from one observation to the next. Then I continued, "Rather than just looking at the entire body of the creature, I am going to really *examine* just one of the arms." Taking a magnifier from the basket near the tank, I went on, "With a magnifying glass, I can really study the details of the sea star's underside as it climbs up the wall of the tank." I spent a few minutes looking carefully and thinking aloud as to the details of color, shape, texture, and size that I noticed.

Then I said, "When scientists observe, they make notes about what they notice. This information is called data, and data is an important part of all scientific investigation. Scientists record data so that they can remember it and think about it again later." At that point, I introduced the children to an **O-W-L** chart (Rhodes, 2001). [Figure 1] "Now

Figure 1



I am ready to make an entry on my **O-W-L** chart," I told the children. I put a transparency of the graphic on the overhead projector. "The first column, the **Observe** column, is a good place to sketch what I have seen." I drew a sketch of the sea star arm, being sure to label the parts. "The second column, the **Wonder** column," I continue, "is a good place to ask a question. I'm going to ask 'What are those little suction cups on the arm?' Asking a question means that I will do some extra thinking about that point. I'll keep a special eye out for information as we read books and magazines over the next weeks. I might even mention my question to some friends, so if they come across any information on sea star arms, they can share it with me. And I will be sure to look very carefully at the suction cups the next time I am at the tank to see if I notice anything more about them. In the third column, the **Learn** column, I am going to write something that I noticed or figured out. Today I am going to write, 'I noticed the sea star has five arms. The sea star can climb up the wall of the tank because the arms are covered with suction cups."

After I completed the demonstration, each child chose one of the creatures to observe over the next several weeks. I assured the class that they should study *all* the invertebrates in the tank, but that they would be paying special attention to one creature. "That way," I told them, "you can each be a real expert on an animal, and we can all share our data with each other."

Over the next days, children had many opportunities to engage in careful observation. We had a regular schedule to be sure that each child had adequate time each day to study, sketch, and record questions and findings. While one group observed, the other children studied topics related to oceans in learning stations around the room.

Stations

In our classroom there are learning stations, places where students have time to work independently and pursue a choice of activity. Observing at the tank became one of our station activities. Some station activities were completed in one 20-minute period, while other stations took up to three days to finish. The content of the stations was based on the children's interests as well as on information I wanted them to have. Some of the stations this year were:

- Puzzle Station (jigsaw puzzles featuring ocean creatures)
- Computer Station (*One Small Square: Seashore* and the Monterey Bay Aquarium web site [www.montereybayaquarium.org] were favored)
- Magazine Station (featuring articles from *My Big Backyard* and *Ranger Rick)*
- Pop-Up Book Station (nothing like a moray eel leaping out of the page to grab the attention of an 8-year-old!)
- Ocean Lotto Station (this matching game was a hit with everyone)
- Filmstrip Station (I still love those old National Geographic filmstrips. What amazing photos!)
- Music Station (Listen to whale calls and waves splashing!)
- Art Station (including water colors, tissue paper and those ubiquitous markers)
- Octopus Station (brand-new this year and born of popular demand)

The children's interest in octopuses came about after my read aloud of *Giant Octopus* (Zuchora-Walske, 2000). The whole class was eager to reread this book and to learn more about octopuses, so I developed a learning station. At first, the octopus station contained

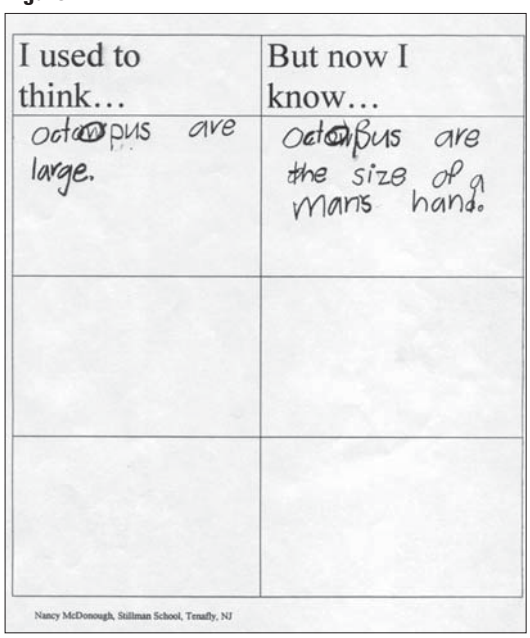
- a large poster that included a photo of an octopus (another opportunity for careful observation)
- several nonfiction books: *Meet The Octopus* (James, 1996), *Ocean Hunters* (Hirschmann, 2000), *Octopus* (Shaw, 1971), and *Sea Critters* (Earle, 2000)
- a delightfully silly piece of fiction, *My Very Own Octopus* (Most, 1980) and equally silly poetry book, *Commotion in the Ocean* (Andreae & Wojtowycz, 1998)
- a book purchased for the class by their Spanish teacher: *Un Pulpo en el Mar* (Roop, 2001)
- an article on octopuses from the *Heinemann First Encyclopedia* (2000).

In designing the center, I was sure to put out materials from several different reading levels, so that each child would have at least one book that was neither too hard nor too easy to read.

As interest in octopuses grew, children independently added to the octopus station: books from home and the library, magazine articles, sketches, models, and even a toy octopus became part of the growing set of resources. And since everyone in the class knew a lot about octopuses, there was no shortage of interest in each contribution.

In addition to reading, sketching and chatting at the octopus station, children also worked on a double entry graphic called *I Used To Think…But Now I Know.* My friend and colleague, Laurie Fox, developed this organizer; its purpose is to help children highlight how their thinking is changing. [Figure 2] After studying at the octopus station, the children laughed at the cartoon image that they once had of this shy creature and marveled at their now accurate perceptions of this animal's intriguing lifestyle.

Figure 2



I was delighted when Eryn made the connection between octopuses and the creatures in the tank. "You know," she told me, "an octopus is like a sea anemone because both are invertebrates." When I later repeated Eryn's observation to the class and asked, "And how is an octopus different from an anemone?" I was treated to wide assortment of information that let me know the children had developed a broad base of knowledge about both sea animals.

Whole Group Instruction

Knowledge building in the ocean unit took place in many settings, not just in small groups or at learning stations. Whole group instruction was an important part of many days. I like to have a "touchstone text" when I teach. A touchstone text is a book that provides all the children with a common base of background knowledge, and the whole class reads it fully, often together, to ensure good understanding. The touchstone book for the Oceans unit was Joanna Coles's *The Magic School Bus On the Ocean Floor* (1992).

The Magic School Bus is just packed with information and the text is such that the second graders could handle it. An added bonus was that we had an amusing audiotape featuring the voices of various characters from the book, like Ms. Frizzle and Lenny the Lifeguard.

The book's organization made moving through it deliberately quite easy. Each pair of pages featured a different ocean depth. (Horizontal layering is a concept we will revisit later in the year when we study forests, soil, and ponds.) The story began on the beach as the bus splashed into the ocean and traveled down, layer by layer, until Ms. Frizzle and the class arrived at the hot vents and trenches. Of course, along the way, the bus morphed into a submersible but, before long, it began its ascent, ending as a surfboard with the class on board screaming "Kowabunga!"

I found that books like this one, which mix fact and fantasy, are engaging and informative for second graders. However, by themselves, they are not enough to provide the necessary scientific information. To supplement the touchstone book, I inserted several micro-units. A micro-unit is a focused study that highlights a part of a larger unit. The micro-unit may take only a few hours, a day, at the most. By way of example, I will describe two micro-units that were part of our study.

Ocean Depths Micro-unit

Our daylong study of the ocean depths began after we studied two pages in the *Magic School Bus*. First, the class listened to the audiotape. Spooky music filled the room as the children heard about water that is "bitter cold and pitch-dark." They

were told that the deep ocean floor is "as empty as an underwater desert." They gasped at creatures like lantern fish and gulper eels, and they studied a graphic that helped them locate themselves at the "deep ocean floor," below the continental slope, but above the trenches. When the tape was over, the children reread the pages, and we discussed them.

One of the questions addressed in the selection was "Why can't plants grow in the deep ocean floor?" After reading the explanation silently, we chatted about the brief answer that was provided in the book. Then I had the children talk in table groups to expand the answer. I moved from table to table, listening to conversations. After several minutes, I called on a reporter from each table to share the comments made by the group.

While I had the children together, I quickly previewed three other books that would be available in a basket for "on your own" study of the depths. I gave a quick overview linking these books to the books that the children had already read.

"One of the books I had chosen was more difficult to understand," I told them. "You can see that there are many more words on each page, but here is the good news. Boldface headings tell you what creature is featured in each section." I showed the class examples of the brightly colored headings. "See, this part is about 'viper fish,' but this part is about octopuses."

"Octopuses!" they called excitedly. "We know about octopuses! Octopuses live at the depths too! Cool!"

After a few minutes of conversation about octopuses, I continued with the book preview. "Now, there are three things you can do to help yourself understand this hard book. First, I have many copies so you can read with a partner and help each other. Or you can read the section where you already have lots of background knowledge."

"The octopus section!" everyone agreed. "That's right," I continued. "Background knowledge about octopuses will help your comprehension, because you will be familiar with many of the words like 'tentacles' and ideas like the eight legs that stretch out from the head. Or, the third thing you can do to read this hard book is to pick just one section and learn only about one creature. Then there are not so many words to figure out, your comprehension will be good and you will be a real expert on that one creature."

"Unless I want to be an expert of all the creatures," Matthew added. "I can learn about one each day." There was agreement that this was an excellent idea.

Inasmuch as the children had been together in a large group for about an hour—first for the group reading and then for the read aloud/book preview—it was time to add instructional novelty and work on some independent reading. Novelty is important in an integrated day. Simple changes, like moving from the rug to desks or from a large group to a small one, help children sustain their interest, as do big events like field trips and guest speakers.

I gave each pair of children a copy of material that they could read independently with good fluency, speed, and accuracy.

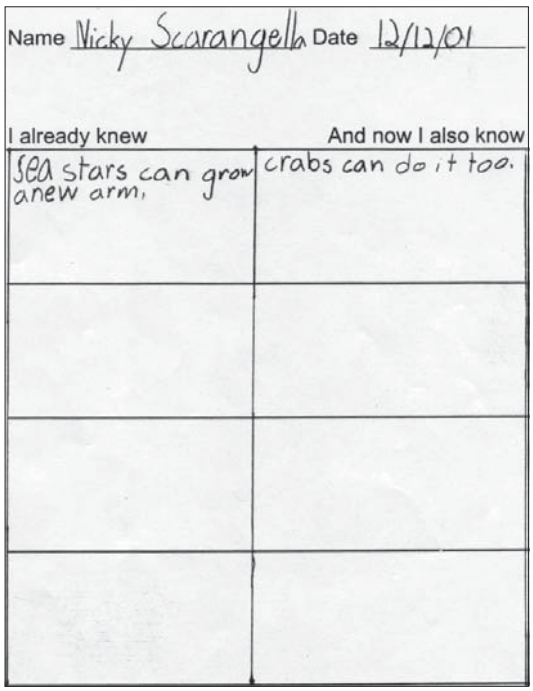
They spread themselves in all corners of the room and out in the hall. The class was accustomed to paired reading—they took turns, stopping to carefully study the pictures on each page. The children knew that, especially in science books, pictures carried information that must be comprehended with the same deliberateness as the words.

As the children were reading, it was a good time for me to go around and listen in. I moved from pair to pair, checking fluency and accuracy. When there was a need, I delivered a comprehension or decoding mini-lesson and offered praise for reading well done.

Tide Pool Micro-Unit

After selecting books, children spread themselves out around tables and on the floor and began attending to their double-entry diaries—*I already knew…and now I also know.* [figure 3] As I read their

Figure 3


Name Nicky Scarangella Date 12/12/01

I already knew	And now I also know
sea stars can grow a new arm.	crabs can do it too.

entries, I was thrilled to see the way the children built upon their prior knowledge. Kayla wrote, "I already knew that a shrimp would eat anything…and now I also know it is called a 'scavenger.'" Nicky said, "I already knew sea stars could grow a new arm…and now I also know that crabs can do that too." "I already knew that some coral like ours in the tank is hard…and now I also know that other kinds of coral are soft."

Combining reading with direct observations brought the children's understanding to a new level. They already knew something about the topic, and they were eager to learn more. It followed, then, that the more prior knowledge the children had, the more *able* they were to read about a topic. And the more they read, the more they knew. In short, they are *learning to read* while they are *reading to learn*.

Writing

Throughout the Ocean unit, children wrote. They wrote about their reading and their observations, they took notes, they reflected. They used their writing as springboards to conversations and records of their learning. However, there were two formal pieces of writing that served as examples of how science information could be woven through writing in many genres, again making for curriculum integration.

During read alouds, the children noticed that scientific information was delivered in many voices. There was "the facts and only the facts" voice of encyclopedia writing, the "step by step" voice of procedural writing, and then there was that *other* voice. It had a poetic richness to it that comes with well-crafted prose. We marveled at how writers could both teach us and delight us with words so carefully chosen! It was that voice that we listened for when I read the children Nicola Davies's *One Tiny Turtle* (2001). "Inside she lays her eggs, like a hundred squidgy Ping-Pong balls." We heard it when Twig George said in *Jellies* (2000), "There are tiny, elegant jellyfish that look like a blizzard of snowflakes"; and when Ruth Horowitz told us in *Crab Moon* (2000), "Everywhere they looked, horseshoe crabs crowded and pushed like restless cobblestones."

I taught the children that when a writer compared one thing to another using *like* or *as*, that comparison was called a simile. Second graders like similes because they are short and contain the energy that makes the image leap off the page. After noticing similes turning up in many of the books they read, the children agreed that they could write similes based on their observations of the invertebrates in the tank.

"You've done such careful observation," I told the class, "and you can use your information to do lots of different kinds of writing. One of the things we've noticed about many science writers is that they try to write beautifully at the same time that they deliver the facts. I'll bet that, if you go back to your **O-W-L** charts, you'll find ideas for some images you could use to write about your creature." Having the confidence that grows from being an expert on a topic, the class eagerly agreed that they were up to the challenge.

I distributed all the **O-W-L** charts so the children could review their observations, drawings and questions. Before long, everyone was bursting not only with similes, but with other vibrant images as well. Children helped each other and shared ideas; they offered

Photo: Nancy H. McDonough

suggestions and made revisions. The writing process was enriched by the fact that all the children shared a complex background of experience and knowledge and could serve as resources to one another. "I'm writing about anemone tentacles," Shane announced to Alex. "Help me make up a simile that describes the way they move back and forth in the water." Nicole chatted with Mia. "I've been thinking about gastropods and bivalves. Which one do you think is more interesting?" Yael studied her sketch and spoke with Max. "Aren't tubefeet cool? I've got a really detailed picture of some here. What's a good simile?"

After several days of writing and revising, each child had written similes that were both descriptive and fresh. All the children were pleased with the results. I've chosen just a few to include here:

The snail creeps and wiggles on a tall cliff while sharks are looking for food. A snail's body is as gooey as a cup of Jell-O.

The sea star looks like a five-headed snake. It pries open a mussel using its five arms.

The shrimp is as clear as Cinderella's glass slipper.

Once the children had completed the writing, our art teacher helped them to design colorful posters, packed with visual information. The children glued their polished writing to their posters, and we hung the finished product in "The Oceans Gallery." (That used to be the wall in the hall, but some renaming seemed in order to receive such amazing work!)

Procedural Writing

The second piece of formal writing in the Ocean unit again returned the children to their observations at the tank, but this time they were asked to write a procedural paragraph describing *how to be a careful observer.* I had chosen to teach this type of writing for two reasons. First, and more important, writing a description of *how to do something* is a useful skill, and second, procedural writing is assessed on our New Jersey state proficiency tests. This, too, is an example of curriculum integration.

It came as a surprise to me that, in spite of weeks of first-hand observation, the children were at first unprepared to describe how they had gone about the process. The act of recounting the sequence of behaviors that lead them to their scientific conclusions suddenly became a jumble of words and foggy recollection.

So, to better prepare for the writing, the children read several short "how to" pieces. We started noticing directions and "how to's" everywhere! We discussed the transition words that showed time and sequence and how writers assisted readers in moving from one step to the next.

One afternoon, our district literacy specialist joined us for a lesson, leading the class in a "visualization" exercise. She helped the children to see themselves at the tank and to recall what they had done to be careful observers. "Picture yourself looking at your ocean creature," she told them. "Now tell me exactly what you are doing that lets me know you are looking very carefully." Children offered precise step-by-step suggestions of what they had done and how the procedure had helped them to learn more about the invertebrates. Using the overhead projector, Mrs. Jennison modeled how the comments could be formed into a complete paragraph. The children titled this group composition *Invertebrate Eyewitness*.

Finally, the children had a try at their own paragraphs. Just as with the simile writing, the children wrote and revised, using one another as resources. Their common background experiences allowed them to crosscheck for clarity and accuracy; they offered reminders and suggestions.

As one last touch of author's craft, the children said that a tide pool setting would be appealing to readers. So they took the literary license to imagine themselves in a natural setting, not watching our classroom aquarium. Here are three of the resulting procedural paragraphs.

> I look in the tide pool and study the mussel. First, I examine the mussel closing and opening its shell. Next, I take note of it and sketch it holding onto a rock. Last, I read the note and label the sketch, so I know where the body parts are. You just learned how to gather some information about a mussel.

> Look at the barnacles very carefully in the tide pool. First I use my magnifying glass, so that I can see the animal more closely. Second, I study its mouth, because I want to see how it feeds. Last, I sketch it, so that I remember what it looks like. This is one way to study barnacles.

> Studying a shrimp is fun, but it is hard work. First, I find the shrimp with my magnifying glass. Then I watch it for an hour so I can get information. At the end, I sketch a picture very carefully. I learned a lot by watching a shrimp!

After reading the children's work, I was reminded of Don Graves's comment in *Investigate Nonfiction*. "The ability to recount is strongly connected with the ability to plan, and the ability to plan is often ultimately connected with the ability to write directions and produce logical arguments" (1989, p. 13). The work of the procedural writing then, not only turned the children back to reinterpret the data gathering process, but it also developed habits of mind that would serve future learning.

Both the simile writing and the procedural writing required the children to work from an information base—an information base that they had acquired, together, over time. When asked to use their knowledge and understanding to fuel new forms of writing, the children came to the task already prepared with something to write about. They began with something to say and explored new forms in which they might say it.

To me, this is an example of the power of integrated instruction. I believe that once children can transfer their knowledge from one domain to another, using it as both an anchor and a springboard, then they have effectively learned.

Treasures From Home

No discussion of instruction, integrated or otherwise, would be complete without entering that thicket called assessment. How do I know that my students are learning? For me, documenting progress in reading and writing is fairly straightforward. I hear students read and talk with them about their comprehension. I look at student writing and see the progress children are making toward fluency and clarity. However, there is more to my assessment than that.

I wanted my children to become active, independent learners and one

of the best ways I had to measure their progress toward that goal was a simple structure called "Treasures From Home"—just "Treasures," for short. "Treasures" sharing was a lot like "Show and Tell" with one important twist. What children brought to show to the group had to be related to the topic under study, which in this case, was Oceans.

There was no requirement to bring "Treasures," nor was there a grade given for doing so. It actually amounted to self-assigned homework, but students participated because they embraced the message of my sermon: "We can't possibly learn all there is to know about oceans just here in class. You've got to continue to study on your own, outside of school." And study they did!

In the Ocean Treasures this year, children shared books, photos, reports, poems, artwork, dioramas, games, toys, computer programs, and stories. They wrote, they drew, they read, they constructed, and they invented. Some of the Treasures, like shell collections, were closely related to Oceans, while others, like the bag of Goldfish Crackers, *("This reminds me of oceans because the fish are shaped like whales")* took us further afield. But in each and every case, children gave evidence that they were *thinking*. They actively connected what they knew and applied their understanding in novel situations. They were independently "integrating" their own learning.

Conclusions

Study in an integrated curriculum invites students to build their world knowledge by offering them the time and the continuous focus to know a subject well. Content-based reading and writing instruction, which is both efficient and effective, makes it possible to "fit it all in" as young scientists develop a deep understanding of process and information. Prior knowledge serves both as scaffold and springboard for children to expand their thinking, while the classroom community provides opportunity to share ideas with fellow experts.

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Nancy H. McDonough is a second-grade teacher at Stillman School in Tenafly, NJ, USA.

Working with the "Quiet Ones"

Rysaldy Kaliyeva

Introverted children, the "quiet ones," pose a problem for every elementary school teacher. They need to learn to express their thoughts, to exchange opinions with their peers, to communicate.

In my first-grade class, over the course of several days I made note of which children did not participate in class. Day after day I found myself writing down the same names. So these were my "quiet ones." Why did I call them that? Because they were the shyest, most restrained, and most passive in the class. Perhaps they were so timid because they had not gone to kindergarten or nursery school. Certainly it was easy to tell them apart from the noisy, boisterous children who had come to first grade via the preschool route. At first I thought that they just needed time to get used to school, time to observe, time to get acquainted with their classmates and teachers. There were so many new and unfamiliar things that they had to deal with.

But time went by, and my "quiet ones" were still silent in class. They still answered only when called upon. When they did speak, their voices were almost inaudible, their eyes downcast. When I called them to come to the blackboard, they preferred to answer my questions from their seats, to avoid having to stand up in front of the class. Even between lessons was no sound from the quiet ones. They rarely entered into the playful give and take of their classmates—they just walked quietly around the room or sat at their desks.

I started to become concerned, because it did not seem normal for children to be so quiet. I felt I had to uncover the reason for their silence. I began by engaging them in simple conversation after class. I asked what had captured their attention, what they remembered most from the lesson and why. When I got around to the question, "Why didn't you participate in the class?" I received answers such as the following:

> *Nelya:* I wanted to answer, but a lot of kids already had their hands up, and Masha said what I wanted to say, so why repeat it?

That meant she had wanted to answer, but someone beat her to it!

> *Sanzhar:* You don't call on me. Once I raised my hand, but you didn't call on me.

The tone of his answer told me that he felt offended. I had to admit that, in the course of the discussion, maybe I had not noticed his hand. And this child needed my attention so much!

On the basis of this experience I resolved to devote my attention first and foremost to these "quiet ones," never to lose sight of their needs. The teacher's attention, a kind word, an understanding glance—all these things might serve to draw them into participating in class. Even so, it was not enough. With all my attention, the quiet ones did gradually begin participating—quietly and hesitantly—when I was leading a general discussion. But when the class was working in small groups, they were as silent as ever. No doubt they were reflecting on the text we had read, but they did not share their thoughts with their classmates.

How could I bring them out of their shells? I felt it was important for all students to learn to share their opinions, as this would lead them toward deeper and more multifaceted analysis, and develop their ability to consider an idea or work of art from several points of view. But my quiet ones refused to engage in this fascinating process, merely observing as their more vocal classmates answered all the questions. Why were the quiet ones so reticent in small group situations? Maybe the atmosphere of these groups did not afford them the opportu-

nity to answer? I proposed to the children that we reconstitute our class groups. I began by asking the quietest girl, Nelya, whom she would like to work with. She named three other students, the very children who were as quiet as she.

It is quite likely that shy children need a social milieu that corresponds to their temperament: peaceful, unhurried, quiet. So my five quietest students formed their own group. What does it feel like for a quiet child to be thrown into a big, noisy group? Only that child knows for sure. How does a quiet child feel in a group of children like himself? That I could see for myself as I observed our group of "quiet ones." They interacted with such warmth and kindness! No one was trying to be the first at everything. They politely took turns in conversation. They were a model of considerate, democratic communication. For the first time I saw them actually smiling in class. The group of "quiet ones" worked more slowly than the others, but I did not hurry them. I gave them plenty of time to think things over. And what answers they came up with! Time after time the most interesting perspectives, the most thoughtful responses, came from this group. Working together as a team they helped one another: their awkwardness disappeared, they were able to make eye contact, their voices became stronger, their gazes became steadier and more confident. They became firm friends, and began to discover common interests. But they could not stay in their own little group forever.

As it turned out, this was not a problem. By the end of first grade the quiet ones dispersed into other groups on their own initiative. With their new self-confidence, they were now welcomed by their classmates. Only Nelya continued to concern me. She was diagnosed with strabismus and now had to wear glasses. She seemed reluctant to attract the attention of her classmates, and became even quieter than before. But even Nelya had benefited from working and communicating in the "quiet" group. When the school year began, she was reading at a rate of only 15 words per minute, and at first she disliked reading. But by the end of first grade she was reading 50 words per minute, and by the end of second grade 75 words per minute. Now she is a fluent and voracious reader, and we see her reading all the time. She loves to talk to her classmates about the books she is reading, enthusiastically recommending her current favorites. The quiet, disengaged little girl has developed into a thoughtful reader with real personality and her own distinct opinions. I see this growth as a tremendous benefit of the "quiet" group, as well as a personal victory for Nelya herself.

In every class there are some students who have an answer for every question. They seem to be in constant competition to see who can be first. However, their ready answers do not display the kind of real insight revealed in the responses of Nelya and the other "quiet ones" in our class. This contrast leads me to another conclusion: We need to teach children not to hurry, but rather to think through each step of a problem and get to the bottom of the issues. Then they will become not merely "readers" of a text, but "thinkers" and "analyzers."

The elementary school years are an important stage in personality development. The elementary school teacher, nurturing young learners, is like a potter molding clay. Depending on how the potter shapes this clay, the resulting vessel may be a rough, crude pot, or a gleaming, graceful urn, perfectly formed by the master's hand.

My aim is to mold students who are considerate, more democratic, more tolerant toward one another, open, able to express their opinions, and able to find answers to all their questions.

An earlier version of this article appeared in a collection of papers from the *First Kazakhstan National Conference on Reading: A Word to the Teacher* ("Personal approaches, practical experience," p. 81). (2001. Almaty, Kazakhstan: Center for Democratic Education.)

Rysaldy Kaliyeva is an RWCT trainer and a first grade teacher at Elementary School No. 60 in Semipalatinsk, Kazakhstan.

On a related note. . .
How would you answer the next *Look Who's Talking* question?

There are a couple of students in my class who are painfully shy. They never volunteer to answer a question, and they seem completely overwhelmed by the other students when we are working in groups. How can I get them to participate in class activities?

Please e-mail your response to bmichaels@reading.org
The editors will select answers to be printed in a future issue of *Thinking Classroom*.

Students' motivation in class

Daniela Cretu

Students' motivation naturally is connected with their desire to participate in the learning process. When students pay attention, do their homework, and participate in class, we usually say that they are motivated. Motivation is that force that energizes and directs behavior toward a goal. It involves the reasons or purposes that underlie students' involvement or noninvolvement in academic activities. It is well known that motivation is critical for learning. However, we should talk not about a general motivation to learn, but about a specific motivation to learn, that "energizes students in a particular class or lesson and which depends more on the teacher and the content" (Eggen & Kauchak, 1994).

Evaluating and promoting students' motivation

Teachers do not have to wait for students to become motivated to learn; they have the ability to influence the motivational process in the classroom through the instructional decisions they make. Motivating students involves not only leading them to what is to be learned, but also making them thirsty for knowledge and understanding. Our goal for this study is to present an approach that teachers can use to promote and investigate students' motivation to learn in the classroom. Four teachers (including the author) were involved in this research. All four teach psychology, in three different public high schools, and all had attended Reading and Writing for Critical Thinking (RWCT) courses (Klooster, Steele, & Bloem, 2001). The idea that brought us together was to see to what extent RWCT strategies used in our psychology courses could sustain students' motivation to learn.

At the very beginning, I have to mention that the whole investigation, which covered the second semester of the school year 2000–2001, was a challenge for teachers as well as for students. It was a challenge for teachers because they were using the RWCT strategies for the first time in classroom instruction, and for students because these strategies were quite different from the instructional practices they were accustomed to. We worked with 91 students in tenth grade (15–16 years old). The subjects of the lessons were taken from the existing curriculum, and ultimately we gathered data for 40 psychology lessons. The individual teachers had the freedom to plan and conduct the lessons in their own manner, but there were some common elements in these lessons.

The psychology lessons were based on a three-phase teaching framework: Evocation/Realization of Meaning/Reflection. During the Evocation phase students were encouraged to evoke prior knowledge, to make predictions and to set goals for exploring newly introduced topics. During the Realization of Meaning phase students were exposed to new information—new academic content—and were actively engaged with the information. Reflection was the final phase of the learning process, when students expressed their new knowledge and understanding in their own words.

The teachers used a variety of RWCT teaching strategies and cooperative learning activities that encouraged participation and critical thinking: dual-entry diary; I.N.S.E.R.T. technique; clusters; know/want to know/learned; think/

pair/share; jigsaw; discussion web; debate; reciprocal teaching. (See Sidebar 1 for descriptions and examples of these strategies and activities.)

The teachers asked open-ended and higher order questions to encourage expression of diverse ideas, opinions, and responses from the students; the students were also encouraged to formulate and ask higher order questions.

The physical arrangement of the classrooms was adapted to facilitate the grouping of students for effective instruction, and the learning environment and wall displays reflected students' work.

Situated motivation

In order to capture the dynamics of students' classroom motivation in these lessons we used Paris and Turner's (1994) notion of situated motivation. In the view of these authors, situated motivation has four characteristics. First, motivation is a consequence of the cognitive assessments individuals provide in specific situations. For example, students evaluate how they perform while engaging in class work ("I like to solve math problems, but I can't memorize the formulas"). Second, individuals construct cognitive interpretations of events that are open to distortion. That means that these cognitive interpretations are constructed by the learner and represent his or her perception rather than an objective assessment. Third, motivation is contextualized because individuals create unique interpretations of events, goals, and probabilities in different situations. For example, the presence of a competitive peer may alter one's effort and persistence in following the task. Fourth, situated motivation is unstable, because learners' goals are not the same in all settings and may vary as a consequence of their perception of their own efficacy, values, rewards, or expectations in a particular setting.

Considering these characteristics, we can say that situated motivation is highly individualized. Paris and Turner's (1994) situated motivation theory requires attention to individuals in context, or, in our case, to students in a classroom context. According to this theory, motivation is a process that involves a complex and dynamic interaction between an individual and an external environment. In consequence, whether a situation or a task is motivating or not depends on the assessment of an individual, which in turn is determined by the internal state of that individual.

The methodology

Applying the concept of situated motivation in the classroom means that students are active evaluators of the lessons. In order to study students' learning motivation in the classroom from a situated perspective, "it is important that students are given the chance to assess their own motivation with regard to a specific lesson" (Ng, 1998). The author cited suggests that a lesson diary can serve this purpose. Following these ideas, we used two kinds of diaries in this study: an open diary and a structured diary (see Sidebar 2). The open diary allowed students to assess and reflect on their learning, and to make judgments about their motivation with regard to a specific lesson. The students were encouraged to write in the open diary whatever they considered important or relevant concerning either the lesson itself or their participation in it. The structured diary contained 13 statements that students used to assess the lessons and their learning behavior during the lessons. Performance goals, socio-affective goals, academic challenge, expressing ideas, and learning climate were each measured by one item. Two items measured self-efficacy, while mastery learning and cooperative learning were each measured by three items. Students were given personal code numbers by which they identified themselves in these diaries. The teachers allowed time for students to fill in the diaries at the end of class. The diaries were collected at the end of each class, so that at the end of semester we had diaries for 40 psychology lessons in four different courses.

Following the notion of situated motivation, we looked for answers to these questions:

- How do students perceive the psychology lessons based on RWCT methods?
- What criteria do students use in their assessment of learning activities?
- What different descriptors will students choose for lessons they perceive as motivating, versus those they identified as unmotivating?

Examples of RWCT methods applied during the lessons

Dual-entry diary
(Barone, 1992)
Time: 20 minutes, Topic: Attention

Handouts containing a text about attention are distributed to the class. The teacher asks the students to draw a vertical line down the middle of a blank sheet of paper and to use the left side for writing ideas and citations from the text that seem to be relevant; and the right side for their comments, questions, and links with other information they know.

I.N.S.E.R.T. (Interactive Noting System for Effective Reading and Thinking)
(Vaughan & Estes, 1986)
Time: 30 minutes, Topic: Language and communication

The students receive a text about human communication. They are asked to read the text and make marks in the margin, using symbols, such as: "÷" if the text confirms the things they already know; "+" for new information; "–" if something contradicts to what they already know; "?" if the students want to extend their knowledge about some specific things encountered in the text. After reading and marking the text, the students draw a table with four columns, corresponding to the four symbols above, and write the information into the table accordingly.

Jigsaw
(Aronson et al., 1978)
Time: 40 minutes, Topic: Personality

The students are divided to small, heterogeneous teams. The academic material on "personality" is divided among the members of each team (home group). Students from different teams who are studying the same material meet in "expert groups" to discuss their topic for about twenty minutes. Next, the "experts" return to their teams and take turns teaching their teammates about their topics. Finally, all the students are tested on the entire body of information.

Think/Pair/Share
(McTighe & Lyman, 1988)
Time: 5–8 minutes, Topic: Creativity

The teacher asks the question, "Under what circumstances is a person considered to be creative? Give at least three examples of creative attitudes." Each student writes out a brief answer to this question. Then, students pair up and share answers with each other, trying to arrive at a joint answer that incorporates both their ideas.

The cluster technique
(Tierney, Readence, & Dishner, 1990).
Time: 10 minutes, Topic: The Character

The teacher writes the word "character" in a circle in the center of the chalkboard and asks the students to write down their ideas related to this notion. The students write "character" in their notebooks, and circle the word, and then connect other words related to character to the circle with lines. In this way they fill out a cluster of ideas. Then, the students share their ideas and the teacher writes them on the chalkboard, organizing the ideas (with the students' help) into more categories. The result is an enriched cluster. After adding and categorizing all the ideas, the teacher asks students to identify aspects of the topic about which they need more information.

Know/Want to know/Learn (K/W/L)
(Ogle, 1986)
Time: 40 minutes, Topic: Imagination

The teacher divides the chalkboard into three broad columns, marked "Know," "Want to know," and "Learned." The students produce their own version of the K/W/L chart in their notebooks. The teacher introduces the topic "Imagination" and asks students what they already know about it. They discuss their ideas until a set of essential facts emerges, facts that the students are sure about. These are recorded in the "Know" column of the chart on the chalkboard (the students do the same in their own version). Then, students are asked to think of things they are curious about with respect to the topic, and they record these (both on the board and in their notebooks) as questions in the "Want to know" column. At this point, the students are assigned to read a text about the topic. When they are finished reading, the teacher asks them to record the main points they have learned on their charts, lining up the answers with the questions they raised originally, and writing other information learned lower down in the "Learned" column. Then students share with the whole group what they have entered in the "Learned" column of their own charts, and this information is also added to the large chart. To answer any remaining unanswered questions, the teacher recommends books and periodicals.

Discussion Web
(Alvermann, 1991)
Time: 15 minutes, Topic: Temperament

After lecturing on human temperaments, the teacher introduces a controversial question to the class: "Should we consider a person's temperament as being either good or bad?" Each pair of students considers the question for five minutes and lists several reasons in favor of each position, "yes" and "no." Then each pair joins another pair and they share the reasons they have listed for both sides. The foursomes discuss the issue and attempt to reach a consensus on the question, and they write down their conclusions in their notebooks. The teacher invites several of the groups to make a summary presentation of their positions.

Sidebar 2

Open diary: Please make a comment about today's lesson that expresses your general impression of it. (What did you think about today's lesson? Why do you think this? How did you feel during the lesson?)

Structured diary: Using a scale ranging from 1 to 5 (where 1 indicates total disagreement and 5 indicates total agreement), students were asked to evaluate the following statements concerning their learning behavior during a particular lesson:

- The learning climate was favorable
- It is important for me to learn this lesson
- I was interested in today's lesson
- I was concerned about understanding my class work
- I tried to do better than other students
- I wanted to make a good impression on my teacher
- I cooperated with my classmates in a common learning task
- I listened attentively to my colleagues' ideas
- I did my best when I worked with other students
- I expressed my opinion whenever I had something to say
- The class work was challenging—it made me think
- I was able to understand the class work
- I think I can learn this material

Photo: Nancy H. McDonough

Analysis and Results

We begin with the analysis of the open diaries. The emphasis in this analysis is on how students perceived and interpreted the lessons. Students' comments in the open diaries were classified into three groups: favorable, unfavorable, and neutral; and were coded by parenthetical identifiers to maintain students' confidentiality and researcher objectivity. Here are samples for each of these three categories.

Favorable open diary comments:

"I liked today's lesson because I understood it and the teacher challenged us to express and to discuss our ideas. I didn't even realize the time had gone by." (E 121, 25.04.2001)

"The topic (the imagination) has been interesting. I focused on the subject and I liked when we had the opportunity to work in groups." (E 124, 14.02.01)

Unfavorable open diary comments:

"I didn't pay attention on the lesson. I was sleepy." (E 318, 23.04.01)

"I didn't like the subject: the memory. Too many ideas and difficult concepts." (E 212, 13.03.01)

Neutral open diary comments:

"The teacher presented the lesson and explained some new things to us. We also received a homework assignment." (E 213, 5.04.01)

"Today we learned about attention. We answered some questions." (E 113, 7.03.01)

Among 899 open diaries collected, 77.30% (695 diaries) were classified as "favorable." These diaries exhibited a variety of comments used by the students in assessing their lessons. We should mention that the categories describing the comments were derived from a close examination of the students' responses after all the diaries were gathered. Table 1 shows these comments and their frequency in students' open diaries.

Table 1: Favorable diary comments

Criteria	Frequency	Percentage	Rank
Interest	203	20.38	1
Expressing ideas	180	18.07	2
Cooperative learning	129	12.95	3
Mastery	123	12.34	4
Approval of teacher's methods/actions	92	9.23	5
Academic challenge	81	8.13	6
Learning new things	61	6.12	7
Learning climate	58	5.82	8
Valuable lesson	31	3.11	9
Self-efficacy	26	2.61	10
No reference comments	12	1.20	11

As the table shows, interest, expressing ideas, cooperative learning and mastery were the most important criteria students cited when they reflected on the lessons. In other words, the students liked the subject matter or the

learning tasks, appreciated the opportunities for expressing ideas and working in groups, and they understood the lessons. The following sample comments illustrate criteria cited by students in the assessment process.

- Interest: "I liked today's lesson. Human affect is a subject I am very interested in, and I was focused on this." (E107, 21.03.01)
- Expressing ideas: "We've been encouraged by the teacher to express our ideas. I looked for convincing arguments to support my opinions. I enjoyed it." (E 220, 4.04.01)
- Cooperative learning: "I worked in groups with my classmates. We exchanged opinions and listened to each other. I am beginning to like psychology class." (E 121, 28.02.01)
- Mastery: "A good lesson. I paid attention and I understood it." (E 111, 7.02.01)
- Approval of teacher's methods/actions: "It seems to me that our teacher has changed her way of teaching. She makes us think more about the subject we are discussing, and encourages us to express our thoughts. I like this way of teaching." (E 101, 7 II 2001).
- Academic challenge: "Today we had a lot of work to do. We did research and tried to answer the teacher's questions or questions of our own. We made connections between new information and the data we already knew. I used my knowledge and my thinking skills a lot." (E 209, 28 II 2001)
- Learning new things: "I learned a lot about human temperament and I found out what characterizes me from this point of view. I also made a temperament portrait for one of my classmates." (E 318, 30 III 2001)
- Learning climate: "Today's lesson was like a game. Everyone enjoyed it because it was an excellent atmosphere for learning and debates." (E 113, 7 III 2001)
- Valuable lesson: "We talked about the human character. It is a very important subject and I think the information we learned in today's lesson is important not only for school, but for life, because it helps us toward a better understanding of people." (E 205, 28 II 2001)
- Self-efficacy: "I have understood the main ideas of this lesson and I believe I will not encounter problems in learning it at home." (E 412, 2 V 2001)

Many of students' comments fit into more than one category, and in these cases we counted them multiple times in the corresponding categories. For example, the comment "Today I was more active then usual. I expressed my ideas several times and I enjoyed working in groups. I like the way the teacher encouraged us to get involved in our class work" (E 116, 14 II 2001), fit into three categories: expressing ideas, cooperative learning, and approval of teacher's actions. In contrast to such multifaceted comments, there were also comments that were too brief or noncommittal to classify, such as: "It was OK" or "A good lesson." We included these kinds of comments in a category called "no reference." Fortunately, the frequency of these comments was insignificant (1.20%). That means that most students succeeded in assessing the lessons and their motivation for learning during these lessons.

Similarly, we tried to identify the criteria used by students in their unfavorable lesson comments. One hundred sixty-three diaries (8.13% among the total diaries) were classified as unfavorable. Table 2 shows these criteria and the frequency with which they occurred in students' diaries.

Table 2: Criteria of unfavorable diary comments

Criteria	Frequency	Percentage	Rank
No interest	39	23.92	1
Unfavorable physical or psychic states	37	22.69	2
Passivity	22	13.49	3
Disapproval of teacher's actions	19	11.65	4
Misunderstanding	16	9.81	5,5
Unfavorable Learning climate	16	9.81	5,5
No reference	14	8.58	7

The following comments illustrate these criteria:

- No interest: "I could not pay attention to the lesson. There is a personal problem bothering me." (E 107, 4.04.01)
- Unfavorable physical states: "I have been so tired. I couldn't concentrate on my class work." (E 329, 28.02.01)
- Passivity: "I was bored. I did not get involved in the lesson." (E 223, 8 IV 2001)
- Disapproval of teacher's actions: "The teacher wanted us to teach one another. Too complicated for me. I did not like it." (E 416, 14 II 2001)
- Misunderstanding: "I was confused. I did not understand the lesson. It seems very difficult to me." (E 306, 23 IV 2001).
- Learning climate: "Too much noise in class today." (E 112, 11 IV 2001)
- No reference: "I didn't like the lesson." (E 420, 21 II 2001)

Many of the diary comments show that the students brought with them to class a variety of concerns and attitudes that distracted them from engaging in the learning activities. These kinds of comments point out that in addition to cognitive assessments, noncognitive variables (e.g., bad mood, tiredness) should be included when we talk about students' motivation to learn in class.

Some of the students, used to teacher-directed instruction and traditional methods, were quite uncomfortable with RWCT methods, which "attack" their accustomed passive role in class. The novelty of the RWCT teaching strategies and the major differences from traditional practices confused some of the students. That was especially the case when teachers moved too quickly from one strategy to another, before the students had enough time to get used to them or before they completed a learning task assigned. In addition, the noise level (frequently associated with group work) troubled some students. They found it distracting. Active listening, tolerance in debates, and respecting others' opinions are abilities that need time to develop. The problem here for teachers is to assure that classroom noise is evidence only of productive work by the students.

Despite these problems—which we believe will be resolved as teachers' and students' experience with RWCT instructional practices grows—the results of our investigations are encouraging. Most students appreciated the new approach. Even if teachers cannot control students' physical or psychic states, they can use instructional strategies to engage students in the lessons and make the learning process more enjoyable. I would like to cite here just one comment made by a student at the end of the second semester:

> The psychology lessons this semester have been more interesting than those in the previous one, when I used to get bored. This semester many things have been different: the teacher used more attractive methods, we were actively involved in debate, we worked in groups, we expressed and shared our ideas. I have even learned more this semester. I hope we continue this way next year, and I also would like to have this kind of class in other disciplines: mathematics, history and so on. (E 423).

Coming back to the diaries, one important finding of our analysis was the fact that students reported disparate and sometimes even contradictory opinions about the same lesson. These contrasting opinions support the idea that each student reflects on the learning situation from a personal point of view, using different criteria to interpret a lesson, according to his or her present needs. Here is a sample of different impressions of the same class, a lesson on "Character" (9.05.01):

> "The lesson seemed easy to me, and the group work made it more attractive. I am enjoying psychology classes more and more". (E 403)
>
> "It was good. We had the opportunity to express what we thought." (E 404)
>
> "I was bored and I didn't understand very much of the subject." (E 407)
>
> "I felt challenged and I like it." (E 409)
>
> "An headache kept me from concentrating on the lesson. I want to go to home." (E 419)
>
> "We found out new things about the human character." (E 421)
>
> "A classmate was annoying me the whole time. I did some work, but I didn't finish it." (E 424)

Another important finding was that a given student's perceptions of the course varied from lesson to lesson. This fact illustrates the unstable nature of situated motivation. Here is a sample of the comments of student E 404:

"It was good. The teacher challenged us to express our thoughts." (14.02.01)

"I was distracted because today is my birthday." (28.02.01)

"I learned new things about my temperament." (7.03.01)

"It was boring. Too much noise in the classroom." (21.03.01)

"We worked in pairs and then in groups of four, and it was fun. I liked it." (4.04.01)

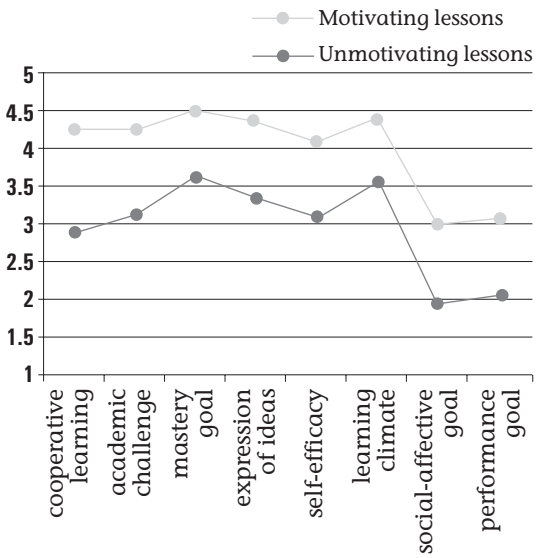
"I'm a little confused because I didn't understand today's topic very well." (25.04.01)

"Today's lesson was good. I enjoyed it and participated in it." (9.05.01)

The variety of learning situations, and of students' psychological or physical states, explains the heterogeneous nature of their comments. The disparate or even opposite comments on a given lesson, and the variation of the individual comments across the lessons, reflect the characteristics of situated motivation. These findings support the idea that students' motivation to learn in the classroom is an individual–context interaction, a process by which individual students are activated to engage in academic activities.

Students' entries in the structured diaries were classified into "motivating" and "unmotivating" lessons, according to their favorable or unfavorable comments in the corresponding open diaries. The next chart presents a comparison of motivating versus unmotivating lessons, showing the mean scores for the variables in the structured diaries (computed based on students' answers given on a scale from 1 to 5 for each variable).

Chart 1:
Means of variables in structured diaries



The above chart shows major differences between the two groups of lessons, from the students' perspective. The open diaries and the structured diaries seem to support each other. That means that students who wrote favorable comments in the open diaries also marked high scores for the structured diary variables. The criteria that received the highest evaluations in both types of diaries were cooperative learning, academic challenge, mastery goal, and opportunities for expressing ideas. Specific teacher practices increased students' involvement and cooperation in lessons, retention of information, and enthusiasm for learning new information. In other words, these students felt that they had succeeded in mastering the course content, were challenged by the learning tasks, could freely express opinions, and worked effectively in groups. When students had this perception of the instructional methods, they were highly motivated. The reverse was true for students who commented unfavorably about the class. Their level of motivation, as measured by the structured diary variables, was significantly lower than the rate of the other group.

In comparing motivating versus unmotivating lessons, students showed differences for all the variables of the structured diary, but the variables of cooperative learning, academic challenge, mastery goal, and expression of ideas seemed to discriminate best between the two kinds of lessons. This fact

also indicates that using students' general comments from the open diaries as criteria to classify students' perceptions of the lessons as motivating or unmotivating was a viable technique. Students showed higher motivation, as demonstrated in the structured diary scores, when they commented favorably on a lesson.

Conclusion

We are pleased that students exposed to RWCT teaching strategies demonstrated a positive attitude toward their lessons. The major benefits students cited were interesting lessons and teaching strategies, active involvement in lessons, more creative and interesting learning experiences, better understanding of the content, high student cooperation, a safer and more comfortable learning environment, more creativity and higher order thinking, and dynamic communication in the lessons. All these benefits were possible because the teachers involved in this research made major changes in their teaching style. They no longer played the role of transferors of knowledge, but took on the role of motivators, mediators, and organizers. Our conclusions seem to confirm teachers' influence on students' motivation to learn, and are congruent with Eggen's definition of specific motivation quoted at the beginning of this study. Our analysis also showed that under the pressure of certain personal concerns, such as bad mood, tiredness, or other problems, the students were distracted from engaging in the lessons.

This study provides evidence that students' motivation in the classroom is an assessment-based process. The diaries showed how students perceived their psychology lessons and what kinds of criteria they used in this assessment process. We also saw that students' motivation was dynamic, unstable. These findings support the validity of a situated approach for classroom motivation. In addition to serving as research tools, lesson diaries constitute valuable resources for students and teachers. They allow students to reflect on their learning experiences and on their classroom motivation. For teachers, on the other hand, diaries provide an opportunity to obtain insight into classroom motivation and to adapt their actions or teaching strategies in consequence. Teachers who are truly interested in optimizing the teaching process, with its implications for students' motivation, cannot afford to ignore the students' reflections on their classes. The lesson diaries have proved to be an important means of recording these reflections and capturing the complex process of motivation for learning. However, future efforts are needed to design research that can identify the long-term effects of RWCT teaching methods on learning situations.

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Daniela Cretu, PhD, is a lecturer in the Department for Teacher Training at Lucian Blaga University in Sibiu, Romania.

The Network of Concepts and Facts: Forming a System of Conclusions through Reflection

Yury Vasilyev

This article presents a strategy that enables students to effectively reflect on the information they are learning, to identify scientific interconnections between the individual facts and concepts, and to develop a system of conclusions.

When I ask my physics students to reflect on the topic we have just been studying, I often encounter a problem: The students generally fail to draw systematic conclusions from the various isolated facts, even though they are quite capable of considering these facts from different perspectives. We may try to address this problem by building clusters—but this only helps to some extent. To create a cluster, the students choose a key word and look for concepts that are linked with it either by association or by logical connections. However, the students are often at a loss when it comes to identifying the interconnections among the concepts. They may have a vague feeling that there is a connection, but since they cannot provide any scientific support for the idea, they are not sure whether they even should mention it. This failure to integrate separate facts and concepts into a harmonious system impedes students' understanding of the physical phenomenon in question.

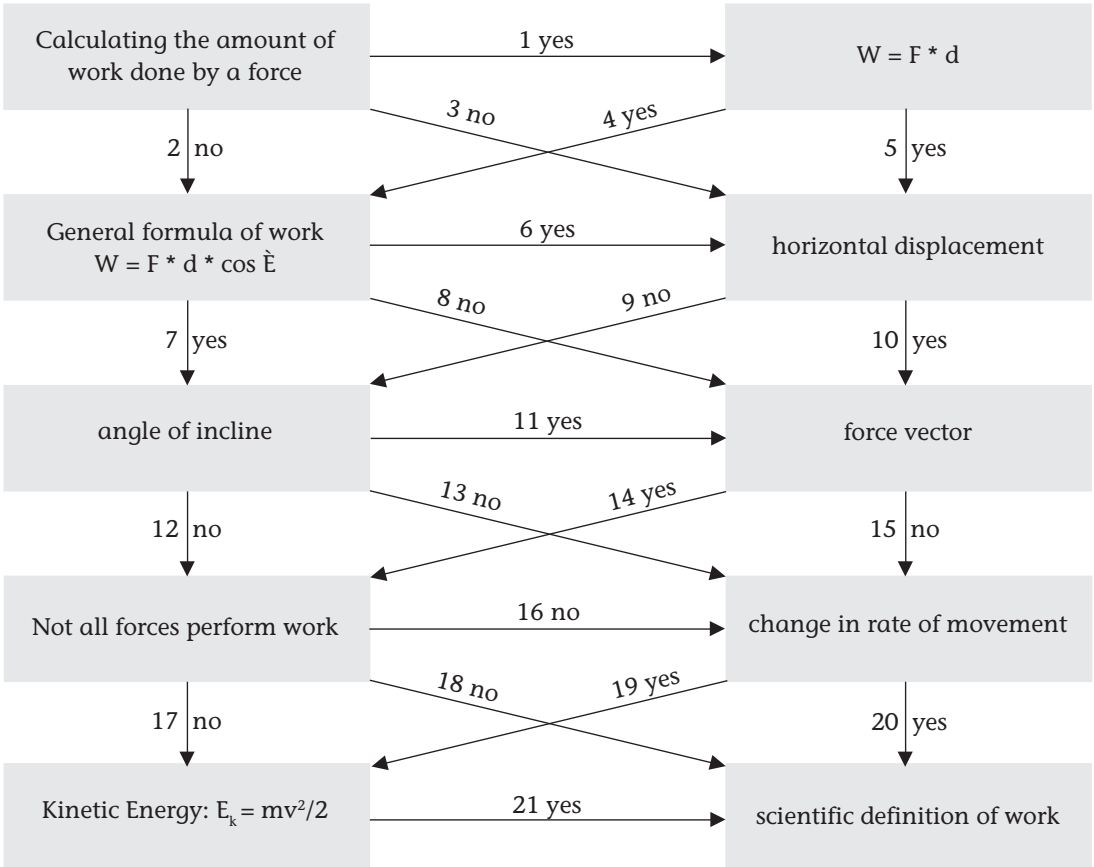
I first conceived a solution to this problem while I was looking through some old issues of a popular physics journal, *Kvant [Quantum]*. I was reading an article about various possible strategies for determining the exact size of a whale swimming off the shores of Greenland (*Kvant* no. 9, 1982). Accompanying the article was a selection of original approaches to the problem. Some were closely related to one another, others were completely independent. Together the proposals appeared to form a sort of network. Working with other journals and books, I discovered similar "networks," in some cases made up of illustrations (Alekseyeva, 1980; *Kvant* no. 6, 1983). I decided to develop the idea of "networks" into a teaching strategy that might solve, at least partially, the problem of getting students to organize their knowledge systematically.

Using concept networks in class

A concept network is a set of ideas and facts relating to a particular topic, with the linkages between the facts represented by arrows. Initially, it is the teacher who selects the facts and concepts for the network. The students' task is

- to become familiar with the concepts and facts included in the network;
- to write "yes" or "no" next to each arrow, indicating whether the linkage does or does not exist.
- to analyze the linkages.

Below is an example of the strategy from a 9th grade physics lesson on "Work and Energy." [Editor's note: Readers should be aware that the creators of the networks explained their linkages verbally, and the thought process they used may not be apparent without this explanation. For this reason, it is not possible to evaluate the accuracy of the specified linkages.]



Learners decide whether to write "yes" or "no" next to an arrow by considering how the two concepts are connected—is one concept a direct consequence of the other, or is it just a supplement to it? What do they learn from this process? As the linkages are labeled "yes" or "no," a complex chain of interconnected and unconnected concepts and facts emerges. The students have to consider why certain linkages exist or do not exist, and how the connections can be confirmed. Reflecting on the relationship between two concepts, the students must establish a scientific basis for their conclusions. The process continues as they move on to the next linkage, and gradually all the facts and concepts in the network are integrated into the given topic. Thus when they complete this assignment, the students have formed a system of conclusions about the concepts and facts they have learned.

As I mentioned previously, at first I compile the concept networks myself, and the students only mark the arrows with "yes" or "no." Initially my goal is to demonstrate the strategy to the students. However, when they have more experience, the students begin to construct their own concept networks on various topics.

Picture Networks

My eighth graders were working with the textbook *Physics and Chemistry* (Gurevich, Isayev, & Pontak, 2000), in which the authors advise, "It is important to study the pictures as attentively as you study the text. Try to understand the important information they convey." This gave them the idea of creating networks consisting of pictures, using materials they had found in the library. Naturally I encouraged them to go ahead—it seemed like a great idea. Here is the picture network "Magnetic Field" by Veronica S.

And here is another network compiled by her classmate Natasha K.

Using pictures to create networks made the process even more interesting for the children. They had to express their ideas in drawings, and then analyze the interconnections between their representations of various facts and concepts. The results were really fascinating! Working with the same topic, the young artists produced completely different sets of pictures.

My more advanced students were given a more difficult assignment: to

Figure 1

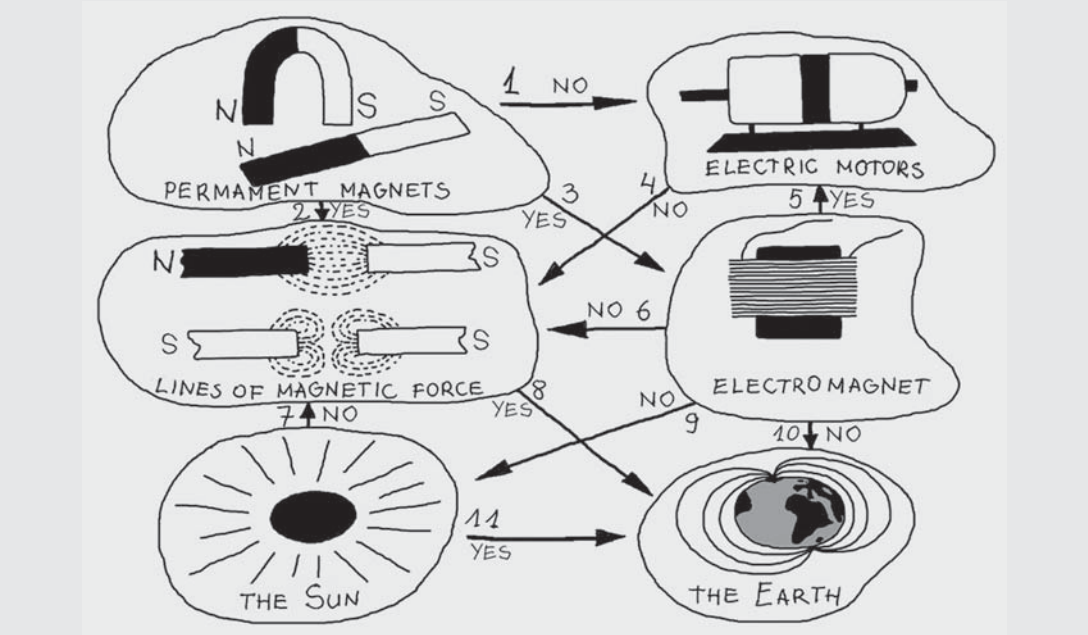
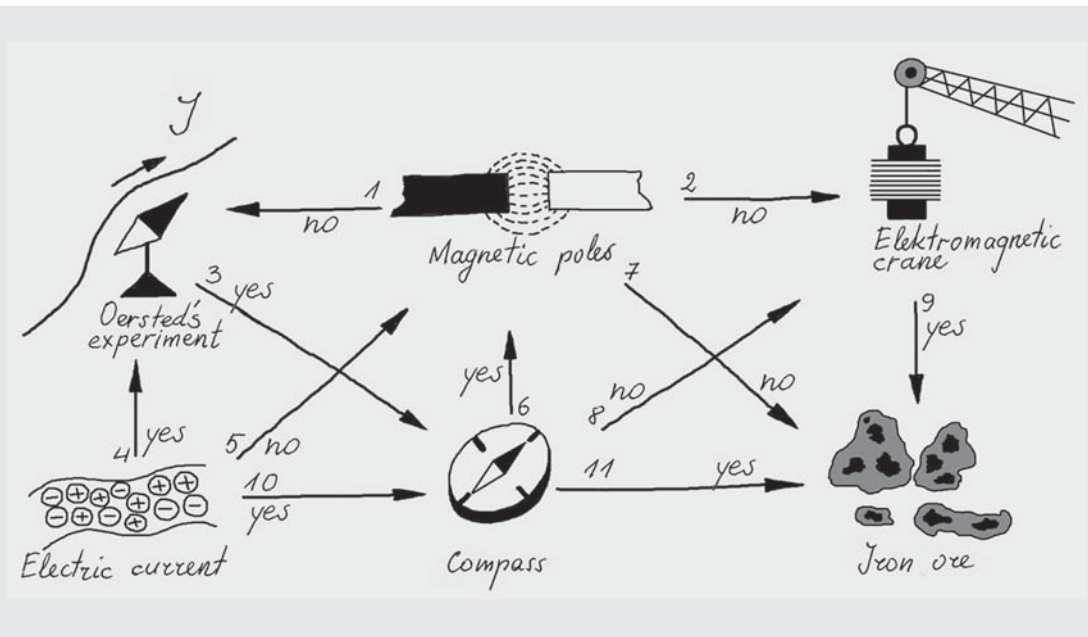
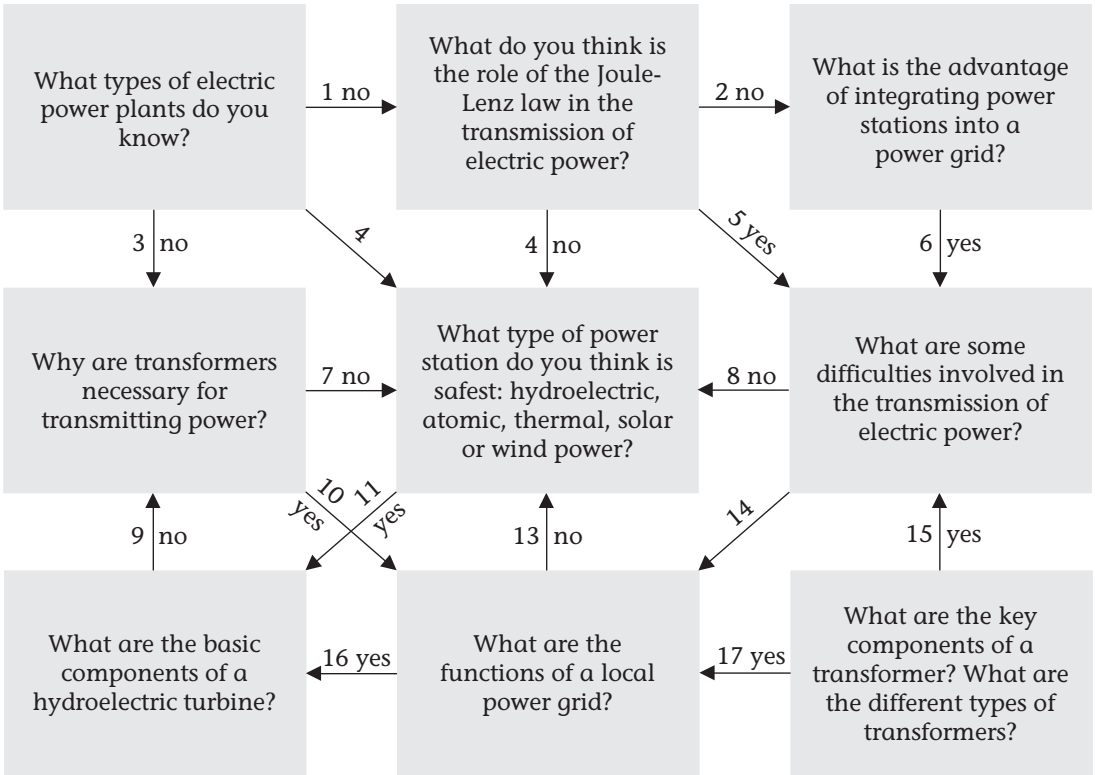


Figure 2



create a network consisting of questions. "It is hard to make up the questions," admitted the students, "but making the connections is usually no problem, because in the process of asking the questions you inevitably come up with possible answers."

What is the point of a question network? Sometimes students have difficulty remembering why this or that arrow was labeled "yes" or "no." In a question network, each question implies a search for possible answers. The students must analyze the questions in the network and try to answer them. Comparing the answers to the questions, they may be surprised to discover that certain questions have a lot in common, while others are completely unrelated to one another. The logical conclusion: "If the answers are tied together, then the questions must be tied together too; but if the answers are unrelated, then we can hardly expect to discover connections between the questions."



Creating such a network gives students a framework for organizing their knowledge about a physical phenomenon. Once they create this framework, they will not have to struggle to recall why a given concept appears in a particular place. There is a continuous process of reflection as the students compile a question network: They recall concepts and facts they have learned in order to answer the questions. Here is an example of a question network created by eleventh graders who were studying the production, use, and transmission of electric power.

Other ways to use concept networks

When my seventh graders were working in teams, some of the students asked whether they could use concept networks to present their work to the class. "Why not?" I responded. So they set about to create a network from the information they had learned about measuring pressure. The result turned out to be more impressive—and somehow more scientifically valid—than if they had used clustering. First the students had to select concepts and facts to illustrate the topic. The selection itself presented no difficulty, but the analysis of linkages caused heated argument. Some students thought that certain facts were closely connected, others could discern no connection whatsoever, and everyone tried to prove his or her own point of view. Eventually a compromise was reached and the argument subsided, only to begin anew when the team moved on to a new set of concepts. The end result was a network created by a "collective mind."

What did the children gain from this work? It certainly contributed to their analytical skills and ability to defend their position, as well as expanding their factual knowledge. And we should not overlook the emotional satisfaction they received from their collective effort. The group derived great pleasure in presenting their project to the class, as it represented the contributions of all the members of their team.

The concept network strategy also lends itself to work in pairs. After students have read and comprehended a section of the textbook, they can work in pairs to review the material and construct a network of concepts and facts. Usually children find this sort of work engaging, and each feels responsible for the results of their combined work: Two heads are better than one, as the saying

goes. The debates tend to be quieter and more thoughtful than in larger groups. Usually the children pair up on the basis of friendship, common interests, similarity of views, and personality, and these factors tend to insure that the work will proceed quickly and efficiently. As they develop the ability to work on complex concepts in cooperation with others, the children also develop a sense of their own individual importance.

At the end of a physics unit, we are often left with some important issues unresolved, and the students have to look for answers to these questions outside the textbook. Concept networks can be helpful here, too. They provide a way for students to reflect upon and organize the information they have gathered in the course of their independent research.

What is the teacher's role in this work? At the initial stage, my job as a teacher is to help my students master the technique of making up a network. I teach them how to select concepts and facts, and explain how to analyze the interconnections. Later my priorities shift. I focus on the motivation behind the assignment—the advantages to the students of creating this particular network. I become a "coordinator" for the class, giving advice and answering questions that come up in the course of work. Gradually, as our work together progresses, I move from coordinator to "facilitator," working in cooperation with a creative team. And that is my continuing role once the students have mastered the construction of concept networks.

Of course with my new students I must always first play the role of teacher, then coordinator, and only after that can I become a facilitator. As the students grow in their understanding of concept networks, my role in the process changes, and they come to view me from a different perspective. An atmosphere of trust is established, and the students gain confidence in their own ability to form a system of conclusions. I encourage them to recognize their growth as individuals in their contributions to the collective effort of our creative team.

You may question my use of the term "creative team." Where does creativity come into it? Where are the original ideas? What is the point of having students form networks using concepts and facts taken from books? The point is the creation of the system—an organized set of conclusions about these scientific concepts and facts. Physics is an exact science, and scientific facts are important in it. Without a certain stock of factual knowledge, the student will be unable to form hypotheses. Hence, the networks created in our classroom become the foundations for forming future scientific concepts.

Creativity is also evident in the selection of material students include in their networks. The students are not limited to what is in the textbook, and many bring in concepts and facts from outside sources. Sometimes the students are faced with such a wide range of possible approaches to a problem that they have to study all of them, and choose the best alternative.

My work with concept networks has led me to conclude that this strategy makes a substantial contribution to the learning process. It simplifies the learner's task of building an organized system of scientific concepts. Many of my students have started to demonstrate a more conscious approach to the learning process. They have learned to reflect and to create their own set of conclusions, something which previously presented a serious problem for them.

I hope that the ideas presented here may strike a chord with some of my colleagues, and help them as they seek more thoughtful and more effective approaches to their own teaching.

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Yury Vasilyev teaches physics at School No 2 in Kyzyl-Kiya, Kyrgyzstan.

Carl Rogers and Me: Revisiting Teaching

Li-Te Li

Introduction

> "Ever since my childhood, I have been curious about life. I always wondered where I came from and where I would go. What is the purpose of life and my relation with others? What exists in the world that I cannot see? With all these questions, I entered school, hoping that learning would clear my doubts and satisfy my curiosities. I loved literature and enjoyed reading. To me, reading is like having a dialogue with the author as well as the characters. However, in my school days, these dialogues were always interrupted by skill training. I was taught to practice the pronunciation of each word, to memorize the structure of each sentence, to finish each question in exercise, and to fill each blank with right answer in tests. Techniques and methods were what I learned. Knowledge, instead of wisdom, helped me to deal with exams but was of no use to meet the needs for being a person" (Li, 2000, p. 47).

"Being a person" is always an underlying longing for me. Though there was no room for such emotional issues in school, thanks to several reflective teachers who showed me their genuineness and sincere caring, my school life had its bright spots. Much inspired, I started my formal teaching career in a vocational high school 15 years ago, hoping to help my young students grow as whole persons. However, on my first day of teaching, the other homeroom teachers and I were asked to enter our empty classrooms while all the students gathered in the playground for the weekly assembly. For what? As a greenhorn, I had no idea. Then, a loud voice came through the PA system commanding the teachers in the empty classrooms to examine each student's schoolbag and desk drawer, to check whether anyone had brought anything that was not allowed—lipstick, Walkman, novels, etc. I was stunned!! "Should I do that?" I was a new teacher, so I was supposed to comply with what I was told. However, I considered this act neither right nor polite, and I wrestled with my conscience. Then, I decided to be honest with myself and also be real to my students. This was the first day of my teaching career, and since that day I have continually encountered similar rules and assumptions in our field, more than I ever could have imagined.

When I was teaching in high school, more than once I was told, "Don't waste your energy. Five sentences in an hour are enough for those dummies!" Now I am teaching adult students, but a similar attitude still exists. Teachers like to decide what students should or should not know. The students, after years and years of relying on teachers, are content to accept what teachers provide or fail to provide. A teacher who shows trust in the students' potential, or encourages students to make their own choices, will meet reluctance from both students and administration, who fear uncertainty and chaos. A high school student once told me, "We like to be treated as cows because that's what we are used to." There is no reflection, no inner discovery, no freedom, and no trust in the relationship between teachers and students. "Being a whole person" seems an unreachable myth in our educational system, especially in English language learning.

Reading Carl Rogers reaffirms my beliefs on "being a whole person" and brings me the joy of revival. However, Carl Rogers seldom appears in any literacy-related research. What if anything does this absence imply? This paper will try to make a connection between Carl Rogers and literacy by briefly introducing Rogers's major contributions and by discussing the implementation of his ideas in an EFL classroom in Taiwan.

Carl Rogers on Education

Carl Rogers (1902–1987), the founder of "client-centered" or "non-directive" theory, devoted his entire professional life to enhancing human communication. He not only proposed and promoted a new approach, known as the "non-directive," "client-centered," or "person-centered" approach, in psychotherapy, but also asserted the value of person-to-person relationships in all the helping professions, such as psychology, social work, education, ministry, and the like (Kirschenbaum & Henderson, 1989; Jiang, 2001).

The best-known contribution of Carl Rogers is his "core conditions" for facilitative (or non-directive, person-centered) counseling practice. These core conditions include congruence, acceptance, and empathy.

Congruence, another term for realness, means that the feelings that a person is experiencing are available to him/her and to his/her conscious awareness. In other words, the person is able to live these feelings and able to communicate them if appropriate. Acceptance, also known as prizing and trust in Rogers's writing, is a non-possessive caring for another person. Through such caring, a person shows his/her confidence in imperfect human beings. Empathy is not simply putting oneself in another's shoes or following certain techniques, such as repeating the last words the client has said (Rogers, 1961, 1980). Empathy involves attentive and nonjudgmental listening and understanding.

Carl Rogers's contributions are not limited to counseling psychology or psychotherapy, but are also important in education. In his later years, Rogers found that his ideas concerning interpersonal relationships were useful and suitable for all human interactions. Thus, he expanded his research into education, and his techniques of facilitative counseling have been widely applied to various educational settings. His educational reforms include the concepts of teacher as facilitator, learner-centered learning, and the ways of building freedom.

Teacher as Facilitator

> "Not long ago, a teacher asked me, 'what changes would you like to see in education?' I answered the question as best I could at the time, but it stayed with me. Suppose I had a magic wand that could produce only one change in our educational systems. What would that change be?
>
> "I finally decided that my imaginary wand, with one sweep, would cause every teacher at every level to forget that he or she is a teacher" (Carl Rogers, 1983, p. 135).

Carl Rogers stated more than once that teaching "is a relatively unimportant and vastly overvalued activity" (Rogers, 1983, p. 119). He disagreed with the definition of teaching as instructing someone else. To him, the mere imparting of knowledge could only make sense in an unchanging environment. Since our world is continually changing, the goal of education should be the facilitation of learning. He also emphasized that an educated person would be one who has learned how to learn, rather than one who relies on static knowledge. The qualities of Rogers's facilitative learning, according to his theory of person-centered counseling, include realness, prizing-acceptance-trust, and empathic understanding.

Realness, the basic element of facilitative learning, suggests that the teacher can be a real person, with convictions and genuine feelings regarding both her/himself and the students. In other words, the teacher is a human being instead of a "faceless embodiment of a curricular requirement" or "a sterile tube through which knowledge is passed from one generation to the next" (Rogers, 1983, p. 122). Prizing-acceptance-trust is another important element in facilitative learning. What Rogers mentioned here is the prizing and acceptance of the learner as an imperfect human being with many

different feelings and potentials. Such trust and love make learning more effective. And finally, facilitative learning requires empathic understanding. A facilitative teacher views the world from the perspective of the students. In other words, the teacher's goal is simply to understand the students, with no evaluation or judgment based on the teacher's own preferences.

In Rogers's view, when a teacher adopts such attitudes, he is no longer a teacher. Instead, he is a facilitator—giving students freedom, life, and the opportunity to learn. Rogers believed, "If only one teacher out of one hundred dared to risk, dared to be, dared to trust, dared to understand, we would have an infusion of a living spirit into education that would…be priceless" (Rogers, 1983, p. 131).

Learner-centered Learning

The person-centered mode of learning emphasizes the teacher's own sense of security, so that he or she has essential trust in the capacity of others to think for themselves and to learn for themselves. With this precondition, it is possible to implement other features of person-centered learning.

Rogers proposed that the whole class should be involved with curriculum planning or course design, so that the facilitative teacher and the learners would share the responsibility for learning. The teacher/facilitator provides learning resources from his or her own knowledge and experience and encourages the whole class to add resources from their knowledge and experiences. As for the learners, they are completely free to choose and develop, individually or cooperatively, their own learning program, according to their interests, curiosities, and resources. At the same time, they are responsible for their own choices. With the atmosphere of realness, trust, and empathic understanding, a facilitative learning climate is created, first by the facilitator and gradually by the whole class. The learning process and the interactions among the learners are given equal emphasis. Both the teacher and the students then experience that learning from each other is as important as learning from books.

In addition, it is primarily the learner who evaluates the learning. In such a self-chosen and self-initiated learning atmosphere, the learner tends to become invested as a whole person in the learning process, and such learning "tends to be deeper, proceeds at a more rapid rate, and is more pervasive in the life and behavior of the student" (Rogers, 1983, p. 189).

Building Freedom

Besides the powerful notion of "teacher as facilitator," Rogers also suggested ways of building freedom in learning.

One of his suggestions is to set up circumstances that involve students with real experiences and problems. Another is to provide resources. He also suggested using learning contracts, involving the community, peer teaching, grouping, using encounter groups, and self-evaluation. Among these methods, the use of contracts is especially effective and interesting. Contracts are usually used for "providing activities, motivation, and reinforcement to help students achieve cognitive objectives" (Rogers, 1983, p. 150). Also, student contracts can be a way to evaluate students. With contracts, students "become searchers after knowledge, not passive and temporary recipients of it. They can enter into the process of learning and discover what an adventure it is" (Rogers, 1983, p. 153).

Application of Person-Centered Learning

Starting from the concepts of person-centered learning, scholars, researchers, and school administrators have conducted a great deal of research in various educational settings. Some frequently cited studies are "A sixth grade teacher experiments" (Rogers, 1983, 1994; Shiel, 1966), "A French teacher grows with her students" (Rogers, 1983, 1994; Swenson, 1974), and "An unusual science course in a university" (Levitan, 1981; Rogers, 1983). Besides these qualitative research studies from American classes and schools, there are quantitative research studies conducted in various countries and settings. The results show that "students learn more, attend school more often, are more creative, more capable of problem solving, when the teacher

provides the kind of human, facilitative climate" (Rogers, 1983, p. 197).

However, the important questions for literacy teachers are "Would such person-centered learning be possible for literacy learning in general and EFL learning in particular?" "Could an EFL teacher be a facilitator instead of a teacher of banking education?" (Berthoff, 1987; Freire, 1970). "Would students learn anything if they are encouraged to have self-directed learning projects?" To answer these questions, I would like to share a project involving theme cycle learning that I conducted in my EFL reading and writing class.

Theme Cycles for EFL Reading and Writing

The setting for this project is an EFL reading and writing class held in a university-based language center. The length of the course is one academic year, with classes meeting once a week for three hours each time. The students are government employees, ages from 25 to 55, some of them married with children. They are highly educated, some even having master degrees or doctorates. However, in terms of English writing, they have little or no learning experience. Thus to them, English writing is both novel and scary.

It is important to note that this course is based on Rogers's philosophy, designed to be person-centered. Through theme cycles, which require students to select and explore a series of themes, students experience making contracts, negotiation, decision-making, peer and group discussions, reflection, and self-evaluation. The term "theme cycles" refers first to the recursive and spiraling process of knowledge construction, and second to the cyclic learning process (Altwerger & Flores, 1994). As "cycle" hints, each step of the theme cycle generates new steps, and theme cycle studies often develop into subsequent studies as new and related questions are posed (see Appendix A). In theme cycles, the students are involved in the entire process of theme development, from deciding on topics to researching materials and information, reading and writing, and sharing what they have learned. In the process, they learn how to learn. They are also involved in discovering themselves from within and without, which paves the way for being a whole person.

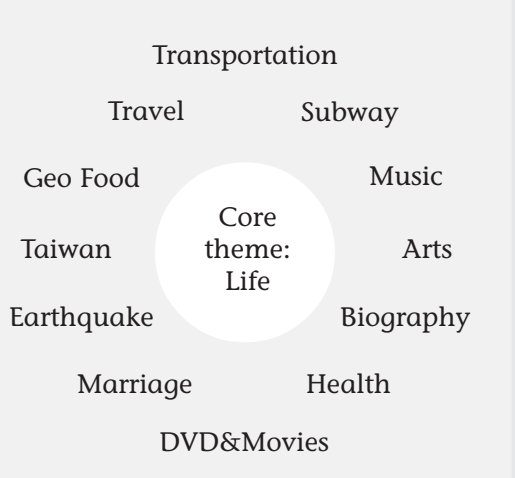
In this process, the teacher plays the role of facilitator, who reveals realness in her interaction with students, shows complete trust in students' potential, and is always interested in students' opinions. An atmosphere of nonjudgmental and self-directed learning is established in the hope that students will not only learn a language but also cultivate their development as whole persons.

Theme Cycles *(By Li-Te Li, 2001)*

Appendix A

Theme Cycles: Processes

Theme Cycles: Examples



The Process and the Result

Begin With Trust

Students coming to the class with prior knowledge, life experiences, and interests should not be mistreated as empty vessels waiting to be filled (Freire, 1970); instead, they should be trusted as active agents who have the ability and potential to generate themes that they would like to explore. Thus, in the beginning of the course, the students are encouraged to discover what they are interested in or concerned about so that they can design their own learning project. The process of theme selection is full of inquiries, negotiation, and re-investigation, accompanied sometimes by anxiety and sometimes by excitement (See Ex. 1).

Ex. 1—e-mail letters written in the first few weeks of the class. *(All the students' writing presented in this paper is kept intact without any revision from the teacher. All students' names are pseudonyms.)*

(Sept. 30, Judy) Dear sir, I am very glad to receive your message. These days, I am very busy for my job, but I am still thinking my "theme" until Now. I decide to giving up my professional topic, because it is too boring. I would like to choose a funny and relax theme, maybe "Travel" is fit. In the future, I can collect many kinds of information including culture, food, structure and so on from different countries. It is time to off, see you next Monday. Bye!

(Oct. 4, Leader) Dear Judy, I am glad you decided the theme so quickly. "Travel" will be very interesting, I guess, and it's good for you to expand the theme into culture, food, and customs!! I believe you will do it well!! Good luck!

(Oct. 5, Judy) Dear sir, I have searching the internet for two days, but still not find out any just essay. I nearly want to give up the theme "travel". In my planning, I want to make a series of reports from the basic traveling knowledge to destination introduction. But most webs introduce the single destination. I don't know how to find my demand. Maybe I need go to the bookshop. Anyway I will go ahead.

(Oct. 6, Leader) Dear Judy, Don't be frustrated!! Try some travel guide, handbook, or some tips for self-help (DIY) travel. You may find some information on the Internet or in bookstores. Also, try the following websites…. Good luck!!

As the example reveals, the teacher plays the role of a facilitator, providing learning resources and creating the environment for engagement. However, the teacher does not provide any assigned topic for the students' theme projects, because the teacher values the students' originality and trusts their capacity. Such trust often paves the way for effective and successful learning (Li, 2001; Rogers, 1983).

Proceed With Realness, Acceptance, and Empathy

After selecting their themes, the students start reading related materials, discuss their impressions from the reading, and write essays and journals. Then, they discuss their drafts with peers or in a group. The drafts are usually revised and edited several times before being published. The term "publish" here refers to a collected anthology of the writing produced by all the members of the class and to their individual portfolios. Also, at the end of each semester, the students will have oral presentations, sharing the essence of their theme projects. As the cycle proceeds, the learning process is full of sharing, discussion, and exchange of ideas. Since realness, acceptance, and empathic understanding provoke learning to be more effective and productive (Kirschenbum & Henderson, 1989; Rogers, 1983, 1994), a climate in which the students can present their opinions freely is of great importance.

In theme cycle learning, regardless of whether the students' sharing is related to reading/writing or to daily concerns, the teacher demonstrates the qualities Rogers emphasized: realness—being what s/he is (see Appendix B); acceptance—prizing the students even though they might be imperfect (see Ex. 2); and empathy—understanding the students without judging them (see Appendix C).

Ex. 2—e-mail letters written when the students had finished their first essay

(Oct. 27, Leader) Dear all, you should be proud of yourselves!!! Your first essays are so interesting and wonderful. Though you produced the pieces under pressure, you did create pleasure for your readers!! I cannot wait till next Monday to tell you all this and I am thankful for your sharing. Enjoy life! Enjoy reading & writing!! :-)

(Nov. 3, Maggie) You always encourage us so much. I appreciate it very much. Sometimes I wonder we are really as good as you said? ……

Appendix B

An Example of Realness

(A student's journal writing)

First of all, education should not be changed as material or goods. It is a learning process. If students don't want to go to school any more, it may represents that the ecology systems get some problems, such as the students have some family reasons to let them not go to — family violence, poverty, economic etc, and educational systems — teaching techniques and education administrational design — can't attract students to go to school. Therefore, if students are uninterested the courses, we should think the real reasons. Do not use money, lotteries, or material ceremony to solve this complicated problems. Education can't be exchanged in the market.

Second, I am worried about that these will have some stigma on these students. For example, some schools hold some pizza parties for potential dropouts. If students come to parties, it implies that these groups are different, abnormal, potential problem makers. Thus, they will go to these places. It labels bad marks on these students. In other words, it will disturb the students learning attitudes.

On the whole, the officers, principals, and teachers and even all of us must think what's wrong in this educational system. We can't take it for granted that it must students want some money, or driver's licenses. We should think why the students don't want to go to school any more and stand on the same side to feel their moods and thoughts then try to dissolve this problem directly.

(The teacher's response)

Dear Peggy,

Thank you for sharing your profound opinions. Yes, we need to find out the real problems and solve them with proper ways. As you mentioned, the real problems often come from family or school, but students are those who are blamed most severely instead, which just causes a lot more complicated unsolved problems.

Besides, I am deeply impressed by your comments on stigma. Labeling does deprive students of their esteem, which, in turn, pushes them to the edge of being wild. I used to teach in vocational high school, and the pain my students experienced will never be wiped out in my memory. I felt their hurt, so I would never agree with any kind of labeling. How nice it would be if more and more educators have your insights on this!

Thank you again for your sharing.

Appendix C

An Example of Empathy

(A student's journal writing)

In this Monday morning, I pass by a park near my office. There are so many people that accompany the music to dance with each other. They look so happy and healthy. But I think myself I have to ride my motorcycle and go to work. I feel a little sad.

In our short life, we must spend how much time working and earning money. Since we retire, we begin to learn how to enjoy my life. But we can't keep our health and energy such as we were young that we would lose some important things in our life. For example like different taste, sport, interest, activities, and so on.

So I think despite work and earning money are very important in life, we can't ignore the leisure, interests, and the thoughts we want to do something. After the hard work, we should take relax and think how to award ourselves. Like listening music and watching the movies we like. And keep our passion for life and not all the work.

(The teacher's response)

…I can totally understand what you are saying here. Yes, we all spend too much time on work or some routine but dull things. For modern people, to have leisure time seems a luxurious expectation, but I agree with you that we should re-arrange our time and restart a more human-like life!!

Thank you for sharing and I believe that you speak for a lot of people here in Taipei!!

Move On as a Whole Person

A whole person, according to Rogers, is one who integrates his or her intellectual and emotional self. Emotional reactions, either to a reading or to a social event, sometimes reveal the students' unique insights, which, in turn, enhance their intellectual development or at least their willingness to pursue a topic further. Though schools seldom value personal emotions, many humanistic researchers have proved that the notions of wholeness have positive influences on an individual's learning and living (Maslow, 1954; Rogers, 1961, 1980). Thus, along with learning English, an underlying goal in this class is being a whole person. In an atmosphere of unconditional positive caring, the students develop confidence in perceiving and experiencing their feelings. Such awareness of their inner world illuminates their relationships with others, and consequently, deepens both their inner and outer understanding. The following examples illustrate this awareness.

Ex. 3—e-mail letters written after the first time of draft discussion

(Nov. 2, Leader) Dear Ken, Are you OK? I kind of worry that you felt uncomfortable about the draft discussion we had in class. Actually, your draft was just a sample for discussion. It doesn't mean that your piece is bad. On the contrary, your piece is pretty good—so good that I would like to choose it as an example! Anyway, I hope you won't take it too personally or too seriously! Cheer up and keep writing! I do enjoy reading your writing, especially some of your reflection on daily life! :-) Trust yourself!

(Nov. 2, Ken) Actually, I felt happy a lot. My article can be discussed by teacher and classmates. Like this chance, it is not everyone that can enjoy. By the way, I can learn more than non-discussing. So, I never felt sad. Thanks you for your comfort.

(Nov. 3, Leader) Dear Ken, thank you for the reply, which relieves my worry a lot! Thus, keep writing! I didn't get any piece from you this week (though it's not required). It's not like you, right? :-)

(Nov. 3, Ken) You know, I am a fire fighter. In order to rescue people and process the recovery after the typhoon, I had four days not to take off! Rarely sleeping well, I can't concentrate my attention on studying. And needless to say, I can write something. All of my wish is let me take off and sleep well, but it can't come true unless everything recovers! So please bless for all people in disaster regions and me ... Amen.....

(Nov. 4, Leader) Sure, Ken! My heart really goes out to the people in this disaster!! Also, without doubt, you and your colleagues deserve the greatest respect!! Take care and sleep well!

Conclude With Confidence and a New Start

After exploring their themes and exchanging ideas with peers, the students usually formulate new inquiries and start a new cycle. In other words, they continue their self-directed learning, even after the end of the school year. Their achievements and excitement are better presented in their own words (See Ex. 4).

Ex. 4—The preface of a student's portfolio

I don't know how to describe my present mood. Because I finally finished my English studying course, I feel excited and proud. Looking back this one year, there are a stirring of emotion in my mind. I really want to thank my family for helping me to reach the dream of pursuing further education.… Their support let me accomplish the hard task. I am very lucky.

I also want to thank [the teacher, who] let me build up my confidence for English. I can hug English again and produce great learning enthusiasm. Her encouragement is an important reason. I am never serious to learn English like this time. Even though I went to a cram school before, I just a quiet person. I didn't dare to say any word. Poor English was always my nightmare. Through this course training, I don't boast of my progress, at least I can speak out bravely in public. In addition, the training of writing changed my English composition ability. I never thought English writing could be done so easy. Although the process of writing I met some problems like structure, organization, no ideals and grammar mistakes, I followed the teacher's leading and overcame these obstacles little by little. In fact, … More readings and writings are the best ways. That is the reason why I announced some writings on the board. I like each piece of writing in my portfolio. Because all writings stand for my painstaking effort, I regard them my achievement.…

This semester we read the book.… Everybody had deep feeling and got many hints from this book. So did I. Because we used the type of discussing everyone's opinion,

not only increased the feeling each other but also achieved many different thinking. I really have great achievement. Although the course was over, we mutually made an appointment to continue reading some English books. In the future, perhaps we can form a study group and go on keeping contact. Every time I went to the class, it was my happy time. I cherish the memory about learning with my classmates. Their friendship will imprint on my mind forever. I wish everybody a perfect life.

The students' literacy improvement and personal development are so tremendous that no one would believe that they are busy career men and women who have had only a few years of English writing experience, and who used to claim that they had no time for discovering either their inner or the outer world. Since this is a small class, the results might not be generalized to every situation. However, the kind of involvement and responses that literacy teachers are able to generate with a Rogerian approach does make learners/teachers and learning/teaching different, and is indeed worth a try. Remember Carl Rogers's "magic wand"? "Teachers' forgetting they are teachers" does work!

Implications and Suggestions

The case of theme cycles, going beyond methodology and skills training, reveals that certain qualities in the personal relationship between teacher and student can trigger effective learning. Among these qualities, the teacher's genuineness, trust and acceptance, and unconditional positive caring and understanding would be the major factors (Rogers, 1983; Rogers & Freiberg, 1994). The teacher builds up the sense of closeness and trust by being open to himself or herself and to the students, e.g., telling his or her own stories of learning English—including difficulties, anxieties, excitement, and problem solving; and by sharing power with the students, e.g., inviting the students to co-design the course syllabus or curriculum. Students of all ages and levels would like to know the teacher more personally (Rogers, 1961) and would like more opportunities for making choices. Why do we disappoint them and consequently deprive them of their motivation and enthusiasm for learning? Trust, acceptance, and appreciation from the teacher, seemingly ordinary but seldom put into practice, help to build up the students' self-esteem, which, in turn, enhances academic learning. As Rogers always contended, "the structure and organization of the self appears to become more rigid under threat; to relax its boundaries when completely free from threat" (*Encyclopedia of Informal Education*, 2001). In the EFL class just described, the students were able to experience their first-time English oral presentation, English book, Web research, written composition, and e-mail letters—the first-time sharing of their lives, concerns, and interests in English—in an atmosphere of trust. They could break through the barriers and become risk-takers, both in learning and in living. Moreover, unconditional positive caring and understanding means a lot to the students. Such empathic listening promotes significant learning. "Students feel deeply appreciated when they are simply understood—not evaluated, not judged, simply understood from their own point of view, not the teacher's" (Kirschenbaum & Henderson, 1990; Rogers, 1983, 1994). Thus, as long as literacy teachers include these qualities in their classrooms, Rogers's person-to-person learning can be generated and the goal of cultivating the whole person can be accomplished. For this purpose, "theme cycles" is a good choice. Using theme cycles not only integrates different skills into learning, but also pulls together the emotional and intellectual self. Both the learners and the teacher share their knowledge and perceptions of their inner and outer worlds. Person-centered learning, such as the theme cycles in this study, connects learning with life and encourages learners to be profound seekers, goals that deserve to be adopted by more EFL practitioners.

Conclusion

> "What do we, the people, want from our school? What do we hope for, in the students who emerge? What sort of…citizens do we need and want in our society?" (Rogers, 1983, p. 307)

I do not know whether Taipei high schools still have the so-called "security check," but I am sure such mistrust will not help a student develop into a person with trust, love, or responsibility. Students are living creatures, human beings. We should not kill their interest, curiosity, and potential; neither should we constrain them by requiring them to mask their real feelings. The value of a person lies in the freedom and capacity to be open, to desire authenticity and wholeness, to wish for intimacy and caring, to be anti-institutional, to have authority within, to degrade the importance of material things but to yearn for the spiritual (Rogers, 1980).

Literacy teachers and learners have spent many years on skills and methodology. Perhaps it is time for us to integrate values and beliefs regarding the human condition into the study of language. It is time for literacy teachers to discard the assumption that the teacher must, at all costs, preserve the status of a know-it-all. It is time for us to create a dialogue, through which the teacher-of-the-students and the student-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow (Freire, 1993).

Rogers emphasized repeatedly that none of his methods would be effective unless the teacher's genuine desire is to create a climate in which there is freedom to learn (Rogers, 1983). Knowing that students actually learn more of the "basics" and exhibit more creativity and problem-solving qualities when a teacher is real, understanding, and caring, do we as teachers have the will and determination to implement these ideas? As Carl Rogers said, "This is the question we all must answer" (1980, p. 286).

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Li-Te Li is a Lecturer in the English Department and a Ph.D. Candidate in TESOL at Tamkang University in Taipei, Taiwan, Republic of China.

Strategic Moves

This is the first entry in a new column called Strategic Moves. The purpose of this column is to present practical and engaging classroom strategies to expand teachers' visions of instructional possibilities. When teachers think and "move" strategically they deliberately plan experiences for and interactions with students that encourage and support active learning. Teachers who make strategic moves create classrooms that are inviting places to learn; they value students as purposeful learners; and they view meaning-making and knowledge-building as a shared and constructive process.

Each installment of Strategic Moves will focus on a particular strategy by first describing the process of teaching the strategy, then providing an illustration of the strategy in practice. By situating strategic teaching within classroom contexts, I hope to help readers of this column come to understand that merely following a series of steps will not automatically produce greater student learning and retention. Strategies that are enacted as a collection of meaningless formulas have little relevance to the genuine learning needs of students. Instead, strategy instruction should reflect conscious planning but also be flexible; have elements of tried and tested effectiveness but also be responsive to the needs of particular learners.

As column editor and on behalf of the entire editorial staff of Thinking Classroom/Peremena*, I hope you find Strategic Moves interesting and useful. While I have authored this inaugural installment and plan to contribute others for future editions of the journal, I invite you to consider submitting descriptions of your own strategic moves to this column.*

William G. Brozo

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Role-Playing: An Effective Readiness to Learn Strategy

We know that when students are adequately prepared for learning activities, their level of engagement increases and their comprehension of the material improves (Eccles, Wigfield, & Schiefele, 1998; Guthrie & Wigfield, 2000). When preparing students for new reading and learning experiences, teachers should (a) activate and build relevant prior knowledge, (b) engender interest and motivation, and (c) help set meaningful purposes (Brozo & Simpson, 2003). The role-playing strategy can accomplish each of these readiness goals.

Before introducing new learning to students, consider how the story or informational content might be translated into recognizable and relevant experiences for them. Those of us with wide-ranging life experiences and imaginative learning sensibilities are easily captivated by tales of historical events, scientific discoveries, and characters from far away places. But to many students these same topics and readings may seem remote and far removed from their lives. Role-playing allows students to "live" and "feel" the content in ways that render it understandable to them. The planning process for a role-play involves some common, basic steps that can lead to a wide variety of activities.

1. Begin by asking yourself how the content can be made relevant to the everyday experiences of the children and youth in your classroom. Ask questions such as:

- What are the driving human forces behind the events?
- What phenomena in the reading have affected ordinary people, including my students and me, or may do so in the future?
- What universal patterns of behavior related to this content can be personalized for my students?

2. Reflect on what students care about, what they experience in their homes and communities, and what they spend their time doing. Then link this information about their world with your answers to the questions in step one.

3. Situate role-plays in settings that are familiar to your students. Leave room for a bit of creative license—provide just enough written and/or oral direction so students can enact the role-play in a way that personalizes it.

A splendid example of a role-playing readiness strategy comes from a chemistry teacher. Isabel was preparing her students for a series of lessons on covalent bonding. To help them better understand this concept, she exploited the class's knowledge of marriage, reasoning that just as the bonding of two people in matrimony has certain conditions, so too does the bonding of atoms. Isabel split her class into two groups, telling one that they represented the Valenti family and the other, the Radics family. The Valentis were asked to select a groom for a marriage ceremony, and the Radics were asked to select a bride. Isabel gave each family an index card with background information to establish a context for forging a successful marriage contract between the two families: As it happens, the two families have a long-standing dispute, the resolution of which depends upon the terms of the marriage agreement being acceptable to both groups; and the Valentis own land while the Radics own seeds. The groups appointed negotiators to meet and work out the contract. Once both families agreed to the terms, the happy couple was joined in matrimony, amid a festive class atmosphere. Isabel even brought out a cake for the occasion.

While the class settled down to enjoy the confection, Isabel put the role-play activity in chemical terms. Using a graphic display, she explained that all atoms strive to become noble gases by having eight valence electrons. Two atoms will come together and share a bond to reach this goal. She went on to ask the students to imagine the Valenti and Radics families are atoms and the seeds and lands are electrons. As long as the married couple stay together and share that bond, they will share the seeds and land between the families. Both families will have food and will prosper together. At the atomic level, when atoms share electrons and form a noble gas, the result is covalent bonding.

With her older, secondary-level students, Isabel did not need to explain that, unlike humans, atoms and electrons do not have volition. With younger learners, when employing similar role-plays that anthropomorphize content, it is essential to help the children understand the distinction between actions taken by conscious, living things and those of inanimate objects. It would be unfortunate to gain a motivation-to-learn benefit from a role-play while also promoting unintended misconceptions about a topic (Marshall, 1989).

A literature teacher, Andre, conducted another excellent role-play strategy. He asked his students to imagine they had committed some minor trespass against a friend, teacher, or family member. But just as they are about to confess their misdeed, someone else steps in and assumes responsibility for it. This premise for the role-plays was used to prepare his class for a scene they were about to read in Dostoyevsky's *Crime and Punishment*. In the scene, Raskolnikov visits the police department to make a formal request for the return of his pawned watch. The

reader knows that Raskolnikov has committed a multiple murder and is experiencing intense internal anguish, though up to this point in the novel his feelings of guilt have not brought him to confess his crime. At the height of the tension, while Raskolnikov is being questioned by officer Porfiry Petrovich, a workman bursts in and confesses to the murders. Will Raskolnikov repudiate this crazed man and own up to the slayings, or will he remain silent?

Andre formed several groups of three students and gave each a note card with a description of the role-playing premise described above. The groups were asked to compose and act out a short skit involving a person's intent to confess a transgression only to have someone else claim responsibility for it. Andre asked his class to be sure to include in their skits how the person who was truly guilty would react to such an unexpected intervention. While the groups planned their skits, Andre moved through the room offering clarification and suggestions. When they were ready, the groups went to the front of the class to perform their impromptu dramas.

In one skit, a girl is being accused by her best friend of reporting her to the teacher for cheating. A third girl enters the scene and says it was really she who had told the teacher, but the first girl denies this and admits to doing it. The skit concludes with the two friends working through the conflict. Another group acted out a situation in which a boy is about to confess to his friend that he has taken her favorite pen from her coat pocket, when another girl speaks up and says she took the pen. In contrast to the previous skit, the boy says nothing more, allowing the other girl to accept responsibility for his actions.

After all the groups had completed their one- to two-minute dramas, the stage was perfectly set for reading about Raskolnikov. With this readiness strategy, Andre had created a context that brought the events of a century-old narrative into the present day, made more vivid the theme of crime and responsibility, and allowed role-play characters to emerge from the students' everyday lives. Andre's students couldn't wait to find out how Raskolnikov's fate would compare with that of the guilty party in their role-play.

Notice that in both Isabel's and Andre's role-play strategies, students assumed roles that were familiar to them because of something they had witnessed firsthand, as in a marriage ceremony, or the typical small conflicts that occur daily among adolescents. While each role-play was unique to the particular classroom and topic under consideration, both share common features: They helped students call to mind relevant prior knowledge; they encouraged active student participation; and they brought students to the threshold of new learning with an attitude of anticipation and purpose.

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William G. Brozo, Ph.D., is Professor of Language and Literacy in the Department of Theory and Practice in Teacher Education at the University of Tennessee, Knoxville, TN, USA.

Our Point of View: Learning to Think

Elena Garayeva and Janna Rahmanjanova

Photo: Irmela Kagaya

We live in a time of change. Everything seems to be in transition, and education is no exception. There are all kinds of new ideas and new approaches to teaching. We would like to tell you about a system of teaching methods adopted by our teachers a few years ago—a program for the development of critical thinking. Actually it is more than just a methodology—It is a whole philosophy of education. As 11th graders who have studied in this environment for over three years now, we want to share our opinions about critical thinking and its influence on our lives both in and outside of school.

The new teaching methods have a direct effect on us as students. Until recently we came to class with only one expectation—to be given information. But at some point we began to notice changes. No one seemed prepared to feed us ready-made knowledge. The whole atmosphere of the classroom had changed. Previously, we didn't think that our friends and teachers could be interested in our ideas. We would try to avoid having the teacher call on us, averting our gaze and appearing as inconspicuous as possible.

But now the situation is different—the teachers really take an interest in what we think. They allow us to think for ourselves in class, and even to make mistakes. Since we no longer feel that the classroom is a battlefield, we don't feel a need to defend ourselves against the teacher's questions. The teachers used to interrupt us when we said something wrong, but now they are willing to hear us out and they value our opinions. We have taken some unorthodox approaches to the curriculum; and we are expected to do more independent work.

Even the way our work is assessed has changed. In the old system, teachers would begin every class with an oral quiz on the homework. It was so boring to listen to the same old memorized rules and theorems repeated over and over again. Now we work in groups (which is really fun!) or in pairs, and prepare presentations of the homework material. This is much more interesting than standing there waiting your turn to spout out essentially the same answer as everyone else, and wondering what grade the teacher will give you for it. Nowadays, sometimes we actually get to evaluate our own work! Working in teams shows us the importance of objectivity in evaluating our work, as well as teaching us to listen to one another and to value our classmates' opinions.

As we reflect on our classes and discuss what we have learned, we realize that our views have become much more progressive. It must be difficult for the teachers, trying to organize our studies in a whole new way. We are aware of changes in our own attitudes in class—we have become more open and eager to learn, and we are not afraid to speak up and ask questions. The transformation is most dramatic in some of our classmates who always used to seem timid and insignificant. Now they express such interesting thoughts, and they can argue so convincingly in support of their opinions!

We have all become more reflective, less reliant on the opin-

ions and ideas of others. And if we want to form our own opinions, we have to base them on facts and figures, so we are learning to search for information, process it, choose the things we need, contribute some of our own ideas. We never used to have to do any of this. Of course, it was easier to just sit there and listen to the teacher talk. But the situation has changed. We have gradually come to understand that the knowledge we acquire on our own, through independent and conscious effort, is much more useful than the knowledge that used to be handed to us.

Many of us have noticed a change in our attitudes outside the classroom, too, which affects our relations with friends, parents, even with our younger brothers and sisters. For example, three years ago it wouldn't have occurred to us to wonder *why* our younger brother was acting up—we would just tell him to shut up, or even punish him. Now, we find ourselves trying to see things from his point of view, to understand his motives.

We believe that this change to a new way of learning has come at just the right time in our lives. We are growing up and coming face to face with the problems of communicating with other people. We don't always know how to act in a given situation or how to react to another person—whether to accept his opinions or try to change them. The new attitudes we are forming can help us resolve these problems. In class we have learned how to analyze and evaluate the behavior of literary characters, whereas three years ago we would just gone along with the teacher's description of them. We have learned to accept one another's opinions and viewpoints, and to be tolerant. It is these very skills that will now help us find understanding with other people.

We realize that the development of thinking cannot be limited to the mind of a single person (be it a teacher or a student), but requires like-minded colleagues. In discussing this fact, we came up with the idea of a school journal devoted to critical thinking. Our journal, *CT Island*, has been in existence for over a year now. We thought this title would be appropriate because it refers to the idea—critical thinking—that was responsible for bringing us to this point in our personal development. *CT Island,* a combined effort of teachers and students, provides a forum for expressing both our ideas and our doubts, a place for engaging in both debate and co-operation. We are glad we decided to work together with the teachers on the journal, as many of the issues that concern us are the same. The publication process gives us an opportunity to discuss and develop our ideas on these issues, to make them more concrete. In fact, in our school community *CT Island* has now become a vehicle for advancing new points of view and a new way of thinking.

Of course, nothing is perfect. There is always a "fly in the ointment," as they say. Our new approach to education has its own problems. We live in a small town that has few resources for research, particularly when it comes to up-to-date materials. It is not easy for us to get access to the Internet, so getting the information we need is extremely difficult. There is so much we want to find out! How can we form our own opinions when we have so little to base them on?

There is another problem, too, one that lies within our own minds. We often find that our old habits take precedence over critical thinking. And no wonder—the tradition of just taking our elders' word for granted, and not accepting any personal responsibility, is many centuries old.

There are students who ask: *What good are these new teaching methods to me? And why should I put out all this extra effort?* We would like to answer that question with a question of our own: *Why do you expect instant gratification? You have to invest some time and effort in order to see the benefits.*

Despite the drawbacks, the positive effects of the new teaching-learning system in our school are obvious. Sometimes we ask ourselves, "Do I need this? Do we need this? Wouldn't it be better to just leave things alone, to go back to the traditional way of doing things?" In a few people's minds, this is still an open question, but most of us would never even consider going back.

Elena Garayeva and Janna Rahmanjanova are 11th grade students at School No.2, Kyzyl-Kiya, Kyrgyzstan.

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