

# Creativity Network Update

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## A View from the Chair

I was recently thumbing through a trade magazine, targeted at art educators, and I came across an article titled *Wait! Wait! I have an idea!* (Marcia Hirst & Dianne Cinkovitch, *School Arts*, March 2009). I am one who judges books by their covers and articles by their titles, so I read on. The article was written by an art teacher who recently discovered Daniel Pink's book; *A Whole New Mind* (Pink was a keynote speaker last November in Tampa, at the 2008 NAGC conference). She discovered that a fellow teacher just finished reading Thomas Freidman's *The World is Flat*. After comparing notes, and reflecting on the students they teach, the colleagues list their observations and concerns:

- Our students do not want to take risks
- Our students prefer the easily attained
- Our students lack authentic experience
- Our students have limited imaginations

The above observations present a picture of students who cannot effectively communicate the human experience. Without authentic experiences, our students have nothing to say that has not already been stated. (Hirst & Cinkovitch, 2009, p 33, 45)

What strides have we, in gifted education, made to address these concerns? My response to this teacher will be: Come visit my classroom. I think you will find enthusiastic, innovative students engaged in authentic art making experiences; doing the work of real artists. Their work, informed by their individual interests, preferred learning styles, serendipity, discovery and collaboration, shows no lack of invention and imagination.

I can extend this invitation because I offer a studio environment in which the curriculum can be summed up in two sentences: *What do artists do?* And *can we be artists?* Bonnie Rushlow, the new president of the National Art Education Association challenged teachers to "...envision all classrooms as studios"(2008 Keynote address, Colorado Art Education Association). I don't think she was just speaking about art classrooms. What if the science room was a laboratory and the language arts room contained a center for letter writing, one for poetry, another for newspaper production and others for reading and orating? How would it look to design programs in all disciplines based on a studio model?

### Inside this edition

- Who is gifted and talented and what should be do about it, by Ruth Richards
- The Eli Method by Ramon F. and Aida M. Ferreiro
- Review of *The Grave Yard Book* by Suzanna E. Henson
- Torrance Legacy Creative Writing Awards
- Visiting Fulbright Scholar from Ukraine

At the NAGC annual conference in Charlotte, N.C.(2006), Stephanie Tolan lamented: “we have changed, in education, not at all.” I hope this is not the case. But when I read statements from teachers such as those by Hirst & Cinkovitch, I fear for today’s students and for the loss of their creative potential. I am bolstered, however, by knowing that there is a sizable group of dedicated, original, ingenious people within our membership, working daily to bring needed change through the study of creativity and by the implementation of promising practices.

Thanks for being there.

~Nan Hathaway

Chair

**Nan Hathaway** is an art educator and gifted education specialist working with gifted learners at Rocky Mountain School for the Gifted and Creative in Boulder Colorado. Nan holds a Master’s Degree in Gifted Education from the University of Northern Colorado and was named Colorado Independent-School Art Educator of the Year (2008). She is on the board of directors for Teaching for Artistic Behavior, Inc. and on the advisory board and board of directors for ArtSource Colorado. Nan is an aspiring potter, amateur photographer, and an avid, but poor, golfer. Her blog, (<http://www.artatrms.blogspot.com/>) chronicles adventures in art and learning in her K-8 studio-classroom.

## Book Review



*The Graveyard Book* by Neil Gaiman

Illustrated by Dave McKean (2008,  
HarperCollins Publishers)

Reviewed by Suzanna E. Henshon, Ph.D.

What's it really like to grow up in a graveyard? Wouldn't you enjoy meeting people who lived in different historical eras? Neil Gaiman's *The Graveyard Book*,

the 2009 Newbery medalist, is the story of Nobody Owens, better known to his friends as "Bod." Bod is a completely normal boy - except for the fact that he lives in a sprawling cemetery, where he is raised and educated by ghosts. In this creatively written story, Bod develops close friendships with spirits but wonders what the outside world is like. Will Bod ever have the chance to step outside the gates of the cemetery? Will Bod ever have a chance to meet children his own age and attend school? Or will Bod spend the rest of his life within the graveyard, never experiencing the living world?

Inside the cemetery, there are many dangers - from an ancient Indigo Man who dwells beneath the hill to an abandoned city of ghouls. But when Bod makes a trip outside the graveyard, he comes face-to-face with Jack, the man who killed his family more than a decade ago. While writing this novel, Gaiman was inspired by Rudyard Kipling's *The Jungle Boy*, and the idea for raising a boy in a cemetery came to the author's mind more than 20 years ago, as he watched his child riding a tricycle through a graveyard. Reading this book, my imagination took flight; I'll never again visit a cemetery without wondering about the lives of the people who are buried there. Gaiman's suspense-filled novel is filled with colorful characters and poignant moments, and is guaranteed to enchant young readers.

**We have a new vehicle  
for communication:**

**A Yahoo Group!**

[http://groups.yahoo.com/  
group/nagccreativtynetwork/](http://groups.yahoo.com/group/nagccreativtynetwork/)

To participate, you will need to go to this site and join (free). This will provide a much more nimble, interactive way to communicate with one another, and also has the benefit of easily sharing files, photos, data bases, polls and links. Many of you are already in the habit of using this vehicle; others may be new to it. You will have the option, when you join, to receive posts in various different ways: as email directly to your inbox, as a daily or weekly “digest” or you may choose to receive NO emails, and to go to the site when you want to read the posts.

Thank you to those who have signed up already. I envision a group containing our whole network membership. This format could develop into a vital, interactive learning community. Please consider taking a moment to sign up now.

## 2008 E. Paul Torrance Award Recipient

### James C. Kaufman

James C. Kaufman, Ph.D., Associate Professor at the California State University at San Bernardino, received the E. Paul Torrance Award at Creativity Night on Friday, October 31, at the NAGC national conference in Tampa, Florida. The E. Paul Torrance Award is given each year since 1988 to acknowledge and reward significant contributions of individuals and groups whose work facilitates the enhancement and spread of creativity, especially among gifted children, and who are themselves creative thinkers. The award carries the name of the man who probably more than any other individual has promoted the values and behavior the Creativity Division wishes to honor.



Dr. Kaufman's research focuses on the nurturance, structure, and assessment of creativity. Kaufman is the author or editor of 15 books either published or in press. These include *Essentials of Creativity Assessment* (with Jonathan Plucker and John Baer; 2008), *International Handbook of Creativity* (with Robert J. Sternberg; Cambridge, 2006), and *Applied Intelligence* (with Robert J. Sternberg and Elena Grigorenko; Cambridge, 2008). His research has been featured on CNN, NPR, the New York Times, and the BBC. Kaufman is a founding co-editor of the official journal for APA's Division 10, *Psychology, Aesthetics, and the Arts*. He is also the associate editor of *Journal of Creativity Behavior and Psychological Assessment*, the editor of *International Journal of Creativity and Problem Solving* and is the series editor of the Psych 101 series.

For more information about this award, to see a list of past winners and to make a nomination for the 2009 award, please go to: <http://www.nagc.org/index.aspx?id=1264>

### Creativity Night

Twenty three different offerings were available to those who joined in to celebrate creativity on Halloween night at the NAGC convention in Tampa. This signature event is popular for the lively pace, the innovative useful ideas and for the contagious fun of being in a room full of creative goings-on. Participants rotate through an array of inventive offerings, learn new skills, glean useful ideas and stretch their own creative power. The Creativity Network is seeking presenters for next year's convention, so tie on your thinking caps and consider joining those who make this unique event happen each year.

Contact Nan Hathaway [nanh@who.net](mailto:nanh@who.net) for an application to present at Creativity Night ("The Creative Spirit of St. Louis") in St. Louis.

# “Just Suppose...”: Revitalizing the Creative Legacy of E. Paul Torrance



Following the Torrance Reception held at the 2007 NAGC convention in Minneapolis, a group formed with the intent that young people continue to learn about E. Paul Torrance and his work. This group, consisting of many leaders in the field of creativity, includes three who were named “Beyonders” by Torrance (Bea Bleedorn, Joan Smutny and Garnet Millar). The group met again at the 2008 NAGC conference in Tampa and has now launched the “Torrance Legacy: Creative Writing Awards,” sponsored by NAGC, The Torrance Center, The Center of Gifted and Scholastic Testing Service, Inc.

## Torrance Legacy Creative Writing Awards

### Accepted Genres

Poetry  
Stories (1250-word limit)

### Topic

“Just Suppose...”

### Students Eligible from the following grade groups:

grades 4 - 5  
grades 6 - 8  
grades 9 - 12

### Contest Sponsors

NAGC  
The Torrance Center  
The Center for Gifted  
Scholastic Testing Service, Inc.

### Timeline

All entries to be received/postmarked by August 24, 2009. Information on submission instructions coming soon

### Scoring

Poetry scoring components:

imagination  
originality  
imagery

Story scoring components:

imagination  
originality  
elaboration  
fluency

### Award Segments

Six (6) individual awards (one poetry winner for each grade group and one story winner from each grade group)

One (1) overall award (highest scoring submission of all grade groups and both genres)

### Prizes

\$100 prize donation from The Center for Gifted  
\$100 prize donation from Scholastic Testing Service, Inc.

NAGC Convention registration for a teacher of student winning overall award

NAGC Parent membership for parent of student winning overall award

Scholastic Testing Service, Inc. to provide creativity books as prizes

### Award announcement date

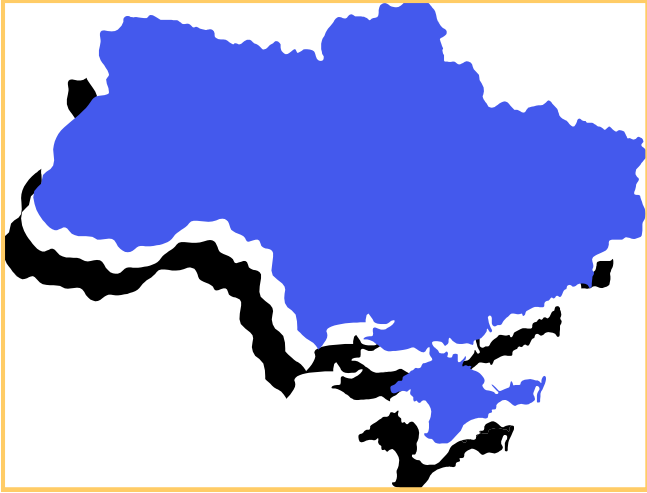
October 1, 2009

### Awards will be presented at the NAGC Convention in St. Louis, MO

### Contact Information

Please contact [Joan Smutny](#) or call 847-256-1220

## Visiting Fulbright Scholar from Ukraine



Dr. Olha His, a Visiting Fulbright Scholar from the Ukraine, is a Research Scientist from the National Academy of Sciences of Ukraine. She has a Masters of Arts in Psychology, a PhD in Mathematical Modeling, and is a current member of NAGC. Areas of research interests include; the development of productive thinking of elementary school students; educational psychology; cognitive psychology; creativity in math; measurement of creativity; elementary education; and child psychology.

Dr. His is the author of series of textbooks, “Planet of Thinking”, and a Teaching Program for the development of logical and nonstandard productive thinking of elementary school students. This is an integrated course, interfacing mathematics, psychology, logic and language. The goal of the course is the systematic development of basic operations of thinking on both *verbal* and

*non-verbal* levels, quick-wittedness, spatial imagination, memory and attention.

It is well known that basic thinking structures are already formed by the age of 10-12, and that is why it is necessary to start developing creative and cognitive abilities of children as early as possible, since their late formation becomes less effective. Taking this into account, the objectives of the course are as follows:

- to form children” ability to analyse and synthesize, generalise and concretise,
- abstract and transfer, classify, compare and single out the most essential,
- think by analogy,
- see differences and regularities;
- also to develop the skills to think by association and
- to search for non-standard approaches to solving problems.

The five textbooks include many engaging tasks and puzzles that stimulate the child's brain to think in both logical and creative manner, awaken faculties of creativity and give the joy of finding-solutions to different problems. All the books are written in an easy to read and fun filled format. The course was supported by Ministry of Education and Science of Ukraine; it has been successfully implemented in many schools of Ukraine for 9 years and showed very high results in development child thinking.

Dr. His is currently at UGA in the Department of Educational Psychology and Instructional Technology until July 2009, for her Research Project. During this period, she proposes to *exchange ideas and experiences* with her American colleagues, who are interested in development of logical and creative “thinking” and *to establish collaboration* with them.

For more information see:

[www.child-thinking.com](http://www.child-thinking.com)

[http://www.coe.uga.edu/torrance/Olha\\_His.html](http://www.coe.uga.edu/torrance/Olha_His.html)

[o.his@child-thinking.com](mailto:o.his@child-thinking.com)

**WHO IS GIFTED AND TALENTED,  
AND WHAT SHOULD WE DO ABOUT IT?**

**Ruth Richards, M.D., Ph.D.**

**Saybrook Graduate School**

**McLean Hospital and Harvard Medical School**

Do we fail to identify the gifted and talented young person? All too often. Not the readers of this piece of course. Not many others in the field of education either. Yet far too often, young talent is missed—and to the great detriment of these particular young people, who might have soared otherwise, and perhaps given benefit to all of society. Let me complain a bit, give a little background, and look at some possibilities for change. Some of you have heard it all before. But it surely bears restating.

How often do we still find giftedness identified only by IQ scores and/or perhaps some standardized achievement measures? We know that Terman's (1925-1959) high scorers didn't automatically go on to do great, or even unusual, things. Some years ago, I saw how my daughter's public elementary school (an excellent school) was one of the offenders. They defined the gifted and talented not through assessment of creativity, and actual activities, but narrowly through aptitude and achievement test scores. To what extent were scores what they really believed predicted creative accomplishment, and how much was it a question of the district not having time and money to go through student portfolios or otherwise assess actual achievements? Considering class sizes, resources were surely one part of it.

Luckily, she, at least, was able to get by on the testing criteria, which opened certain benefits to her, and all the way through high school too. But what of those equally talented others who didn't "pass the tests"? I can think of a number of her peers, and also a relative, who did not (although they absolutely should have) make the cut. Indeed, how much did the GATEkeepers, for this particular program which *was* called GATE (Gifted and Talented Education), know of my

daughter's lifelong interest in drama, creative writing, or in different languages (an enthusiasm that grew out of fantastical worlds, and Elvish, from Lord of the Rings). Maybe they knew, maybe they didn't, but it "didn't count."

What does a school do to help them, once these high potential kids are identified? I noticed what the gifted and talented students sometimes received, in their classes—and I'm thinking especially now of classes in an underfunded high school. They got extra work, as part of the regular classes, and not necessarily all that innovative (though it sometimes was). Lack of funding is surely one factor here, again, and a big one; it takes a lower student:teacher ratio truly to identify and honor these young peoples' individualized needs. The funding problem at this school also included lack of funding for teacher training in working with the so-called gifted (which actually should extend to working with every young person—we all have wasted creative potential (Richards, 2007a). The teachers associated with this gifted program, who met regularly with parents, were hungry for more creativity-related continuing education.

Now IQ and standardized achievement tests do have real value, in the bigger picture, and are a major assessment triumph as well (e.g., Kaplan and Saccuzzo, 1997). But even here, certain talented youth may have very uneven strengths (e.g., Winner, 1996) and domain specific abilities (e.g., Sternberg, Grigorenko, & Singer, 2006) such that overall indices are misleading. Plus, we psychologists and educators who study creativity know, very well, how many other factors are involved in our crowning human capacity to improvise, innovate, reframe our reality, bring beauty and truth into the world, and recreate life in new and more valuable ways, including some more general factors (e.g., Barron, 1969; Richards, 2007a). Some of these may be necessary.

It's not as if psychologists haven't been aware for many years that measures of creativity correlate at only a low positive level with measures of intelligence, or that there are other qualities that may also be vitally important (e.g., Barron & Harrington, 1981; Richards, 1981, 2007a; Runco, 2007a). Just to name a few, consider *tolerance of ambiguity*, *preference for complexity*, *independence of thought*, and *openness to experience*. How nice that the latter has now been enshrined in the Five Factor Theory of Personality (see Costa & Widiger, 1994; Richards, 2007b), indeed, as one of the Big Five. Would we be more accurate to call it a form of "cognitive style"? In any case, this one may be a bit closer to the Holy Grail.

Let us also not forget findings suggesting, for those eminent creators recognized by society, that IQ or something

aspect of what IQ measures is necessary but not sufficient for creativity. That is, eminent creators tend to be above an IQ threshold (e.g., Barron, 1969; Richards, 1976; Runco, 2007a). But beyond that, what makes the difference? Isn't that the prize we are seeking? The magic ingredient that gives creativity its special flavor? There are many people who can copy Picasso. (Even Picasso was one, by his own admission; he reportedly said "I often paint fakes.") Still, there was only one Picasso. Only one person with that unique vision.

How sad it is. Already, over 25 years ago, guidebooks on giftedness (e.g., Webb, Meckstroth, & Tolan, 1982) were stressing different student styles, individual manifestations of talent and giftedness, and the limitations of any single index of ability or achievement. (Webb et al. (1982) was even winner of the American Psychological Association Media Award.) It is also important how, sometimes, the highly creative young person, and also adult, may be misidentified as troubled and difficult (e.g., Cramond, 2005; Kurcinka, 1998; Richards, 1981, 1999; Runco & Richards, 1998; Torrance, 1970) rather than seen as unusual and eager to strike out in new ways. Do we even know what, or who, we are really looking for?

One may take a lead from Frank Barron, David Crutchfield, Harrison Gough, Ravenna Helson, and others who were at the Institute for Personality Assessment and Research (IPAR) and for decades studied eminent creative individuals at the University of California, Berkeley. Included were writers, mathematicians, architects, and others (Barron, 1969; Helson, 1999). The researchers asked experts in the field to identify creative professionals, such as architects or writers, whose work they knew. Then the IPAR researchers, via a "living in assessment" method, spent much time with these creative professionals, to see what was special about them.

Here, for example, is where some of the groundbreaking research on non-intellective factors was done. Note that emphasis moves from creative *product* or outcome (where product is used to identify the creator, then put aside) to creative *process* as well as qualities of the creative *person*, and the *press* of the environment that catalyzes creativity (See "4 Ps of creativity," e.g., Cramond, 2005). The questions become: Who is gifted, and what do they look like and what do they do? What can catalyze it? Much recommends a process approach (Richards, 2007) including better understanding of beneficial outcomes, such as health benefits related to creative activity (Richards, 2007b). Even evidence supporting, for example, higher creativity linked to personal or family history of mood disorders—a rather well established finding (e.g.,

collected articles in Runco and Richards, 1998)—is sometimes misinterpreted. If these are people with problems it does *not* mean *creativity is a problem*. In fact, the greatest creative activity—which often tends to occur during better functioning mood states (e.g., Jamison, and also Richards & Kinney, in Runco & Richards, 1998)—may often speak to health. Here one may recall a now famous expression of Frank Barron’s (1963) that “the creative person is both more primitive and more cultured, more destructive and more constructive, occasionally crazier and yet adamantly saner than the average person” (p. 234). What is abnormal is not necessarily pathological—and in fact it may be highly adaptive, and even amazing.

Let us then identify our gifted and talented kids by what they actually do, which has long been a premier indicator (Hocevar, 1981, Richards, Kinney, Benet, Merzel, 1998). And let us help our teachers—who can be our expert judges here—develop the capacity to accurately identify such creative tendencies in the *person and process*. Indeed, these are not always recognized (e.g., Westby & Dawson, 1995). Let us also develop new measures, to more fully assess the creativity of young people in the developmental realms they inhabit, for example, involving new measures of *mini-creativity*, *personal creativity*, or *everyday creativity* (Beghetto & Kaufman, 2007; Richards, 2007a; Richards, et al., 1988; Runco, 2007b), and in each case with a greater focus on creative process. More natural means of classroom assessment (e.g., Smith, Smith, & DeLisi, 2000) can also be adapted to these ends. Such a focus can help us find more valid indicators and predictors to identify the gifted and talented. And also to learn how this potential manifests over time, and can be further developed. We need to honor this precious natural resource in our kids—both for the sake of the young person, and for the betterment of our entire society.

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**A NEW METHOD FOR THE DEVELOPMENT  
OF CREATIVITY IN THE CLASSROOM: THE ELI METHOD**

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**Aída M. Ferreiro**

**Talent Latin-American Network.**

**Arrowhead Kinder**

‘Every effort to spread instruction is in vain when teaching is not tailored to fit the needs, nature and future of the one who receives it’ José Martí.

### **Abstract**

The aim of the job is to present a teaching method to guarantee the development of the intellectual and creative potential of students, in classroom’s ordinary conditions. The cognitive and humanist movement in Latin-America’s 70’s and 80’s education programs encouraged projects and events for the stimulation of intelligence and creativity in children and youngsters. A few variables were emphasized - creative and critical thought skills, learning styles, artistic creativity - and different methods for its implementation: the inclusion of a special subject within the school curriculum, enhancement workshops parallel to the curriculum or supplementary school time. Our research on the impact of these methodologies encouraged us to establish the need to create a common teaching method to every subject and education level to foster the development of intelligence and creativity alongside with the learning process of the curricular content, in ordinary school learning conditions.

Keywords: intelligence, creativity, ELI methodology, constructivism, cooperative learning.

### **Introduction**

The education of the intelligence and creativity of children and youngsters constitute a need but above all, a right of the new generations. Not of one but of all members of it. It is their undeniable right to the display of their potential. And therefore to its implementation and their right to transcend as a professional, technician, laborer and above all as a person. (Cortés, 1991; Ferreira, 1995; Machado, 1983).

The school is a social institution whose mission is in current terms that of forming new generations. Of course not only school, and we employ this term in its widest connotation, contributes to the upbringing of citizens; but there is no doubt that school is the institution par excellence.

Every school level and type in each moment and as a whole during the biological cycle of a man and a woman, decide the upbringing of the youngster's personality. The preceding statement is so true that the term upbringing is equivalent to school and vice-versa. In this context, school, because of its content and its function, hands in the highly qualified individual to the society and the company for the development of the present and perspective plans and that individual must also find within the labor surrounding, the means to continue developing its potential.

Evidently intelligence and creativity are part of the school content and even constitute the indicator of the quality of the educational process. But also other social institutions contribute, whether they are aware or not, to its development and demand as well, its display for the execution of the most diverse activities.

The pedagogical importance of the school activities relies in its contribution to the upbringing of the personality and the preparation for life. Renowned humanists, philosophers and educators such as Juan A. Comenio, José Martí, Lev. Vigotsky, Celestin Freinet, John Dewey, R. Marín, Robert Sternberg, Howard Gardner, to mention a few from different historical periods, geographical areas and practical and theoretical positions, have expressed the value of school activities in the whole upbringing process of a person. The contents of the activity in general and specifically the school activities, have been highlighted by many education specialists in creativity and intelligence, as a necessary condition however not the only one. (Csikszentmihalyi, 1985; Nickerson 1987; Renzulli, 1985).

### **Contributions of the XX Century.**

The XX Century contributed with a vast number of approaches, theories and methodologies to education (state of the art), that no doubt as never before in human history has helped to understand and transform the learning – teaching process (state of the practice). In this context, the employment of information and communication technologies (ICT) in contemporary societies has been more frequent.

It is only enough to examine how in just a century, the XX Century, we have moved from, to mention only a phase of the problem, a reductive understanding of the learning process starting with the proposals of behaviorism, to more rigorous and devoted to contemporary reality interpretations, like those obtained through the humanist, socio-cultural, cognitive paradigms and the social constructivism, which allow a better understanding of the educative fact and suggest new forms of organizing the school learning process without underestimating the undisputable contributions of behaviorism to education (Hernandez, 1998).

What characterizes the current situation of the Latin American and Caribbean school reality is, given a series of diverse nature and types of facts, the awareness of chairmen and administrators, school principles and teachers as well as parents and other social institutions, amongst them certainly companies, of the need to change the education institutions to implement the accumulated experience and knowledge.

According to the foregoing, the ideal scenario in general terms is that one in which schools: (Ferreiro, 2004):

- Intensify and diversify the participation of students in the learning process,
- Emphasizes the interaction between the learner and the teaching contents, as well as the interaction between those who learn and between these and their teachers,
- Motivate cooperation relationships amongst the participants of the learning process,
- Accomplish a free from bias and face to face direction of the learning process by the teacher, in regards with the students
- Professionalize teachers as intermediaries between students and the contents of teaching, between students and between the student and the social context,
- Apply teaching methods that lead to the social construction of knowledge by the students,
- Respect the styles and learning rhythms based on the criteria of teaching the development of their potentials,
- Place the teaching contents in context and give them a life experience meaning in the classroom through a pre-professional practice that relates directly with the labor, technical and professional problems which need to be confronted as soon as the university studies are completed,
- Insist in the need of developing cognitive and socio-affective skills as well as attitudes and necessary values to enable an integration to the current social context,
- Diversify the sources and types of information for the student in the learning process and the teacher in the teaching process, in which the use of English is determining to accomplish the level of professional competencies demanded by the contemporary society,
- Employ information and communication technologies called ICT, not only as informative tools but also formative,
- Focus on the educative process with the perspective of the indissoluble unit between thinking, thinking and acting, knowing, know how and executing, between the affective and the behavior,
- Achieve besides an adding evaluation, a formative assessment through different means to, instead of corroborating only, promoting the development of the students.

To the previous points, it is necessary to add the raise of the awareness of the need to take the individual differences, in the diversity context we find in our countries, into consideration particularly the need of socio educative inclusive programs, to make the real equality programmed in official documents, come true.

### **The Methodological Manners**

The humanist and cognitive movement of the 70's and 80 are promoted very diverse programs and projects for the identification and stimulation of intelligence, creativity and talent in the infantile population of Latin America and the Caribbean. (Machado, 1983; Nickerson, 1987; Yuste, 1997).

The educative models for the development of such proposals according to the valid international trends were also diverse depending basically on the age group and the school level, though we can summarize them in two fundamental methodological variables:

- Extracurricular workshops in sessions aside the school activities usually developed by institutions and personnel different from the school with a periodicity of at least once a week, dedicated basically to the development of creative activities related with arts in general and specifically plastic arts.
- Inclusion of a subject dedicated exclusively to the development of thinking skills in the study plans, with a varied periodicity but never higher than 3 hours a week.

The studies that evaluated these two methodological variables themselves and their impact in the development of the intelligence and the creativity of the students, with a scientific rigor in our region are scarce. Nevertheless studies were conducted by the Argos Project (Ferreiro, 1992); and the investigation group of the CAS Program of the Public Education Secretariat of Mexico (Cortes, 1991) brought up amongst other issues, their separation from the school content in the 90's decade.

### **The school content**

It is undisputed today whether or not it is possible to develop the human being's potential. Nobody stoops to reflect if the school has a role to play in this respect. It does and in an important manner. However it is necessary to take a series of measures to encourage the school institution to take more into consideration the demands society and corporations have, to satisfy the spiritual and material needs of the contemporary community. An added subject or an extra workshop cannot contribute as it is required to the human development in which intelligence and creativity become the condition and source of personal development and therefore of labor and professional development also, as well as an indicator of the quality of education.

The Latin American and Caribbean school and along with it all of its professional members, feel the challenge that contemporary society and corporations demand from us for various reasons amongst them social change, technology introduction and migratory movements.

Today's social and corporative life in Latin America and the Caribbean is the same but very different from that of a few years ago. The current generations are similar, that's true, to the previous ones but different. The social conditions are also similar, but subjectively different. For such reason it is impossible to educate as it was done long time ago. It is necessary to establish a hierarchy in the most extended institution in our countries: school. It is necessary to work with all and to assist all taking into consideration the diversity as well as the individual potentialities. Adding subjects or proposing extra activities does contribute but it is not the way to guarantee that everybody with no distinction of race, social position, religious belief or cultural background, display their potential.

## The Method

From the historical perspective of constructivism (Hernández, 1998) and the methodology of cooperative learning (Calderón, 2007), the class is the shared process between teacher and students in which he becomes the mediator between the student or group of students and the content of teaching. (Kozulin, 2000). All of this demands an active, conscious cooperative and well intentioned participation from students in class to learn the school contents along with it a repertory of skills, attitudes and values for all their life.

Research done employing the method of class observation group and personal interviews as well as the systematization of the content of teacher learning communities (Ferreiro, 2001) have demonstrated the reiteration of certain moments in class in which teachers apply the theoretical principles of social constructivism and the methodology of cooperative learning. These are periods which are dedicated to same nature activities with an identical intention which are applied during the whole class to make of it an active learning activity, participative and cooperative.

It enabled us to systematize and document the good practices and the conformation of a routine first and later a methodology which has proven its impact in the learning and upbringing process of students, and its evidence is shown in their school performance as well as in key indicators of creativity and intelligence.

There could be many moments during a class but seven of them are the key ones which resume the necessary activities for students to build their knowledge. They constitute the essence of the ELI method. (Ferreiro, 2001).

A very important moment during a good class is that dedicated by the teacher and the students to create a proper environment to learn: comfortable surrounding, relaxed, fraternal and secure in which all participants know each other, call themselves by their names and are willing to participate in class. This is the moment known through the letter E for comfortable environment, to which the intellectual and socio-affective activation done by the teacher in a cognitive and affective manner needs to be added, to enable the student to face the predominantly intellectual effort that the learning process demands.

Another meaningful moment of the class is the O moment which corresponds to the initial letter of the word orientation, another important function to be accomplished for the student to learn. Good teachers are characterized amongst other aspects because they are able to capture the student's interest in the subject that is being developed during the class. Different strategies may be applied for the students be clear in what they are learning, how it is being carried out, what results are expected and even more, have the students make the logic of the learning content, their own.

The R moment is that of recapitulation or debriefing. That is, the moment which is dedicated to recover or reiterate the most important aspects seen up to that specific moment or during the entire class. There are different ways to implement this activity but it has to be done in a comfortable and relaxed manner and also different each time. Most important, it must contribute to obtain a deep understanding of the object of study.

The moment of information processing (IP) is that dedicated for students to individually or in groups, confront the issues of the work: read, observe, answer questions, etc. which allow in a joint manner with the other activities of the class, to socially build the knowledge.

The moment of social positive interdependency known as moment I, consists of fostering the opportunity to share processes and results of the work done between the members of the different teams or the entire class in a way that students learn from one another, constituting real learning communities in class.

The evaluation upon results and advances as a value judgment is a substantial component of the teaching process and it is known as moment E, which accompanies the entire process in a mandatory way and could at a point in time in the development of the class, become the most important part to which the celebration of the results obtained by each different group, could be added.

And finally the SSMT or reflection moment as it is also known. The first two letters refer to the two basic categories of sense and significance. Many students do not learn not because they do not have the capacity to learn but because they cannot “catch” the sense and significance of what the teacher is teaching. The letter M stands for metacognition meaning the capacity to think about thinking or in other words being aware of what is being learned, how it is being learned, etc. The letter T is referred to the transfer capacity. To transfer means to move or being capable of applying what is learned in a determined environment to a different one. All that has been referred, the sense and significance, the metacognition and the transferring, enables the individual that is learning to be self regulated, self-governed. Self regulation is the possibility to execute control given by internal mechanisms of the individual and not by external compulsory dispositions.

The relationship between moment and activity in a class is dialectic. This means that it constitutes a dynamic link that provokes the development of a sequence in arrangement to what is wanted to be accomplished. It is not a rigid structure. On the contrary, the moments alternate in different ways in different classes. Moreover, their duration depend on the learning aim in each of them.

In that relationship between moment and activity there is another essential and definitive component: the strategy. So it is a total of three elements which constitute the dialectic unit of a class: the activity, the moment and the strategic mediation used by the teacher which will become didactical functions to be implemented. In other words, the strategy employed will characterize the activity that is developed in the classroom and it of course is time consuming, and will give a name to the activity held at that specific moment.

We teachers need teaching strategies to become mediation instruments between the student and the content of the object of acquaintance. (Kozulin, 2000). That is the only way students can construct their acquaintance. The employment of strategies permits to achieve an active, participative, cooperative and learned through experience learning process. It will avoid those classes in which the teacher spends all the time exposing the subject and the students only take notes or

make and answer some other question.

The problem is not only reduced to applying strategies, techniques or dynamics, like any other person may apply one or a different type of exercise. Strategies as a mediation resource must be employed with a determined intention and according to the didactical functions to be fulfilled in the class.

For students to learn it is required that didactical functions consisting in a determined activity, a specific moment in the class and the employment of didactical strategies as tools of mediation between the student or group of students and the teaching contents, be complied.

Summarizing, the classes which are developed through the ELI method follow a flexible and dynamic structure that enables to comply with the proper didactical functions and thus to organize the learning and teaching processes in the classroom. There are seven main ones:

- Creation of the proper environment to learn and the activation of the intellectual and emotional effort that learning demands.
- Orientation of the student's attention.
- Recapitulation or review of what is learned.
- Processing of the information.
- Social positive interdependence amongst the members of the group to be able to learn.
- Evaluation and celebration of results.
- Reflection upon what was learned and how.

The order and time of the mentioned moments depend on facts like the contents of teaching. It is not the same to impart a class that emphasizes on knowledge, than one dedicated to skill, habits and capacities development, or one dedicated to attitudes and values. Another issue is the aim to fulfill, the physical conditions, the available resources etc.

### **The role of mediation and the need of strategies.**

Starting with the constructivist movement, better said, the social constructivism and the cooperative learning didactic, moments and specifically teaching strategies are mediation tools.

Mediation is a process of not straight direction of the participation of the students in the learning – teaching process as well as the cognitive and affective activity of each of the students.

The role of the teacher stops being that of a mere information transmitter, group coordinator or simple potential facilitator, to mediate between the individual that learns and the teaching content with a clear intention that transcends here and now.

This is not in dispute with the function of exposing a subject in a logical way and for a period of time, coordinating the group or facilitating the learning potential, aspects that the mediation concept and the proposed method assume as part of the moment

Mediation is the help that the student requires at a given moment of the learning process to achieve a development level (Kozulin, 2000). Therefore, the learning process is not a goal itself but a mean to bring up the human potential. The pedagogic mediation process that takes place in a classroom requires tools to enable that help to come up, and to promote the development, that means, a movement of the student in its potential development zone.

The teaching strategies are those tools that make it possible to mediate between the student and the learning content and which because of the type of help they bring and the direction style they establish, stimulate the development of students. So strategies are neither one more resource nor a goal themselves. They are tools which allow to achieve the student to learn significantly and for these acquisitions to favor its development.

The correct employment of the didactical strategies demand amongst other aspects to have a theoretical conception on which to base its use, moreover to be clear on what is it that wants to be accomplished and the conditions in which it needs to be applied. The teacher needs the didactical strategies to carry out its mediator role, necessary condition for students to learn and achieve the established educative aims to stimulate their development.

The teacher's professionalism increases when he employs strategies, knows how to select them for the different moments of the class and makes a creative use of them regarding what wants to be accomplished given a series of conditions.

The moments of a class constitute a reference to select the strategies and employ them for what we want with a clear intention of, on a short term basis, to make it possible for the student to learn, and on mid term to favor its development. We step aside then from those pragmatic positions known as “dynamical” teachers, meaning to say that one who employs a technique by itself with the only purpose of producing activity, without any intention to have an effect on the students development.

The dynamic just because of the dynamic itself or the fatuous techniques, sooner than later lead to professional frustration because neither the teacher nor the student are convinced of the use of those dynamics or techniques that usu-

ally are time consuming but are not being reflected on tangible results in the additive or formative evaluations conducted either by the same teachers or by external reviewers.

### **Advantages of the ELI Method**

The previous aspects are overcome easily when we work with the ELI Method in the classroom, amongst other reasons because it contributes to: (Ferreiro, 2001):

- The basic concepts to professionally teach any subject or school content.
- A didactical working routine based scientifically in the social constructivism theory and in the cooperative learning methodology.
- A model that adjusts to very different school backgrounds since essentially it is not a rigid repertory of steps to follow but the compliance of didactical functions that guarantee learning.
- A typology of activities of different type and nature necessary and enough to produce significant learning at different level of education, from preschool to university Studies.
- A practical and flexible guide for the creative structuring of a sequence of activities that allows to work using “all the brains”, integrating the cognitive and the affective, the individual and group work.
- Suggestions of strategies to be used in different moments of the class. In other words the tools to teach according to the necessary didactical functions for the student to learn.
- A list of specific didactical, professional competencies according to the theory and methodology on which they are based and the educational fact of teaching - learning that takes place in the classroom everyday.

The ELI method is by definition an active method of cooperative work in a small group. It doesn't eliminate, on the contrary it potentiates the efforts and the input of the independent work of each one, focused on the intellectual and socio – affective activity of the student, who obtains useful strategies for the rest of its life.

Little by little the stage of a teacher who speaks all the time in class or has its students do something funny as part of the lesson stays behind, to clear the way for a real professional who renews himself every day instructing, even better, educating besides teaching, being opened to learn and having the students want to be like him, because he encourages their growth and their holistic development.

The ELI method has been validated (Ferreiro, 2001) in customary classrooms in private and public schools, in different levels of education: preschool, elementary, junior high school, high school and university, utilizing the controlled pedagogic experimental method, the group control and the experimental group. Amongst the indicators referred to the students, the ELI method was basically used in a first stage of a validation process to measure the academic profiting always

in favor of the experimental group both in evaluations carried out in official programs as well as in the learning retention tests (without previous notice), 45 and 90 days after the thematic units and the course under the investigation process, were finished.

The results in favor of the ELI method expressed in a better school profiting of the students, suggested the possibility of impact of the method in the development of creativity and intelligence of children and youngsters that usually learn through the application of the method imparted by their teachers. It was widely proven when the results of control and experimental groups, were contrasted (Ferreiro, 2001).

The follow up of students of different levels undeniably show the incidence of the ELI method in their holistic development and their creativity and intelligence (which has brought up the idea that, given the particularities of the Net generation that we currently assist in the school system, it is necessary to apply the method in the design of new environments or learning backgrounds where ICTs play a role of delivery or mediation in the formative processes).

### **Limitations**

Amongst the limitations of the ELI method it is possible to mention the need of teacher training through real life experienced sessions in which the procedures and the teaching - learning strategies during the development moments of the class, are modeled. It will also be necessary to demonstrate the acquisition of the didactic professional competencies that this method demands for its correct application and procurement of the desired results.

Even though the appropriation of the method generates a positive attitude towards teaching, it requires a high level of identification with the profession from the teacher, as a necessary condition, but not enough to succeed.

The application of the method requires time units for the development of the lesson, not inferior than 90 minutes. This makes it necessary for certain institutions to change of the 45 minute historically established format, for the development of classes in our schools.

The method requires classrooms not to have graded furnishing, nor fixed. On the contrary, furniture needs to be relocated by students in different forms in function of the activity which is going to be held in a small or large group, or independently

The correct application of the ELI method depends on the development of a series of professional didactical competencies by the teacher, related with the development of the class and also other which are not less important, that have an incidence on the two groups of competencies mentioned above regarding after class competencies.

### **Closure**

The state of the art of education is satisfactory because of its amplitude as well as the depth of the contemplated aspects. Nevertheless, the state of the practice is very inadequate. In great measure, the conditions and form of teaching are

not very far from those that existed at the beginning of the XX century.

The teacher needs theory to get to know and understand its professional duties. He also requires methodology to be in conditions to perform according to a set of rules and principles. Theory and methodology must be coherent with one another. But the teacher also needs and above all, a method as an instrument to perform consequently, according to the theory and the assumed methodology.

The Eli method enables, as of the theoretical premises of social constructivism and the methodological postings of the cooperative learning, to act consequently and in a professional manner to educate students. The seven moments of the method and the strategies to apply for each moment, permit a potential development of the group education, as it assists individuality in a frame of diversity.

In the current social conditions of life and education, a method to develop the intelligence and creativity, is required. It shall imply a new form of organizing the learning process in the classroom, for a plain development of the distinctive capacity of the human being, without any distinction: to think and to feel, create and innovate, discover and transform, in an expression of humanism and respect for mankind. It is the only way to achieve a democratic society to transcend in the personal and in the group.

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