



Enabling Differentiation Through Levels of Service

Dr. Carol Tomlinson, of the University of Virginia, has been one of the country's leading researchers and writers on differentiating instruction. Writing in *Educational Leadership* in 2000, she offered several basic principles underlying differentiation. In this article, we'll examine the principles from her article and explore how the Levels of Service approach (LoS; Treffinger, Nassab, Wittig, & Young, 2004) supports and enables differentiation.

1. *Students who are the same age differ in their readiness to learn, their interests, their styles of learning, their experiences, and their life circumstances.*

In the LoS approach, we describe the importance of using student interests and learning style preferences to differentiate basic instruction for all students. Level I services reach all students, providing many and varied ways to engage the interest and attention of learners at different levels of readiness and to provide the productive thinking foundation that all learners need to prepare for more complex learning challenges (in both content and process skills). Level II services invite students to participate in activities through which they can verify and extend their strengths, talents, and interest areas. Levels

III and IV provide highly personalized responses to students' growing expertise. All LoS services are based on each student's demonstrated interests and talent strengths, rather than on fixed age or grade levels or generic test "cutoff" or selection scores.

2. *The differences in students are significant enough to make a major impact on what students need to learn, the pace at which they need to learn it, and the support they need from teachers and others to learn it well.*

In all four levels of the LoS approach, the fundamental question is not simply, "Is this a gifted child?" Rather, based on the specific information we have about a student's characteristics, strengths, and interests, we seek "gaps" between the student's current program or activities and the services that will be most appropriate. We do not assume that the regular classroom teacher must be solely responsible for meeting all the student's needs, but at the same time, we do not assume that "the gifted teacher" (or a single, fixed "gifted program" or curriculum) will do that either. We ask, "Given this student's strengths, talents, and sustained interests, what does he or she need? How will we meet those needs? Who will be in-

volved in planning and carrying out appropriate and challenging services?"

3. *Students will learn best when supportive adults push them slightly beyond where they can work without assistance.*

In LoS, we believe that the work students do should always be appropriate, challenging, and developmental (i.e., helping them move forward and grow within their talent areas). We use the ordinary dictionary definitions of

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Dr. Don Treffinger Receives Creativity Award

In May, 2005, more than 10,000 creative problem solvers of all ages gathered on the campus of the University of Tennessee in Knoxville for the Global Finals of Destination ImagiNation®— the largest gathering in the program’s history. We have reported on this event each year for several years, and again this year it was an inspiring and exciting experience. The positive energy of young people and adults, all immersed in the challenge of solving problems creatively, created an amazing environment of engagement, productivity, and fun!

This year’s Global Finals proved to be a very special experience for our Center’s director, Dr. Don Treffinger. He was designated as the 2005 recipient of the organization’s *Risorgimento Award* for Creativity. The award’s name comes from a 19th Century Italian movement that inspired political unification and creative and cultural renewal for people and society. Destination ImagiNation, Inc. presents the award annually “in recognition of someone who changes the face of his or her field of endeavor through the influence of his or her creative touch.” Previous recipients of the award have included Adrian Fisher, the world’s leading designer of mazes, CPS pioneer, Sidney J. Parnes, and (posthumously), Walt Disney.



Dr. Don Treffinger accepting the 2005 Risorgimento Award at the Opening Ceremony of Destination ImagiNation® Global Finals in Knoxville, TN. (Photo courtesy of Destination ImagiNation, Inc.)

Dr. Treffinger’s award was presented at the Opening Ceremony on Wednesday evening, and included a video presentation highlighting a variety of his activities and contributions to recognizing and nurturing creativity throughout more than three decades of teaching and research. Don reported that standing at that podium before the huge group of people— the largest audience he has ever had the opportunity to address, ranging in age from elementary-school students to adults— was a “career moment” of awe and a mixture of excitement and, to tell the truth, genuine anxiety as well!

In his remarks to the group, Dr. Treffinger challenged the conventional wisdom that someone is either born creative or isn’t. We all have the potential to be creative, and to grow in our ability to think creatively and solve complex, important problems. Our research, he told the audience, shows that there are many ways, not just one, for people to be creative. He encouraged the group not to allow anyone to “beat down” creative ideas, nor to let anyone tell us that the problems of our world today cannot be solved. His message encouraged everyone to “keep your creative spirit growing, in your own unique and personal ways,” and observed that Destination ImagiNation®’s programs provide excellent ways to learn and apply Creative Problem Solving in powerful, rewarding, and worthwhile ways.

To learn more about the Global Finals event, and about the program’s varied offerings, visit the Destination ImagiNation® website at www.destinationimagination.org. You can view a gallery of photos from Knoxville, the daily newspapers from Global Finals, and also learn more about the opportunities and challenges for CPS teams for 2005-06.

Center to Conduct Research on Style, Teamwork With Future Problem Solving Teams

The Center for Creative Learning has received a research grant from the Future Problem Solving program to study the relationship of problem solving styles to teamwork skills and the impact of style awareness on team competitive performance. The goal of the project is to evaluate the impact of providing team members with style preference feedback and support information on their teamwork skills and team problem solving performance in the FPS program.

The experimental study will involve a number of Middle and Senior level teams. The Experimental groups will respond to the VIEW problem-solving style inventory, receive information

about their individual and team results, and complete a teamwork skills assessment (now being created for several projects at the Center). The Control groups will participate in all data collection, except that they will not receive the VIEW assessment or support materials. We will gather data regarding the teams' scores on Practice and Qualifying problems, and data regarding Affiliate Bowl scores for teams that qualify to participate. In analyzing the data, we will compare the Experimental and Control groups on Teamwork Skills and on their success and accomplishments during the program year, and we will also analyze indexes of change in teamwork skills.

Through this project, we expect to gain knowledge of the role and impact of problem-solving styles on teamwork skills and problem-solving performance, and to gain new insights into ways to help adults and student team members use problem-solving style and teamwork skills information to enhance their performance as group problem solvers. The project will begin in late summer, 2005, and will run through June, 2006. Watch for a report of the results in a future issue of *Creative Learning Today* newsletter. For more information about the Future Problem Solving Program, visit their website: www.fpsp.org.

On these pages, you see information about two international, non-profit organizations that are devoted to fostering creativity and problem-solving skills for individuals and teams of many ages—from early childhood through adult. If you are new to *Creative Learning Today*, and to the Center for Creative Learning, you might ask, "Why do we highlight these programs? Aren't there many creativity programs for young people?" Yes, there are many programs, and we have no doubt that they serve the needs of their participants in a variety of ways. We highlight these programs because we have maintained a close, collaborative working relationship with them for many years. We respect them as non-profit organizations, completely focused on serving their participants and advancing the goals and values of creativity in education. We also know that they are committed to quality, constructed on a strong foundation (commonly sharing the CPS heritage of our Center and its team), and engaged in building creative leadership for future generations.

Center Partnership with Destination ImagiNation, Inc. Enters Its Sixth Year

The Center for Creative Learning and Destination ImagiNation, Inc. will begin their sixth year of collaborative work in September, 2005. This partnership spans a variety of activities: research and evaluation, training, assessment (using the VIEW inventory and other tools), and the collaborative development and publication of several books. The books published to date are *Building Creative*

Excellence (2002, by Don Treffinger and Grover Young), *The Problem Solver's Practical Toolbox* (2003, by Rosemary Bognar, Mo Guy, SusanBeth Purifico, Lindy Redmond, Jill Schoonmaker, Pat Schoonover, and Don Treffinger), and *Successful Creative Problem Solving Teams: Growing, Guiding, and Celebrating* (2004, by Don Treffinger and SusanBeth Purifico). For information about

obtaining any of these books, visit www.shopdi.org. A variety of new projects and initiatives are on the horizon for 2005-06; watch future issues of *Creative Learning Today* for updates. To obtain more information about the Destination ImagiNation, Inc. family of programs, visit the program website (given on the previous page).

Coming Soon... To Your Computer!

Distance Learning Modules on Creative Learning and Talent Development

The Center for Creative Learning is pleased to announce two new distance learning opportunities for educators. These web-based courses will enable you to pursue in-depth, personalized learning at your own pace. Learn the latest information and methods for Creative Learning and CPS, or for the LoS Approach to Talent Development— from any computer that has an Internet connection.

Creative Problem Solving in Education (CPSE)

Creativity and Creative Problem Solving (CPS) are essential goals of education in today's world of change. Not only are these skills essential for adults, but they are of critical importance in preparing students for life success! This web-based, interactive course, which we developed in collaboration with the Future Problem Solving Program and Destination ImagiNation, Inc., allows you to learn, practice, and apply the basic concepts and tools of CPS. The course addresses the full range of topics that we include in our CPS workshops: defining creative and critical thinking, guidelines for effective thinking, tools for generating and focusing options, the components and stages of our contemporary CPS Version 6.1™ framework, and an assessment of your personal problem-solving style. You will also benefit from interaction (by email) with an experienced Mentor as part of your distance learning experience. (Note: a portion of all registration fees for this course supports the Future Problem Solving and Destination ImagiNation® programs. Special discounts are also available for registered FPSP and DI participants.) This course will be available for new participants in early October, 2005.

Talent Development: The Levels of Service (LoS) Approach

The Levels of Service (LoS) approach to talent development is a contemporary, flexible, and inclusive model for nurturing the strengths and talents of students in many ways, through the collaborative efforts of the school, the home, and the community. Based on more than two decades of research, development, and practical application, the LoS approach will serve as a "guiding framework" for ensuring appropriate and challenging learning experiences for high-ability students and for differentiating instruction, recognizing strengths, talents, and interests, and nurturing the potential in all students. Our goal is "bringing out the best in every student." In this interactive, web-based course, you will investigate: expanding conceptions of giftedness and talent, challenges for a new generation of programming for talent development, effective programming at four levels of service, student action planning for talent development ("beyond identification"), and a systematic planning process for program design or redesign. You will receive practical resources for your own setting as well as the knowledge and skills for implementing LoS at the classroom, school, or district level. You will also benefit from interaction (by email) with an experienced Mentor as part of your distance learning experience. We anticipate that this course will be available for new participants by mid-November, 2005.

For more information about these opportunities, please send an email to Dr. Don Treffinger at the Center for Creative Learning, at don@creativelearning.com. Please put "Distance Learning Inquiry" in the header of your message!

Recent and Forthcoming Articles, Books, and Presentations from the Center's Team and Colleagues

During the past year, the Center's team members and colleagues have been actively involved in writing for a variety of professional journals, authoring new books, and making presentations at regional, national, and international conferences. In this list of both recent and forthcoming activities and publications, the names of the Center's core team and Board members are in bold type. We were pleased to be able to collaborate with a number of additional clients and professional colleagues as well.

Articles

Nancy Cook, **Carol Wittig**, and **Don Treffinger** published "The path from potential to productivity: The parent's role in the levels of service approach to talent development" in *Parenting for High Potential*, (March 2004, pages 22-27).

Scott Isaksen and **Don Treffinger** published the article, "Celebrating 50 Years of Reflective Practice," in the *Journal of Creative Behavior* (2004, volume 38, number 2, pages 75-101). This article provides an in-depth look at the ways in which the CPS model has evolved and continued to improve throughout more than five decades of research and practice.

Ed Selby, **Don Treffinger**, **Scott Isaksen**, and Ken Lauer made the pages of the *Journal of Creative Behavior* for the second time in the same year, with their article, "Defining and Assessing Problem Solving Style: Design and Development of a New Tool" (in volume 38, number 4, pages 221-243).

Ed Selby, **Don Treffinger**, and **Scott Isaksen** joined several other colleagues in publishing "Innova-

tive leadership in today's demanding marketplace: A new tool for understanding our problem solving style to better leverage human assets," in the March 17, 2004 issue of IBM's ABI Insight *newsletter* (accessed on-line at www.ibm.com/ibm/palisades).

Don Treffinger published "Assessing creativity: Challenges and opportunities," in the Spring, 2004 issue of *Quest: NAGC Research and Evaluation Division Newsletter*.

Don Treffinger and **Ed Selby** published "Problem solving style: A new approach to understanding and using individual differences" in the *Korean Journal of Thinking and Problem Solving* (2004, Volume 14, number 1, pages 5-10).

Grover Young contributed several Resource Round Up columns to *Parenting for High Potential* magazine in 2004 and 2005, and once again edited the Annual Holiday Toy List for *PHP's* September, 2005 issue.

Special Journal Issue

The Fall, 2005 issue of the *Gifted Child Quarterly* will be a special issue on the theme of creativity. **Don Treffinger** served as the Guest Editor for this issue.

This special issue addresses a number of issues and topics that bridge theory, research, and practice. The articles include:

Bonnie Cramond and Juanita Matthews-Morgan provide new updates on recent work in assessment using the *Torrance Tests of Creative Thinking (TTCT)*, and argue for the value and relevance of creativity assessment in schools today.

Scott Hunsaker discusses the current status of research on the outcomes of creativity training programs in schools, suggests some guidelines for understanding the application of strategies and programs in the classroom setting, and proposes several important directions in which more work is needed.

Ed Selby, Emily Shaw, and John Houtz provide us with a contemporary review and analysis of research on creative personality and characteristics, guiding us in understanding the relationships between personal qualities and creative processes, and suggesting that new directions in research on style hold promise for the identification and development of creative talent.

Scott Isaksen and John Gaulin provide an extensive review and reexamination of the research on brainstorming. This article dispels some misunderstandings about what the "research says" about brainstorming, and offers several helpful insights for practitioners.

Ken McCluskey, Phil Baker, and Andrea McCluskey review more than a decade of research and practice relating to creativity, Creative Problem Solving, and talent development with at-risk or marginalized student populations.

To complete the issue, **Scott Isaksen** and **Don Treffinger** provide an overview of historical advances and contemporary perspectives on Creative Problem Solving (CPS) and their implications for gifted education and talent development.

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Publications

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Presentations

Don Treffinger returned from knee replacement surgery in mid-December, 2004 to resume his customary schedule of programs and presentations. He presented on creative learning and style in multiple sessions at Asker Municipality and the University of Oslo, in Norway, in March, 2005. In May, Don presented a teamwork and CPS workshop, two VIEW sessions, and a commencement address (for graduating high school students) during the Destination ImagiNation® Global Finals in Knoxville. Then, in June, Don (along with **Ed Selby**) participated in evaluating Community Problem Solving projects at the Future Problem Solving International Conference in Lexington, KY. Next, Don traveled to the "Louisiana Lagniappe" conference in Lafayette, Louisiana to make a keynote presentation and give a creativity workshop. In July, it was north to the "Big Apple" (New York City) to continue his long tradition of presentations on creativity, talent development, and style at Rita and Ken Dunn's Learning Styles Institute.

As this issue of *Creative Learning Today* goes to press, four Center team members (**Pat Schoonover**, **Ed Selby**, **Don Treffinger**, and **Carol Wittig**) are preparing for several presentations at the Biennial Conference of the World Council on Gifted and Talented Children, August 6–10 in New Orleans.

Pat Schoonover also did some "globe hopping," giving a keynote Presentation, *A VIEW to Creative Problem Solving*, at the International Conference on Multiple Intelligences, Creativity and Problem Solving, in Beijing,

China, July 19–22, 2005. Back home in Wisconsin, Pat is also scheduled to give a keynote address at the State of Wisconsin Conference for Municipal Comptrollers in September, 2005.

Carole Nassab stayed closer to home, but in October, 2004, continued a tradition of several years by conducting a workshop on creative and critical thinking tools for substitute teachers in a special training program offered in the Sarasota County Public Schools.

Books

Don Treffinger edited *Creativity and giftedness*. (2004, Thousand Oaks, CA: Sage/Corwin), and wrote the introduction, entitled, "Creativity and giftedness: An overview."

Don Treffinger, **Scott Isaksen**, and **Brian Stead-Dorval** completed the updated and expanded 4th Edition of "Creative Problem Solving: An Introduction," which will be published in Fall, 2005 by Prufrock Press. (During 2004, the 3rd Edition was also translated into Korean.)

The CPS Team also completed another major collaborative project. **Don Treffinger**, **Carole Nassab**, **Pat Schoonover**, **Ed Selby**, **Cindy Shepardson**, **Carol Wittig**, and **Grover Young** created *The CPS Kit*, a comprehensive program for learning and applying CPS. This program, for students in grades five and above, will also be published in Fall, 2005 by Prufrock Press.

Earlier in the past year (2004), Prufrock Press also published our team's three volume set, *Thinking with Standards: Preparing for*

Tomorrow" (elementary, middle, and secondary levels, as well as our book, "Enhancing and Expanding Gifted Programs: The Levels of Service Approach" (by **Don Treffinger**, **Carole Nassab**, **Carol Wittig**, and **Grover Young**). These books have been announced in previous issues of *Creative Learning Today*.



A Very Special Concluding Note

One of the Center's team members attained a significant personal and professional goal this year, too. **Cindy Shepardson** is now "Doctor Cindy," having completed her Ed.D. degree in Curriculum and Instruction at Argosy University in June, 2005.

The title of Cindy's dissertation was, *Teachers' Beliefs About Creativity and Its Facilitation in the Classroom: An Explanatory Narrative*. The purpose of the study was to examine the beliefs of teachers who deliberately chose to teach for creativity in their classrooms, and who documented practices to facilitate such development. The narrative data collected were used to develop an explanatory narrative related to teaching for creativity, and to identify similarities of beliefs among participants that were related to promoting the creativity of their students.

Reacting to Change: A Sampling of Quotations from Notable Sources

In preparing for several recent presentations on the importance of creativity and the benefits of instruction that promotes it, we located a number of intriguing and stimulating quotations from famous people, contemporary and historical, from many disciplines or careers. Our search involved many sources, but web searches can quickly turn up hundreds of quotations. Two sites that we found particularly interesting were:

www.wisdomquotes.com and www.quote garden.com. Here's a brief sample of some the quotations that led us to pause, sometimes to smile, but consistently to reflect:

American proverb:

It doesn't work to leap a twenty-foot chasm in two ten-foot jumps.

Henri Bergson:

To exist is to change, to change is to mature, to mature is to go on creating oneself endlessly.

Bill Clinton (in a 1992 Presidential debate):

We live in a world where what you earn depends on what you can learn, where the average 18-year-old will change jobs eight times in a lifetime, and where none of us can promise any of you that what you do for a living is absolutely safe from now on.

Henry Steele Commager:

Change does not necessarily assure progress, but progress implacably requires change. Education is essential to change, for education creates both new wants and the ability to satisfy them.

W. Edwards Deming:

It is not necessary to change. Survival is not mandatory.

Marian Wright Edelman:

If you don't like the way the world is, you change it. You have an obligation to change it. You just do it one step at a time.

Bill Gates:

We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction.

Eric Hoffer:

In times of change, learners inherit the Earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.

Helen Keller:

The heresy of one age becomes the orthodoxy of the next.

John F. Kennedy:

Change is the law of life. And those who look only to the past or present are certain to miss the future.

Charles F. Kettering:

You can't have a better tomorrow if you are thinking about yesterday all the time.

Abraham Lincoln:

The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew and act anew.

Nelson Mandela:

Education is the most powerful weapon which you can use to change the world.

Margaret Mead:

Never doubt that a small, group of thoughtful, committed citizens can

change the world. Indeed, it is the only thing that ever has.

George Bernard Shaw:

The only man I know who behaves sensibly is my tailor; he takes my measurements anew each time he sees me. The rest go on with their old measurements and expect me to fit them.

Alvin Toffler:

In describing today's accelerating changes, the media fire blips of unrelated information at us. Experts bury us under mountains of narrowly specialized monographs. Popular forecasters present lists of unrelated trends, without any model to show us their interconnections or the forces likely to reverse them. As a result, change itself comes to be seen as anarchic, even lunatic.

Andy Warhol:

They say that time changes things, but you actually have to change them yourself.

Alfred North Whitehead:

The art of progress is to preserve order amid change and to preserve change amid order.



Enabling Differentiation

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those three key words to guide us (see the accompanying table).

Initial experiences at Levels I and II can become springboards for extended and personalized opportunities in Levels III and IV. Some of these may involve group instruction; if so, the groups will consist of other students with similar strengths and interests (who will challenge and extend each other), and supportive teachers (who bring expertise in the talent domain and excitement for the challenge of working with talented students). Other Level III and IV experiences may draw individual or small groups of students into extended experiences at higher levels of education (e.g., middle- or high-school students enrolling in a college-level course) or in supervised projects or mentor relationships. Varied options and personnel, within the school and beyond, are hallmarks of LoS programming.

4. *Students will learn best when they can make a connection between the curriculum and their interests and life experiences.*

This principle is at the very heart of LoS programming, in which we believe that neither identification based on a limited set of test criteria nor “one-size-fits-all” programs can provide an optimum response to the challenge of nurturing students’ strengths and talents. The “connection” discussed in this principle is clearly consistent with the LoS commitment to seek and respond to each student’s strengths, talents, and sustained interests. Programming in the LoS approach serves two goals: responding to strengths and talents that are already manifest in the student’s life, and engaging in services that will stimulate the recognition, discovery, or development of the best learning potentials in all students.

5. *Students will learn best when learning opportunities are natural.*

Level I services, even though they are generally brief in duration, are readily accomplished in the classroom or through specific “events” outside the classroom that will catch and engage students’ natural curiosities and interests (e.g., field trips, guest speakers). Level II services, which may have a specified scope and duration, may be brief (single session or multiple sessions over several weeks) or extended over a longer period of time (e.g., during a semester or school year). The students’ participation is driven by their sustained engagement and interest. Level III and Level IV services emerge naturally as students’ immersion or involvement in a talent or interest grow over time.

In Level III and in Level IV there is student selection, but it is based on the student’s specific characteristics and “readiness,” in relation to the skills that will be required for successful engagement in the activity, not a generic “ability” or “giftedness” label. We look for:

- Demonstrated student interest and motivation

- to engage in the activity
- Evidence of ability and/or achievement in the specific content or talent area
- Characteristics and needs that are clearly relevant to the content and performance expectations for the specific activity or service

6. *Students are more effective learners when classrooms and schools create a sense of community in which students feel significant and respected.*

In LoS programming, we emphasize the importance of involving students in understanding themselves (e.g., clarifying their interests and learning style preferences, building personal profiles) and learning to manage and direct their talent development experiences (e.g., through individual, personal talent development Action Plans). Students are not simply “placed in a program,” but are active participants in designing, carrying out, evaluating, and modifying their plans.

7. *The central job of schools is to maximize the capacity of each student.*

This principle sums up nicely a value commitment that is at the very core of LoS programming. We cannot complain that high-ability students languish in the

Appropriate

- Especially well-suited
- Consistent with needs and characteristics
- “Fits” well
- Makes sense
- Wisely and carefully-designed
- Compatible

Challenging

- Invitingly provocative
- Arousing competitive interest, thought, or action
- Energizing and stimulating; exciting and motivational
- Expanding, “stretching”
- Forward-looking
- Capacity-building
- Inspiring, stirs passion and intense involvement

Developmental

- Designed to assist or encourage growth
- Gradually becoming manifest or apparent
- Helping to bring about improvement
- Making active and available
- Enabling progress or advanced to new or higher levels

“sameness” of regular classrooms, and then respond by placing them, as if they were all alike, in a single, fixed gifted program; that is simply “more of [a different] same thing for all. If we make the commitment — as the LoS approach states as a fundamental belief— that our job is to “bring out the best in every student,” our practices must be consistent with our beliefs.

To learn more about the basic guiding principles and beliefs underlying the LoS approach, visit our website and read, “Dear School People... What are you doing to find and develop my child’s talents?”. This article poses “25 tough questions that are more important than, ‘Is my child

in the gifted program?’”) and may be downloaded at: <http://www.creativelearning.com/DearSchool.htm>.

You can also read and share our four-page PDF file expressing our “Fundamental Tenets and Belief Statements” for the LoS approach to talent development at: <http://www.creativelearning.com/PDF/LoSBeliefs.pdf>.

Finally, Don Treffinger’s 1998 article in the Phi Delta Kappan provides an overview of the LoS approach that may stimulate valuable discussion among educators and parents.

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Treffinger, D. J., Nassab, C. A., Wittig, C. W., & Young, G. C. (2004). *Enhancing and expanding gifted programs: The Levels of Service approach*. Waco, TX: Prufrock Press.

This chart summarizes several unique features of each the four levels in the LoS approach, and gives a basic example of the level in action.

<p>Level I: Services for All Students (“Discovering and Building”)</p> <ul style="list-style-type: none"> • Appropriate and challenging content and process for all students • Foundational skills and tools, exposure to talent or interest possibilities • Differentiation based on differences among all students in strengths, interests, style preferences, prior knowledge and skills, and rate or pace of learning <p>Teachers in a school noticed that most of the questions they asked their students called for basic recall. They decided to teach higher level thinking skills and deliberately modified their questioning technique by developing questions that required students to think creatively and critically.</p>	<p>Level III: Services for Some Students (“Enthusiastic and Performing”)</p> <ul style="list-style-type: none"> • Services respond to needs based on individual strengths, talents, and sustained interests • Selecting students based on specific data regarding their learning characteristics for specific options • May involve collaborative efforts among schools, special after-school or summer activities (in school or by outside agencies) <p>Students with strengths and talents in math may be placed in advanced math classes, Honors classes, or AP math courses (based on mathematical aptitude, skills, and interests). Their math opportunities may involve acceleration as well as opportunities for enrichment (e.g., special projects for individuals or small groups).</p>
<p>Level II: Services for Many Students (“Curious and Exploring”)</p> <ul style="list-style-type: none"> • Invitational opportunities (“Anyone might; not everyone will”) • Engaging in and verifying interests and possible strengths and talents, student-selected process or content activities or programs <p>A school offers students opportunities to participate on teams for the Future Problem Solving Program or the Destination ImagiNation® Program. Students may have opportunities to compete at the local, regional, state, or national/international levels.</p>	<p>Level IV: Services for A Few Students (“Soaring and Passionate”)</p> <ul style="list-style-type: none"> • Linking the student’s high-level needs and the unique programming response(s) • Custom-planned, designed, or selected responses to the individual student • May involve an extensive shift of grade level, setting, and providers <p>In one district, elementary age students were permitted to enroll in secondary level course in areas of special talent, and middle- or secondary-level students had opportunities to take post-secondary level courses in their special talent areas (e.g., science, technology, dramatics, creative writing, history, and math) at area community colleges and universities.</p>

CPS: Master Teaching Tips

Metacognitive Skills Are Essential When Learning and Applying CPS

When teaching CPS or guiding groups of any age in their initial efforts to apply CPS, it is often easy to focus on the process skills: generating and focusing tools or the process stages and components. In some teaching and training programs, we've seen or read about "teaching CPS lessons" or "covering the CPS unit."

If instruction or training focuses only on mechanical instruction in "the steps" of the process (along the lines of, "Take out your CPS Workbook and do the next four pages"), the dynamic nature and the real power of the method may be lost. At the other extreme, if a program focuses entirely on "doing a problem" using CPS (or what we used to call a "process run-through"), the participants may have an interesting, enjoyable, and perhaps even exhausting experience, but come away without a grasp of the essential elements that will make CPS useful to them in the future. Keep in mind three important "C's": **Competence** (knowing and understanding the process); **Confidence** (awareness that you can apply the process effectively); and **Commitment** (willingness to engage in challenging tasks for which CPS will be appropriate and helpful).

To ensure that your groups will learn and be able to add CPS to their own personal working repertoire of methods, be certain to deal with metacognitive skills. These might be described informally as "thinking about your thinking while you are thinking." They involve:

- Constructing personal meaning for the process tools, stages, and components;
- Knowing and feeling comfortable with the language and vocabulary of the process (e.g., definitions, guidelines, generating and focusing tools, three process components and their six stages; a management component and its two stages);
- Understanding how to personalize or customize the process to fit your problem-solving style preferences (using VIEW, for example);
- Monitoring your choices and decisions about process while you are applying it; managing your CPS strategy to ensure that what you are doing is leading you toward your goals;
- Modifying your process choices and decisions as you apply the process (adjusting or "self-correcting" your use of process as you work with it).

Textbooks can provide the basic information that people need about CPS, and they can be efficient, effective ways to share information concisely. We are also creating a variety of additional learning resources, such as the CPS Kit (a self-guiding program for learning and applying CPS) and our CPS in Education distance learning module (described elsewhere in this issue). As a CPS Master Teacher, help your students (children, adolescents, or adults) by doing more than "teaching them about" CPS; help them build the metacognitive skills they need to make CPS a powerful, productive, personal process.

Purpose of CLT

Editor: Dr. Don Treffinger

Purpose: To share new ideas and practical strategies for productive thinking, and talent development, and learning style; information about and reviews of new resources; and opportunities for networking among our readers.

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Direct all inquiries and changes of email address to don@creativelearning.com

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VIEW Inventory: Advanced Training Program

VIEW: An Assessment of Problem Solving Style, is now being used by educational organizations and businesses worldwide. The on-line edition will soon be available in Dutch, French, Chinese, and Korean as well as in English. VIEW can be used effectively with adolescents (ages 12 and older) through adults. If you are interested in adding VIEW to your repertoire of professional tools, visit our Problem Solving Style page at <http://www.creativelearning.com/Problemsolving.htm> to learn more. Our next Advanced Training Program for new VIEW users will be September 22-23, 2005 in Sarasota.