



CPS for Positive Achievement

Powerful Tools for Leadership to Build Success for All Students

by Dr. Donald J. Treffinger

Educators today often feel frustrated and confused about how to help students to be successful personally and academically. The achievement gap between successful and unsuccessful student performance seems often to be widening even as we attempt to close it. Continuing to do what we have always done, in the ways we have always worked, no longer leads to the results we need. As McCluskey, Baker, Bergsgaard, and McCluskey (2001) pointed out, educational underachievement carries high emotional, personal, and academic costs for students, schools, and ultimately, for society. School dropouts, for example, earn significantly lower incomes than successful students and have fewer career opportunities in today's complex world; as an economic result, some estimates of the costs to society suggest billions of dollars in lost revenue and escalated costs in welfare, unemployment, and criminal justice. In addition, individuals blocked from legitimate paths to success may turn their talents to unsavory pursuits, at considerable personal cost to themselves and others (Place, McCluskey, McCluskey, & Treffinger, 2000; McCluskey et al., 2001).

The complexity of the issues sometimes appears to be unmanageable. Consider, for example, the concerns commonly heard from administrators, teachers, parents, and community leaders (adapted from Buddle [2003]):

- So much to do... so little time
- The problem is so complex, we can't get a handle on it.
- The more work we do, the farther behind we seem to get.
- Can we do anything that will really solve the problem?
- We talk a lot, but we don't come up with any real solutions
- My plate is full... I can't do one more thing

Creative Problem Solving: Tools for Positive Student Growth and Achievement

The Creative Problem Solving system (CPS Version 6.1™; Isaksen, Dorval, & Treffinger, 2000; Treffinger, Isaksen, & Dorval, 2000) is the current version of a framework that has been applied successfully in businesses, education, and other organizations worldwide for more than five decades (Isaksen & DeSchryver, 2000). In addition to its many and varied applications with adults in

the organizational world, CPS also helps educational leaders to address the significant challenges of student achievement and success.

The initial promise of CPS applications in relation to positive achievement and student success focused on CPS as a constructive set of planning tools for educators to use when seeking to design interventions for students (e.g., Timgren, McCluskey, & Baker, 1994; McCluskey, Baker, O'Hagan, & Treffinger, 1995; O'Hagan, Tymko, Timgren,

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Implications of Style Differences For Explorers and Developers in the Use of CPS Tools

By Dr. Patricia Schoonover and Dr. Don Treffinger

The basic toolbox of CPS Version 6.1™ includes many practical tools that groups and individuals can use when they are generating options or when they are focusing their thinking. People of all ages— from young children at home or in school to adults in the workplace— can be successful in learning and applying a variety of generating and focusing tools (e.g., Isaksen, Dorval, & Treffinger, 1998; Treffinger & Nassab, 1998, 2000).

We have found, however, that differences among people in problem solving style preferences influence how many people learn and apply those tools. We do not believe that people with certain preferences can only be effective in using some tools and not others. Style does not limit our capabilities; rather, it influences how we customize our learning and application, and guides us in “personalizing” learning and making tools our own. Understanding the implications of our style for our natural preferences can be helpful in guiding teaching and learning, and in helping people to be aware of their strengths and to build on them to be as productive as possible.

In this article, drawing on research with several assessment tools, we will share our current thinking about how people who differ in the *Orientation to Change* dimension of *VIEW: An Assessment of Problem Solving Style* (Selby, Treffinger, & Isaksen, 2002) address the challenges of learning, practicing, and applying CPS tools. We are planning to conduct additional research in which we will extend our inquiry into all three VIEW dimensions

with subjects of different ages and in different settings.

Explorers

People who prefer the Explorer style often look first at applying tools that they can use easily to generate a substantial number of options, including many that will emphasize a high level of novelty or originality. They make be quick to adopt new tools that they perceive add variety or liveliness to their search for options, and they may not have much concern at all for learning “the steps in using the tool.” They will often be eager to apply the tool in their own way, or to modify the tool playfully in order to stretch their thinking. When they report that they have used a tool, and begin to explain what they have done, be prepared to be surprised or even puzzled. Their “application” of the tool might not resemble any standard “published” description of that tool. However, it is likely that they will have attained results about which they are enthusiastic, and that if those options can be developed and made workable, may have a powerful impact on the task.

When people who prefer an Explorer style as their Orientation to Change learn, practice, and apply CPS tools, they:

- Enjoy discovering new tools and will feel free to use them as they wish, often in unpredictable ways.
- Need feedback to help them check their understanding of basic tools.
- Will explore other ways to use the tools and break implied rules (as perceived by their more Developer-oriented peers).

- Will generate many ideas, but may need prompting to record any of them.
- Will feel free to combine tools and generate new variations of traditional CPS tools.
- Enjoy the novelty of new applications of the tools.

Developers

People who prefer the Developer style often look first to tools that they perceive as functional, practical, and efficient. They will often prefer to study the tools and the procedures or directions for using them before they begin to practice or apply them, seeking to ensure that they really understand how to use the tool the way it was described (i.e., “correctly”). Once they feel confident about understanding a tool, they will test it and assess the results to ensure that they are satisfied that the tool is useful. Developers often prefer tools in which they see immediate value and usefulness in the results of their thinking. When they report that they have used a certain tool, and describe what they have done, it will usually correspond quite closely to published descriptions of that tool; you won’t have any difficulty in recognizing the tool. The results of their efforts will usually be clearly relevant to the task, add value to the situation on which they’re working, and be able to be implemented in a very direct, straight-forward manner. When people who prefer a Developer style as their Orientation to Change learn, practice, and apply CPS tools, they:

- Enjoy learning tools that they perceive as practical and relevant to the tasks on which they work.
- Need feedback on their progress with their use of the tools.

- Use tools in their customary manner, staying within boundaries as they perceive them.
- Generate “just enough” ideas to feel comfortable, and will record all responses.
- Will feel most comfortable when using one tool at a time.
- Will find pragmatic, realistic applications for the tools.

Shared Needs

Both Explorers and Developers can learn and apply a variety of generating and focusing tools successfully. Although their approach may vary in a number of ways in relation to their style preferences, there are also some common needs and concerns that will help them to learn, practice, and apply tools with competence, confidence, and commitment. We have found that both Explorers and Developers need:

- A support network as they implement the tools (for Explorers to build clarity and for Developers to build confidence).
- To practice the tools (again, Explorers for clarity and Developers for confidence).
- Opportunities for varied modalities of instruction, to build understanding of the tools and to promote successful transfer from the training session to real uses in their own setting.

References

- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1998). *Toolbox for creative problem solving*. Williamsville, NY: Creative Problem Solving Group, Inc.
- Treffinger, D. J., & Nassab, C. A. (1998). *Thinking tool guides*. Sarasota, FL: Center for Creative Learning.
- Treffinger, D. J., & Nassab, C. A. (2000). *Thinking tools lessons*. Waco, TX: Prufrock Press.

On-Line CPS Course Available in Spring, 2004

Dr. Don Treffinger will offer a three-credit, graduate, on-line course in Creative Problem Solving this spring, as part of the University of Connecticut series of web-based courses. The course (EPSY 300: Creative Problem Solving) will run from January 20 through April 30, 2004, although it is possible to sign up for spring courses beginning in mid-September, 2003. The course will involve understanding and applying the Creative Problem Solving components, stages, and tools, using CPS Version 6.1™, with hands-on, minds-on practice. Students learn and apply CPS with realistic and real problems and challenges while they assess CPS outcomes.

If you are interested in this course, or know others who may be interested, additional information is available at the website of the Neag Center at the University of Connecticut; the web address is:

<http://www.gifted.uconn.edu/WebClasses/Descriptions.htm>

Personal Opinion: Some Truly Poor Advice?

Perhaps *Parade Magazine* is included in your local Sunday newspaper, as it is in the *Sarasota Herald-Tribune*. We wouldn't ordinarily consider it as a “scholarly” resource, of course, but it does reach a rather large readership. In the September 21, 2003 issue, it contained some advice to parents that struck us as being so terrible that it warrants comment. We tried to email a comment to the publication's website, but one must register and obtain a password to send them an email message; we get enough worthless “spam” without inviting more! In this issue, Bill O'Reilly (billed as a “television personality and author,” which must imply expertise in the parenting advice area, of course) offers this piece of wisdom: “*Finally, an effective parent will not allow a TV or computer in a child's room. This is a dangerous world, and the danger is now inside the house. The exploiters want your kids. You must look out for them. Fight hard.*” We can only hope that many readers will find the fallacies in this advice. Can he really believe that, by banning television or computers from the child's room, parents will ensure that their children will never discover these devices or their contents? Does he really believe that this strategy will be more effective than teaching children how to examine and think critically about what they view? Does the absolute rule relieve parents from the responsibility of monitoring and guiding their children's television or computer activities? (“Don't think; just follow an absolute rule!”) Would he restrict the benefits that young people can obtain from convenient access to the many resources provided by today's technology? Yes, there may be dragons in those forests, but Mr. O'Reilly's advice won't slay them. It seems to be an exercise in self-deception and an invitation to poor parenting that avoids responsibility for difficult challenges. (DJT)

Construct Validity of VIEW: An Assessment of Problem Solving Style

By Edwin Selby, Emily Shaw, and John C. Houtz

Fordham University

Cognitive style research is a well-developed area of inquiry (Dunn & Dunn, 1978; Jonassen & Grabowski, 1993; Sternberg, 1988; Sternberg & Grigorenko, 1997; Wang & Walberg, 1985). The study of how individuals perceive their environments has become central to research on learning. Ever since the “cognitive revolution” began sometime in the 1960’s, when the word “information” began substituting for “stimulus” or “stimulation,” researchers have tried to understand how learners approach, process, and respond to information around them.

What is more recent, however, is the notion of creativity or problem solving style (Isaksen & Dorval, 1993). For much of the past half-century, the study of creativity and creative problem solving focused on asking questions about “how much” creativity an individual possessed or demonstrated. On the other hand, it has always been obvious that “non-creative” individuals also solve problems. Over the past 10 years there has been significant interest in asking questions about the different ways (*i.e.*, the style) that individuals employ to solve problems. Kirton (1976, 1994) and Basadur (1995; Basadur, Graen, & Wakabayashi, 1990) developed theories, instruments that contributed to creativity style research. Selby, Treffinger, and Isaksen (2002) developed *VIEW: An Assessment of Problem Solving Style* as a multi-dimensional approach to investigating and assessing problem solving style. VIEW measures three dimensions of style: an individual’s orientation to change (OC), manner of processing (P), and way of deciding (D).

Development of VIEW has drawn upon established research and theory in Creative Problem Solving, learning style, cognitive style, and psychological type. The Orientation to Change dimension measures an individual’s preference for “responding to and managing structure, novelty, and authority when dealing with change or solving problems” (Selby, Treffinger, Isaksen, & Lauer, 2002, p. 8). Individuals can be described along a continuum between Explorer and Developer. Explorers prefer to break away and create their own approaches whereas Developers prefer to work within the structure.

The Manner of Processing dimension assesses how the individual uses his or her “inner energy and resources, and that of others, when managing change or solving problems” (Selby, Treffinger, Isaksen, & Lauer, 2002, p. 11). The continuum ranges from External to Internal, which reflects an individual’s preference to involve others right way in discussion and deliberation or, in contrast, takes time to gather and reflect about one’s own views of ideas and options before sharing them with others.

Finally, the Ways of Deciding dimension assesses an individual’s preference, when choosing methods and options for solving problems, for considering the effects of ideas and actions on the people involved (the Person style) or the conditions or requirements necessary for completing the solution (the Task style).

Research with VIEW is accumulating (Houtz, 2003; Selby, Shaw, & Houtz, 2003). Reliabilities are high; item factor structures are consistent with theory; and

normative data are extensive (Selby, Treffinger, Isaksen, & Lauer, 2002). A thorough technical manual is available; professionals are being trained and certified as qualified VIEW users; and substantial background material about VIEW, Creative Problem Solving, and teaching and learning opportunities is available to psychologists, educators, and individuals. The purpose of the present research was to add to the body of evidence supporting the construct validity of VIEW.

Method

Participants

Participants in this study were 57 graduate students (48 women and nine men) enrolled in three classes of educational psychology taught by the first and third authors. Students received credit for participation and individual feedback about their VIEW scores and VIEW theory. Students ranged in age from 22 to 55 years, with a mean of 33. While most students were preparing for their initial teaching certificates, some were already teaching and/or working toward advanced certificates or license extensions to other areas. Years of teaching experience ranged from zero to six years, but only a few students had more than two years of classroom experience.

Instruments

VIEW. As described above, VIEW assesses three dimensions of problem solving style: Orientation to Change (OC), Manner of Processing (P), and Ways of Deciding (D). VIEW test-retest reliabilities range from .84 to .93 over a two-month interval. Inter-

item correlations range from .87 to .91 across OC, P, and D dimensions. Validity data include correlations with Kirton's Adaption—Innovation Inventory, the Myers—Briggs Type Indicator, and measures of learning style. Factor analyses suggest a stable three-factor structure, with individual items loading on their respective dimensions.

Myers-Briggs types. The Myers-Briggs Type Indicator has a substantial history and literature in support of the four dimensions and 16 individual typologies it purports to measure (Myers & Myers, 1980). The four dimensions of personal preference are introversion—extraversion, sensing—intuitive, thinking—feeling, and judging—perceiving. In combination, there are $2 \times 2 \times 2 \times 2 = 16$ types, with associated individual personality characteristics. Participants were given a single page of brief descriptions of each of the 16 personality types, as provided in the Myers-Briggs Manual (Myers & Myers, 1976) and asked for their choices among the 16 that most closely matched what they thought of themselves.

The "Big Five" personality characteristics. While there are numerous theories of personality extant in the literature, five global personality characteristics have come to be identified as the "Big Five" theory (Wiggins, 1996). These qualities include extraversion, agreeableness, conscientiousness, emotional stability, and openness. Extraversion is the degree to which an individual is other-oriented, friendly, gregarious, energetic, or assertive. Agreeableness is the degree to which the individual is easy-going, friendly, warm, trustworthy, altruistic, straightforward, etc. Conscientiousness includes diligence, dutifulness, competence, orderliness, being task-oriented, etc. Emotional stability includes being

even-tempered, not anxious, not hostile, not angry, not depressed, etc. Finally, openness includes being curious, interested, willing to feel, appreciative of beauty, willing to dream, inspired, a risk-taker, etc. A simple five-item questionnaire was constructed to assess students' self-ratings on each of the five personality characteristics. Individuals were asked to rate themselves on each of the five characteristics on a 10-point scale, with a "10" representing the judgment that the characteristic was most like themselves.

Learning styles. To assess left- or right-brain style preference, a list of 30 bi-polar adjective pairs were presented to subjects. Adjectives indicative of left-brain preferences included: sequential, serial, focusing, separating, and analytic. Adjectives indicative of right-brain preferences included: random, simultaneous, scanning, integrating, and global. Adjectives were selected based on the work of Hermann (1990), Torrance (Torrance & Mourad, 1979; Torrance, Taggart, & Taggart, 1984), and others. Students simply indicated along a line between each adjective pair where they felt one or the other of the two adjectives applied to themselves. The closer to one adjective or the other they marked the line, the clearer would be the classification of a left- or right-brain preference. Adjective-pairs included those characteristic of both the cognitive and affective domains. Scoring of this survey was simply by a count of how many marks made by the student were to the left or right of the mid-point of the line between the adjective-pairs. Subjects were categorized as left-, right-, or no preference (equal number of marks on either side of the line).

Procedures

VIEW was administered to participants in their regular class-

rooms by certified VIEW users (the first and third authors) during the first week of classes. Administration takes about 15 minutes. Participants completed the Big Five personality ratings, the informal learning style inventory, and selected their first, second, and third choices of Myers-Briggs types during the second and third weeks of class. VIEW was scored by certified and experienced VIEW users. A trained graduate assistant entered the VIEW scores, the Big Five ratings, the three Myers-Briggs choices, and the left-, right-, or no preference learning style preference into an SPSS database for analysis.

Results and Discussion

To analyze the results, correlational statistics, t-tests, and cross-tabulations were computed. The t-test results comparing men and women revealed only one statistically significant difference—that males exhibited more right-brain preference ($t = -2.25$, $df = 55$, $p < .05$). However, because of the imbalance between the numbers of women and men in this study, any conclusion about gender differences is suspect. Age did not correlate significantly with any variable in the study.

Secondly, since there were three different classrooms involved in this study, analyses were first computed for each class separately. Descriptive statistics (means, variances) and correlational patterns among the variables were not significantly or substantially different across the three classes.

On one of the VIEW dimensions, orientation to change, the overall average across all three classes was substantially higher than the hypothetical VIEW mean (80 vs

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Construct Validity

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72), indicating a more Developer-oriented group of individuals. From a theoretical viewpoint, this is not unexpected, since these individuals are preparing to be teachers. While there must certainly be "Explorer-type" teachers, it is much more likely that individuals who think that they would like to be (and would make good teachers) would exhibit characteristics of Developers. They would prefer to solve problems within existing structures and rules. They would more likely seek fewer solution possibilities and solutions of high quality (i.e., the best solution, the best way of doing things, or the "one right" answer). The results for VIEW suggested that Explorers within this sample also appeared more External and Person-oriented, while Developers more Internal and Task-oriented.

A large number of significant correlations and t-tests were observed, all suggesting construct validity for the VIEW. For example, with the Big Five ratings, Explorers were more extraverted and rated more highly on openness. As for Manner of Processing, VIEW Internals were less extraverted, less agreeable, and less open.

As for learning style, or brain dominance, VIEW Developers (Orientation to Change) and Internals (Manner of Processing), and Task-oriented (Ways of Deciding) individuals exhibited more left-brain preference. The converse, of course, was that VIEW Explorers, Externals, and Person-oriented individuals were more "right-brained."

Other relationships established internal consistency among all of the personality ratings. For example, "Big Five" openness correlated significantly with

"right-brain" preference; conscientiousness correlated with "left-brain" preference. Extraversion correlated significantly with agreeableness and openness; agreeableness also correlated significantly with emotional stability and openness; conscientiousness correlated significantly with emotional stability; and emotional stability also correlated significantly with openness. There were no negative correlations among any of the Big Five ratings. Conscientiousness correlated significantly with left-brain preference; extraversion and openness correlated with right-brain preference.

With regard to the choices of Myers-Briggs types, Table 1 presents tabulations of choices in those type categories with the greatest discrimination among Developers and Explorers, Externals and Internals, and Person-versus Task-oriented individuals. To perform the cross tabulations, individuals were categorized according to the mean-split for each of the three VIEW dimensions (using the means from the current sample). For the Orientation to Change dimension, there were 25 Explorers and 32 Developers; for Manner of Processing, there were 34 Externals and 23 Internals; and for Ways of Deciding, there were 27 Person-oriented and 30 Task-oriented participants.

Several clear patterns are evident in the choices students made. By a 13 to 1 ratio, Developers selected Myers-Briggs types that were characterized by such adjectives as serious, quiet, thorough, practical, or orderly. By a 14 to 2 ratio, Externals chose types characterized by such adjectives as outgoing, easygoing, friendly, or accepting. The Ways of Deciding dimension also revealed discrimination. Even though there was greater overlap than in Orientation to Change or Manner

of Processing, there were clear majorities of responses illustrative each of the Person- and Task-oriented type characteristics.

Conclusion

The types chosen by participants easily parallels the theoretical profiles of Explorers, Developers, Internals, Externals, and Person- or Task-oriented deciders on which the VIEW was designed. Even though this sample of pre-service and early career teachers scored higher as Developers than the VIEW norms, results from the type choices and two other measures of personality and thinking preference used in this study provide evidence in support of the construct validity of VIEW. Additional research is warranted, of course, with more males, individuals of different ages and professions, with other measures of personality, and with direct measures of actual behaviors.

References

- Basadur, M. (1995). *The power of innovation*. London: Pitman.
- Basadur, M., Graen, G., & Wakabayashi, M. (1990). Creative Problem Solving Profile Inventory. *Journal of Creative Behavior*, 24, 111-131.
- Briggs, K. & Myers, I. (1976). *The Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Dunn, R., Dunn, K. (1978). *Teaching students through their individual learning styles: A practical approach*. Englewood Cliffs: Prentice-Hall.
- Hermann, N. (1990). *The creative brain*. Lake Lure, NC: Ned Hermann/Brain Books.
- Houtz, J. C. (2003). Creativity style makes a difference in problem solving. *Creative Learning Today*, 11(2), 7-9.

Isaksen, S. G., & Dorval, K. B. (1993). Toward an improved understanding of creativity within people: The level-style distinction. In S. G. Isaksen, M. C. Murdock, R. L. Firestien, & D. J. Treffinger (Eds.), *Understanding and recognizing creativity: The emergence of a discipline* (pp. 299-330). Norwood, NJ: Ablex.

Jonassen, D. H., & Grabowski, B. L. (1993). *Handbook of individual differences, learning, and instruction*. Hillsdale, NJ: Lawrence Erlbaum.

Kirton, M. J. (1976). Adaptors and innovators: A description and measure. *Journal of Applied Psychology*, 61, 622-629.

Kirton, M. (Ed.) (1994). *Adaptors and innovators: Styles of creativity and problem solving (Revised edition)*. London: Routledge.

Myers, I. & Myers, P. (1980). *Gifts differing*. Palo Alto, CA: Consulting Psychologists Press.

Selby, E. C., Shaw, E. J., & Houtz, J. C. (2003). *Initial principles of novice teachers*. Paper submitted for presentation at the annual meeting of the American Educational Research Association, San Diego, April, 2004.

Selby, E. C., Treffinger, D. J., Isaksen, S. G. (2002). *VIEW: An assessment of problem-solving style*. Sarasota, FL: Center for Creative Learning, Inc.

Selby, E. C., Treffinger, D. J., Isaksen, S. G., & Lauer, K. J. (2002). *VIEW: An assessment of problem solving style technical manual and user's guide*. Sarasota, FL: Center for Creative Learning, Inc.

Sternberg, R. J. (1988). The development of intellectual styles. *Teaching Thinking and Problem Solving*, 10(2), 1-4.

Sternberg, R. J., & Grigorenko, E. L. (1997). Are cognitive styles still in style. *American Psychologist*, 52, 700-712.

Torrance, E. P., & Mourad, S. (1979). Role of hemisphericity in performance on selected measures of creativity. *Gifted Child Quarterly*, 23, 44-55.

Torrance, E. P., Taggart, B., & Taggart, W. (1984). *Higher Information Processing Survey*. Bensenville, IL: Scholastic Test Service.

Wang, M. C., & Walberg, H. J. (Eds.) (1985). *Adapting instruction to individual differences*. Berkeley, CA: McCutchan.

Wiggins, J. S. (Ed.) (1996). *The five-factor model of personality*. New York: Guilford.



Table 1
First Choice Personal Qualities of VIEW Scorers

Explorers	Developers (13 vs. 1) Serious, quiet, thorough, practical, orderly, logical, realistic, dependable, friendly, responsible, lends stability to projects, painstaking, accurate, loyal, considerate
Externals (14 vs. 2)	Internals
Outgoing, easygoing, accepting, friendly, warmly enthusiastic, stimulating company, alert, outspoken, high-spirited, talkative, popular, born cooperative, need harmony, active committee members, hearty, frank	
Person (16 vs. 5)	Task (19 vs 6)
Quiet, friendly, responsible, conscientious, outgoing, accepting, warmly enthusiastic, high-spirited, ingenious, imaginative, warm-hearted, talkative, popular, conscientious, born cooperative	Serious, quiet, earn success by concentration, thorough, practical, orderly, logical, realistic, dependable, too absorbed in what they are doing to be sociable, enthusiastic, loyal, matter-of-fact; may make good administrators, especially if they consider others' feelings and opinions; responsive and responsible.

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McCluskey, & Baker, 1995; Buddle, 2003).

CPS has been also used successfully to guide school intervention teams in planning for students by researchers and practitioners at Indiana State University (e.g., Buddle & Miller, 2001; Grimes, 2001; McKinney, 2001). Bahr and Walker (see: <http://web.indstate.edu/soe/blumberg>) reported that CPS-trained intervention teams, in contrast with teams without CPS training, demonstrated greater effectiveness in team functioning and in classroom results. They were also more thorough in follow-up with student intervention plans, and they demonstrated greater quality practices in team processes. McKinney (2001) reported that CPS-trained teams accomplished greater accuracy of special education referrals, and greater emphasis on providing successful interventions in the classroom. Grimes (2001) found that trained teams demonstrated greater awareness of and familiarity with positive interventions for students and more overall intervention options (not just a few options from a prescribed list).

It seems clear, then, that learning and applying CPS provides powerful tools that educators can use to build student success, or as we might describe the goal, “planning for positive achievement.” Learning and applying CPS provides process tools that will:

1. Provide a framework for looking constructively at student needs and concerns
2. Guide educators in clarifying desired outcomes for the student
3. Expand the “pool of options,” ensuring that educators examine and consider mul-

iple interventions and strategies

4. Result in the development of practical, effective Action Plans
 5. Help school teams, with practice and experience, to work more effectively and efficiently
 6. Help school staff members, with follow-up and commitment, to attain the goal of successful achievement for all students.
- (Adapted from Buddle, 2003).

Subsequent initiatives also indicated that, beyond its uses as a planning tool for adults, guiding students in learning and applying CPS also contributed directly to increased personal and academic success (e.g., McCluskey, McCluskey, Baker, & O’Hagan, 1996, 1997; McCluskey, Baker, O’Hagan, & Treffinger, 1998; McCluskey, Place, McCluskey, & Treffinger, 1998; Place, McCluskey, Treffinger, & McCluskey, 2000; McCluskey, Baker, Bergsgaard, & McCluskey, 2001). These studies have documented the positive effects of CPS and talent recognition and development initiatives on the personal growth, learning, and life accomplishments of at-risk students.

It is fashionable for political rhetoric today to proclaim that there will be “no child left behind.” We are concerned, however, that interventions based primarily or exclusively on basic skills, low level content “standards,” and performance on standardized tests may risk creating an educational system in which many students are, in fact, left behind. Powerful interventions for positive student achievement and success must incorporate tools for process (or “knowledge construction and management”) as well as content skills and basic subject area skills. Content and process are not

educational goals that oppose or contradict each other, but mutually important elements of planning and delivering effective instruction.

References

- Buddle, B. (2003, May). *Presentation notes: A process and tools that work for school intervention teams*. Presented at the Center for Creative Learning Annual Networking Conference, Sarasota, Florida.
- Buddle, B. & Miller, M. (2001, April). *Creative Problem Solving for General Education Intervention Teams*. Paper presented at the annual meeting of the Council for Exceptional Children, Kansas City, KS.
- Grimes, J. (2001). *The impact of Creative Problem Solving for general education intervention teams on team members’ ratings of treatment acceptability*. Unpublished doctoral dissertation, Indiana State University, Terre Haute.
- Isaksen, S. G., & DeSchryver, L. (2000). Making a difference with CPS: A summary of the evidence. In: S. G. Isaksen (Ed.). *Facilitative leadership*. (pp. 187-248). Dubuque, IA: Kendall/Hunt.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (2000). *Creative approaches to problem solving*. (2nd Ed.). Dubuque, IA: Kendall/Hunt.
- McCluskey, K. W., Baker, P. A., Bergsgaard, M., & McCluskey, A. (2001). *Creative problem solving in the trenches: Interventions with at-risk populations*. (Research monograph #308). Williamsville, NY: Creative Problem Solving Group.
- McCluskey, K. W., Baker, P. A., O’Hagan, S. C., & Treffinger, D. J. (Eds.). (1995). *Lost prizes: Talent development and problem solving with at-risk students*. Sarasota, FL: Center for Creative Learning.
- McCluskey, K. W., Baker P. A., O’Hagan, S. C., & Treffinger, D. J. (1998). Recapturing at-risk, talented high-school dropouts: A summary of the three-year Lost

- Prizes Project. *Gifted and Talented International*, 13 (2), 73-78.
- McCluskey, K. W., McCluskey, A., Baker, P., & O'Hagan, S. (1996). Talent dormant – talent awake: A three-year summary of the Lost Prizes Project. *Creative Learning Today*, 6 (4), 8-9.
- McCluskey, K. W., McCluskey, A., Baker, P., & O'Hagan, S. (1997). Reclaiming lost prizes. *Reclaiming Children and Youth: Journal of Emotional and Behavioral Problems*, 5 (4), 235-238.
- McCluskey, K. W., Place, D. J., McCluskey, A., & Treffinger, D. J. (1998). Creative problem solving gives aboriginal inmates a second chance. *CPSB Communiqué*, 6, 1-4.
- McCluskey, K. W., & Treffinger, D. J. (1998). Nurturing talented but troubled children and youth. *Reclaiming Children and Youth: Journal of Emotional and Behavioral Problems*, 6 (4), 215-219, 226.
- McKinney, A. C. (2001). *The use of a Creative Problem Solving process with general education interventions teams*. Unpublished doctoral dissertation, Indiana State University, Terre Haute.
- O'Hagan, S. C., Tymko, A., Timgren, M., McCluskey, K., & Baker, P. (1995). The BEST Beginnings project. In: K. W. McCluskey, P. A. Baker, S. C. O'Hagan, & D. J. Treffinger, (Eds.). (1995). *Lost prizes: Talent development and problem solving with at-risk students*. (pp. 93-105). Sarasota, FL: Center for Creative Learning.
- Place, D., McCluskey, A., McCluskey, K., & Treffinger, D. (2000). The second chance project: Creative approaches to developing the talents of at-risk native inmates. *Journal of Creative Behavior*, 34 (3), 165-174.
- Treffinger, D. J., Isaksen, S. G., & Dorval, K. B. (2000). *Creative problem solving: An introduction*. (3rd Ed.). Waco, TX: Prufrock Press.
- Timgren, M., McCluskey, K. W., & Baker, P. A. (1994). *The BEST Beginnings project: An ongoing evaluation*. Beausejour, MB, Canada: Agassiz School Division #13.

CCL To Offer Two New Summer 2004 Professional Development Institutes

We will offer two new professional development Institutes in Sarasota this summer. These programs will focus on new developments and directions in the areas of talent development and Creative Problem Solving (CPS). The programs will be offered successively, enabling participants to attend either or both programs with a single trip.

Institute on Talent Development: The Levels of Service Approach (July 7-10)

This program will provide an in-depth presentation of the Levels of Service (LoS) approach to talent development. It will provide individuals or teams an opportunity to learn the latest developments in our contemporary approach to talent development in education. We will deal with: an overview of the LoS approach; strategies, tools and resources for implementing LoS at the school, school district, regional, or state level; and procedures for effective program planning (or re-design of existing programs). This program will begin at **3:00 PM. on Wednesday, July 7**, and conclude by **2:00 PM. on Saturday, July 10**.

Institute on Creative Problem Solving (CPS) in Education (July 11-14)

The current Creative Problem Solving framework—CPS Version 6.1™— is a powerful but practical set of tools and resources to help individuals and groups use creative and critical thinking, solve problems, and manage change. The CPS framework builds on more than five decades of research, development, and practical applications. CPS has been applied successfully in businesses, schools, churches, and other organizations worldwide. People of all ages can learn and apply CPS effectively. In educational settings, CPS Version 6.1™ can be applied in many important ways. This Institute will provide practical instruction to guide individuals or teams in applying CPS with students at all levels and with adults. This Institute will begin at **3:00 PM. on Sunday, July 11**, and close at **2:00 PM. on Wednesday, July 14**.

We will email all *Creative Learning Today* readers a PDF brochure about these Institutes; information is also available on our website. Please help us “get out the word” about these opportunities!

Differentiation: A Key to Talent Development

By Don Treffinger

The importance of “differentiating” instruction has long been one of the primary emphases in gifted education. Advocates for gifted programming recognized that requiring all students to do the same thing, at the same time, and in much the same way, was a significant factor contributing to boredom and lack of challenge for high-ability students. In addition, they pointed out that effective differentiation also needed to be qualitative (*changing the kind and quality of activities or assignments*), not just quantitative (*doing more of the same*).

Recently, recognition of the value and importance of differentiated instruction has expanded from its roots in gifted education. Differentiation has become an element of quality teaching and learning for all students. Research and development on learning styles (e.g., Dunn & Griggs, 2003) has led to major advances in our understanding of the many and varied ways in which people learn, as well as to practical guidance in teaching students through their preferred styles. In addition, some leaders in gifted education have been instrumental in stimulating broader interest in differentiation of instruction in general education (e.g., Tomlinson, 1999, 2001). Our work on the Levels of Service (LoS) approach to programming (Treffinger, Young, Nassab, & Wittig, 2003), as well as Renzulli’s work on schoolwide enrichment and enrichment clusters (Renzulli, 1994; Renzulli & Reis, 1997; Renzulli, Gentry, & Reis, 2003), also emphasize the importance of differentiating content and process in curriculum and instruction.

Our work on individualizing programming for talent develop-

ment and productive thinking (e.g., Treffinger, 1986; Treffinger & Feldhusen, 1998; McCluskey & Treffinger, 2002; Treffinger et al., 2003) led us to formulate several principles or “key learnings” to guide differentiation in practice. This article will summarize five of our key learnings; we will elaborate on them in our summer institute on the Levels of Service Approach to Talent Development (see www.creativelearning.com for more information) and in a forthcoming new book that is now in process.

1. Begin by thinking about the way you approach your entire class, rather than about students in pre-defined categories or groups. In the LoS approach, we do not “pre-designate” some students as “gifted,” treating everyone else therefore as “non-gifted.” Instead, we seek talents, strengths, and sustained interests. Students’ strengths and talents may take time to “emerge” or be observable, and they may not be evident unless schools provide opportunities for students to discover, express, and apply them and to nurture their expertise in content and process. In differentiating curriculum and instruction for all students, some areas to consider are:

- Teaching to develop multiple talents
- Provide opportunities for students to discover and build on their own interests.
- Planning an array of exploratory activities (such as suggested by Renzulli’s “enrichment clusters”)
- Assessing students’ learning styles and using the data to vary instructional activities
- Use classroom space and resources in new ways
 - Dunn and Dunn: restructuring the classroom or class-

- room re-design
 - Organize the classroom as a “learning laboratory” for individual, team or small group, and large group activities
- Diversify learning activities within the classroom
 - Team learning, circle of knowledge, small group strategies
 - Use peer tutoring approaches (within classes and cross-grade)
 - Seek ways to expand the use of community resources
 - Develop tutoring, shadowing, and mentor opportunities
 - Computer-based or -supported activities
 - Multi-sensory learning kits
 - Working in team on multidisciplinary projects (with broad themes and issues)

2. Establish a foundation for process differentiation, including attitudes and tools for productive thinking. Differentiation involves helping students to learn and apply a variety of tools for higher-level thinking in unique and personal ways, and fostering positive attitudes about productive thinking. Some important elements to consider include:

- Deferred judgment when generating ideas
- Affirmative judgment when analyzing ideas
- Tools for generating ideas or “creative thinking”
- Tools for focusing options or “critical thinking”
- Learn and apply Creative Problem Solving methods
- Offer students a variety of opportunities to participate in programs that teach and apply Creative Problem Solving skills
 - Destination ImagiNation®
 - Future Problem Solving

- Inventing programs
- Provide opportunities for involvement in real-life problems (such as the Community Problem Solving program or service-learning initiatives).

3. Ensure that students are not required to spend valuable instructional time in activities that are unnecessary or redundant.

Responding appropriately to students' actual instructional needs is one of the basic foundations of differentiation. In any curriculum area, at any grade level, students enter a classroom differing in their present knowledge and skill as well as in the time and effort they must invest in order to learn new material. Renzulli, Reis, and their associates refer to the need for "curriculum compacting." The procedures and resources they describe are useful. Some of the basic issues to consider include:

- Ask key questions to determine students' true proficiency and needs.
 - What do students already know?
 - Based on their proficiency, what might be eliminated for a unit or from required activities?
 - What variations are there among students in relation to the time needed for learning?
 - How might activities be "streamlined" for some learners or extended for others?
- Gather evidence from many sources to ensure that you have an accurate picture of the students' entering behavior or present level of proficiency in core content areas. Use these data as a starting point for differentiated planning.
- Use varied instructional delivery strategies
 - Small group techniques
 - Cooperative or collaborative

- team projects
- Computer-based or -supported self-paced instruction

4. Teach metacognitive ("executive" or "process and process management") strategies and skills. As part of your commitment to effective differentiation, draw the learners themselves in planning, carrying out, managing, and evaluating learning. Some specific elements of this factor include:

- "Learning to learn" skills and strategies
- Use contracts, learning agreements, growth plans, or personal talent development plans
- Research methods
- Test-taking, note-taking, study skills
- Project planning, goal setting, project management skills
- Conferencing and evaluation skills
- Using a systematic approach to Self-Directed Learning

5. Expand approaches to documenting, evaluating, and grading student performance. There is a strong emphasis (and very likely, an over-emphasis) today on students' results on standardized tests. It is important to work toward approaches to evaluation and grading that are consistent with differentiated curriculum and instruction, and that involve evaluation of higher-level thinking, real-life productivity, and authentic learning. Some issues to consider in this area include:

- Audiences and outlets for sharing student projects (within the school or in the community)
- Develop, discuss, and use portfolios for higher-level projects and outcomes
- Consider a variety of sources of "evidence" relating to student outcomes.
- Consider alternative formats

- and procedures for grading and reporting

References

- Dunn, R. & Griggs, S. (2003). *Synthesis of the Dunn and Dunn Learning-Style Model Research: Who, what, when, where and so what? The Dunn and Dunn learning-style model and its theoretical cornerstone*. New York: St. John's University's Center for the Study of Learning and Teaching Styles.
- McCluskey, K. W., & Treffinger, D. J. (Eds.). (2002). *Enriching teaching and learning for talent development*. Sarasota, FL: Center for Creative Learning.
- Renzulli, J. S. (1994). *Schools for talent development*. Mansfield Center, CT: Creative Learning Press.
- Renzulli, J. S., & Reis, S. M. (1997). *The schoolwide enrichment model. (2nd Ed.)*. Mansfield Center, CT: Creative Learning Press.
- Renzulli, J. S., Gentry, M., & Reis, S. (2003). *Enrichment clusters: A practical plan for real-world, student-driven learning*. Mansfield Center, CT: Creative Learning Press.
- Tomlinson, C. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. (2001). *How to differentiate instruction in mixed ability classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Treffinger, D. J. (1986). *Blending gifted education with the total school program*. Buffalo, NY: DOK.
- Treffinger, D. J., & Feldhusen, J. F. (1998). *Planning for productive thinking and learning*. Waco, TX: Prufrock Press.
- Treffinger, D. J., Young, G. C., Nassab, C. A., & Wittig, C. V. (2003). *Talent development: The levels of service approach*. Waco, TX: Prufrock Press.

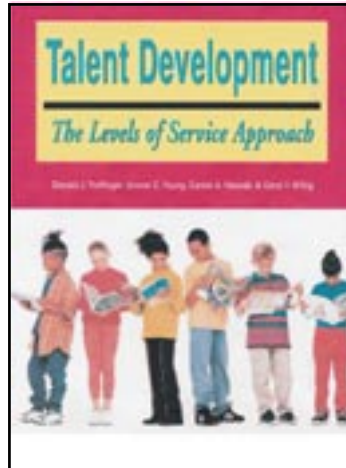
Talent Development: The Levels of Service Approach

New Book Available in September, 2003

Our newest publication from Prufrock Press will be released in September. *Talent Development: The Levels of Service Approach*, by Don Treffinger, Grover Young, Carole Nassab, and Carol Wittig, offers an innovative, field-tested approach to programming for talent development.

The Levels of Service (LoS) approach to programming may be familiar to most *Creative Learning Today* readers. This new book is the most comprehensive description available of our research-supported, practical model for talent development programming.

Our goals were to offer a straightforward method of organizing student experiences, and to provide a practical, how-to manual for building an effective LoS talent development program. The book uses several stories, drawn from actual schools' implementation of LoS, to introduce each of the levels, and also provides many illustrations drawn from a variety of age and grade levels. It includes a thorough description and discussion of each of the four levels. We identify three to five "keys for success" for each level, suggest specific services and programming activities for each level, and point the way to additional areas of development. This book also provides strategies for planning, implementation, and evaluation of programming, and an appendix of publications, centers, and websites for expanding your repertoire of programming activities. The book is \$29.95 plus shipping and handling. You can obtain the book from Prufrock Press (www.Prufrock.com) or from the Center for Creative Learning. Keep in mind that, as a *Creative Learning Today* subscriber, you will receive a 10% discount if you order the book from CCL.



Purpose and Subscriptions

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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Forthcoming Events On the CCL Calendar

Sept. 25-26	Don Treffinger, Ed Selby, VIEW User Qualification Program, Sarasota
Sep. 29- Oct.1	Don Treffinger, Grover Young, Ed Selby. Indiana LoS Pilot Project Training, Indianapolis
Oct. 17-18	Don Treffinger, FLAG (Florida Association for the Gifted) State Conference, Orlando
Nov. 12-16	Many CCL Team Members, NAGC Conference, Indianapolis
Dec. 4-5	Don Treffinger, Ed Selby, VIEW User Qualification Program, Sarasota

July, 2003: **New!** Institutes on LoS Programming and on CPS in Education– See Our Separate PDF file for additional information.