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ABSTRACT

This paper reviews Lev Vygotsky's theories concerning optimizing of potential through assistance, support, or instruction. The paper notes that there is a "zone of proximal development" or a band around intelligence quotient (IQ) scores reflecting one's true potential. IQ tests are generally well-standardized and "static," meaning that the administrator does not help the student in any way. Such influences as anxiety, fatigue, choice of test, and language difficulties may influence students' test-taking outcomes and thus impact on their identification as gifted. Components of a program that would maximize the growth and development of gifted students are outlined, including: mentoring, planned outside reading, individual tutoring, parental involvement, community involvement, support systems and networks, specifically planned homework assignments, the use of humor, emotional education, personality development, dynamic assessment, and minimizing roadblocks to achievement. (Contains 12 references.) (JDD)

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Vygotsky's Zone of Proximal Development : Implications for Gifted Education

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Abstract

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Gifted Assessment and Gifted Education have been seen from a predominately static perspective . The Soviet psychologist, Vygotsky has advocated a more on-going dynamic assessment and instructional mode and posture. This paper reviews this posture and indicates implications for gifted teachers , and instruction.

The assessment and instruction of gifted children has improved considerably over the past twenty years, yet many children do not seem to live up to their potential, other children do not receive services, and others who should be placed in gifted programs are often not placed or do not receive optimal services. Traditional I.Q. tests are often used for assessment and often those with high I.Q. scores who do not meet the various " cut offs " such as an I.Q. of 130, are underserved in the classroom. Some of the students in the 125-129 I.Q. range, may in fact be gifted, but for various reasons ( i.e. feeling poorly during testing, lack of testing experience as well as a number of other explanations, may fail to achieve the designated " cut off " or there may be many other reasons why the " cut off " was not reached. This paper will address some issues relative to first the testing of gifted students, and later the instruction of gifted students to help them maximize their potential.

The Soviet psychologist Lev Vygotsky has indicated that people's potential may be optimized if assistance, support, or instruction is forthcoming. Certainly, all of us could perform any task better with quality tutoring or instruction. According to Vygotsky, there is a " zone of proximal development " or a band around I.Q. scores or one's functioning or potential. In simplistic terms, this means that a gifted child's I.Q. of 125, could in fact be a 130

I.Q. with assistance, prompting, encouragement and patient aid. A student's reading grade level could be at the 12<sup>th</sup> grade level, instead of their present 10<sup>th</sup> grade placement. And, many students could conceivably do better with individual tutoring, direct instruction, or small group instruction rather than our traditional large classroom instruction.

In effect, there is a rubber band of sorts around one's measured potential and their real possibilities.

How to identify these students is obviously a major concern of pedagogy.

#### Testing and the Zone of Proximal Development

Although I.Q. tests are generally well standardized and administered according to rigid guidelines, they do not reflect how well a student might do with prompting, encouragement and/or guidance. Almost all I.Q. tests are "static" - by this we mean that the administrator does not help the student or assist the student in any way. It is a very objective, neutral impartial assessment procedure. We see how the child functions independently. However, in the real world, many of us seek help, support and assistance from other people as we learn. Children learn from their parents and students often learn much from their peer group.

Tutoring has been a way to help some people learn and mentoring also facilitates learning.

We would do well to remember that for some students, anxiety, fatigue, and other factors may be operative. A female may be intimidated by a male and a black youth may be afraid of a white male examiner. Some of the testing concerns can be rectified i.e having a Mexican or Puerto Rican tester administer tests in the "barrio" or disadvantaged area. Simply taking time to establish rapport before testing and working on the relationship may facilitate more accurate scoring and enhance the test taking environment.

The choice of a test may also be a variable of interest. Recently, the Psychological Corporation has released the W.I.S.C.- III, the follow up edition of the W.I.S.C.-R (Wechsler, 1974 ) This test has the advantage of contemporary norms. The recently revised Stanford Binet, (Thorndike, Hagen and Sattler, 1986 ) is also a more contemporary measure although the test is somewhat long and tedious to administer. The Kaufman Assessment Battery for Children ( K-ABC ) ( Kaufman and Kaufman, 1983 ) is a test of mental processing, but it has been used as an I.Q. measure. This test however , has a ceiling age of 12. Recently, the Kaufman Adolescent and Adult Intelligence Scale (1993) has been released. This test shows a return to the fluid and crystallized model of intelligence espoused by Horn and Cattell (1966) .

It is anticipated that gifted children will not do well

on this test as many items are dichotomously scored and many subtests tap or measure multiple processing skills and abilities.

Achievement test scores may be used in lieu of I.Q. scores in some instances where a school psychologist is not readily available. A liberal approach to placement ( including those with I.Q.'s in the 120-130 range who have clearly demonstrated by a number of other criteria their skills, abilities and potential may perhaps also be included in the gifted programs. )

We must also consider those students coming from minority families and disadvantaged homes. They may not clearly manifest the verbal skills so often demanded on several of our intelligence tests due to a bilingual background.

Performance scores may also be depressed due to a visual problem or difficulty. Some children simply need glasses and it should be noted that depressed or unhappy children do not generally do well on intelligence tests as they are preoccupied with their own internal distress- their unhappiness, their lack of fulfillment, the void in their lives, the fact that they have no outlets for their skills and abilities and their own adolescent turmoil.

## Optimizing Instruction and Growth through Outside Sources

All too often, we provide gifted children with instruction from a certified trained experienced teacher and expect that that teacher will be able to meet the needs of these students. In other instances, a make shift program is set up where a teacher who is certified in some other area, but may have one course in gifted education is asked to direct a gifted education program. In either case, the students are often underserved.

We may, in the future, decide to invest more in our gifted youth in the hopes that that will save our society in the next century. We would like the readers to consider implementing some or all of the following additional aspects of a gifted program in order to maximize the growth and development of our students.

1) Mentoring- Torrance (1984) has written extensively on mentor relationships and Shaughnessy (1989) has discussed mentoring the creative child, adult and prodigy. In mentoring, the gifted child is matched or paired either formally or informally, with a older wiser, more competent adult who tries to help, assist, encourage, support, and counsel the protege toward their goals or dreams. There are both formal and informal mentoring programs and advantages and disadvantages to each. Shaughnessy and Neely (1987) have discussed some of the personality aspects



relative to successful mentoring of the gifted.

2) Planned Outside Reading- All too often, too much time is spent by all children in front of the t.v., video games, M.T.V. and movies. Although gifted children do watch different types of programs, much time is still sadly wasted. In order to insure that gifted children grow up to become culturally literate adults, we must encourage, prompt, and help them develop good reading habits, and read quality books. As Stephen King says in a public service message " You know what really scares me ? Kids who don't use the library " . We, as parents, teachers, counselors and involved others want kids to read not only Stephen King, but other novels- science fiction, adventure, the classics, westerns, historical novels and romance novels.

3) Individual Tutoring- Certainly, individual tutoring can be expensive, but in many cases, it may well be worth the effort and energy. In many instances, students may have to go to a local college or university and take classes there that are more appropriate for their advanced understanding and abilities.

4) Parental Involvement- Parents must be involved from kindergarten (if the child is identified early) to high school (or whenever graduation may occur) .

Some parents are more than willing to become involved, other single parents may have other duties , obligations and responsibilities.

5) Community Involvement- People in the community can serve as resource personnel. In one community, a gifted child had a vocational interest in becoming a optometrist or an ophthalmologist. A program was set up whereby the child could visit the offices of an optician and a pediatric ophthalmologist. The gifted child learned an immense amount about the eye and the practice of medicine and surgery regarding diseases and problems of the eye.

6) Support Systems and Networks- In some communities, there are a number of service clubs and organizations which may prove helpful for gifted education. One program, Medical Explorers, took children into the local hospital on a monthly basis to visit the emergency room, the renal dialysis department, the I.C.U., the X-Ray department, the pharmacy area, the Neurology wing, the obstetrics/gynecology domain and other facets (nutrition) of the functioning of the hospital. We do not know how many of these students will go on to be physicians or how many of them will do medical research or the exact amount of " I.Q. " points they procured from this experience. We do feel that they benefitted from the experience, that it was a worthwhile

vocational/occupational exposure and that it was certainly<sup>1</sup> better than them watching " Gilligan's Island " re-runs on t.v. We hope that our time, effort and energy was a wise investment.

7) Specifically Planned Homework Assignments- Teachers assign homework from the first grade through the twelfth and on into college. Thousands of hours are spent on review lessons and perhaps " busy work " . Many teacher education programs teach much about pedagogy and teaching, but very little about the systematic use of specific homework assignments to review what was learn and challenge students to learn more. As yet, we do not have a theory of homework- how to assign it, what to assign, how much to assign, at what level of Bloom's taxonomy to assign it and how to use it from kindergarten through college to assist in the process of learning. However, the good teacher will intuitively assign meaningful growth enhancing assignments which will challenge, excite and stimulate the gifted child.

8) The Use of Humor- Avner Ziv has written about the use of humor with gifted children. Humor is a good teaching strategy and an excellent motivational device.

9) Emotional Education- Gifted kids need to learn about intimacy, their emotional needs, their interpersonal needs and how to deal with their mental health needs (Shaughnessy, 1991 ; Shaughnessy and Shakesby , 1991)

Although there are many variants a program like this could take- one might suspect that sex education, dealing with death of

parents, coping with adolescent challenges ( drugs, alcohol, sex ) and future planning may be appropriate topics for discussion for gifted children. Life 101 for the Gifted might not be a bad title- dealing with the expectations of others, coping with loss, grief and life's onslaught of difficulties.

10) Personality development - There are some gifted children who literally do want to develop their personalities, to become better people and grow emotionally. There is some research to indicate that certain personality variables are operative with gifted students in math and science respectively (Odom and Shaughnessy, 1989; Ham and Shaughnessy, 1991)

11) Dynamic Assessment. Following in Vygotsky's footsteps is an approach to assessment advocated by Reuven Feurstein (1980) and Carol S. Lidz (1991). The basic premise is that we want to know how well a child can learn with support or assistance. This approach to testing is predicated upon the idea that " children can learn if sufficient time and effort is expended to discover the means by which they can profit from intervention" (p. 9). Once we uncover or discover the way in which they learn best, we can teach them in that manner or help them to learn in that manner.

Reuven Fuerstein (1979) has developed the Learning Potential Assessment Device (LPAD) which endeavors to ascertain how well and individual could perform with mediation. There are several different types of mediation. These include :

- 1) Mediation of intentionality and reciprocity
- 2) Mediation of meaning
- 3) Mediation of transcendence
- 4) Mediation of feelings of competence
- 5) Mediated regulation and control of behavior
- 6) Mediated sharing behavior
- 7) Mediation of individuation and psychological differentiation
- 8) Mediation of goal seeking, setting, planning and achieving
- 9) Mediation of challenge
- 10) Mediation of change

11) Mediation of an optimistic alternative ( Lidz, 1991, pp 14-15) In other words, there are ways to enhance and improve and ameliorate one's learning skills and abilities.

In a more dynamic approach to assessment, the evaluator determines what an individual may be able to do with some assistance or guidance. The assessor in this methodology must be well trained, understand the perspective and offer guided assistance. The forthcoming report must be detailed with specific recommendations as to how to help the learner learn better.

12) Optimizing Talent and Minimizing Roadblocks to Achievement- Many students that are very bright never fail to utilize their talents and underachieve , not employing their skills to the fullest. Sternberg (1986) has indicated 20 reasons why intelligent persons do not always do well. An awareness of these

reasons and coping skills may help facilitate maximal use of one's resources.

The twenty reasons why intelligent people do not always do well are :

- 1) Lack of motivation
  - 2) Lack of impulse control
  - 3) Lack of perseverance and perseveration
  - 4) Using the wrong abilities
  - 5) Inability to translate thought into action
  - 6) Lack of product orientation
  - 7) Inability to complete tasks and follow through
  - 8) Failure to initiate
  - 9) Fear of failure
  - 10) Procrastination
  - 11) Misattribution of blame
  - 12) Excessive self pity
  - 13) Excessive dependency
  - 14) Wallowing in personal difficulties
  - 15) Distractibility and lack of concentration
  - 16) Spreading oneself too thin or too thick
  - 17) Inability to delay gratification
  - 18) Inability or unwillingness to see the forest for the trees
  - 19) Lack of balance between critical, analytical thinking and creative, synthetic thinking
  - 20) Too little or too much self confidence.
- (Sternberg, 1986, pp.339-345)

#### Summary and Conclusions

All of the above, or even some of the above measures, in conjunction with a gifted education program will certainly do more to help with the growth and development of gifted children. If we all work to help gifted children reach their true potential via a variety of means, we will have accomplished a great deal.

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