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Abstract

A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students

This thesis was developed as a response to a need for rigorous and relevant teacher preparation in the area of Gifted Education. The thesis contains a model of a professional development program for educators who work with gifted students in a regular classroom setting as well as for those who work with the gifted child in a more homogenous environment. The program model incorporates the newest theories in the field of Gifted Education and reflects national and California State trends to include differentiated programming for gifted and talented children in the regular curriculum. The program gives emphasis to the needs of students typically underrepresented in gifted education from across cultures and within underserved populations. The model program was sent to educators who acted as program reviewers, and the model underwent modification taking into account reviewer feedback. The result is a model for gifted education teacher preparation that hopes to meet the needs of all children to their fullest potential.

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I would also like to thank my program reviewers for their insights and suggestions that helped me rethink my objectives and refine my work to reflect concerns of educators in the field.

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Chapter 1

STATEMEMNT OF PURPOSE, RATIONALE, OVERVIEW

Purpose

My project is a model of a professional development program with an emphasis on serving typically underserved populations for educators working with gifted and talented students.

Introduction

Providing adequate services to meet the advanced educational and psychosocial needs of gifted students, K-12, has long been a challenge in the U.S. This problem has been especially prevalent within culturally and linguistically diverse populations. In order to begin to remedy the situation, a new federal definition of giftedness, aligned with recent theorists, moves well beyond mere recognition of "school house" intelligence to a more encompassing theory of intelligence as developing expertise. This definition has been proposed at the federal level to draw attention to the needs of the gifted especially those typically underserved. The Jacob K. Javits Gifted and Talented Students Education Act defines giftedness as:

> Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. **Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (O'Connell Ross, 1993)** (my emphasis)

This newest federal definition of giftedness highlights the need to seek and serve typically underrepresented and underserved students from culturally and linguistically diverse populations as well as other typically underserved populations: gifted females, underachieving gifted, learning disabled, handicapped, behavior disordered gifted and the profoundly gifted. This definition also reinforces the need to focus on and serve the neglected talent aspect of the term gifted *and* talented. It is now up to state, local and federal agencies, school districts and institutions of higher education to rededicate efforts to reach and serve all gifted children and to extend services to regular classroom teachers so that the needs of these, and other children can be met "all day, every day." Education of teachers, administrators and specialists who work with gifted students is needed to realize the intent of the new legislation to find and serve all gifted children. My program with its emphasis on identification, understanding the needs, and programming for gifted children, which highlights underserved populations, is an attempt to fill this need.

It's been projected that only 1.2 of the estimated 3 million gifted students are being served by gifted education programs (Zirkel & Stevens, 1987). To compound matters, historically, gifted education programs have underrepresented certain minorities, such as African American and Latinos, and English Language Learners (O'Connell Ross, 1993; Bernal, 2001). An unpublished 1988 U.S. Department of Education study entitled the National Educational Longitudinal Study, of eighth graders throughout the nation found the following percentages from among the 8.8 percent of children participating in gifted education programs:

- 17.6 percent of Asian students
- 9.0 percent of white, non Hispanic students
- 7.9 percent of black students
- 6.7 percent of Hispanic students
- 2.1 percent of American Indian students (NELS:88, 1991 in O'Connell Ross, 1993).

Furthermore, handicapped, underachieving and learning disabled children have also been underrepresented. Questions of how high ability students are identified and served, evolving definitions of giftedness and the role of the classroom teacher in meeting the needs of this population are being widely debated in and outside the gifted education field. Given the above trends toward inclusion of typically underserved populations, the term "gifted" or "gifted and talented" is taken within the context of my work, to include culturally and linguistically diverse students from all socioeconomic backgrounds regardless of disabilities even if not specifically stated. Further, my model will emphasize identification, support and programming for these excluded populations because it will train regular classroom teachers as well as specialists to develop inclusive views of giftedness. It will also include differentiation strategies to meet the diversity of needs found in a typical classroom.

In 1961, the California legislature instituted a program for the state's academically gifted students. In 1980 the law was amended to allow districts to set their own student qualification criteria and broadened services to include those with talents in a variety of areas. In January of 2001, The California Legislature eliminated the requirement that there be 200 minutes per week set aside for direct services to gifted students for schools receiving gifted education monies from the state. The emphasis from the State Department of Education places the onus of meeting the needs of gifted students on regular classroom teachers in regular classroom settings. The ruling does not eradicate pull-out programs, but relegates them to an adjunct role. The intent of the legislature is that Gifted and Talented Education (GATE) programs "must be an integral part of the school day, and include modification and extensions of the core curriculum appropriate for gifted learners" (Gosfield, 2002, p. 16). Thus there is a need for professional development of all teachers, not just those who have typically been assigned GATE pull-out classes. My program is intended help train all teachers to identify and serve gifted students, especially those from

typically underserved populations who have been largely excluded from traditional gifted and talented services.

Many classroom teachers are not addressing the needs of the gifted in their classrooms. According to a National Research Center on Gifted and Talented (NAGC)[1] study entitled "The Classroom Practices Survey," there are few modifications for gifted in third and fourth grade classrooms across the country. Strategies to meet needs of the gifted and talented are used infrequently, many only a few times per month or less. The study also noted that many schools still do not have formal gifted programs. Even where there are such programs, their impact has not been felt in the regular classroom possibly because of lack of time and inadequate training of gifted education personnel. In addition, economic issues are resulting in the elimination of formal programs for the gifted and talented. Sixty-one percent of respondents in the above survey have had no staff development in gifted education (Archambault, Westberg, Brown, Hallmark, & Emmons, 1993). In order to expand gifted education services to benefit a wider circle of students, and to help ensure that the needs of these students are met "all day, every day," teachers need more training and expertise.

In addition, teachers need to understand the nature and needs of a broader conceptualization of gifted and talented students. In a slide show adapted from The National Research on Gifted and Talented Presentation Guidebook on nontraditional assessment for gifted programming, Scott

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[1] The National Research Center on Gifted and Talented is the research arm of the Jacob K. Javits Gifted and Talented Students Education Act. "The work of the National Research Center of the Gifted and Talented (NRC/GT) is guided by emerging research about the broadened conception of human potential and the need to develop "high-end learning" opportunities for all of America's students" (Renzulli & Gubbins, 2003). The NRC/GT believes "that the nation's largest reservoir of untapped talent can be found among those young people who, by reason of economic circumstances and all of the problems that surround poverty in American, have not been given equal opportunity and encouragement to develop their potential to the fullest" (Renzulli & Gubbins, 2003). Thus, the NRC/GT has focused on high-end learning for total school improvement and on "developing gifts and talents in young people based on a broad array of both traditional and emerging indicators of potential for high performance" (Renzulli & Gubbins, 2003). The NRC/CT is composed of a consortium of researchers from university, school districts, and 52 state and territorial departments of education. "Preexisting arrangements with over 360 multiethnic and demographically diverse school districts throughout the nation allows us easy access for research studies in over 8,000 schools and classrooms (5.4 million students) across the nation" (Renzulli & Gubbins, 2003).

Hunsaker states, "As far as identification of gifted populations is concerned, I think one of the things that's important is we have a history of using the deficiency model in identifying our gifted and talented students. We need to take a proficiency view, take a look at the strengths within cultures, take a look at the strengths of students and find reasons within those strengths to provide services to students" (in Gubbins, 1995 p. 22). Additionally, Carol Callahan states, "We see a combination of new instruments and new techniques....which involves people looking at children over a longer period of time trying to get involved in bringing out the talent that's there, actually eliciting talent as much as identifying talent (in Gubbins, 1995 p. 24). Similarly, Donna Ford asserts, "Assessment is more comprehensive and thorough and tells us not only whether the child is gifted, but in what ways he/ she is gifted so that we can meet not only academic needs, but social, emotional, and psychological needs as well" (Gubbins, 1995). Dorothy Sisk recommends identification procedures she, June Maker and Roberta Daniels used in a research project, STEP UP (Systematic Training for Education Programs for Underserved Pupils), designed to identify and work with underserved gifted children. These include reliance on teacher judgment and education of teachers to look for the strengths of typically underserved students (Sisk, 2000).

The state of California best practices echo the above national concerns and states "All children are eligible for the nomination process regardless of socioeconomic, linguistic or cultural background and/or disabilities" and that the school district "establishes and implements both traditional and nontraditional instruments and procedures for searching for searching for gifted students." In addition schools are encouraged to actively search "for referrals among underrepresented populations" ("Recommended standards for programs for gifted and talented students," 2003). Without training in the nature and needs of gifted students, especially those of typically underserved gifted populations, the intent of the various legislative directives may not be carried out. My program is designed to fulfill the legislative intent and educate

teachers on a wide variety of identification and programming practices designed to include typically underserved populations.

California is one of only 12 states that does not mandate programming for its gifted and talented students. While funding for gifted education is available, it is not mandated and is constantly in danger of being reduced or eliminated in tough financial times. While, California does not require certification or credentialing of those working with gifted students, currently, monies granted are tied in to providing some certification for all teachers who work with gifted students, including classroom teachers, although levels and quality of this certification is left up to individual districts. Fifteen years ago, California had a thorough credential for teachers working with gifted children, and nine California universities prepared teachers for that credential. The Commission on Teacher Credentialing deleted the Specialization Credential in Gifted Education and thus most universities do not offer classes in gifted education at this time. Currently no doctoral program and only a few advanced degree programs and occasional gifted education classes exist in the state (Clark, 1995). The state of California needs rigorous, relevant and more binding requirements for those working with gifted children. This includes not only gifted education facilitators, but also classroom teachers with whom these children spend most of their time. My model will help fill the need for teacher preparation with an inclusionary view of gifted programming.

Currently, there are no guidelines from the California State Department of Education and only a handful of examples from state universities as to appropriate coursework for teachers of the gifted and/or classroom teachers wishing to understand, identify and serve this expanded population of gifted students. More needs to be done to ensure that teachers of the gifted, regular classroom teachers, and administrators understand and are able to implement the new standards of identifying and serving typically underrepresented gifted education students, especially in the light of elimination of gifted education specialists and decreased funding for gifted education. To address the needs stated above, I have developed a model of a professional development program

with an emphasis on serving typically underserved populations that could be used as a supplement to a teaching credential for any teacher working with gifted and talented students. Such training would not only serve the intended population (gifted students regardless of socioeconomic, linguistic or cultural background and/or disabilities) but also advance the learning of all students in the regular classroom through the dispersement of knowledge of the nature and needs of this population and classroom differentiation strategies outside the field of gifted education ("Recommended standards for programs for gifted and talented students," 2003).

Background

I have been an educator of the gifted for over twenty years. I have witnessed first hand, both inside and outside of regular classroom programs, the frustration, lack of motivation, and social and emotional problems inherent when the needs of gifted and talented students are not adequately addressed. Conversely, I have also witnessed, both inside and outside regular programs, the exhilaration and advanced productivity these students can exhibit when challenged at levels commensurate with their talents and abilities. I have worked extensively with regular classroom teachers, as well as gifted education facilitators to improve understanding and programming for this segment of the population. During my 18 years in Moscow, Idaho I co-taught with virtually every teacher in the two schools for which I coordinated programming for gifted and talented students. The collaboration was mutually beneficial and new understandings of the nature and needs of this special population emerged among regular classroom teachers. In addition, programming approaches, methods, and strategies were extended not only to those formally identified as gifted, but to all students. I actively promoted child find efforts, especially in the first, second and third grades classrooms in the schools in which I coordinated gifted services to find, refer, and serve, all types of gifted children. In one school where I taught, 26 languages were spoken. Since bilingual

education was not feasible under these circumstances, children were given ESL training. I worked in concert with classroom teachers and the ESL teacher for the district in my child find efforts and we referred and served a number of ESL students. In addition, the state of Idaho also initiated child find activities among the large Hispanic population in Southern Idaho.

Since I have been in California I have, with a cadre of educators of the gifted, developed a course of 30 hours of Continuing Education Credits which has lead to a GATE Certification recognized by school districts in Monterey County which fulfills the State Department of Education requirement that all teachers involved in education of the gifted be so certified to receive three year program approval and contingent funding. I have co-taught the Nature and Needs of the Gifted Learner portion of the above certification course. The GATE Certification coursework emphasized the nature and needs of all types of gifted students, especially those typically underserved and presented powerful models of differentiation intended to reach these populations and all students in the regular classroom.

The California State Gifted Education Program Standards state, "All teachers assigned to teach gifted students are certified through a variety of formal and informal certificate programs" ("Recommended standards for programs for gifted and talented students," 2003). My project is the more formal avenue for meeting this certification requirement. It will involve rigor and relevance, greatly add to teacher competency in the field of gifted education, and be transportable from district to district, which is not the case with the aforementioned Monterrey County Office of Education (MCOE) continuing education credits certificate which is based upon participation only. Given more time and accountability, my model attempts to give depth to the issues raised in the current MCOE certificate.

I believe the understandings, approaches and methods stemming from the gifted education field can and do benefit a larger population. Special pull-out programs targeting gifted and talented learners are in jeopardy due to current budgetary constraints, and given the fact that the recent State

Department of California guidelines have put the onus of meeting the needs of an expanded gifted population on the regular classroom teacher, more than ever gifted education facilitators and classroom teachers need in-depth understanding of this special population of students within their classrooms. It is for this reason that I have proposed this model for coursework leading to a gifted education certificate with emphasis on typically underserved populations. I hope to present my project to California universities, school districts and other educational institutes of learning as a model to be used in providing professional development for pre-service and in-service teachers.

In order to develop this certificate program, I have researched the field of gifted and talented education. I have situated my research within a historical context relating to the development of various theories of intelligence and intelligence testing and evolving inclusive definitions of giftedness. These theories have led to a broader understanding of the concept of intelligence, by including domain specificity, cultural and environmental context and going well beyond the limited intelligence theories, which have typically informed gifted education practices and have tended to exclude rather than include. I searched the literature to provide rationale for 1) serving the needs of this expanded population in general, and 2) differentiating the curriculum in the regular classroom. I have detailed various intelligence theorists whose work has come to bear on the field, and looked to the research to understand what is needed to prepare teachers to work with a more diverse population of gifted. Lastly, I sampled models in California and other states for credential/certificate or equivalent programs before designing my model. I have employed a cadre of collaborators drawn from the field of gifted education and regular education to serve as reviewers of my work to help me adapt and refine my model in light of the newest research.

A sequence of courses leading to a certificate in the field of gifted education at minimum needs to include the history of the field with its roots in intelligence theory and testing; the nature and needs of the gifted, both academic and socio-emotional; identification issues including outreach to

underserved populations; and curriculum models appropriate for gifted and talented with an emphasis in approaches suited for differentiation in the regular classroom program.

Overview of Action Thesis

For educators to meet the needs of all gifted children, indeed all children, rigorous and relevant in-service is needed in the newest theories of intelligence as well as in understanding and employing the newest approaches and methodologies to enhance its development. Chapter 2 of this thesis is an overview of the literature broken down into the following sub-sections:

- The History of Intelligence Theorists and Intelligence Testing
- Historic Misconceptions of Who is Gifted
- Rationale for Meeting the Needs of Gifted and Talented Students
- Rational: A Case for Differentiation
- Preparation and Ongoing Professional Development of Teachers of the Gifted

Chapter 3, Methodology, outlines the research question and research design. It describes the Phase 1 collection of data from states with gifted education mandates and from universities offering coursework leading to certification/endorsement of master's degrees in the field of gifted education. It also outlines the analysis of the data in Phase 1 through the use of a data analysis matrix and the current guidelines of the Council for Exceptional Children for teachers working with gifted students. This chapter also outlines Phase 2 data collection which consisted of a program review of the program of study I proposed, and subsequent refinement of my program in line with reviewer comments.

Chapter 4 shows the result of the Phase 1 data collection and analysis with "A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students," and the cover letter that went out to program reviewers for Phase 2 data collection. It also discusses how the various courses

in the model came to be included.

Chapter 5 is the result of the Phase 2 data collection and analysis. Chapter 5 includes a discussion of the program reviewers' feedback and a revision of the program model.

Chapter 2

LITERATURE REVIEW

History of Conceptions of Intelligence and Intelligence Testing

Theories of intelligence and intelligence testing in the modern era seem roughly to have clustered around two schools of thought. Originally, theorists saw intelligence as composed of a single factor, fixed, testable, predictive and largely inherited. Intelligence tests were based on the scientific method paradigm and purported predictive, valid, reliable and quantifiable measures of IQ. This group of researchers which includes figures like Galton, Spearman, Terman and the like probably come out of a positivist tradition in they believed in a quantifiable description of intelligence and used quantitative methods to "uncover" the phenomenon. This view of intelligence has largely been used to support an elitist view and generally equates intelligence with what might be considered "school-house intelligence." This is not surprising given that tests developed to measure intelligence came out of the need for predicting success in school. Thus giftedness is seen as static and composed of high levels of the traits of the "good student." In this view assessment of giftedness is also static and measures the "traits" of intelligence and often assesses past learning. Giftedness is seen as domain general with some individuals broadly gifted and others not. Environment does not play much of a factor in this view of giftedness and gifted individuals will be alike across cultures (Sternberg, 2001).

Many of those favoring the above genetic school of thought seemed to espouse a eugenics approach to engineering society to produce a more intelligent populace (Grinder, 1990). While it is sometimes thought that the fixed, single-faceted, eugenic view of intelligence is passé, such is not the case, and even today, there are great debates among those espousing "nature" and "nurture" philosophies both inside and outside the field of gifted education (Plucker, Monson, & Espring, 1998).

Other researchers came to view intelligence as a mixture of genetic and environmental dynamics, mutable and composed of a variety of factors. Perhaps these researchers saw intelligence more from a phenomenological approach, although many may have retained roots in the positivist tradition. Researchers such Binet, Piaget, Holligsworth, and more recently, Gardner, Renzulli, and Sternberg seem to fall into this genre of thinkers. Such researchers tend to view intelligence as more closely related to what happens in the real world when environmental factors are in play. These works tended to use case studies and research studies from the field.

Those researchers who espouse a view of intelligence as developing expertise, such as Gardner, Renzulli, and Sternberg, see giftedness as composed of a quantitatively and qualitatively high level of this phenomenon. Assessment consists, not merely of specific tests, but of an analysis of past history of development to assess the rate of development and project future accomplishment consistent with asymptote development. In other words, gifted children in this view, consistently achieve, or have the potential to achieve well beyond their peers and with support will continue to do so. This view of intelligence is largely domain specific, and while some individuals achieve across many domains, some do not. Genetics plays some part in this view of intelligence; the role of the environment in coaching and nurturing giftedness is paramount. Different kinds of achievement, or expertise, are valued by different cultures, thus giftedness is culture specific (Sternberg, 2001).

While it is beyond the scope of this paper to correctly align each researcher with either a major bent toward positivism or phenomenology, I have attempted to align researchers with either the hereditary, unitary, fixed tradition, which I read as more positivistic and associated with a static view of intelligence, or with the mutable, multivariate position, which I associate more with phenomenology and a developing expertise model. This section will attempt to show the evolution (generally, but not inexorably, towards a blend of positivism and phenomenology) of intelligence theories and how they fit into the thinking

of gifted education proponents throughout the years. I end with a look at the leading researchers in the field of gifted education who are informing gifted education practices towards a paradigm of giftedness as inclusive of the outstanding talents that "are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (O'Connell Ross, 1993).

From Philosophy to Science

Modern interest in intelligence and intelligence testing stems from European theorists and philosophers establishing a new science of psychology Plucker et al., 1998; Grinder, 1990). Such notables as William James, Wilhelm Wundt and Francis Galton were among those who spearheaded this movement. Wundt has been called the "Father of Experimental Psychology." He brought laboratory science into the new field (Plucker et al., 1998; Grinder, 1990). He believed that the mind was an activity, which he called "apperception," that could be observed by measurable stimuli and reactions (Plucker et al., 1998). Wundt influenced James Cattell who became very interested in bringing quantitative methods to bear in psychology and weeding out the science's philosophical underpinnings so that the new science would meet the standard of accuracy and objectivity akin to other sciences. James Cattell worked briefly with Francis Galton and was influenced by Galton's belief in the inheritability of intelligence. Cattell also believed that his experiments pointed to a unitary intelligence, although his research is considered controversial (Plucker et al., 1998).

Circa 1901-1937, various researchers drew upon the earlier works cited above to develop the first modern intelligence tests. Yerkes is probably best known for chairing the committee composed of, among others, Henry Goddard, Lewis Terman and Walter Bingham which developed the Army Alpha and Beta Intelligence tests during World War I. This was the first group intelligence test and was designed to find officer candidates and those suitable for higher assignments (Plucker et al., 1998). It consisted of the verbal Alpha tests and

the non-verbal Beta tests designed for illiterate and non-English speaking recruits. Its employment was pivotal and spread the use of intelligence testing in the public as well as the private sectors. The data gathered and the methods used during this testing of approximately two million men, lead to future controversies over "apparent racial differences in intelligence test scores and the supposed decline of America's national intelligence" (Francher, 1985 in Plucker, 1998). This argument still ensues both inside and outside the field of gifted education.

In 1904 Alfred Binet working with Theodore Simon, developed the Binet-Simon Scale for the French government to discover students who needed alternative education. They were the first to compare intelligence tasks with a subject's chronological age to compute mental age (Plucker et al., 1998). Later, William Stern proposed dividing a child's mental age by his chronological age to arrive at an intelligence quotient, or IQ. Lewis Terman got rid of the troublesome decimals by multiplying the intelligence quotient by 100. Binet developed his theories on intelligence through observations of his two daughters. He came to believe that one of the main components of intelligence was good judgment, or practical sense (Plucker et al., 1998).

Piaget was Simon's student. However, he finally came to disagree with Simon's methods for testing and understanding the nature of intelligence. Piaget believed that intelligence was a human adaptation in which the processes of assimilation and accommodation were at work. Piaget held that nature and nurture were inextricably bound. It was impossible for a child to go from one stage to another solely by direct teaching. Many interactions with environment and maturity were needed to proceed from one level to another but Piaget held that certain processes were inherited that allowed an individual to act and react in the environment (Plucker et al., 1998). Piaget's theories are still in the forefront in educational theory today.

Henry Goddard translated the Binet-Simon into English and served on the aforementioned Army Alpha and Beta testing committee, promoted the widespread use of intelligence testing in schools, and helped draft the first

state law mandating special education. He is considered the father of intelligence testing in America (Plucker et al., 1998). While Binet was not a proponent of an inherited, fixed intelligence, Goddard most definitely was (Fancher, 1985 and Zenderland, in Plucker, 1998).

Lewis Terman revised the Binet-Simon scale for determining intelligence while at Stanford University in 1906. This IQ Test then became known as the Stanford-Binet and was the instrument of choice for individualized intelligence tests. It's promulgation in American schools by Goddard and others lead to widespread use of tracking (Diaz, 2002a; Plucker et al., 1998). The Stanford-Binet Form L-M is currently considered the intelligence test of choice for use when profound giftedness is suspected as it mitigates against the ceiling limits of other intelligence measures (Silverman & Kearney, 2003).

In the field of gifted education, Terman is perhaps best know for his landmark longitudinal study on gifted children. Countering a prevailing theory of the time that gifted children may be subject to the "early ripe, early rot" phenomenon, Terman's study dispelled this and other myths. He found the gifted children he studied to be well rounded, taller, healthier and better developed physically. His subjects were leaders and were socially well adapted (Plucker et al., 1998). His work has been criticized for focusing on the children of the white upper class. His concept of giftedness ignored the contribution of creative abilities within the sphere of gifted behaviors and was attuned with social efficiency theories of his age (Colangelo and Davis, 1997 and Witty, 1981 in Diaz, 2002a; Grinder, 1990). His views of and recommendations for this population include:

- They are the top 1 percent in intelligence,
- They should be identified as early as possible in childhood,
- They should be accelerated through school
- They should have a differentiated curriculum and instruction,
- They should have specially trained teachers,
- They should be viewed as a national resource for the betterment of society, and
- They should be allowed to develop in whatever directions their talents and interests dictate (Plucker et al., 1998)

Letta Hollingsworth knew of Terman's work and opposed his and other's ideas of inherited intelligence. She believed that nurture played an enormous role in the development of potential. Whereas Terman was mainly interested in identifying and describing the gifted, Hollingsworth sought ways to provide appropriate educational opportunities for gifted individuals and nurture their development (Plucker et al., 1998).

Terman's test and others like it purported a single entity approach to intelligence. This "g" factor, or generalized intelligence was considered hereditary and largely fixed. A student of Wundt who was also influenced by Francis Galton, Charles Spearman concluded that generalized intelligence was a real phenomenon and that intelligence had two factors: "g" or generalized intelligence and "s," specific intelligence. According to Spearman, any intellectual act required both factors. However, he reasoned that many intellectual endeavors were heavily saturated with the "g" factor. Furthermore, if one measured a particular level of "g," in an individual, it was possible to predict how that same person would perform on other task heavily sated with "g" intelligence. If a task was weighted in favor of special or "s" intelligence, the correlations were less significant. Thus, a person's "g" intelligence was a good predictor of later performance and ability was the "g" factor of intelligence (Plucker et al., 1998). While modern g factor theorists still have sway today in the field of intelligence and intelligence testing, researchers in the field of gifted education seem to have moved beyond the notion of a fixed, inheritable, generalized intelligence (Tomlinson, 1999 p. 18).

Countering Spearman and other's fixation on a single entity approach to intelligence in an argument that spanned 25 years, was Edward Thorndike. Thorndike proposed that abstract intelligence was composed of the following:

- **Altitude**: the complexity or difficulty of tasks one can perform (most important)
- **Width:** the variety of tasks of a give difficulty
- **Area:** a function of width and altitude

- **Speed:** the number of tasks one can complete in a given time (Plucker et al., 1998)

Thorndike's Law of Effect evolved from his work on animal behaviorism. He concluded that "a) Responses to a situation that are followed by satisfaction are strengthened; and b) Responses that are followed by discomfort are weakened" (Plucker et al., 1998). He felt that the two fundamental intelligences were "Trial and Error" and "Stimulus-Response Association" (Plucker et al., 1998). He developed the CAVD test of intelligence that became a foundation for later intelligence tests. Thorndike argued that the intelligence tests of the day only measured abstract intelligence, and he posited two more types: mechanical and social. He understood that measures of intelligence were culturally dependent and needed to take cultural background into account (Plucker et al., 1998). His theories seem to be reflected in the works of Howard Gardner, a major influencer of gifted education theory and programming.

A student of Thorndike, the aforementioned, Leta Hollingsworth's, studies argued against the widespread views of the day that women were intellectually inferior to men. She pioneered work with the profoundly gifted, those scoring above 180 in the Stanford-Binet (Plucker et al., 1998). Today, the The Hollingsworth Center for Highly Gifted Children, is a resource and support network for highly gifted children, their families and communities.

Another student of Thorndike, Walter Bingham worked with Yerkes to develop the Army Alpha and Beta tests. Bingham defined intelligence as the ability to solve new problems and did not believe in a fixed intelligence. While noting the supremacy of inherited potential, Bingham saw maturity and education experiences as central to the development of intelligence. Bingham espoused a multi-dimensional theory of intelligence measured by looking at a subject's aptitude for mathematical, verbal, mechanical and social skills (Bingham, 1937 in Plucker, 1998). Bingham's student, L.L. Thurstone, also adopted a multi-factor approach to intelligence and intelligence testing. He conceived of intelligence as the ways in which people try to attain a goal or

"satisfaction" with more successful attempts reflecting on and inhibiting instinctive responses. Thurston's theories lead him to conceive of intelligence, not as Spearman had, as generalized intelligence, but as many factored. His work stating that a person could be intelligent in more than one way. He proposed the following factors:

- Verbal Comprehension
- Word Fluency
- Number Facility
- Spatial Visualization
- Associative Memory
- Perceptual Speed
- Reasoning (Plucker et al., 1998)

His work lead to many factored intelligence tests and influenced such thinkers as Taylor, T. Thurstone, Guilford and Howard Gardner (Plucker, 1998 and (Tomlinson, 1999).

Even though Bingham saw more standardized intelligence tests as an improvement over physical appraisal of a person's intelligence as practiced by Goddard and others, he argued against sole and blind reliance on standardized intelligence tests. This argument is being made today in meeting the needs of underserved populations in the field of gifted and talented education (Ford, Harris, Trotman, & Frazier, 2002).

Calvin Taylor took Thurston's work and projected it into the sphere of human creativity especially as it related to scientific creativity. He applied his research by implementing the Multiple Creative Talent Teaching Approach. Through his association with Thurstone, and his study of Guilford's Structure of the Intellect, Taylor believed that current intelligence measures tapped into only a small portion of abilities humans possess. Taylor postulated nine talent areas: include academic, productive thinking, planning, communicating, forecasting, decision-making, implementing, human relations, and discerning opportunities. Further, he reasoned gifted individuals might not be gifted in all areas and advocated evaluating students' talents in the regular classroom in

order to identify a greater percentage of high ability children and help all children become self-actualized (Plucker et al., 1998).

Also building on Thurstone's work, and rejecting Spearman's generalized intelligence, J. P. Guilford proposed a three dimensional "Structure of the Intellect." The dimensions consisted of Operations, Products and Material or Content. He identified 120 intellectual acts. While this model has been used in the field of gifted education, its use has not been as widespread as its potential suggests (Plucker, 1998).

Another person influenced by Thurston, seemingly rejecting his teacher, Spearman's work, was David Wechsler. Perhaps Wechsler is best known for his intelligence tests: the Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC). Weschler's tests are composed of verbal and performance components that reflected his views that intelligence was multivariate. He believed that intelligence was, "The aggregate, or global capacity to act purposefully, think rationally, and deal effectively with the environment," and felt it was a part of the total personality (Plucker et al., 1998). The Weschler tests of intelligence remain standards in the arsenal of gifted education.

Also arguing against a unitary view of intelligence was Anne Anastasi. Anastasi decided that intelligence was not solely inherited, but a construct of culture and related to survival and advancement within that culture. She also avowed that intelligence was not innate, not static, and that the earlier one worked on improving intelligence, the more gains were perceived. She argued against the misuse of intelligence tests. Anastasi believed that the very nature of intelligence is culturally proscribed. She insisted that not only were standardized intelligence tests culturally biased, they only measured what a particular culture deemed "intelligent behavior" (Plucker et al., 1998). Tests such as the Wechsler Scale and the Stanford-Binet largely measured intelligences important in academia and business. Since intelligence tests, developed to predict success in these areas, need to be re-designed as schools and the world of work changes. However, she favored assessments that more

closely aligned to particular cultures and felt they could be equally as valid and perhaps more useful, than standardized intelligence tests. Her work seems to have influenced modern gifted education theorists such as Renzulli, Gardner, and Sternberg.

At roughly the same time many writers and researchers were arguing against a unitary, single factor view of intelligence, there was still a strong tradition of favoring the former view espoused by Galton. Cyril Burt falls into this category. He believed intelligence was fixed after eleven years of age, not influenced by environment of the subject's emotions and interest, and indicated an innate capacity. His studies of children of upper and lower classes lead him to conclude that even so-called environmental factors had genetic roots in the inheritability of intelligence. Burt's twin data gathered between 1943 and 1966 has been largely discredited for its lack of duplicability, if not outright fraud. In 1926 Burt proposed testing nationwide in England in the hopes of finding bright children from all strata of society, although admittedly, he did not expect to find many such children among the lower classes (Francher, 1985 in Plucker, 1998). Some version of this testing is alive today and referred to the Eleven-Plus exam as it is given after the age intelligence was deemed to be "fixed." Results of this test traced students to grammar or college track schools, or modern schools. These permanent designations benefited some lower class children assigned to grammar schools, but condemned others to permanent exclusion from university (Francher, 1985 in Plucker, 1998).

Recent Intelligence Theorists Informing Gifted and Talented Education

Recent theorists of intelligence both grow out of, and to some extent refute and refine, the work of earlier theorists. More recent intelligent theorists, especially those influencing current thinking in gifted education circles, have seemed to move beyond the nature-nurture controversy and seek ways to incorporate both notions in a developing expertise view of intelligence. This view is less concerned with the relative quantity nature or nurture lends

to overall intelligence and focuses on the subtle interaction of multivariate forces to produce the concept we call intelligence. These theorists seem to understand that intelligence is an artificial construct, domain specific, environmentally influenced, and culturally contextualized. Three important contributors to current thinking in the field of gifted education are Joseph Renzulli, Howard Garnder, and Robert Sternberg.

Joseph Renzulli

Joseph Renzulli has long been a figure of importance in the gifted education movement. His work grew out of research and an analysis of the traits and behaviors of gifted and talented youth and adults whose abilities would not have been uncovered by the narrowly restrictive traditional cognitive models and tests of intelligence. Renzulli's models are based on the theories of William James, Alfred Whitehead, John Dewey, Jerome Bruner, Paul Torrance, Virgil Ward, and Philip Phenix (Renzulli, 1988). He broadened the definition of intelligence in gifted children and moved it beyond the single factor theory held by Terman. He conceptualized giftedness as composed of three dynamic, fluid and interactive factors: above average ability, creativity and task commitment (Plucker, 1998 and Renzulli, 1999). He posited that there were essentially two types of giftedness: school house giftedness and creative productive giftedness (Renzulli, 1999). Schoolhouse giftedness could be predicted, and it correlated, not surprisingly, with good grades and school achievement. This type of lesson learning was largely stable over time. Creative production however was not always characterized by high task commitment and consistent high-level output. In fact, Renzulli speculated that this type of intelligence needs cyclic periods of productivity and lull to allow for reflection, renewal, and gathering of data and/or ideas (Renzulli, 1999). Creative production was also largely domain specific. Schoolhouse giftedness can be tested using traditional means, whereas creative production and task commitment are context specific. He viewed giftedness as malleable and too narrowly defined by IQ testing alone, "the display of gifted behaviors is a development process that should be viewed

as a goal of education rather than a pre-existing condition" (Renzulli, 1988 p. 201). He felt that methods and practices used by gifted educators should be spread throughout the system (Renzulli, 1988).

With colleagues Sally Reis and Linda Smith, Renzulli developed the Revolving Door Identification Model to find youth capable of working at high levels (Renzulli, 1999). The identification model is inextricably linked to his service delivery model. Because Renzulli's work has been both theoretical and practical, his Three-Ring Conception of Giftedness often depicted using a Venn-diagram, lead to the development of the Enrichment Triad Model. In this model, Type I (exploratory activities to discover interests) and Type II activities (designed to teach skills and process related to research) prepare students to proceed to Type III enrichment activities, which involve student choice, production and evaluation of projects for authentic audiences. Using Type I and Type II activities, educators form a "talent pool" of above average ability students. Classroom teachers are trained to refer students showing high motivation and interest within this talent pool so that they may "revolve" into the more rigorous and self-motivated Type III Enrichment activities. Students revolve in and out of Type III activities as their interest and motivation warrant. Thus, service delivery and identification procedures are simultaneous and don't rely on traditional identification measures. They include many more students than the 1%-5% typically served in a gifted education program (Renzulli, 1999). Renzulli claims his model, "minimizes concerns about elitism and helps to do away with the either-you-have-or-you-don't-have-it approach to giftedness" (Renzulli, 1999 p. 14). It also allows for multiple measures of giftedness and does not rely on standardized tests for participation in the program. Thus his program model has tremendous potential for underserved gifted populations as well as enriching all students (Kloosterman, 2001). Additionally, the flexibility of the model can also be a "paradigm for creative productivity" (Renzulli & Reis, 1993 in Renzulli, 1999 p. 26).

Using task commitment as a major component in his definition of giftedness has left Renzulli open to the criticism that his work does not allow

for the gifted underachiever. Renzulli refutes this by referring to his original definition and bolding the illuminating phrase, "Gifted and talented children are those possessing or **capable of developing** this composite set of traits and applying them to any potentially valuable are of human performance"(Renzulli, 1978 in Renzulli, 1999 p. 10). He claims he never meant that gifted students should only be considered for programming if they displayed high task commitment. He points to research done with underachievers using the Enrichment Triad model a highly favorable (Baum, Renzulli, and Herbert, 1995 in Renzulli, 1999).

On looking back over his career, Renzulli states that his original Three-Ring Conception of Giftedness might have more thoroughly investigated some of the personality and environmental issues in the background of his model. He cites the work of Gardner, especially his interpersonal and intrapersonal intelligences, and Coleman's emotional intelligence as nascent in his original thinking. He believes that further research along the lines of Albert, Runco, Simonton and Sternberg, and studies involving children at work holds promise for illuminating and expanding his Three Ring conceptual model (Renzulli, 1999).

In 1983 A Nation at Risk reported widespread problems with American education. As a result of this federal report Renzulli states,

> ...another force began to emerge in general education....that was to have extremely unfavorable impact on the gifted education movement. This force was the powerful equity-in education movement and a host of related school reform initiatives that sought to improve what was viewed as a declining educational system...One of these solutions was the elimination of grouping, and part and parcel of this thrust was doing away with special programs for the gifted (Renzulli, 1999 p. 28).

Renzulli claims that criticisms of gifted education as being elitist, undeserving minority populations, receiving disproportionate funding and promoting separatism are not unjustified and the resulting paradigm shift between "conservative" gifted educators and more liberal proponents occurring

at this time, opened the way for the more inclusive, broad-based model of gifted education service delivery he and colleague Sally Reis were working on, The Schoolwide Enrichment Model (Renzulli, 1999).

This model more thoroughly involves all teachers in developing and implementing Type I and Type II enrichment activities and employs varied differentiation techniques in an integrated fashion. Renzulli claims that he and Reis believed that a:

> ...broad-based approach to differentiation (i.e. not just for 'the gifted') andrespect for the abilities, interests, and learning styles of all students would:
>
> (a) guard against charges of elitism and undemocratic practice,
>
> (b) provide a flexible vehicle for developing the talents of students who might otherwise go unrecognized, and (c) allow us to continue to serve our highest achieving students (Renzulli, 1999 pp. 28-29

The Schoolwide Enrichment Model has become a standard in the arsenal of serving gifted and other students in and out of the regular classroom (Plucker et al., 1998).

Robert Sternberg

Robert Sternberg was influenced by Piaget and rejected the way traditional IQ tests measured this elusive entity (Plucker et al., 1998). Sternberg depicts a three-part model of intelligence. He posited that intelligence, as a construct, can be looked at as developing expertise. Since 1985 Sternberg has built on his Triarchic Theory and talks about successful intelligence, which he defines as the "ability to choose the personal and professional goals (people) set for themselves" (Sternberg, 2002 p. 385.) Sternberg believes that intelligence is composed of the interplay between a componential intelligence, experience and context (Plucker et al, 1998). He concludes that how the three play out in a person's life determines the range of mental ability. Sternberg views developing expertise, which he sometimes calls, successful intelligence, as composed of three aspects: analytic, creative,

and practical. He sees these as largely domain specific although he concludes that the analytic aspect of successful intelligence has some generalizablity across domains. Further individuals can show any one aspect of expertise within a domain without exhibiting the other two. Sternberg views intelligence neither as totally static nor dynamic, but rather encompassing both views. Traditional IQ tests have purported to predict success in a school context and have traditionally measured tasks and abilities needed for academic work. Further he states that traditional IQ tests do not measure intelligence as a prerequisite or predictor for success in school, but rather measure on-going developing expertise of the very abilities needed for school success even if they have been abstracted. Thus abilities are inextricably entwined with expertise and do not exist beyond specific domains. Sternberg understands that what we call intelligence and what he calls developing expertise incorporates more than what happens in school, and measurements should predict success in life. The fact that success in school is not a predictor of success in life shows that achievement and ability tests, as well as grades and honors in school only measure a small part of intelligence i.e. developing expertise (Sternberg, 2001). Sternberg defines gifted individuals as "...those who develop expertise at a more rapid rate, or to a higher level, or to a qualitatively different kind of level than do non-gifted individuals" (Sternberg, 2001 p. 161). His model of developing expertise contains five elements: metacognitive skills, learning skills, thinking skills, knowledge, and motivation. He states that gifted children utilize several key elements in developing expertise whereas highly gifted individuals may use all key elements in concert. Sternberg's model describes in detail the cyclic nature of developing expertise and the interaction of the key elements.

It is important to keep in mind that this model represents developing expertise within a domain. Sternberg states that gifted individuals "differ in rate and asymptote of development" (Sternberg, 2001 p. 162). He argues that while capacity may be important in developing expertise, the main constraint against successful development may be active work in a domain,

which consists of practice, direct instruction, role modeling and feelings of reward. Central to developing expertise is motivation, which is the sine qua non of developing expertise. Gifted persons combine the elements in effective ways to arrive at specific levels of expertise more quickly and/or at higher levels. He argues that some children we now call gifted may merely be good at taking the tests that measure gifted behavior. This phenomenon may explain, in part, why some children of promise fail to develop that population. Also, since developing expertise is domain specific and contextually driven, the environment is key. Learning in English by a limited English speaker, for example alter the level of attained expertise (Sternberg, 2001).

Further, Sternberg equates "school intelligence" with the "g" factor, generalized ability stable over time. He claims that traditional school ability and achievement tests measure this rather limited range of ability, which they have socialized in children. This would not be surprising as such tests were originally developed to measure success in school (Sternberg, 2001).

Sternberg further calls into question the notion of generalized ability with his studies of 85 students in Kisumu, Kenya. Practical knowledge, gained without benefit of formal schooling, of herbs and their uses are important for survival in Kenya. Children were given a test of tacit knowledge of these herbs, and an English language test, an indigenous language test, and the Ravens Coloured Progressive Matrices. The findings were that children, who did the best on the test of practical knowledge of herbal medicine, did the worst on the English language tests. Sternberg explains that concentrating on one aspect of successful intelligence, practical intelligence, as the children who did well on that test proved, correlated negatively with developing other types of expertise. Thus families who prized practical knowledge over school learning positively motivated their children in that direction. Thus, according to Sternberg, it is important to note that individuals gifted to adapt to a particular environment, might not show up as "gifted" on the traditional tests used in schools to measure that potential. Thus:

> "...it would be foolish to speak of a single group as gifted. Students may be academically or practically gifted, or in exceptional circumstances, may be gifted in both ways. But we cannot routinely expect such dual gifts as a matter of principle or practice" (Sternberg, 2001 p. 168).

Sternberg alleges that various ethnic and economic groups may develop different aspects of developing expertise, which may be both genetic and environmental. Students in middle class environments, not having to rely on practical knowledge and creativity for basic survival, have the luxury of developing the analytic aspect. However, students in survival mode may have to develop the practical and creative aspects for survival. Conventional tests, which measure mainly the analytic aspect, are not broad enough to encompass the full range of developing expertise and thus:

> "...until we expand our notions of abilities, and recognize that when we measure them, we are measuring developing forms of expertise, we will risk consigning many potential excellent contributors to our society to bleak futures. We will also be potential overvaluing students with expertise for success in a certain kind of schooling, but not necessarily with equal expertise for success later in life" (Sternberg, 2001, pp 175-176).

In summary, Sternberg posits a unique view of intelligence as developing expertise in which giftedness is seen as advancing either qualitatively or quantitatively towards expertise in a domain. Assessment of giftedness should involve history of achievement, and prediction of future asymptote development. Although genetics play a role, the development of gifted expertise is largely contingent upon environmental stimuli and intrinsic and extrinsic motivation. Different cultures value different expertise and so "giftedness" is culture specific (Sternberg, 2001).

Sternberg likens his work to that of Benjamin Bloom (Sternberg, 2002). Indeed, using Bloom's Taxonomy he relates the knowledge and comprehension level to teaching for memory. Not surprisingly, Blooms' application level is related to Sternberg's teaching for application. Sternberg's analytical thinking involves Bloom's analysis and evaluation levels and Bloom's synthesis equates

to Sternberg's teaching for creative thinking. Sternberg's model differs, however from Bloom's in some important ways. Perhaps the most important is that Blooms Taxonomy is not an intelligence theory whereas Sternberg's model is definitely that. In addition Bloom's model is hierarchical with one level being based up the preceding one. The Triarchic Model and its refinement, Successful Intelligence, is not. In addition thinking skills are differently grouped within the two models. Also, Sternberg views the skills in his model as more broadly defined and encompassing than Bloom's taxonomic levels (Sternberg, 2002).

Sternberg also sees a kinship between his work and that of Howard Gardner (below) (Sternberg, 2002). Since Howard Gardner deals largely with domains, Sternberg sees compatibility between teaching for creativity, for example, within any of Howard's domains. He differs from Gardner in that he views some of his intelligences as non-essential for survival in the world. His theory is based on universal intelligences necessary for success in life. Sternberg claims empirical and predictive superiority of his theory over Gardner's. He claims that validation of a theory ensures that "it does, indeed, characterize how people really think, rather than merely the investigator's or other's opinions of how they really think" Sternberg, 2002 pg. 391).

Howard Gardner

Another person influenced by Piaget and also by Thurston's many factored intelligence theory, is Howard Gardner. Gardner's early interest in creativity studies and artistic development prompted him to look at less psychometric ways of describing how intelligence plays out in the lives of people from all over the world. This is not to say Gardner dismisses the concept of general intelligence out of hand. He simply thinks that the concept does not go far enough in describing the totality of human cognition. He believes that intelligence flourishes in a multitude of contexts, which elicit and in turn, nurture combinations of specific intelligences. In his 1983 book, Frames of Mind, Gardner first posits his (then) seven intelligences:

> ...that can be divided into three main groups: object-related intelligence, which includes mathematics and logic; object-free intelligence, including music and language; and personal intelligence, or the psychological perception we have of ourselves and others (Gardner, 1983) (need page number)

Each person combines the (now) eight intelligences in a myriad of combinations to form a unique composite. Gardner's intelligences are: linguistic, logical-mathematical, spatial, musical, bodily kinesthetic, interpersonal, intrapersonal, and the naturalist. Gardner also understands that these intelligences may work in concert with one another (Blythe and Gardner, 1990). Gardner's work is becoming more and more influential, and he chastises schools for not utilizing and developing all of the types of intelligent behaviors and to honor different ways of learning and acquiring information (Plucker et al., 1998). For Gardner the most effective way to deliver meaningful curriculum is to discover the uniqueness of each individual in a natural leaning environment and not in a staged psychometric setting (Gardner, 1995). Gardner also does not enter into the dispute between inheritability vs. development of intelligence. Rather he focuses on the interaction of genetics with the environment (Gardner, 1995).

His definition of intelligence is most enlightening. According to Gardner, intelligence is a "biophyschological potential that is drawn on within a culture for a variety of purposes" (Gardner, 1994 in Fasko, 2001). Gardner believes that intelligence is "biological and psychological potential" and is realized in a person through culture, experiences and motivation (Gardner, 1995). He refutes as myth the notion that his intelligences are merely domains of activity or talents. Instead he states that any domain, such as chess, physics etc. are specific and may use many intelligences. Conversely intelligences work across domains (Gardner, 1995). He also counters the idea that intelligence is equated with a learning style, but rather argues that it is a capacity not an approach.

The multiple intelligence theory has been criticized for its lack of empirical support (Sternberg, 1994 in Fasko, 2001 and Sternberg, 2002), a fact

which Howard Gardner specifically refutes, "Literally hundreds of empirical studies were reviewed in that book (Frames of Mind), and the actual intelligences were identified and delineated on the basis of empirical findings" (Gardner, 1995). He is proud of the fact that his theory is tested in the field and that it is constantly reforming upon empirical field and laboratory evidence (Gardner, 1995).

Gardner states that his theory of intelligence impels educational practices into broader realms. The modern classroom should teach to and nurture and develop a wide range of abilities using a variety of instructional methods, approaches and strategies. Multiple Intelligence theory advocates hands-on learning, learning within a context and the use of the apprenticeship model, as students are multivariate in their intelligences. It favors authentic, on-going assessment.

In Conclusion

It seems that the theorists who have informed new thinking and practices in the field of gifted education have tended to focus on broader definitions of the concept of intelligence. Indeed, "the trend in interpreting nature-nurture factors as interactive points to the probably rapprochement between those who argue for the primacy of nature and those who call for emphasis on nurture," (Grinder, 1990). Researchers have tended to move beyond a purely positivist approach taken in the first part of the 20th century to at least a blend of positivism and phenomenology. They have distinguished between "school-type" intelligences and those more specific to success in endeavors outside of the school experience. The school-type intelligences are largely seen as more correlated with g intelligence and as measurable with predictive value and stable over time. We will know "it" by grades and more substantially, but testing. The other types of intelligences seem more related to a phenomenological perspective. We will know "it" when we see it in action. We can evaluate "it" when we see a portfolio of products. The newer researchers have understood that intelligence is an artificial construct, domain and culture

specific and influenced and nurtured by various cultures in various ways. These researchers have, in part, responded to criticisms of elitism and insensitivity within gifted education. The programming they have spawned has attempted to be more inclusive and more respectful of the contributions and potentiality of a broader spectrum of society. The program models these researchers espouse emphasis development of expertise within domains and respect cultural viewpoints and contributions and allow for demonstration of talent. The program designs are inclusionary and flexible, and allow for the centrality of the regular classroom program in meeting the needs of gifted children. However, gifted educators must rededicate efforts so that the lofty goals of these education visionaries are put into practice. Renzulli's ideas must be thoroughly understood. We must ensure that the works of Howard Gardner are seen as more than just the latest version of learning styles, and that Robert Sternberg's triarichic conception of giftedness receives "more than just lip service" (Callahan, 2001). Education is the key.

Historic Misconceptions of Who is "Gifted"

Is there such an "entity" as a gifted child or is the notion completely an artificial construct? Is gifted education only for the rich and the white? Do abilities and thus needs exist on a continuum? These are some of the questions brought up by critics of gifted education. Certainly the notion of giftedness is an artificial construct. As Sapon-Shevin (1993 p.27) asserts, "identifying a category of children as "gifted" represents a decision." That decision involves whose construct of giftedness is employed and how that construct is measured and to what level. What construct of intelligence is used when gifted programs only look at IQ scores and achievement tests to "find" children whose needs are so extreme as to warrant services beyond what the regular classroom typically provides? Isn't it a narrow view, "linked to the belief in the inborn, hereditary nature of intelligence"(Sapon-Shevin, 1993 p. 27)? Hasn't the field of intelligence theory and intelligence testing pointed the way to a more inclusive definition of giftedness?

As we have seen reviewing the literature the history of conceptions of intelligence and intelligence testing, up until the 1940's the definition of who was gifted and talented was very narrow and comprised only 1%-2% of the population. Typically this population was white. In the 1950's definitions expanded to include more of the population, 10%-15%, however, again, this population was largely white and affluent. During the 1960's up to the present, researchers such as Torrance, Taylor, Rensulli, Gagne, Sternberg, and Gardner have broadened the definition of who was gifted (Diaz, 2002a).

Eva Diaz frames the history of gifted education within a larger social, political and economic context and focus on the failure of gifted education to serve the needs of gifted children from minority populations and the need for programming for underserved groups:

> ...dissonant experiences with intelligence testing also increased as (1) the charges of elitism and the quest for a broader understanding of giftedness grew and (2) the racial, cultural, and linguistic diversity present in the school system was highlighted by desegregations efforts, civil rights, enforcement, and the focus on equity during the 1960's and 1970's. As a result, authorities in the filed began promulgating that IQ tests were effective neither in assessing originality or creativity, not in identifying gifted students from diverse racial and cultural backgrounds (Witty, 1981 in Diaz, 2002a).

Circa 1968 recognition began to surface that America's disadvantaged were not being adequately served in gifted programs (Gowan, 1968 in Diaz, 2002b). The situation did not improve. The Bilingual Education Act of 1984 was enacted, and for the first time, funding was given for "the establishment and implementation of gifted and talented programs for students with LEP" (Diaz, 2002b p. 39). In 1991 the Office of Civil Rights also stated that exclusion of Limited English Proficiency students was a violation of 34 C.F.R.

The problem still persists despite affirmation by the Jacob K. Javits Act that, "gifted and talented students from economically disadvantaged backgrounds and with limited English proficiency are at greatest risk of being unrecognized and not being provided appropriate education services" ("Jacob K. Javits Gifted and Talented Students Education Act," 1994). The 1993

National Excellence Report states, "special efforts are required to overcome the barriers to achievement that many economically disadvantaged and minority students face (O'Connell-Ross, 1993 p. 29). Many states have inclusive language written into their identification policies, but discriminatory practices still prevail (Coleman and Gallagher, 1992, in Diaz, 2002b). Many states still *use* narrow measures and cut-off scores to define giftedness while espousing more inclusive definitions. In fact, the use of standardized test scores and single item admissions criteria in addition to being unethical may also be legally discriminatory (Brown, 1997). States have reported increased efforts to find and serve underrepresented populations of gifted students, but "still find themselves either lacking support and guidance in designing, implementing, and evaluating their efforts of just ignoring the available body of knowledge" (Diaz, 2002b p. 41). There have been some model programs to address the problems of identification, and more specifically, talent development, however more are needed. In the area of bilingual education and giftedness, the National Association for Bilingual Education (NABE) and the National Association for Gifted Children (NAGC) have begun to establish special-interest groups. Confratute (Renzulli and Reis summer institute on enrichment learning and teaching) has offered teaching strands on this topic. The National Resource Center on the Gifted and Talented, Office of Educational Research and Improvement (OERI) and others have sponsored research studies on the issue of underrepresented gifted education students (Diaz, 2002b).

Efforts to solve the problem of under representation of culturally and linguistically diverse students are on going, but progress is slow. It is not just a matter of finding a better test. It is also a matter of "ingrained attitudes about the abilities of poor and minority children that will somehow thwart the efforts that you want to make" (Grantham, 2002; Morris, 2002). It is about looking for the strengths of children, and developing talent and potential. It is about recognizing the diverse ways intelligence is manifest in cultures. It is not about *making* anybody gifted, or fulfilling a quota, it is about designing programs that "do not insult the intelligence" of children and recognizing

giftedness, "however it comes packaged" (Grantham, 2002). It is a push against cultural and racial structural forces in America (Morris, 2002)

As special education has moved away from rigid classifications and reliance on IQ scores, so too are gifted education proponents. It is high time to move beyond such narrow descriptions of intelligence and embrace a new understanding that intelligence is linked to environmental and cultural contexts and can best be viewed as developing expertise. After all is it not that "although we might wish to believe otherwise, that people do not all have the same capacity to sing or to run or to write great verse or to apply mathematics to the conundrums of physics (Tomlinson, 1994b). We must find and serve all children whose needs exist beyond those met in the typical classroom. We should "speak for educational opportunities carefully crafted and articulated to develop apex talent in a widening circle of domains and in all segments of our increasingly multicultural society" (Tomlinson, 1994b). We should strive for programs that enrich all and are not culturally subtractive. After all, "adopting multicultural and broader definitions of giftedness and constructing better tools for assessing and identifying gifted African American (as well as other excluded populations) students represent small steps towards creating equitable education for all students" (Morris, 2002). My designed program by emphasizing the under representation of culturally and linguistically diverse students in gifted programs will help ensure that teachers of gifted students understand the complexity of the issues endemic in America's education system as regards identification of and programming for diverse gifted students.

Rationale for Meeting the Needs of Gifted and Talented Students

The literature on Gifted Education gives a variety of approaches in providing a rationale for meeting the needs of gifted learners. Few researchers seem to pursue legal avenues as rationale for gifted education programming and admit there has been a dearth of federal judicial precedent in this arena.

The short history of federal level involvement in gifted education seems to be a cyclic response to the perceived vulnerability of America to foreign competition. "It has been the economic arguments that have generally impressed decision-makers to pay special attention to these students" (Gallagher, 1994 p. 98).

Aside from the law, many researchers seem to focus on the needs of gifted and talented students themselves and the lack of excellence in the typical American classroom as reason for providing differentiated curriculum in and outside of the classroom setting. The thrust of newer articles advocating for the gifted is towards classroom differentiation, broader definition and identification procedures for finding gifts and talents, and the education of regular classroom teachers in strategies and practices to meet all needs found among today's diverse school population.

The Letter and Spirit of Federal Law as Regards Gifted Education

The first half of the 20th century was an interesting time for the field of gifted education in America. The term "gifted" was coined and many researchers were interested in defining the nature of gifted students (Diaz, 2002a). However, only minimal interest was paid to the development of gifts or programming for the gifted as intelligence was still seen as largely inherited during this period. No laws were in effect and the major models for gifted education programming were acceleration and homogenous groupings.

By the early 50's some states actually had laws concerning gifted students (McHardy, 1985 in Diaz, 2002a). However after the 1957 launch of Sputnik, the National Defense Education Act of 1958 not only attempted to strengthen curriculum in foreign languages and math and science, it also allocated funds to institute gifted education services (DeLeon & VandenBos, 1985 in Diaz, 2002a). Gifted students were seen as vital to U.S. national interests to win the Space Race and ultimately the Cold War and services to this population used this most powerful rationale. This time in America is often seen as "a time of splendor for gifted education" Diaz, 2002a p. 21).

From the Cold War on, it seems that whenever America legislated for gifted education, the needs of society were at the forefront of the rationale to do so.

Almost concurrent with the above, the Civil Rights Movement burgeoned in America. Brown vs. the Board of Education was (and is) the basis for non-discriminatory practices in American Public Education. Can civil rights legislation and the laws protecting the rights and of exceptional students provide rationale for meeting the needs of gifted students (Ford, Russo, & Harris, 1993)? Do gifted children have the right to "a free and appropriate education consistent with their unique needs" as are exceptional students (Ford et al., 1993)? Even though the decision was not directly related to gifted and talented students, Ford and Russo (1995) declare that until Brown vs. the Board of Education, there was no concerted effort in the United States to address the needs of any underrepresented children. The authors include gifted children as a sub-group of children's whose needs are not being adequately addressed, and they feel that it may be of use today in providing a rationale for the meeting the needs of this population. However, other researchers acknowledge that during the civil right's struggles of the 1960's attention was diverted from gifted education. Further the movement accused gifted education of employing biased tests and denying access to gifted programming to culturally diverse students (Tannenbaum, 1979 in Diaz, 2002a). Thus, however logical, it seems ironic that this law would be used as part of the rationale for serving the gifted students today. Further, attempts to litigate on the basis of federal law have been limited and number and have proven consistently futile perhaps because there is no federal mandate for education of the gifted (Zirkel & Stevens, 1987). However, these researchers predict that further legislation and litigation will evolve, as for handicapped students, regarding the rights of gifted children to an appropriate education. Perhaps some day legal precedent will become a powerful rationale in the service of gifted students.

Evolving Federal Definitions of Giftedness

The Education Amendments of 1969 contains one of the earliest definitions of the phrase, "gifted and talented":

> The term "gifted and talented children" means in accordance with objective criteria prescribed by the commissioner, children who have outstanding intellectual ability or creative talent, the development of which requires special activities or services not ordinary provided by local education agencies (U.S. Congress, 1970 in Stephens & Karnes, 2000).

In 1970 federal support was again given to gifted education with the congressional mandate, "Provisions Related to Gifted and Talented Children." This directive spurred the U. S. Commissioner of Education, Sydney P. Marland to launch a study to detail the state of gifted education in America. The report, Education of the Gifted and Talented is best known as the 1972 Marland Report and is seen as the genesis of most of the modern approaches to finding and serving gifted children (Diaz, 2002a). In the 1940's the term, gifted and talented referred to the top 1-2 percent of the population. As understanding of intelligence broadened, the percentage was increased to between 10 and 15 percent (Diaz, 2002a). In the Marland Report, the following definition was given and widely used thereafter and was an attempt to expand the definition of giftedness even further:

> Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance.
> These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combinations: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and/or psychomotor ability (Marland, 1972).

This above definition (and the later 1978 revision excluding psychomotor ability) in principle suggested that underrepresented minority populations of gifted students be identified and served. However, in reality tests used to find and serve gifted children seem to favor White upper and middle class America (Diaz, 2002a). In addition, up to this point, definitions of giftedness seem predicated on the possession outstanding ability or potential versus demonstration of this ability (Gallagher, 1994).

The years following The Marland Report marked the first time that categorical funding for research, training, and demonstration projects were allocated for gifted education (Marland, 1972). Again, the rationale behind serving America's gifted and talented was that these children would grow up to be adults who would make contributions to "self and **society"** (author's emphasis) (Marland, 1972).

The repeal of the Gifted and Talented children's Education Act of 1978 cut funding for gifted education and closed the Office of Gifted and Talented in the Department of Education (Diaz, 2002a). Some interest in gifted education was aroused by the controversial Nation at Risk report, but its effects were short-lived (Diaz, 2002a).

The Jacob K. Javits Gifted and Talented Students Education Act of 1988 was passed and once again funding was allocated for serving gifted and talented children. This initiative was intended to provide national guidance in identifying underserved populations including economically disadvantaged youth, children with disabilities and English language learners. Importantly it established the National Research Center on Gifted and Talented (NRC G/T) as a research arm for gifted practice within the Department of Education.

The newest discussion nationally surrounds the 1993 National Excellence report. In retrospect, The Marland Report seems to have opened up the discussion of the nature and needs of gifted students and gave the first official federal definition of "gifted and talented." Passow and Rudnitsky point out, however, that this definition linked the two terms and focused exclusively on this population and on solutions to meet their needs above and beyond the

classroom. In contrast, the National Excellence report puts more emphasis on reaching the gifted within the regular classroom setting (Passow and Rudnitsky, 1994). The new description of gifted and talented in National Excellence modifies the Marland Report's definition by reflecting the thinking that "giftedness" is a measure of mature development and does not suggest that it is the "potential" that is manifested in childhood:

> Children and youth with outstanding talent perform of show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity or excel in specific academic fields. They require services or activities not ordinarily provided by schools.
>
> Outstanding talents are present in children and youth form all cultural groups across all economic strata, and in all areas of human endeavor (O'Connell Ross, 1993).

The report states that in order to understand the ramifications of this revised definition, and put its intent into practice, schools need to develop an identification system that looks for children with gifts and talents in a wide range of disciplines, uses varied types of assessments, and is free of bias and discrimination. In addition assessment must be fluid, identify potential and also "understand the drive and passion that play a key role in accomplishment" (O'Connell Ross, 1993). At the heart of the new identification systems are the most recent constructs of giftedness, a concerted search for historically underrepresented populations, consideration of the context and cultural nature of talent development, and improvement of qualitative and quantitative measures (Shaklee, 1997).

The above was meant to broaden the concept of giftedness. In reality this definition has not "trickled down" to the state level and the majority of states still use the 1978 modified Marland definition of giftedness and not much has changed for underserved populations of gifted students (Ford et al.,

2002; Karnes and Stephens, 2000). As of 1998, only 15 states reported efforts to expand opportunities for typically underserved populations (Landrum, Katsiyannis, & DeWaard, 1998). Perhaps "the field will continue to experience conflict while the new definitions, constructs and identification schemes are supplanting the old and more stereotypical notions of who is gifted and how they can be identified" (Shaklee, 1997 p.214) However, states need to be more proactive in ensuring that all gifted children within their jurisdictions receive needed services.

> By having a comprehensive state definition, messages conveyed by such groups to the general public within the state have a greater likelihood of being consistent. Lack of consistency in how gifted and talented students are defined have perpetuated myth and misrepresentation as to the true nature and needs of these exceptional students (Stephens & Karnes, 2000 p. 31).

It is hoped that the federal definition of gifted and talented, as well as those of Renzulli, Gardner, and Sternberg may also influence states to rethink narrow classifications. Perhaps, "with more emphasis on identifying underrepresented groups...it is likely that new state definitions will reflect more inclusive practices (Stephen & Karnes, 2000 p.31).

In Conclusion

Laws enacted to serve the gifted and talented have argued that this population is worthy of consideration because they are a talent resource needed to keep America a strong and viable nation. Sapon-Shevin (1993) states that perhaps gifted education advocates exploit fears about America's preeminence in the word to gain support for funding. There does seem to be a direct correlation between this country's attention to gifted education and the fear of foreign competition. One only need look at the spurt of interest in gifted math and science students post Sputnik. Yet even though government intervention has often seemed self-serving, its advocacy has spurred states to actively pursue some level of services for this population. Similarly, formal

definitions of "giftedness" at the federal level have become more broader, inclusive and seemingly more cognizant of the evolving conceptions of intelligence to include culturally and linguistically diverse learners (Diaz, 2002a). However, dedication and education are needed to make sure that there is a "true commitment to solving the problems of under-representation, which go far beyond the choice of a test into issues of talent development, appropriate program options, curricular modifications, support needs and attitude adjustments" (Callahan, 2001).

It seems certain than more than mere surface work is needed to ensure that the newest thinking in the field of gifted education influences local, state and federal governments, school systems, and the teachers in those systems and departments of higher education. My model, with its emphasis on serving typically underserved populations, is one way these new conceptions can filter down beyond bureaucratic levels to the teachers in the classroom. Thus:

> ...we must first become committed to all gifted children, not just those whose parents bring them to our door as fully developed learners, but also those who have not had the privilege of an enriched environment. We can no longer give lip service to the development of talent.... We must become critical of every aspect or our language, our programs, and out behaviors so that, first and foremost, we truly become developers of talent" (Callahan, 2001).

Hasn't Federal Legislation Helped Gifted and Talented Students?

There is a notion that the federal government has and is providing for the needs of the nation's gifted students. It is true that since the 1972 Marland Report and the 1983 Nation at Risk Report, many changes have been made for the benefit of gifted children in America's public schools. By 1990, 38 states report serving over 2 million students in grades k-12. Other states did not report numbers. In their study, State Policies Regarding Education of the Gifted as Reflected in Legislation and Regulation, Passow and Rudnitsky state that all 50 states have some type of legislation, rules or guidelines for gifted and talented children (in Passow and Rudnitsky, 1994). However, only 2 cents out of every $100 of state and local education monies was spent on gifted

programming in 1990, and the figures are undoubtedly worse today (O'Connell Ross, 1993). Further the NELS study found that following breakdown participation in gifted education programs from among the 8.8 percent reportedly participating in gifted education programs.

- 17.6 percent of Asian students
- 9.0 percent of white, non Hispanic students
- 7.9 percent of black students
- 6.7 percent of Hispanic students
- 2.1 percent of American Indian students (NELS:88, 1991 in (O'Connell Ross, 1993)

Twenty years ago, 43 states had no mandate or funding for gifted students. In 1990, most if not all states have some type of legislation regarding gifted programming and some even have funding. Approximately half the states require specialized services. The others have passed discretionary measures allowing for gifted and talented programming and six states and territories lack gifted education legislation.

Currently, there is only one federal law relates directly to the education of gifted and talented students in America. The Jacob K. Javits Gifted and Talented Students Act of 1988, while advocating meeting the needs of gifted and talented students, does not mandate creation of programs toward this end (Ford and Russo, 1995). The lack of mandate at the federal level is partly responsible for the fact that 14 states still do not require some type of programming for the gifted, and that only 1.2 of the estimated 2.5-3 million gifted students are in gifted education programs (Zirkel and Stevens, in Ford, et al, 1995). Among the states which do mandate gifted education programming, many only offer general guidelines for these programs and do not offer specifics for quality programming (Irvin, 1991 in Ford, 1995).

According to Ford and Russo (1995) legal precedent for gifted education could be seen as a result of reasoning by analogy from handicapped children law: Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania, (1971 & 1972) and Mills vs. Board of Education of the District of

Columbia (l972). As a result of these laws, programming for students with disabilities has flourished. Students at the other end of the educational spectrum, by analogy, have equal needs, yet programming for these students has not, flourished.

The notion of gifted children as a "minority" population with underserved needs is contrary to the way the gifted are viewed at large. Gifted education is often seen as elitist and not representative of minority and/or low socio-economic populations Gallagher, 1995; Tomlinson, 1994). While arguing that the needs of gifted students are not being adequately met, Gallagher admits that those whose needs are being at least partially met are mainly, white and Asian children from the middle to upper class strata of society. Gallagher states that elitist reasoning stems from that fact that gifted behaviors are the culmination of a "pyramidal structure of learning" in which expertise is built on prior learning and experiences and work habits. These students are thus achieving students are selected for gifted programs. Because middle and upper class white and Asian families stress achievement and reward good work habits, these children are selected for gifted programs, and "the rich get richer." If students are deficient in skills and/or knowledge and experiences, their abilities will not be "crystallized" (Gallagher, 1995). These children may not be considered for or qualify for gifted education programming even if innate ability is present. However, instead of eliminating programs for gifted students because they are considered elitist, Gallagher advocates early intervention for young able students. He uses the analogy of the "tall poppies." Students excelling in school are the "tall poppies" in a field. Rather than cut the "tall poppies down to size to make everyone "equal," to remedy inequities in gifted education identification and service, Gallagher recommends that young gifted children in underrepresented populations be identified. However, he doesn't give recommendations for the selection process. Once identified, students should receive cognitive, mathematical and perceptual training (Gallagher, 1995).

Ford and Harris (2002) agree that gifted programs underrepresent African American students by as much as 50% and that progress in serving this sub-population of the gifted has been largely nonexistent. Despite the fact that the gifted education field has striven to identify and serve gifted Black students, results continue to be disappointing. Many states still rely on the Marland Definition to guide identification decisions and depend mainly on IQ measures (Ford et al., 2002). Further, there is a lack of research, which focuses on retention and programming for these students once they have been identified.

The authors believe the problem is systemic and requires more than simply substituting tests and/or using more authentic assessment measures for identification although traditional intelligence measures are certainly flawed and teachers inadequately trained in how to interpret results for adequate programming for any culture, but especially for the Black culture (Ford et al., 2002). They state that a fundamental paradigm needs to take place among regular classroom teachers and gifted educators alike. They contend that "educators must move beyond a deficit orientation in order to recognize the strengths of African American students" (Ford et al., 2002).

Deficit thinking, results in lower referral rates for gifted Black students as positive traits inherent in Black culture such as, verve and movement, an affective orientation, oral tradition, spirituality and communalism are often misunderstood by the majority culture and seen as deficits and not assets to achievement (Ford et al., 2002). This ignorance is, in part, due to the lack of multicultural preparation in teacher education coursework. In addition, teacher preparation courses do not adequately address gifted education issues in general, let alone for minority populations, and thus the problem of identifying this population is further compromised. Additionally, teachers gauge minority students against White student norms of achievement and behavior and the problem is exacerbated. Compounding the problem, many teachers do not understand that gifted students can and do underachieve. In particular gifted children may lack motivation, may exhibit tension between

achievement and identification with peer groups. Moreover, personal problems may interfere with school achievement (Ford & Harmon, 2001a).

Another problem in the referral and retention of Black students to gifted programs is that teachers may not communicate effectively with parents about gifted programs and there may be mistrust among parents (Ford et al., 2002).

Maybe the worst symptom of deficit thinking is its internalization among students of color. Such students may unwittingly believe they have deficits, suffer from text anxiety, deliberately underachieve, and refuse to participate in gifted programs (Ford et al., 2002).

Thus, federal legislation in the area of gifted education has attempted to focus on and provide for the needs of gifted children. However, the sporadic efforts have largely been minimally successful. While there is some understanding of the need to support and serve gifted children, there remains little funding and no mandate for effective programming. Changing the federal definition and funding research through the NRC/GT which especially targets typically underserved populations is a step in the right direction. More needs to be done before the nation can be satisfied that all of it's most gifted students' needs are being adequately addressed in the course of their every day education.

Conceptions of Equity and Excellence

While other writers also see gifted education as a legal/civil rights issue addressing intellectual diversity, they also stress the tensions in the balance between equity and excellence. Gallagher (1994) sees three decades of struggle in this country between excellence and equity. Equity is viewed as "the promise that all children shall receive an equal opportunity for education" while excellence is viewed as " full attention and stimulation ...given to the very best of students," (Gallagher, 1994 p. 96). Tomlinson, (1992 p. 185) echoes that typically in the literature excellence has meant "a focus on the highly able. 'Equity' has meant a focus on the 'disabled' (whether the disability was physical, social or economic." Promoting excellence to further our nation's

interest, economically, intellectually and culturally, at home and abroad, the study, National Excellence: A Case for Developing America's Talent, also promotes excellence in schools "because all children, including those with outstanding talents, deserve an education that helps each of them develop their special qualities. The National Excellence report affirms, "this human element must not be ignored" (O'Connell Ross, 1993). The report states "The message society often sends to students is to aim for academic *adequacy*, not academic *excellence*" (O'Connell Ross, 1993). According to Tomlinson, public education should be about meeting the needs of those at the high end of the educational spectrum which she calls "apex" excellence (Tomlinson, 1994b). Because general education strives to educate all with limited financial resources, anyone whose needs lie outside the middle may be underserved. In the name of efficiency, the "one size fits all" lesson plan may also mitigate against excellence. In addition, society often touts intellectuality, but devalues and derides the intellectual. Traditionally the debate has been between those advocating for the needs of the many against the needs of the few. That is, treating all children exactly the same without regard to the special needs of certain students. However, reconciling this debate may mean reframing the question. Isn't it possible to have both equity and excellence? After all, isn't the "public" in public education composed of all students? Shouldn't the classroom be the place for meeting the needs of each and every student to the highest levels (McDaniel, 2002)? In her final argument that the balance between excellence and equity is currently decidedly in favor of equity, Tomlinson states that America was created and has flourished because it has both encouraged all to develop to their highest potential *and* that we adhere to the principal that all men are created equal. She cautions that to silence the voices for equality would lead to totalitarianism. To silence the voices for excellence would lead to "conformity and socialism" (Tomlinson, 1994b). Additionally, Ford and Harmon (2001) wish to posit that this dichotomy of thinking may preclude the notion that equity and excellence may coexist. In classrooms where all children are treated as individuals and their unique needs

attended to, equity and excellence need not be dichotomous. That said, we need to keep in mind, that "commitment to excellence and equity will require digging beneath the surface and working with passion to achieve that end (Callahan, 2001). We must translate the goals into practice. Helping teachers learn differentiation techniques for all students as well as understanding the nature, needs and capabilities of all learners, can go a long way in bridging the perceived gap between excellence and equity.

The National Excellence report argues that as early as de Tocqueville's comment in the 1830's " that Americans tend toward a "middling standard," Americans have eschewed excellence in favor of equity (O'Connell Ross, 1993). Tomlinson states that "balancing between these twin commitments, to equity and to excellence, is a challenge" and that there are few if any moments in the history of American Education where time and money have nurtured both simultaneously (Tomlinson, 2002). The current climate of test-driven curriculum, while seeming to raise standards, may in fact have the opposite effect for gifted children. A paper commissioned for the National Excellence report states "current reform movements rarely mention the special needs of gifted students in their goals or objectives (Gallagher, 1994). In fact Tomlinson would argue that the historical pendulum has swung away from excellence with the passage of the No Child Left Behind Act. She states that as the law now stands there is no incentive for schools to push beyond proficiency. What happens with students who are proficient at the start of the school year with this largely "remediation-focused initiative" (Tomlinson, 2002)? Because it is rooted in basic knowledge and fundamental skills, the No Child Left Behind Act does nothing to ensure that we are creating a nation of the "truly literate," beings who can read, reason, think and communicate. Kearney echoes, "For years educators of gifted children have been encouraged to cooperate with general education. However, in the rhetoric of school reform little has been written about the responsibilities of general education to its most gifted students" (Kearney, 1993). The National Excellence report declares that achievement "ceilings" as well as the "floors" must be raised (O'Connell Ross,

1993). Perhaps Masse (2001) says it best when he states, "I wish to stress that educational equity will be attained when all students are nurtured so as to perform up to their own level of capability." Again, when we look beyond mere test scores to define "good" schooling, when we insure that all children have the opportunity to learn something new every day and to stretch and grow in their own zones of proximal development, we may come closer to achieving a blended goal of equity and excellence. It is hoped that through my model classroom teachers will learn techniques that allow the blend of equity with excellence so that all students experience excellent education.

The National Excellence Report in Depth

The National Excellence Report rendered seven recommendations for meeting the needs of gifted and talented students:

- Establish challenging curriculum standards
- Establish high-level learning opportunities
- Ensure access to early childhood education
- Expand access to early childhood education
- Expand opportunities for economically disadvantaged and minority children
- Encourage appropriate teacher training and technical assistance
- Match world performance

How has the nation fared since the 1993 National Excellence Report? A 1998 study (Landrum et al., 1998) conducted a "state of the states" survey to determine the answer to this question. In the area of establishing challenging curriculum and more challenging opportunities, about half of the state report success. However, programming for rural gifted remains inconsistent and pull-out programs are still the predominate service delivery model.

With respect to initiatives aimed directly at typically underserved gifted and talented students, namely, early childhood access to gifted education, broadening the definition of giftedness and increasing learning opportunities for minority and disadvantaged populations, the results are not as heartening.

Young gifted children do not have access to early childhood gifted education in more than half the states. Cut-off scores, discriminatory to disadvantaged students are still being used. Only nine states identify up to 10% of their populations as gifted, "which is reflective of a moderate rather than a truly broadened definition of giftedness (Landrum, et al., 1998 p. 368). In addition only 1% to 5% of identified children are minorities. Only one state indicated that it kept data on disadvantaged learners. Thus, "given the existence of limited data regarding the inclusion of culturally diverse and young children in gifted programs; therefore, it is unclear to what extent states have met the initiative on expanding the opportunities for these two underrepresented populations of gifted learners and (sic) actual practice" (Landrum, et al., 1998 p. 368).

Teacher certification/credentialing can be found in 25 states. This is an increase of 10 states since 1993. Typical coursework includes, curriculum and instruction, nature and needs of the gifted learner, identification and assessment, program development, creativity and affective needs of the gifted. However the rigor of these programs may be questioned, as the range of hours leading to a certification or a credential is between 3 and 24 hours. In addition, only 1 out of the 40 states responding to the survey indicated that classroom teachers were required to have training in gifted education.

The results on the last initiative, matching world performance, are murky. General reform efforts may have spilled over and upgraded curricula and performance within gifted education, however only one quarter of the states responded that efforts have been made to address gifted education standards.

Clearly, much work needs to be done to implement the recommendations of the National Excellence report, especially as regards gifted and talented students from underrepresented populations. Teacher training may hold the key in directing gifted education reform efforts to individual schools.

The Evidence of Testing: A Failing Grade for Academic Excellence

Is there is a "quiet crisis" in American public education? Are we failing our top students by not providing for their special needs and not demanding rigorous academic achievement as the 1993 National Excellence report suggests? According to the 1993 National Excellence report, a retrospective of the last twenty years in gifted education, states that even among college-bound students less than 10 percent could solve multi-step math problems, interpret historical data at the college level, answer basic civics questions, reason through scientific data, write a coherent response more than a paragraph, and read at an advanced level. It is little wonder that colleges have to offer more and more remedial classes. A look at SAT scores and Advanced Placement Data is little more heartening. Even though the level of difficulty on the SAT test has declined since 1972, verbal scores have decreased and the number of high scorers on the Math section of the test has remained constant. Advanced Placement scores have remained stable even though many more minority students have taken advantage of such classes, which is one indication that students rise to the level of challenge given (O'Connell Ross, 1993).

However, when comparing internationally, Americans still underachieve. The top performing students in America score at or near the bottom when compared with the top-achieving students in foreign countries(O'Connell Ross, 1993). While American college applicants only need fill out multiple-choice tests, college-bound students in other countries answer hours long essay questions demanding detailed knowledge and higher level reasoning on a variety of topics. The outlook is also dim when analyzing data from colleges. American students are eschewing post-baccalaureate degrees especially in the areas of math and science. Minorities drop out of college at an alarming rate and do not enter fields, such as math and science, at a rate proportional to their numbers. Perhaps if more classroom teachers were able to differentiate learning for their students, move beyond our test-driven curriculum, and

provide educational opportunities to the level of need for all students, some of the problems cited above might be ameliorated.

A Caveat

In A Manufactured Crisis, Berliner and Biddle dispute many dire findings criticizing American education in the 1983 National at Risk report, state that the "public school system has actually performed remarkably well" and lay the blame for problems on society, it's lack of funding for schools, and not at the feet of the educational system per se (Berliner & Biddle, 1996). It is beyond the scope of this literature review to enter into a detailed debate over this issue. Whatever the cause, it seems safe to say that societal problems cannot be solved completely by only one segment of society, the schools, but suggest more endemic causes needing more comprehensive solutions. Schools can, however, attempt to give to all children the opportunity to learn at levels commensurate with their abilities.

In Conclusion

Even with the rise of programs for the gifted, their remain areas of need. In regular classroom, many students have mastered between 35-50 percent of the core curriculum for the remainder of the in September, yet little is done by classroom teachers to modify the curriculum for these students. Textbooks have been "dumbed down." The "basic skills" movement has further eroded high-level curriculum. At the junior high level programming for high ability students is fragmented if non-existent. Many high school students report studying less than one hour per day. Are they being sufficiently challenged? Small towns and rural areas are often not able to offer advanced coursework. Dual enrollment in high school and college is sparse. Gifted programs typically serve academically talented (ignoring other talent areas) students for a few hours per week and many minority and poor students are not included in these programs. Teacher training in gifted education remains sporadic and the quality may be questionable. Concomitantly, gifted education programming

may also not be of the highest caliber. We need to ensure that no matter what the service delivery model, gifted programs do not stand for "privilege rather than responsibility" or, "court isolation and snobbery rather than respect and understanding" (Callahan, 2001). A program to help teachers learn about how to meet the needs of all members in the classroom through differentiated instruction, and to understand the nature and needs of an often ignored segment of learners, the gifted, especially those gifted from disadvantaged and minority populations, can work to the benefit of all students.

Rationale: A Case for Differentiation

The Inclusion Debate

Some writers argue that the current push to include gifted education students in the regular classroom program to the exclusion of homogeneous grouping is unsound. Either extreme, exclusion or full inclusion necessarily restricts programming options for students (Schroeder-Davis, 1995). However, many writers feel that segregation of gifted children is discriminatory and protects white privilege. These writers feel that the needs of the gifted can best be met through inclusion or mainstreaming. In his essay, McDaniel states that "gifted students may be the last frontier in the mainstreaming impetus so characteristic of this country's effort to provide excellence and equity in the public school" (McDaniel, 2002). He also states that mainstreaming will help all children in a classroom achieve their highest potential, and may better help the under identified, a-typical gifted child more than current programming options. Sapon-Shevin (1994b p. 34) states "much of gifted education is laudatory and desirable," yet, "there is no convincing evidence that 'investing' in gifted children will trickle down to others students unless programs are expressly designed to do so." Some would argue to the contrary citing that fact that gifted educators have "studied, described, applied, and evaluated the kind of cognitively based instruction which is now being commended broadly for all students" (Tomlinson, 1992 p. 185). All teachers of the gifted have been

through general certification education, but not all regular classroom teachers have had the benefit of specialization in the field of gifted education. Gifted education "is a ready source of teaching models which encourage a more student-centered, process oriented, content rigorous approach to curriculum than is typically practiced in today's schools" (Tomlinson, 1992 p. 186). However gifted education does not have all the answers to the dilemmas facing today's classrooms. "At a time when we need rich and varied answers to complex educational dilemmas, all educators (should) work together for solutions" (Tomlinson, 1992 p. 1897). It is important for educators to begin to work together rather than regard their disciplines as inherently discreet and to integrate theories and practices. Thus, it behooves gifted and regular and special education to work together so that the benefits of all disciplines accrue to all students.

Researchers respond to the racial and cultural divides in American public schools as a main rationale for inclusive classrooms. Oakes and Wells (1998) chronicle 10 U.S. secondary schools that made structural modifications, such as eliminating or reducing tracked courses as a way to balance equity and excellence and provide high standards for all students. While detailing various types of reform, and indicating that gifted students were not harmed in the reform process, the authors caution that there are powerful political and social forces to protect privilege working against efforts in this area. It is interesting to note, however, that there was at least one mention of special classes offered to low-achieving students. Perhaps because these classes occurred before or after school, they were not considered tracking. Sapon-Shevin argues that gifted education advocates fear that inclusion will dilute excellence. While acknowledging that in general schools may not work well for most students, Sapon-Shevin argues that providing an atmosphere of acceptance for all with appropriately challenging material is the best way to meet the educational needs of all students. She defines an inclusive school as having a "cohesive sense of community," which accepts difference and responds to individual needs. Pull-out for any reason is seen as disruptive to the tightly knit

community fostered in such schools. Inclusive classrooms should embrace diversity and honor differences. While she acknowledges that "gifted students often report isolation and lack of acceptance in a typical heterogeneous classrooms," Sapon-Shevin believes that a truly inclusive classroom would address this issue as it does all issues of difference by advocating tolerance and understanding (Delisle, 1984 in Sapon-Shevin, 1994).

Countering Sapon-Shevin and those who would argue for no tracking, Tomlinson argues that the currently, the classroom does not meet the needs of high ability students (Tomlinson, 1994a). This fact not disputed by researchers such as Oakes and Wells and Sapon-Shevin. Tomlinson states special programs have historically been advanced because students' needs have not been met at the various ends of the ability spectrum in the classroom. In addition, large class sizes, lack of time, and lack of specialized training are blamed for the dearth of differentiation in most regular classrooms to meet the needs of gifted children. Too often teachers do not understand this population of students and are more able and motivated to provide assistance to struggling learners than to those, whom they feel can "make it on their own," (Tomlinson, et. al., 1994; Crammond and Martin, 1987 in Tomlinson, 1994). While citing the critics of inclusion for special education students, Tomlinson nevertheless agrees with Sapon-Shevin and others that "the vision of a community of inclusion is too important to the future of public education for us not to actively work toward it (Hallahan and Kauffman, 1994, in Tomlinson, 1994). In fact, many of her most recent publications have dealt with differentiating curriculum within the regular classroom program to meet diverse needs. With the fear that regular educators may embrace gifted education as yet another "one-size fits all approach," gifted education advocates share a desire to collaborate with regular classroom teachers (Tomlinson et. al., 1994 in Tomlinson, 1994). Sapon-Shevon seems to agree:

> If we must settle for classrooms as they are now organized and staffed, curriculum as it is currently defined and teaching strategies limited to lecture and whole-group instruction, thin it is

> not wonder that advocates for gifted students see the students removal and segregation as the only viable solution (Mara Sapon-Shevin, 1994).

Many researchers in the field of gifted education have begun to address the needs of gifted students where they spend the most time: in the regular classroom. Whatever the take on meeting the needs of gifted through special programming, the consensus of many of today's writers in the field, seems to be that since most students spend the majority of their time in school in the regular classroom that room ought to meet their special needs. Responding to the needs gifted children have all day, every day, the California Legislature recently did away with the requirement that there be 200 minutes per week set aside for direct services to gifted students for schools receiving gifted education monies from the state (Gosfield, 2002). The emphasis is now on educating regular classroom teachers on the nature of gifted children and how best to meet their needs in the regular classroom. "For education of the gifted to succeed in the regular classroom much work must be done by teachers in the regular classroom and teacher of the gifted to improve the conditions for learning and teaching in the regular classroom" (McDaniel, 2002). Educators and administrators must understand that differentiation requires a "serious commitment of time, energy, and funds; needs teachers who understand the complexities of various disciplines; requires administrator buy-in and support; and may not meet all students' needs (Callahan, 2001). In fact, differentiation is only a part of an array of services options for gifted children. To ensure that differentiation will be effective is "not being used as a way of temporarily warding off those who would attack quality education for gifted students," much education needs to be done (Callahan, 2001). My model for teacher preparation with an emphasis on serving typically underserved populations hopes to reach regular classroom teachers as well as teachers of the gifted to arm them with helpful strategies to differential curriculum with rigor and relevance.

The Extent of Differentiation Strategies in Use in the Regular Education Program

What, if any, strategies for meeting the needs of high ability children are currently in place in regular education programs? In order to discover an answer to this question over 1500 third and fourth grade teachers from all over the country and from a variety of socio-economic strata responded to The Classroom Practices Survey under the auspices of The National Research Center of the Gifted and Talented funded the Jacob K. Javits Gifted and Talented Students Education Act. The NRC/GT study asked:

1. Do classroom teachers modify instructional practices and curriculum materials to meet the needs of gifted and talented students?

The study concluded that only minor modifications are made in regular classrooms providing for the needs of gifted and talented students. When there was modification teachers used "Questioning" and "Thinking Skills" most often, and these only used slightly more often with gifted than with average children. The following were only used a few times per month, and again only slightly more often with gifted than with average students: Providing Challenge and Choice (advanced curriculums units, independent study, ability grouping, acceleration to higher grade level content, etc), Reading and Written Assignments, Curriculum Modifications (pretests, elimination of mastered material, substitution of assignments, etc.), Enrichment Centers, and Classroom Practices.

2. Do classroom teachers in various parts of the country and in communities of different sizes provide different services for gifted services?

Results around the country and in different communities (rural, urban and suburban) were similar.

3. What instructional practices are used with gifted and talented students in classrooms across the country?

Advanced readings, independent projects, enrichment worksheets and reports are used most often. Also some teachers attempt to compact the curriculum, give students choice of how to use their time and allow for higher level thinking skills. These modifications are not used much more frequently than for average students, and then only a few times per month. Many other modifications for gifted such as, working with like ability students, using enrichment centers and acceleration opportunities are not employed.

4. Are there differences in types of regular classroom services provided gifted students in districts with and without formal gifted programs?

There seem to be few differences between schools with a formal gifted and program and those without (Archambault et al., 1993).

The study concluded that there are few modifications for gifted in third and fourth grade classrooms across the country. Strategies to meet needs of gifted and talented are used infrequently, many only a few times per month or less. The study also noted that many schools still do not have formal gifted programs. Even where there are gifted programs, their impact has not been felt in the regular classroom possibly because of lack of time and inadequate training of gifted education personnel. In addition, economic and equity issues are resulting in the elimination of formal programs for gifted and talented. Sixty-one percent of respondents have had no staff development in gifted education (Archambault et al., 1993).

Besides not having appropriate training in differentiation strategies and techniques, many teachers do not provide for the needs of gifted students in their classrooms because of misconceptions about the nature of this population. Teachers may feel that giving gifted students more help, when they can "get it on their own," is elitist. Classroom teachers may also not understand who the gifted learners in her class might be especially if they are underachievers (Winebrenner, 2000). Because gifted children often score high on tests, teachers, maybe falsely, assume they are learning (Winebrenner,

2000). Such students may have already learned the information; in addition, the tests may not measure what a child truly knows or what a child could do with the information. In this age of accountability, teachers may spend most of their time with students they feel they can bring up to the standards and not those who are already there, or far exceed them (Winebrenner, 2000). Many classroom teachers modify classroom assignments for low-achieving students and are encouraged to do so. However, for students who might score well above the norm on an end of the year test given in September, little if any modification occurs. Further, classroom teachers may overlook the needs of gifted students from typically underserved populations because they don't fit into their "good student" model of what constitutes gifted behavior.

The consensus among gifted education researchers and writers seems to be that a major avenue for meeting the needs of gifted children all day every day is differentiation of instruction. But just what is "differentiated instruction?" Remembering that all children are unique, and all gifted children are equally unique, it's been said that "all gifted learners march to the beat of a different drummer, (but) they do not march to the same beat of the same different drummer (Callahan, 2001). Teachers offering differentiation should adhere to the principle that they teach "students, not curriculum," and see their pupils as separate individuals with personal styles, interests, talents and skills. Reis et al defines differentiation as:

> ...accommodating learning differences in children by identifying students' strengths and using appropriate strategies to address a variety of abilities, preferences, and styles. Then, whole groups, small groups and individual students can equally engage in a variety of curriculum enrichment and acceleration experiences" (Reis et al, 1998 p. 75).

In the end, we should "worry less about the label we assign and more about the instruction that we offer" (Callahan, 2001). My model is designed to help classroom teachers, as well as teachers of the gifted, understand and

implement the many and varied approaches to differentiating the curriculum so that the needs of all students can be more effectively and efficiently met.

In Conclusion: A Vision for Excellent Schools

Perhaps there is no better summary of what is needed for the gifted, and indeed for all children in America's public schools than the vision elucidated in the National Excellence report:

> All children progress through challenging material at their own pace. Students are grouped and regrouped based on their interests and needs. Achieving success for all students is not equated with achieving the same results for all students.
>
> Diversity is honored in students' backgrounds as well as in their abilities and interests. The classroom, school organization, and instructional strategies are designed to accommodate diversity and to find the strengths in all children.
>
> Students know that parents, educators, and other important adults in their lives set high expectations for them and watch them closely to ensure that they work to their ability and develop their potential.
>
> The community provides the resources needed to adapt and enrich the curriculum to meet student needs. School faculty and administrators ensure that community and school resources are matched with students' strengths and needs.
>
> Students gain self-esteem and self-confidence from mastering work that initially seemed slightly beyond their grasp.
>
> Students emerge from their education eager to learn and confident that they can join the intellectual, cultural, and work life of the nation (O'Connell Ross, 1993).

Preparation of Teachers for the Gifted

Recommendations Regarding Teacher Preparation and the Education of Gifted and Talented Students

The literature offers many and varied solutions for the problems facing gifted education. [2] One of the main recommendations involves teachers in the regular classroom. The first thing that has to happen is for teachers and others to acknowledge that there are those who have high abilities (O'Connell Ross, 1993; Tomlinson, 1994). All educators should show respect for intellectual diversity (Kearney, 1993; Tomlinson, 1994).

Many researchers call for gifted education all day every day even for the profoundly gifted (Kearney, 1993). While this may include pull-out or other options, the bulk of the needs of gifted students should be met through differentiation of the regular classroom program in which most gifted students spend a majority of their time. Ford & Russo, 1995; Tomlinson, 1995; Tomlinson, 1995; O'Connell Ross, 1993; Passow & Rudnitsky). Training for teachers should be systematic and continuous (Tomlinson, 1995). It should also include understanding and methods to help teachers deal with extreme intelligence (Kearney, 1993).

> Developing gifted potential in the classroom will:
>
> > (1) improve the quality of education for all students instead of a small minority; (2) satisfy the education needs of many gifted students; (3) create opportunities in which the diverse capabilities of students, whatever their background or characteristics, can be supported and developed; and (4) and provide students with more chances to manifest their abilities or talents in the classroom (Masse, 2001).

All teachers should recognize the characteristics and needs of gifted learners especially non-traditional and underrepresented populations (Ford and Russo, 1995; Kearnery, 1993; Tomlinson, 1994). Programming should encourage diverse needs and have multiple menus to support humanities, literature and the arts not often found in schools (Masse, 2001). Teachers need to be sensitive to what constitutes motivation for developing gifts and talents,

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[2] Note that the term gifted is used herein, but refers to the gifted and talented and includes typically underserved populations.

be committed to long-term training in the traits associated with creativity: tolerance for ambiguity, risk taking, perseverance, willingness to grow, open mindedness and self-esteem (Sternberg & Lubart, 1993; Masse, 2001, Ford el al., 1993). In addition, there should be more emphasis on socio-emotional needs of high potential children (Masse, 2001). Moreover teachers (and others) should strive to mitigate the often hostile school climate with respect to highly gifted children (Kearney, 1993) and gifted children (O'Connell Ross, 1993).

Research should be conducted on challenging curriculum, standards for assessment, and teaching strategies that meet the needs of gifted students (O'Connell Ross, 1993). Programming for gifted in and out of the regular classroom program should be global and include true multicultural studies and foreign language learning (Masse, 2001).

Local, state, and federal governments need to sufficiently fund these efforts (O'Connell Ross, 1993). Additionally, teachers should know what the ceiling is in the regular classroom program and how the achievements of the gifted reach or exceed that ceiling (Tomlinson, l994b). Moreover, research should keep abreast of brain research and the interaction of environment on developing talents so that the most "brain friendly" methods and approaches are employed (Masse, 2001).

Teachers should be able to understand appropriate assessment procedures which measure achievement at the highest levels so that students from these varied backgrounds can be correctly identified and served (O'Connell Ross, 1993). To find gifted children, multiple selection criteria should be used (Gallagher, 2000; O'Connell Ross, 1993). Self-evaluations should also be considered as manifestations of intrinsic motivation (Masse, 2001). Teachers should understand that the purpose is not to label students, but to help develop nascent talents (Masse, 2001).

Even given the above emphasis on regular classroom teachers, it is recommended that existing programs for the gifted not be cut (Archambault et al, 1993; Passow & Rudnitki, 1994). However, gifted education services should exist on a continuum of need. Historically, because of funding service delivery

has been limited, and practice is based on expediency and not on empirical evidence (Shaklee, 1997). Best practice deems that programming should include "many sectors: regular and special classrooms, local and specialized schools, instructional methods, curriculum, coordination of stakeholders (educators, parents and other members of the community), resources learning environments, expectations, assessment, and so forth" (Masse, 2001). Services for gifted students may take place in a variety of settings including pullout and in the community (O'Connell Ross, 1993; Passow & Rudnitski, 1994).

In addition, all teachers of the gifted should have special training in gifted education and should be certificated in this area (Ford & Russo, 1995; Archambault et al., 1993; Masse, 2001; Ford el all, 1993). Just as teachers working with children with disabilities needs special training, so do teachers of the gifted (Ford et al., 1993). Teachers of the gifted should be recruited from minority and bilingual teacher populations (Bernal, 2002). Moreover, teachers of the gifted should be trainers of classroom teachers in differentiation strategies with the proviso such teachers may not be effective staff developers and their time might best be spent directly with gifted students (Archambault et al., 1993; McDaniel, 2002). Regardless of who does the instruction, it is imperative that all teachers should have opportunities for "extensive and comprehensive" preparation to understand gifted students Ford et al, 1993 p. 10). Without such education, especially in the area of differentiating the curriculum, classroom teachers may not have the knowledge and skills necessary to mitigate against the negative myths and stereotypes that surround the gifted (Toll, 2000).

Since more advocacy groups and lobbying efforts are needed for gifted students (Ford & Russo, 1995), gifted educators need to be a strong voice for advocacy (Tomlinson, 1994; Ford et al, 1993).

California

California is one of only 12 sates that does not mandate programming for its gifted and talented students (Clark, 1995). While funding for gifted education is available, it is not mandated and is constantly in danger of being reduced or eliminated in tough financial times. While, California does not require certification or credentialing of those working with gifted students, currently, monies granted are tied in to providing some certification although levels and quality of this certification is left up to individual districts. Fifteen years ago, California had a thorough credential for teachers working with gifted children, and nine California universities prepared teachers for that credential. The Commission on Teacher Credentialing deleted the Specialization Credential in Gifted Education and thus most universities do not offer classes in gifted education at this time. Currently no doctoral program and only a few advanced degree programs and occasional gifted education classes exist in the state (Clark, 1995). The state of California needs rigorous, relevant and more binding requirements for those working with gifted children. This includes not only gifted education facilitators, but for classroom teachers with whom these children spend most of time.

Characteristics of an Effective Teacher of the Gifted With Attention to Culturally and Linguistically Diverse Learners

Tomlinson (1995b) makes one of the most eloquent arguments for the traits of an effective teacher of gifted students, whether that teacher is a specialist in the field or a regular classroom teacher. According to Tomlinson, an effective teacher in any setting is one "who leads children on a pilgrimage of the mind. An effective teacher—for gifted learners, as for others---a magical teacher, is one who crafts a "love triangle" between himself or herself, the child and the ideas around with classroom days are constructed (Tomlinson, 1995b, p. 9). This more holistic description of teacher effectiveness stands in stark contrast to the "good teacher of the gifted" checklists common in the literature and illuminates the need to move beyond the idea that high quality teaching and learning is formulaic. Rather, effective teaching involves helping gifted

students find pathways within chosen disciplines and assist them in acquiring the skills, mental and physical, needed for the development of talent in particular areas (Landvogt, 2001).

Whether pre-service or in-service teachers, those who work with gifted students need to have certain habits of mind, which include an extreme desire for learning. Such a teacher is a learner with "a mental itch" to learn that in turn motivates student learning (Tomlinson, 1995b; Csikscentmihalyi, Rathunde & Whalen, 1993). In order to stretch minds and bring learning alive, the teacher of gifted students should have a wealth of knowledge in specific domains and an understanding of how the subject is conceptually framed. This type of deep perspective will help insure that the learning is meaningful and has the necessary depth and complexity to challenge gifted minds and to provide the struggling learner with appropriate focus (Tomlinson, 1995b). In order for students to experience peak learning experiences, called "flow," teachers need to continually develop their own interests in the domain, and be able to understand their abilities to convey passion; they focus on development of skills, not discipline issues, hold high standards and model metacognition and self-reflection. In addition they are flexible and read their students' shifting emotional and cognitive needs well (Csikszentmihalyi, Rathunde, & Whalen, 1993). Moreover, classroom teachers, as well as teachers of gifted in a homogenous setting need to know how to differentiate the curriculum, allow for flexible grouping and adjust the pace of learning so that students are neither bored nor frustrated (Tomlinson, 1995b).

In essence, characteristics of effective teachers of the gifted mirror attributes of gifted individuals and include high intelligence, knowledge and achievement, flexibility, and respect for differences, pursuing cultural and intellectual interests, and valuing gifted students.

Effective teachers of the gifted establish the classroom as a community of learners in which students engage in work that respects their abilities and learning styles where the teacher is a facilitator encouraging independence (Tomlinson, 1995b). Since today's classrooms tend to be multicultural and

encompass wide-ranging needs and abilities and socio-economic groups, it is essential that teachers value both likenesses and differences and strive for equity *and* excellence:

> A teacher with this characteristic understands that pretending we are all alike robs us of our individuality, obscuring both our talents and our troubles. Such a teacher also understands that failure to help us understand our vast commonness robs us of respect for the value of all human life (Tomlinson, 1995b p. 9).

Effective teachers of the gifted in today's classrooms, first and foremost need to have a sensitivity to cultural differences that begins with self-awareness and self-understanding, cultural awareness and social responsiveness(Ford & Trotman, 2001b). To create a culturally responsive classroom, teachers will need to understand culturally relevant pedagogy to empower students by developing cultural identity. In addition, teachers need to seek equity for all students under their care. Teachers in a culturally sensitive classroom need to understand that all students have knowledge and should look at children holistically. The classroom should be a caring place that fosters inclusivity and is respectful of family needs and contributions. Teachers need respect for students' primary languages and seek learning strategies that match cultural learning styles and seek culturally sensitive assessments. Effective teachers of the gifted in such settings need to be aware that they may be adopting a deficit viewpoint when evaluating needs within the classroom or referring students for gifted programs. It may difficult for teachers to see beyond what a student can do to what they might be capable of accomplishing (Harris III & Ford, 1999). Thus in order to acquire the sensitivity and understanding promoted by Tomlinson, preservice and practicing teachers should receive:

1. Early, ongoing, and substantive classroom experiences with minority and gifted students
2. Training to understand and respect students' cultural heritages, worldview, values, customs and languages

3. Understanding of minority students' communication skills, modalities, behaviors (e.g. Body language, facial expressions, eye contact, silence, touch, public space, dress
4. Understanding and decreasing of their misperceptions, stereotypes and fears of minority students
5. Outreach skills how to work effective with minority students, their families, and their communities
6. Greater respect for individual and group differences in learning, achievement and (Ford, 1998).

Concomitantly, gifted English language learners also need special considerations in addition to the above. San Diego City School's Project EXCEL, adding to more general gifted and talented educational concerns, describes the need to understand "the impact of culture, ethnicity, socioeconomic status, home language and other factors on the development, expression, and recognition of giftedness," and how these factors affect assessment and achievement. There is also a need for bilingual teachers to be trained in gifted education and for gifted education teachers to be trained in bilingual education (Bernal, Perez, & Rode, 1997 in Bernal, 200).

In order to create a classroom responsive to diverse needs, the teacher needs to continually assess student interest, knowledge and abilities, allow for multiple modes of accessing and relaying information and understanding, promote flexible grouping, and help students internalize high standards of work and accomplishment and goal setting. Additionally, teachers need to understand the link between affect and cognition and know how and when to balance group and individual work, teacher and student direction, and between individual and group accomplishments (Tomlinson, 1995b). Teachers also need to understand the characteristics and needs of multilingual gifted students who are often referred late to gifted programs, or go unrecognized in regular classrooms (Bernal, 2002). Moreover, bilingual teachers should be trained in gifted education and gifted educators, as well as classroom teachers need to understand ELL methodologies and approaches. There is also a need for teachers of ELL and/or minority gifted students to be well versed in working with the parents of these children (Bernal, 2002).

Why does research show that "relatively few veteran teachers and fewer novice teacher are exemplars" of traits necessary for effective teachers of the gifted (Tomlinson, 1995b)? Perhaps it is because teachers are trained for a one-size fits all classroom. There is a lack of teacher preparation for differentiated instruction, worry over administrator misunderstanding of learning in less structured environment and a lack of subject mastery. In addition, test-driven instruction and lack of management skills for a multi-task classroom, large class sizes, and lack of training in academic and cultural diversity play a large part in discouraging teachers from pursuing classroom models based on the community of learners philosophy (Tomlinson, 1995b). In addition, teachers of color and multilingual teachers have not been adequately recruited and retained to work with this population within or outside of regular classroom programs (Ford, 1998; Bernal, 2002).

Standards for Personnel Preparation in Gifted Education With Attention to Culturally and Linguistically Diverse Learners

One of the seven recommendations of The National Excellence report was that teacher training be improved so that teachers are trained in and receive support for delivering high-level curricula to benefit "not only students with outstanding talent but children at every academic level" (O'Connell-Ross, 1993). As stated previously, this initiative has seen mixed results. The quality of gifted education teacher preparation is inconsistent. While 37 states report state level assistance to teachers, these typically are offered to gifted education specialists and not to classroom teachers who work with students day to day. Furthermore, the in-services offered are often disjointed, and consist of one-time workshops given by outside consultants. State personnel or higher education faculty designated to provide assistance to gifted education personnel, are often overburdened with other responsibilities. Thus, there is a continued need for federal, state and local financial support so that all teachers will have access to quality education in this field.

It seems clear then that today's classroom teachers, as well as gifted

education specialists need more comprehensive teacher preparation to meet the needs of the diverse learners they will encounter. What would a rigorous university based teacher preparation program look like? There appears to be a dearth of empirically based research on the effectiveness of staff development in the field of gifted education (Johnsen, 1998 in Bernal, 2002).

Even though teachers' personal traits are of paramount importance in teaching gifted students (Landvogt, 2001) it is probably best to focus on modifiable competencies, skills and knowledge, as the basis for learner outcomes in teacher preparation programs for gifted educators (Feldhusen, 1997). Summarized from the literature (Hultgren & Seeley, 1982; Nelson & Prindle, 1992 Silverman, 1982; Starko and Schack, 1989 and Story, 1985) these competencies include:

> teaching thinking skills, problem solving, and creativity; in interacting with students; in using appropriate motivational techniques; in conducting student-directed activities; and in facilitating independent research (Feldhusen, 1997 in Chan, 2001).

Individual disciplines may, in turn, have their own concomitant competencies.

Barbara Clark offers a two-tiered approach to professional development. She likens similarities and differences between regular classroom teachers and gifted education specialists to those between general practitioners and specialists in the medical field. While all teachers need to be proficient in the differentiation practices of assessing learning, pacing of instruction, integrating varied intellectual processes, and making sure all students achieve to their highest level, gifted education personnel, just as medical specialists, need more detailed preparation. Specialists should understand the nature, needs and origins of high intelligence and how to effectively meet those needs. Specialists should understand the cognitive, social, emotional, and intuitive traits that high levels of intelligence can engender. Gifted education specialists should be just that in designing learning environments that foster risk-taking, peer relations, and challenge in a setting that is flexible, individualized and differentiated. Gifted education specialists should also be curriculum experts

to challenge those with deep and diverse interests and foster social and ecological awareness in students as well as a respect for all people. Gifted education specialists should also be able to provide professional services including consultation and collaboration for teachers, administrators and parents. In addition, gifted specialists should act as advocates for gifted education (Clark, 1995).

Kaplan seems to agree somewhat with the views of Clark above. She states that, just as students need differentiated instruction, so do teachers. "Differentiation should guide the type and scope of learning experiences...to those preparing to teach gifted students" (Kaplan, 1995 p. 31). Further, an on-going support network needs to be established to provide encouragement and assistance in carrying out new learning In addition, since one-size-fits-all in-services rarely meet the needs of participants, professional development needs to take into account teacher readiness, interest, professionalism and expertise. She proposes a four-tiered program to meet these varied needs. The stimulus type of in-service is that which is intended to arouse interest and give an overview of gifted education. Theoretical programming gives teachers the contextual underpinnings of the views and practices of gifted education. Practical in-services develops teacher expertise in the field, and training in-services help teachers become teacher leaders and assume teacher trainer roles (Kaplan, 1995). She proposes a successful professional development rubric , which puts the onus on participants rather than in-service workshop leaders to evaluate the effectiveness of teacher preparation in-service.

San Diego's Project EXCEL's certification process (Bernal, Perex & Rode, 1997 in Bernal, 2002) for its Bilingual G/T teachers includes in its goals and objectives curriculum which focuses on the characteristics, behavior, identification, assessment and differentiated curriculum for gifted and talented students and professional development for teachers. Significantly, it also includes instruction of parenting of gifted students and ways to include parents

in all aspects of their child's education.

In 1995 the National Association for Gifted Children[3] published standards for personnel preparation for gifted educators at the graduate level. The NAGC standards are designed:

1) to set standards for institutions attempting to develop or refine new or existing graduate programs preparing personnel for professional roles in gifted education and;
2) to prescribe criteria on which internal and external evaluation of such programs may be based (Parker, 1996 p.159).

The NAGC standards encompass four main categories: Conceptual Framework, Candidates for Graduate Programs in Gifted Education, Professional Education Faculty, and Resources. Indicators within each category serve as outcomes/objectives. The following enumerate the standards from Category I: Conceptual Framework. This category includes both the conceptual framework i.e. the philosophy goals and knowledge base of the curriculum, but also professional studies, the professional coursework and field experiences. The conceptual framework indicators help ensure that there is a firm philosophy of pedagogy in place and that courses and fieldwork adhere to that philosophy. Indicators for the professional studies sub-category include (1) what teachers need to know and understand, and (2) what teachers are able to do (Parker, 1996). (Appndix D) These standards seem to constitute a rigorous and rich curriculum for teachers preparing to work with gifted students. Highlighted are those standards that seem to address the need for teachers to understand and work with underrepresented gifted student populations.

Category II of the NAGC recommendation relates to candidates for graduate programs in gifted education. The standards advocate teacher candidates be high quality students and efforts should be made to attract students of diverse backgrounds. Admission to graduate programs in gifted education "should consider a variety of indicators such as appropriate test data, records of academic achievement, evidence of successful teaching experience, and other current methods of assessing academic and teaching potential" (Parker, 1996).

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[3] Mission Statement: The National Association for Gifted Children (NAGC) is an organization of parents, teachers, educators, other professionals and community leaders who unite to address the unique needs of children and youth with demonstrated gifts and talents as well as those children who may be able to develop their talent potential with appropriate educational experiences. We support and develop policies and practices that encourage and respond to the diverse expressions of gifts and talents in children and youth from all cultures, racial and ethnic backgrounds, and socioeconomic groups. NAGC supports and engages in research and development, staff development, advocacy, communication, and collaboration with other organizations and agencies who strive to improve the quality of education for all students. (*National Association for Gifted Children*, 2003).

In Conclusion

The NAGC and Project EXCEL's standards and gifted education teacher preparation curriculum components complement each other well. Two glaring differences arise. Project EXCEL's curricula includes a heavy parent component seemingly absent in the NAGC standards. Concomitantly, practicum or field experiences seem absent in the EXCEL curriculum.

The National Council for Accreditation of Teacher Education (NCATE) in affiliation with the Council for Exceptional Children regulates accreditation of gifted education teacher preparation at the national level. The knowledge and skills deemed necessary by this body is included in table (Appendix A). Standard GT 1, Gifted Education Philosophical, Historical and Legal Foundations of Special Education standard, K-4, speaks to the import of discriminatory practices concerning underserved gifted populations. GT 2, Gifted Education Characteristics of Learners standards K-3 and K-4 also addresses needs of special populations of gifted students and GT 2, K-5 looks at the effects of families on gifted students, but does not specifically advocate working closely with parents as does the Project EXCEL criteria. In the GT 3, Gifted Education Assessment, Diagnosis, and Evaluation strand of the standards, no special provisions seem to be made to understand the differing assessment and identification requirements of typically underserved gifted populations.

In neither the Project EXCEL model nor the NAGC or CEC models is multicultural education mentioned for gifted and talented students. Perhaps it is embedded within the strong choice component of typical programming for gifted children, but a strong component of any culturally sensitive programming for gifted children should included explorations of many cultures.

The NAGC, Project EXCEL and CEC standards and teacher preparation curricula components can serve as models against which to measure teacher preparation and staff development programs.

Chapter 3

METHODOLOGY

Research Question

What would constitute a rigorous model of a professional development program with an emphasis on serving typically underserved student populations for educators working with gifted and talented students?

Research Design

My research is intended to improve the current training of teachers of the gifted in the state of California and to spread this training to teachers beyond the gifted education field so that the newest theoretical constructs regarding intelligence theory, identification practices, and service delivery may be implemented and not just espoused at the state and federal level, and to expand the population that is currently reached in gifted and talented programs.

For my Action Research Project, I designed, received feedback from program reviewers and developed a model of a professional development program with an emphasis on serving typically underserved student populations for educators working with gifted and talented students. I will distribute my model to California universities for consideration.

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Data Collection PHASE 1

In order to understand how states mandate what educators of gifted children should know and be able to do, I researched credentialing, certificate and/or endorsement requisites in states with mandates to serve gifted children. Looking for models to reveal how state mandates are translated into coursework, I analyzed program models from universities in each state that have endorsement mandates and also at universities where noted professionals

in the field of gifted education currently work. I looked to these states and universities because I hoped that there would be found models espousing the inclusion of a wide range of gifted children and the newest education theories in the gifted education field. I also looked at teacher education programming for educators of the gifted at two [selection criteria?] California universities even though this state has no credential for gifted education so that my work can build on what is already being offered here. These particular universities are listed as offering gifted education graduate courses (*Education of the gifted: graduate schools in the United States*, 2003). I looked at university program and course descriptions for both core and elective courses to determine as much as possible the theoretical constructs underlying these programs and to measure how specific courses align with stated state and university goals. I also examined the Council for Exceptional Children's Educational Standards for teachers of Students with Gifts and Talents. I sought not only to see what was being taught in the field across the country, but I wanted to emulate coursework that reflected the newest theories of gifted education in my own program.

Data Collection PHASE 2

Once that data was analyzed, I developed a prototype of a gifted education professional development program, which is grounded in the relevant research reflecting the newest intelligence theories and inclusionary practices, and teacher preparation guidelines and models for work with underrepresented gifted populations. I submitted the professional development program to fifteen readers chosen from among classroom teachers, administrators and university personnel and from educators selected for their expertise in the field of gifted education.

After interpreting feedback from my field reviewers, I refined the gifted education professional development program and will submit it to California universities for possible implementation.

Analysis Procedures PHASE I

I analyzed program components using the attached matrix to find patterns in the data, commonalities and innovations, which would inform the certificate program I developed. I grouped coursework under the following headings: History of Gifted Education, Nature and Needs, Programming Models, Curriculum Modifications, Talent Development, Program Development/Staff Development, Thesis, Practicum Description, Special Seminar and Other. I also noted the name of the Institution, the program description and its length in semester hours.

Throughout, I looked at course descriptions that spoke specifically to the goals of preparing teachers to work with diverse gifted students both in and outside of regular classroom programs and to spread gifted education differentiation techniques to a wider population than is typically served.

Analysis Procedures PHASE 2

I analyzed the feedback from my field reviewers and incorporated suggestions as warranted into my final product design. I asked my reviewers to especially look for those aspects of my program that speak to diverse and typically underserved gifted students both in and outside of regular classroom programs and ways gifted education differentiation techniques can be more widely disseminated in regular classroom programs. I then modified my program design according to feedback.

Education of the gifted: graduate schools in the United States. (2003). Retrieved 10-7-2003, 2003, from http://www.gradschools.com/listings/west/edu_gifted_west.html

Chapter 4

DISCUSSION, IMPLICATIONS, CONCLUSIONS INITIAL PROGRAM DEVELOPMENT

What would constitute a rigorous model of a professional development program with an emphasis on serving typically underserved populations for educators working with gifted and talented students?

In order to address the above question, I conducted a literature review, researched program guidelines in states requiring gifted and talented endorsements, and analyzed university certificate and master's degree programs to see how state mandates were realized through coursework. I also examined the Council for Exceptional Children's Educational Standards for teacher of Students with Gifts and Talents (*CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents*, 2003).

Historical Import

The first literature review section entitled, **History of Intelligence Theorists and Intelligence Testing** gives a brief overview and history of the gifted education field and it's roots in modern psychology with emphasis on the theories behind the construct of intelligence in general and the evolving conceptions of giftedness in particular. In addition, this section more thoroughly explores the theoretical contributions of some of the major curriculum developers in the current field of gifted education. Joseph Renzulli's Three-Ringed Theory of Giftedness, and his curricular models, The Revolving Door Model and Schoolwide Enrichment Model are pervasive in the field. His work broadens and operationalizes the definition "gifted and talented" and shows how schools can efficiently provide gifted education services to the academically gifted as well as students possessing outstanding talents while

benefiting the whole school population. Renzulli's model, based in the classroom, is intended to reach all students with above average intelligence, task commitment (inside and outside of school), and creativity.

Howard Gardner's Multiple Intelligence Theory has not only shaped curriculum in the gifted education field, but his ideas have broadened the way gifted educators are thinking about identification issues by looking for gifts and talents beyond the analytical reasoning core of traditional intelligence tests. Howard Gardner's work addresses the long neglected talent aspect of gifted and talented education by positing talents within specific intelligences.

Robert Sternberg's Triarchic Theory of Human Intelligence is important for it's view of giftedness as advancing, either qualitatively or quantitatively, towards expertise in a domain. Thus, teaching for "Successful Intelligence" significantly informs curriculum considerations for this population.

This portion of the literature review taught me the significance of understanding the early history of intelligence and intelligence theories, even though few states specifically indicate that this history is necessary in their mandates. Most universities, if they address this historical framework at all, do so either within more general foundations or philosophies of education courses or as a subsection of courses with a variation of the title, "Nature and Needs of the Gifted Child." Of the universities I researched only The University of Idaho and The College of William and Mary listed separate coursework, which specifically addressed this content. However, the Council for Exceptional Children's Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents lists the following knowledge foundations for teachers working with gifted and talented children:

Historical foundations of gifted and talented education.
Models, theories, and philosophies that form the basis for gifted education.
Issues in definition and identification of individuals with gifts and talents, including those from culturally and linguistically diverse backgrounds.
Incidence and prevalence of individuals with gifts and talents.

Historical points of view and contributions of culturally diverse groups. (*CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents*, 2003)

This historical foundation is critical so that educators can understand the newest thinking in the field as it relates to intelligence of all children in general and so that a more accurate philosophy of "giftedness" is understood in particular. Such a foundation will also help ensure that the newest federal and state definitions of giftedness are understood in an historical and epistemological framework and that the ramifications of this work are appreciated. Thus, among the core courses I have proposed in my professional development model is a course entitled "Nature and Needs of the Gifted and Talented Child With Attention to Children from Across Cultures and Within Underserved Populations." One of the major learning outcomes is: "Students will critically analyze the history of intelligence theory and intelligence testing and history of the field of gifted education, and articulate a rationale for the education of gifted children from across cultures and within underserved populations."

Who are the Gifted?

My research also touched on some sensitive and controversial issues surrounding gifted education. Fundamental questions regarding the legitimacy of the field have been raised in the literature. Is there such an "entity" as a gifted child or is the notion completely an artificial construct? Is gifted education only for the rich and the white? Do abilities, and thus needs, exist on a continuum? These are some of the questions brought up by critics of gifted education and explored in the second section of my literature review, **Historic Misconceptions of Who is "Gifted."** Certainly the notion of giftedness is an artificial construct. As Sapon-Shevin (1993 p.27) asserts, "identifying a category of children as "gifted" represents a decision." That decision involves whose construct of giftedness is employed and how that construct is measured and to what level. Too often the construct of intelligence

that is used to identify gifted children relies heavily on IQ scores and achievement tests. It is a narrow view, "linked to the belief in the inborn, hereditary nature of intelligence" (M. Sapon-Shevin, 1993). Eva Diaz (2002a) frames the history of gifted education within a larger social, political and economic context and focuses on the failure of gifted education to serve the needs of gifted children from minority populations and the need for programming for underserved groups

Gifted education proponents are moving away from rigid classifications and reliance on IQ scores It is high time to move beyond such narrow descriptions of intelligence and embrace a new understanding that intelligence is linked to environmental and cultural contexts and can best be viewed as developing expertise. After all is it not that "although we might wish to believe otherwise, that people do not all have the same capacity to sing or to run or to write great verse or to apply mathematics to the conundrums of physics (Tomlinson, 1994b). We must find and serve all children whose needs exist beyond those met in the typical classroom. We should "speak for educational opportunities carefully crafted and articulated to develop apex talent in a widening circle of domains and in all segments of our increasingly multicultural society" (Tomlinson, 1994b).

Most states, which specify curricular areas for individuals wishing to become certified in the field of gifted education, include nature and needs of gifted children in their mandates. In addition, most universities include courses with titles such as "Identification, Nature and Needs of the Gifted, Talented and Creative" (*Arkansas State University Graduate School*, 2003) and "Characteristics of Gifted Children and Youth" (*Educational Psychology Gifted and Creative Education*, 2003). Many are beginning to add emphasis on identification and education of gifted students from across cultures and within underserved populations, however not many include this emphasis in their titles. The University of Northern Arizona lists a course entitled "Education of Minority Gifted" (*M.Ed. In Special Education Gifted Emphasis*, 2003) and the

University of Texas Pan American lists The Atypical Gifted Child" (*Masters Degree Program in Gifted Education and Certification Endorsement Program*, 2003). The University of Connecticut, home of the National Research Center on the Gifted and Talented lists "Underserved Populations and Multicultural Aspects of Gifted" in its' Three Summer's Program (*The Three Summers Program*, 2003). Whitworth College offers "Teaching the Underachiever," (*School of Education*, 2003) and Kent State University lists "Gifted Subpopulations" (*Kent State University College of Education*). These are the exceptions. For many other courses of study, it is important to look at program descriptions when looking for evidence of emphasis on underserved populations. The CEC Foundation Standards also specifically addresses issues surrounding gifted and talented students and specifically highlights the needs of underserved populations of gifted students. See Appendix A for these standards.

It seems essential that my program specifically focus on gifted children from across cultures and within underserved populations. In the core course entitled "Nature and Needs of the Gifted and Talented Child With Attention to Children from Across Cultures and Within Underserved Populations," the major learning outcomes are:

> Students will be able assess characteristics and concomitant educational needs of gifted children across cultures and within underserved populations.
>
> Students will be able to assess and recommend for use various identification instruments and procedures of gifted children across cultures and within underserved populations.
>
> Students will be able to recognize psychological profiles and concomitant psychosocial needs of gifted children across cultures and within underserved populations.

Psychosocial Needs of the Gifted in Depth

Understanding the nature and needs of gifted children includes understanding the psychology of students with asynchronous development. Many universities include the social and emotional development of such students within the "nature and needs" courses. Some universities offer separate courses with titles such as the University of North Carolina-Charlotte's course, "Social and Emotional Needs of Gifted Students." Other universities concentrate on psychometrics when dealing with the psychological needs of this population with courses such as Ball State University's, "Identification and Evaluation of Gifted Students." A few such as the University of Nebraska look at programming for the affective needs of gifted students in courses such as, "Guiding the Social & Emotional Development of Gifted/Talented Learners." Even fewer institutions, such as the University of Arkansas, seem to concentrate on the psychological needs of all students within the classroom, "Affective Programming in the Classroom." The CEC Standard 2: Development and Characteristics of Learners also list the importance of the affective in education of gifted students. See Appendix A for more information.

Thus to meet needs concomitant with students who develop at significantly different rates and who may differ from age peers in profound ways, I included among the elective courses in my program one which focuses on the affective needs of this population. This course entitled, "Psychology of the Gifted Child From Across Cultures and Within Underserved Population," has the following major learning outcomes:

> Students will search, navigate and critically consume research on one aspect of the psychosocial needs of gifted students from across cultures and within underserved populations.

Students will investigate school district and/or community resources to address psychosocial needs in gifted children from across cultures and within underserved populations.

Programming for Gifted Students

In order to further illuminate the need for specialized programming, both in and outside of the regular classroom and to show current debates within the gifted education community, the literature review includes the next two sections: **Rationale for Meeting the Needs of Gifted and Talented Students, and Rational: A Case for Differentiation.** A compendium of recommendations for the field of gifted education in general and for preparation of teachers to work with this population in specific is included in **Preparation of Teachers for the Gifted**.

Most states mandating gifted education endorsement realize the importance of teacher education in the field of specialized programming for gifted and talented among gifted and talented education facilitators. None specifically state that regular classroom teachers may also need this training. Universities that offer gifted education coursework regularly offer classes dealing with programming models and curriculum modifications. Sometimes these are separated into two distinct courses; at times they are parts of one general course on curriculum development for the gifted. There seems to be a dearth of courses in meeting the curricular needs of gifted students with an emphasis on programming for gifted students across cultures and within underserved populations. One such course from The University of Southern Mississippi is entitled, "Programming for the Atypical Gifted" (*The Frances A. Karnes Center for Gifted Studies*, 2003). Other courses, such as "Curriculum Theory and Instruction" and "Curriculum, Teaching Strategies and Evaluation for Learners with Gifts and Talents" from Cleveland State University mentions specialized populations in course descriptions, but not in course titles (*Department of Gifted/Talented*, 2003). Overall, it was difficult to find emphasis on underserved gifted populations in gifted education coursework in most universities studied.

CEC Standard 4 (Instructional Strategies), 5 (Learning Environments/Social Interaction) and 6 (Language) also address curricular needs of gifted students. See Appendix A for more information.

Because it is important that regular classroom teachers as well as gifted education facilitators have an understanding of how to meet the needs of gifted and talented students from across all cultures and within underserved populations, and because gifted education facilitators are increasingly being called on to present in-service for their colleagues, I included a core course entitled, "Meeting the Educational Needs of the Gifted and Talented Child From Across Cultures and Within Underserved Populations." This course is designed to investigate ways to meet the educational needs of gifted children in homogeneous or heterogeneous settings. Students will explore programming models, curricular modifications, and exemplary curricula for gifted children from across cultures and within underserved populations. Major Learning Outcomes for this course include:

Students will be able to argue for and against the utilization of various gifted education program models in individual educational settings.

Students will be able to design lessons/units using various curricular modifications to allow for depth, complexity and student choice and self-direction.

Students will redesign a regular classroom lesson using backwards design to allow for depth, complexity and student choice and self-direction.

Students will understand the nature of creativity, thinking skills and questioning techniques and employ strategies to teach these to children.

Students will research, teach and participate in lessons from established exemplary programs for gifted children such as Junior Great Books, Odyssey of the Mind, Future Problem Solving, Creative Problem Solving, etc.

Students will understand the impact of the dominant culture on shaping schools and gifted education programming and the historical points of view and contributions of peoples across cultures

In addition, I felt it was important to advocate for special populations within gifted educations beyond the core curriculum I proposed. Thus, among elective courses I included a course entitled, "Special Populations in Gifted Education With Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations." The major learning outcomes ask professionals to research a particular sub-population of gifted students in depth and design and implement some type of advocacy action on its behalf.

> Students will search, navigate and critically consume research on typically underserved populations of gifted children.
>
> Students will understand culturally responsive factors that promote effective communication and collaboration

> Students will search, navigate and critically consume research on typically underserved populations of gifted children.
>
> Students will understand culturally responsive factors that promote effective communication and collaboration

As stated previously, state mandates for gifted education rarely consider the regular classroom or regular classroom teachers. Universities also neglect this most essential aspect of gifted education. The University of Texas Pan American is an exception with it's course entitled, "The Gifted Child in the Regular Classroom" (*Masters Degree Program in Gifted Education and Certification Endorsement Program*, 2003). Whitworth College offers, Teaching the Underachiever" (*School of Education*, 2003).

Since I found few distinct courses on differentiating regular education curriculum with respect to gifted and talented children, and the literature kept reiterating the importance of the regular classroom where gifted children spend the majority if not the totality of their time, I included in my program a core course entitled, "Differentiating Curriculum in the Regular Classroom for Gifted and Talented Children from Across Cultures and Within Underserved Populations." This course concentrates on techniques and approaches regular

classroom teachers might use to differentiate the curriculum for gifted students from across cultures and within underserved populations. It also follows the guidelines inherent in the CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents found in Standard 7 (Instructional Planning.) See Appendix A for more information.

The Major Learning Outcomes for Differentiating Curriculum in the Regular Classroom With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations include:

> Students will assess the suitability of various textbooks in core subjects for use with heterogeneous classrooms concentrating especially on gifted students from across cultures and within underserved populations.
>
> Using various differentiation models students will design and teach classroom units in core subjects to meet the need of a heterogeneous classroom population.
>
> Students will design and teach a short classroom unit without textbooks, which utilizes individual student or cooperative group research techniques and methods.
>
> Students will investigate and employ various assessment techniques for use with differentiated curriculum.
>
> Students will demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status, and sexual orientation of individual students.
>
> Students will learn and use strategies to create learning environments that allow students to retain their own and appreciate other's language and cultural heritage.

In order to give professionals extended experience working with gifted students in a homogeneous or heterogeneous setting, I included a practicum course among the required courses entitled, "Practicum in Gifted Education With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations." This course refines and extends learning in the previous courses. The major learning outcomes for this course include:

Students will differentiate and teach curriculum for a heterogeneous classroom or homogenous gifted education program.
Students will differentiate a specific unit of curriculum that emphasizes multiculturalism and helps prepare students to live in a culturally diverse world.

Students will critically question their practice in a reflective j ournal.

Preparing to Teach Teachers

The last section of my literature review **Preparation and Ongoing Professional Development of Teachers of the Gifted**, includes characteristics of effective teachers of the gifted especially those related to reaching traditionally underserved populations. This section also highlighted research establishing the need for professional development in the field of gifted and talented education and delineates current thinking in the field regarding what teachers need to know and be able to do with regards to all gifted and talented students. As stated previously, teachers of the gifted need to be trained in the nature and needs of gifted students from across all cultures and within special populations, and be able to deliver programming to address those needs. Many researchers speak to the specifics of the above which include respect for high intelligence, understanding of the social and emotional needs of the gifted, assessment issues, curricular issues, community and parental concerns and involvement, and advocacy concerns (Kearney, 1993; Tomlinson, 1995; Ford, D. 1998;Bernal, 2002; Masse, 2001 and others previously cited).

In addition, Bernal (2002) speaks to the specifics of teacher preparation to address culturally diverse learners, especially ELL students. Bernal describes San Diego's Project EXCEL certification process and to train bilingual gifted educators. Project EXCEL includes standards for teacher preparation and has an emphasis on training teachers to work with parents of gifted students. This emphasis is not seen in more "traditional" approaches to education of teachers working with gifted children.

In addition to the above-mentioned Council for Exceptional Children (CEC) standards for teachers of students with gifts or talents, The National Association of Gifted[4] also has published gifted education programming criteria for teacher preparation for those working with gifted children. This publication states:

> Gifted learners are entitled to be served by professionals who have specialized preparations in gifted education, expertise in appropriate differentiated content and instruction methods, involvement in ongoing professional development and who possess exemplary personal and professional traits (*Gifted Education Programming Criterion: Professional Development*, 1998).

The CEC guidelines also address the topic of teacher preparation in standards 9 (Professional and Ethical Practice) and 10 (Collaboration.) For more information see Appendix A.

Thus, I included within the elective portion of my program a course entitled, Creating Gifted Education In-service With Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations." The major learning outcomes are:

> Students will search, navigate and critically consume research on one or more aspects of gifted education to address needs in an academic setting.
>
> Based on critical research on one or more aspects of gifted education, students will design an in-service to address needs in an academic setting.

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[4] Mission Statement: The National Association for Gifted Children (NAGC) is an organization of parents, teachers, educators, other professionals and community leaders who unite to address the unique needs of children and youth with demonstrated gifts and talents as well as those children who may be able to develop their talent potential with appropriate educational experiences. We support and develop policies and practices that encourage and respond to the diverse expressions of gifts and talents in children and youth from all cultures, racial and ethnic backgrounds, and socioeconomic groups. NAGC supports and engages in research and development, staff development, advocacy, communication, and collaboration with other organizations and agencies who strive to improve the quality of education for all students. (*Gifted Education Programming Criterion: Professional Development*, 1998).

Creativity

Coursework involving creativity has traditionally been the mainstay of gifted education in-service. Creativity can be taught and creative thinking and creative problem solving often form the basis of much programming for gifted students. Many universities still offer separate courses in creative thinking. Examples include Arkansas State University's course simply entitled, "Creativity," University of Southern Florida's, "Theory and Development of Creativity," and University of Idaho's, "Creative and Critical Thinking Skills for Gifted and Talented Students." The University of Northern Arizona has a course titled, "Creativity and Giftedness in the Classroom," which seems to set the stage for the direct teaching of creative thinking skills in heterogeneous settings.

The CEC document consistently lumps "gifts and talents" together and does not specifically address the need for teacher in-service in the creative arena. However, due to the fact that much of gifted education programming still involves creative thinking and problem solving, and the fact that all students would benefit from practice with creative thinking, I included among my elective coursework the course, "Creativity and Thinking Skills in Depth With Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations." The major learning outcomes for this course are:

> Students will search, navigate and critically consume scholarship in the field of critical and creative thinking.
>
> Students will research and teach various methods to infuse high-level thinking within curriculum.

The Family Connection

Historically, providing coursework for teachers in collaborating with families of gifted children has been virtually non-existent. In my small sample of gifted education coursework, I found only two universities with courses

mentioning the family connection. The University of Connecticut offers "Collaborating with Parents and Community." California State University- Los Angeles offers a counseling course entitled, "Conferences with Parents/Primary Caregivers." This latter course seems to come from a special education (vs. gifted education) background. Bernal (2002) seems to advocate especially for coursework involving the parental connection and collaboration with families. Perhaps new focus on underserved populations of gifted children, especially from culturally and linguistically diverse populations underscores the necessity of reaching out to parents and including them in the education of their gifted children has brought this focus to the fore.

The CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents guidelines repeatedly mentions the importance of the family connection. See Appendix A for specifics.

Additionally, the importance in utilizing community resources as a source and an audience for learning is not addressed in most university coursework involving education of gifted children with the exception of Oklahoma State University which has a course entitled, "Developing Community Resources for Gifted and Talented Programs."

The CEC standards do address some aspects of the importance of community if gifted education in Standard 10 (Collaboration.) See Appendix A for more information.

Because I felt that the family connection is very important, and little pursued in the field of gifted education, and because of the need to use the whole community to meet children's needs, I included as one of my elective courses, "Working with Parents and the Community to Meet the Needs of the Gifted Child From Across Cultures and Within Underserved Populations." The major learning outcomes are as follows:

> Students will research various models promoting parent support groups from among gifted education students from across cultures and within underserved populations and understand the culturally responsive factors that promote effective communication and

collaboration.

Students will implement research to initiate a local parent support group, which responds to concerns of families of gifted children for gifted children from across cultures and within underserved populations.

Students investigate ways local education and community organizations and/or resources can collaborate for the benefit of gifted children from across cultures and within underserved populations.

Conclusions: Program Development

The review of the literature, a look at university offerings concerned with gifted education and an analysis of the Council for Exceptional recommendations for what educators working with gifted children should know and be able to do, lead me to develop "A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students." Juggling many concerns, I hope that my program takes into account the latest research and guidelines in the field, reflects an acknowledgement of the importance of past education in the field and looks towards a relevant future.

A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students

This proposed course of study consists of 16 hours of core courses and 6 hours of electives in the education of gifted children from across cultures and within underserved populations. [5]

Core Courses			
Course Title	Course Description	Major Learning Outcomes	Semester Hours
Nature and Needs of the Gifted and Talented Child From Across Cultures and Within Underserved Populations	This course will investigate the nature and concomitant needs of gifted students with special emphasis on the education of gifted children from across cultures and from underserved populations, such as learning disabled gifted, handicapped gifted, underachieving gifted, profoundly gifted, etc.	Students will critically analyze the history of intelligence theory and intelligence testing and the history of the field of gifted education, understand the changing ideas surrounding the incidence and prevalence of gifted children across cultures and articulate a rationale for the education of gifted children from across cultures and within underserved populations.	4 Hours
		Students will be able to assess characteristics and concomitant educational needs of gifted children across cultures and within underserved populations.	

[5] Major Learning Outcomes use the following source as a guideline
CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents. (2003). Retrieved 9-29-2003, 2003, from http://www.cec.sped.org/ps/gifted.doc

		Students will be able to assess, interpret and recommend for use various identification instruments and procedures of gifted children across cultures and within underserved populations and discuss issues surrounding due process rights relating to assessment, eligibility and placement within a continuum of services. Students will become especially aware of and be able to address issues related to definition and identification of gifted children from culturally and linguistically diverse backgrounds and from underserved populations.	
		Students will be able to recognize psychological profiles and concomitant psychosocial needs of gifted children across cultures and within underserved populations and understand how teacher attitudes and behaviors influence behaviors of all children with gifts and talents.	
Meeting the Educational Needs of the Gifted and Talented Child From Across Cultures and Within Underserved Populations	This course will investigate ways to meet the educational needs of gifted children in homogeneous or heterogeneous classroom settings. Students will investigate programming models, curricular modifications, and exemplary curricula for gifted children from across cultures and within underserved populations.	Students will be able to argue for and against the utilization of various gifted education program models in individual educational settings.	4 Hours
		Students will be able to design lessons/units using various	

		curricular modifications to allow for depth, complexity and student choice and self-direction.	
		Students will redesign a regular classroom lesson using "backwards" design to allow for depth, complexity and student choice and self-direction.	
		Students will understand the nature of creativity, thinking skills and questioning techniques and employ strategies to teach these to children.	
		Students will research, teach and participate in lessons from established exemplary programs for gifted children such as Junior Great Books, Odyssey of the Mind, Future Problem Solving, Creative Problem Solving, etc.	
		Students will understand the impact of the dominant culture on shaping schools and gifted education programming and the historical points of view and contributions of peoples across cultures.	
Differentiating Curriculum in the Regular Classroom With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	This course will concentrate on techniques and approaches regular classroom teachers might use to differentiate the curriculum for gifted students from across cultures and within underserved populations.	Students will assess the suitability of various textbooks in core subjects for use with heterogeneous classrooms concentrating especially on gifted students from across cultures and within underserved populations.	4
		Using various differentiation models students will design and teach classroom units in core subjects to meet the needs of a heterogeneous classroom	

		population.	
		Students will design and teach a short classroom unit without textbooks, which utilizes individual student or cooperative group research techniques and methods.	
		Students will investigate and employ various assessment techniques for use with differentiated curriculum.	
		Students will demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status, and sexual orientation of individual students.	
		Students will learn and use strategies to create learning environments that allow students to retain their own and appreciate other's language and cultural heritage.	
Practicum in Gifted Education With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	In this supervised practicum, students will design and teach curriculum for gifted children in a homogenous or heterogeneous setting.	Students will differentiate and teach curriculum for a heterogeneous classroom or homogenous gifted education program.	4
		Students will differentiate a specific unit of curriculum that emphasizes multiculturalism and helps prepare students to live in a culturally diverse world.	
		Students will critically question their practice in a reflective journal.	

Electives			Choose 3
Course Title	**Course Description**	**Major Learning Outcomes**	**Semester Hours**
Working with Parents and the Community to Meet the Needs of the Gifted Child From Across Cultures and Within Underserved Populations	This course is designed to aid professionals in working with parents of gifted children from across cultures and within underserved populations. This course will also look for ways to involve local communities in the education of gifted children from across cultures and within underserved populations.	Students will research various models promoting parent support groups from among gifted education students from across cultures and within underserved populations and understand the culturally responsive factors that promote effective communication and collaboration.	2
		Students will implement research to initiate a local parent support group, which responds to concerns of families of gifted children for gifted children from across cultures and within underserved populations.	
		Students investigate ways local education and community organizations and/or resources can collaborate for the benefit of gifted children from across cultures and within underserved populations.	
		Students will initiate a project involving gifted students from across cultures and within underserved populations and a community organization and/or resource.	
Special Populations in Gifted Education With Emphasis on the Gifted Child from Across Cultures and Within	In this course students will identify, describe and analyze typically underserved populations in gifted education and propose a plan of action to meet the needs of gifted children from across	Students will search, navigate and critically consume research on typically underserved populations of gifted children. Students will understand culturally responsive factors that	

Underserved Populations	cultures and within underserved populations.	promote effective communication and collaboration.	
		Students will use, apply, design and/or implement research to bring about change for gifted children from across cultures and within underserved populations.	
Creating Gifted Education In-service With Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations	This course will prepare educators to create in-services on various aspects of gifted education for appropriate audiences (parents, fellow educators, administrators, etc.)	Students will search, navigate and critically consume research on one or more aspects of gifted education to address needs in an academic setting.	2
		Based on critical research on one or more aspects of gifted education, students will design an in-service to address needs in an academic setting.	
Psychology of the Gifted and Child From Across Cultures and Within Underserved Populations	This course will investigate etiology of psychosocial strengths and possible concomitant problems among gifted students from across cultures and within underserved populations.	Students will search, navigate and critically consume research on one aspect of the psychosocial needs of gifted students from across cultures and within underserved populations.	2
		Students will investigate school district and/or community resources to address psychosocial needs in gifted children from across cultures and within underserved populations.	
Creativity and Thinking Skills in Depth With Emphasis on the	This course will investigate the theoretical foundation of creative and critical thinking and explore ways to infuse	Students will search, navigate and critically consume scholarship in the field of critical and creative thinking.	2

Gifted Child from Across Cultures and Within Underserved Populations	high-level thinking within curriculum.		
		Students will research and teach various methods to infuse high-level thinking within curriculum.	
Seminar: Special Topics in Gifted Education With an Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	This seminar will investigate topics current in gifted education literature.	Students will search, navigate and critically consume recent research and scholarship in the field of gifted education.	2
		Students will express orally and in writing a critical, questioning perspective concerning recent research and scholarship in the field of gifted education.	

Chapter 5

DISCUSSION, IMPLICATIONS, CONCLUSIONS PROGRAM REVIEW AND REDESIGN

Out of the 17 educators I sent program reviewer materials to, I received 9 responses for a 53% response rate. Perhaps expectedly, gifted educators replied in the greatest numbers. See Appendix C for a breakdown of contactees and responders by job description.

Of those reviewers who used the Program Reviewer Response Form to score the relevance of the proposed courses to needs in their districts, all scored each course at a 5 (Program thoroughly addresses needs in my district). Thus it seems as if there is a strong perceived need among my reviewers for a program which helps teachers understand and meet the needs of gifted students.

All program reviewers wrote notes on the Program Model or on the Program Reviewer Response Form to give more specific feedback. In analyzing the responses most reviewers seemed to question the title of each of the courses. Some reviewers thought that the course title's phrase, "Gifted and Talented Child From Across Cultures and Within Underserved Populations," did not refer at all to the "typical" student found in gifted programs. One reviewer stated, "Wording of 'From Across Cultures and Within Underserved Populations' is awkward and vague." Other reviewers indicated the phrase did not seem to apply to the broader spectrum of gifted children. Some reviewers stated that the titles of the courses should be shortened and the qualifying phraseology should be incorporated into course descriptions. The few reviewers I had conversations with directly, seemed to understand the rationale for including the qualifying phrase in course titles, but suggested a clearer wording of the titles. One suggestion included substituting the word "focus" for "emphasis" in the qualifying phrase. In reality, if these courses were to be offered at the university level, the titles would no doubt be shortened to better

fit print and on-line catalogues. However, not hampered by pragmatics, I have changed the course titles to include some variation of the phrase, "...the Gifted Child Including Those From Across Cultures and Within Underserved Populations." I hope the re-wording clears up the current confusion. I also made some rather minor word changes in both the course descriptions and major learning outcomes to clarify issues raised by reviewers.

I had several suggestions about formatting. Originally, I sent most of the program reviewer materials via e-mail. The table format seemed to be fairly clear using the on-line format. However, a few reviewers suggested that the formatting be changed for "hard copies." I decided to change the table formatting to make courses easier to read as a hard copy, as well as on-line.

In addition, I made minor editing changes in the Program Rationale section of the Program Reviewer Materials. Also, I was urged by a few reviewers to place the Program Rationale before the Program Model in the Program Reviewer Materials. However, this is probably just a preference. The revised Program Reviewer Materials appear in Appendix B.

Some researchers would like to see the Creativity and Thinking skills course assigned for four semester hours of credit instead of two because there is a lot of information, programs and techniques. However, I decided that I would not make this change because the course material could be taught in a "jig-saw" fashion with each class member contributing a facet of the research and skills to the other class members. Thus a lot of information could be covered in a two- semester hour course.

One reviewer wanted to see a list of topics under the Special Topics Seminar. If this course were in a university catalogue, these would be spelled out and would change to fit current trends in the field. Some of these topics might also be student generated. Thus, they are intentionally left blank for the purposes of this thesis.

The major change, however, between the first program model and its successor lies in moving a formerly elective course now titled, Special Populations in Gifted Education Including Gifted Children from Across

Cultures and Within Underserved Populations to the core. It was pointed out to me that since this is the heart of my program, it deserves more emphasis that it had been given. I had originally intended for it to be a refinement and a emphasis of the foundation course now entitled, Nature and Needs of the Gifted and Talented Child Including Gifted Children From Across Cultures and Within Underserved Populations. Also, I had wanted to keep the entire program to 22 hours. However, I agree with the reviewers who urged me insure that the Special Populations course become a core course, and I decided that the core coursework should consist of 20 hours. I then changed the number of electives from three to two. The entire program now consists of five core courses and two electives for a total of 24 semester hours. Of course elective courses could be added at any time as professional development warrants.

A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students

This proposed course of study consists of 20 hours of core courses and 4 hours of electives in the education of gifted children including gifted children from across cultures and within underserved populations.[1]

Core Courses (4 Semester Hours)	
Course Title	Nature and Needs of the Gifted and Talented Child Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This foundation course will investigate the nature and concomitant needs (identification, assessment, instruction and psycho-social needs) of gifted students with special emphasis on the education of gifted children from across cultures and from underserved populations, such as learning disabled gifted, handicapped gifted, underachieving gifted, profoundly gifted, etc.
Major Learning Outcomes	♦ Students will critically analyze the history of intelligence theory and intelligence testing and the history of the field of gifted education, understand the changing ideas surrounding the incidence and prevalence of gifted children across cultures and articulate a rationale for the education of gifted children from across cultures and within underserved populations. ♦ Students will be able to assess characteristics and concomitant educational needs of gifted children across cultures and within underserved populations ♦ Students will be able to assess, interpret and recommend for use various identification instruments and procedures of gifted children across cultures and within underserved populations and discuss issues surrounding due process rights relating to assessment, eligibility and placement within a continuum of services. Students will become especially aware of and be able to address issues related to definition and identification of gifted children from culturally and linguistically diverse backgrounds and from underserved populations. ♦ Students will be able to recognize psychological profiles and concomitant psychosocial needs of gifted children across cultures and within underserved populations and understand how teacher attitudes and behaviors influence behaviors of all children with gifts and talents.
Course Title	Meeting the Educational Needs of the Gifted and Talented Child Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This course will investigate ways to meet the educational needs of gifted children in homogeneous or heterogeneous classroom settings. Students will investigate programming models, curricular modifications, and exemplary curricula for gifted children from across cultures and within underserved populations
Major Learning Outcomes	♦ Students will be able to design lessons/units using various curricular modifications to allow for depth, complexity and student choice and self-direction. These lessons will be demonstrated and critiqued by class members. ♦ Students will redesign a regular classroom lesson using "backwards" design to allow for depth, complexity and student choice and self-direction. ♦ Students will understand the nature of creativity, thinking skills and questioning techniques and employ strategies to teach these to children. ♦ Students will research, teach and participate in lessons from established exemplary programs for gifted children such as Junior Great Books, Odyssey of the Mind and/or Destination Imagination, Future Problem Solving, Creative Problem Solving, etc. ♦ Students will understand the impact of the dominant culture on shaping schools and gifted education programming and the historical points of view and contributions of peoples across cultures.

Core Courses (4 Semester Hours)

Course Title	Differentiating Curriculum in the Regular Classroom With Emphasis on the Gifted Child Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This course will concentrate on techniques and approaches regular classroom teachers might use to differentiate the curriculum for gifted children including gifted children from across cultures and within underserved populations.
Major Learning Outcomes	♦ Students will assess the suitability of various state mandated textbooks in core subjects for use with heterogeneous classrooms concentrating especially on gifted students from across cultures and within underserved populations. ♦ Using various differentiation models students will design and teach a classroom unit in a core subject to meet the needs of a heterogeneous classroom population. ♦ Students will design and teach a short classroom unit without textbooks, which utilizes individual student or cooperative group research techniques and methods. ♦ Students will investigate and employ various assessment techniques for use with differentiated curriculum. ♦ Students will demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status, and sexual orientation of individual students by incorporating a multicultural approach in unit design and assessment. ♦ Students will learn and use strategies to create learning environments that allow students to retain their own and appreciate other's language and cultural heritage.
Course Title	Special Populations in Gifted Education Including Gifted Children from Across Cultures and Within Underserved Populations
Course Description	In this course students will identify, describe and analyze typically underserved populations in gifted education and propose a plan of action to meet the needs of gifted children from across cultures and within underserved populations
Major Learning Outcomes	♦ Students will search, navigate and critically consume research on typically underserved including "twice exceptional" or "multi-exceptional" populations of gifted children. Students will understand culturally responsive factors that promote effective communication and collaboration. ♦ Students will use, apply, design and/or implement research to bring about change for gifted children from across cultures and within underserved populations.
Course Title	Practicum in Gifted Education Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	In this supervised practicum, students will design and teach curriculum for gifted children in a homogenous or heterogeneous setting.
Major Learning Outcomes	♦ Students will differentiate and teach curriculum for a heterogeneous classroom or "homogenous" gifted education program. ♦ Students will differentiate a specific unit of curriculum that emphasizes multiculturalism and helps prepare students to live in a culturally diverse world. ♦ Students will critically question their practice (assess and evaluate strengths and weakness) in a reflective journal. ♦ Students will video-tape a lesson for group analysis

Elective Courses (2 Semester Hours)	
Course Title	Working with Parents and the Community to Meet the Needs of the Gifted Child Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This course is designed to aid professionals in working with the special needs of parents of gifted children including gifted children from across cultures and within underserved populations. This course will also look for ways to involve local communities in the education of gifted children from across cultures and within underserved populations.
Major Learning Outcomes	♦ Students will research various models promoting parent support groups from among gifted education students from across cultures and within underserved populations and understand the culturally responsive factors that promote effective communication and collaboration. ♦ Students will write a plan, which could be used to initiate a local parent support group, which responds to concerns of families of gifted children for gifted children from across cultures and within underserved populations. ♦ Students will investigate ways local education and community organizations and/or resources can collaborate for the benefit of gifted children from across cultures and within underserved populations. ♦ Students will write a plan, which could be used to implement a project involving gifted students from across cultures and within underserved populations and a community organization and/or resource.
Course Title	Creating Gifted Education In-service Including Gifted Children from Across Cultures and Within Underserved Populations
Course Description	This course will prepare educators to create in-services on various aspects of gifted education for a variety of audiences (parents, fellow educators, administrators, etc.)
Major Learning Outcomes	♦ Students will compile and critically analyze research on one or more aspects of gifted education to address needs in an academic setting. ♦ Based on critical research on one or more aspects of gifted education, students will design and implement an in-service to address needs in an academic setting.

Elective Courses (2 Semester Hours)	
Course Title	Psychology of the Gifted Child Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This course will investigate the etiology of psychosocial strengths and possible concomitant problems among gifted children including gifted children from across cultures and within underserved populations.
Major Learning Outcomes	♦ Students will search, navigate and critically analyze research on one aspect of the psychosocial needs of gifted students from across cultures and within underserved populations. ♦ Students will investigate school district and/or community resources to ascertain how psychosocial needs in gifted children are addressed across cultures and within underserved populations.
Course Title	Creativity and Thinking Skills in Depth With Emphasis on the Gifted Child Including Gifted Children from Across Cultures and Within Underserved Populations
Course Description	This course will investigate the theoretical foundation of creative and critical thinking and explore ways to infuse high-level thinking within curriculum
Major Learning Outcomes	♦ Students will search, navigate and critically consume past and more recent scholarship in the field of critical and creative thinking. ♦ Students will research and teach various methods to infuse high-level thinking within curriculum.
Course Title	Seminar: Special Topics in Gifted Education Including Gifted Children From Across Cultures and Within Underserved Populations
Course Description	This seminar will investigate topics current in gifted education literature
Major Learning Outcomes	♦ Students will research and critically consume recent research and scholarship in the field of gifted education. ♦ Students will express orally and in writing a critical, questioning perspective concerning recent research and scholarship in the field of gifted education.

[1] Major Learning Outcomes use the following source as a guideline

CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents. (2003). Retrieved 9-29-2003, 2003, from http://www.cec.sped.org/ps/gifted.doc

APPENDIX A

CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents

Special Education Standard #1: Foundations

GIFTS AND TALENTS

Knowledge:	
GT1K1	Historical foundations of gifted and talented education.
GT1K2	Models, theories, and philosophies that form the basis for gifted education.
GT1K3	Laws and policies related to gifted and talented education.
GT1K4	Relationship of gifted education to the organization and function of educational agencies.
GT1K5	Issues in definition and identification of individuals with gifts and talents, including those from culturally and linguistically diverse backgrounds.
GT1K6	Incidence and prevalence of individuals with gifts and talents.
GT1K7	Issues, assurances and due process rights related to assessment, eligibility, and placement within a continuum of services.
GT1K8	Impact of labeling individuals with gifts and talents.
GT1K9	Potential impact of differences in values, languages, and customs that can exist between the home and school.
GT1K10	Impact of the dominant culture on shaping schools and the individuals who study and work in them.
GT1K11	Rights and responsibilities of students, parents, teachers and other professionals and schools related to exceptional learning needs.
GT1K12	Issues and trends in gifted education and related fields.
GT1K13	Laws, policies, and ethical principles regarding behavior management planning and implementation.
GT1K14	Teacher attitudes and behaviors that influence behavior of individuals with gifts and talents.
GT1K15	Historical points of view and contributions of culturally diverse groups.
Skills:	None

SPECIAL EDUCATION STANDARD #2: DEVELOPMENT AND CHARACTERISTICS OF LEARNERS

Gifts and Talents

Knowledge:	
GT2K1	Typical and atypical human growth and development.
GT2K2	Similarities and differences of individuals with and without gifts and talents and the general population of learners.
GT2K3	Similarities and differences among individuals with gifts and talents.
GT2K4	Educational implications of various gifts and talents.
GT2K5	Characteristics and effects of the cultural and environmental milieu of the child and the family.
GT2K6	Effects of medications on individuals with gifts and talents.
GT2K7	Cognitive characteristics of individuals with gifts and talents in intellectual, academic, creative, leadership, and artistic domains.
GT2K8	Affective characteristics of individuals with gifts and talents in intellectual, academic, creative, leadership, and artistic domains.

GT2K9	Effects of families on the development of individuals with gifts and talents.
GT2K10	Family systems and the role of families in supporting development and educational progress for students with gifts and talents.
Skills:	None

Special Education Standard #3: Individual Learning Differences

Gifts and Talents

Knowledge:	
GT3K1	Impact of diversity on educational placement options for individuals with gifts and talents.
GT3K2	Variations in beliefs, traditions, and values across and within cultures and their effects on relationships among individuals with gifts and talents, family, and schooling.
GT3K3	Impact gifts and talents can have on an individual's life.
GT3K4	Academic characteristic of individuals with gifts and talents, and disabilities.
GT3K5	Affective characteristics of individuals with gifts and talents, and disabilities.
GT3K6	Impact of multiple exceptionalities that may result in sensory, motor, or learning needs.
GT3K7	Differing learning styles of individuals with gifts and talents including those from culturally diverse backgrounds and strategies for addressing these styles.
GT3K8	Impact of learners' academic and social abilities, attitudes, interests, and values on instruction and career development.
GT3K9	Cultural perspectives influencing the relationship among families, schools, and communities as related to effective instruction.
Skills:	None

Special Education Standard #4: Instructional Strategies

Gifts and Talents

Knowledge:	
GT4K1	Sources of differentiated materials for individuals with gifts and talents.
GT4K2	Technology for planning and managing the teaching and learning environment.
Skill:	
GT4S1	Select, adapt, and use instructional strategies and materials according to characteristics of individuals with gifts and talents.
GT4S2	Use instructional time effectively.
GT4S3	Teach individuals to use self-assessment, problem solving and other cognitive strategies to meet their needs.
GT4S4	Choose and use technologies to modify the instructional process.
GT4S5	Use strategies to facilitate effective integration into various settings.
GT4S6	Integrate social skills into the curriculum.
GT4S7	Use procedures to increase the individual's self-awareness, self-management, self-control, self-reliance, self-esteem, and self-advocacy.

Special Education Standard #5: **Learning Environments and Social Interactions**

GIFTS AND TALENTS

Knowledge:	
GT5K1	Ways specific cultures are negatively stereotyped.
GT5K2	Strategies used by diverse populations to cope with a legacy of former and continuing racism.
GT5K3	Effective management of teaching and learning for students with gifts and talents.
GT5K4	Acceleration, enrichment, and counseling within a continuum of service options for individuals with gifts and talents.
GT5K5	Grouping practices that support differentiated learning environments.
GT5K6	Ways to create learning environments that allow individuals to retain and appreciate their own and each others' respective language and cultural heritage.
GT5K7	Strategies for crisis prevention and intervention.
GT5K8	Strategies for preparing individuals to live harmoniously and productively in a culturally diverse world.
Skills:	
GT5S1	Establish and maintain rapport with individuals with gifts and talents.
GT5S2	Structure, direct and supervise the activities of paraeducators, volunteers and tutors.
GT5S3	Create a safe, equitable, positive, and supportive learning environment in which diversities are valued.
GT5S4	Design learning environments that encourage active participation in individual and group activities.
GT5S5	Create an environment that encourages self-advocacy and increased independence.
GT5S6	Teach self-advocacy.
GT5S7	Prepare and organize materials to implement daily lesson plans.
GT5S8	Design and manage daily routines.
GT5S9	Direct activities of classroom volunteers.
GT5S10	Use universal precautions.
GT5S11	Organize, develop, and sustain learning environments that support positive intracultural and intercultural experiences.
GT5S12	Use communication strategies and resources to facilitate understanding of the subject matter for students whose primary language is not the dominant language.
GT5S13	Prepare individuals to exhibit self-enhancing behavior in response to societal attitudes and actions.
GT5S14	Mediate controversial intercultural issues among students within the learning environment in ways that enhance any culture, group or person.

Special Education Standard #6: Language

GIFTS AND TALENTS

Knowledge:	
GT6K1	Effects of cultural and linguistic differences on growth and development.
GT6K2	Characteristics of one's own culture and use of language and the ways in which these can differ from other cultures and uses of language.
GT6K3	Importance of the teacher serving as a model for individuals with gifts and talents.
GT6K4	Ways of behaving and communicating among cultures that can lead to misinterpretation and misunderstanding.
Skills:	None

Special Education Standard #7: Instructional Planning

Gifts and Talents

Knowledge:	
GT7K1	National, state or provincial, and local curricula standards.
GT7K2	Scopes and sequences of general and special curricula.
GT7K3	Theories and research that form the basis of curriculum development and instructional practice.
GT7K4	Identify and prioritize areas of the general curriculum and accommodations for an individual with exceptional learning needs.
GT7K5	General and differentiated curricula for individuals with gifts and talents.
GT7K6	Differential curriculum needs of individuals with gifts and talents.
GT7K7	Community-based and service learning opportunities for individuals with gifts and talents.
Skills:	
GT7S1	Prepare lesson plans for individuals with gifts and talents.
GT7S2	Design cognitively complex learning experiences for individuals with gifts and talents.
ST7S3	Plan instruction using cognitive, affective, and ethical taxonomies.
GT7S4	Sequence, implement, and evaluate individualized learning objectives.
GT7S5	Integrate affective, social, and career skills with academic curricula.
GT7S6	Develop and select instructional content, resources, and strategies that respond to cultural, linguistic, and gender differences.
GT7S7	Develop and implement comprehensive, longitudinal individualized programs in collaboration with team members.
GT7S8	Make responsive adjustments to instruction based on continual observations of gifted students.
GT7S9	Select instructional models to differentiate specific content areas.
GT7S10	Involve the individual and family in setting instructional goals and monitoring progress.
GT7S11	Identify realistic expectations for personal and social behavior in various settings.

Special Education Standard #8: Assessment

Gifts and Talents

Knowledge:	
GT8K1	Basic terminology used in assessment.
GT8K2	Legal provisions and ethical principles regarding assessment of individuals.
GT8K3	National, state or provincial, and local assessment, accommodations and modifications.
GT8K4	Screening, pre-referral, referral, and identification procedures for individuals with gifts and talents.
GT8K5	Use and limitations of assessment instruments for students with gifts and talents.
Skill:	
GT8S1	Gather relevant background information.
GT8S2	Use formal and informal assessments.
GT8S3	Interpret information from formal and informal assessments.
GT8S4	Develop and administer nonbiased, informal assessment procedures.

GT8S5	Use assessment information in making eligibility, program, and placement decisions for individuals with gifts and talents, including those from culturally and/or linguistically diverse backgrounds.
GT8S6	Identify supports needed for integration into various program placements.
GT8S7	Develop or modify individualized assessment strategies.
GT8S8	Evaluate instruction and monitor progress for individuals with gifts and talents.
GT8S9	Use performance data and information from all stakeholders to make or suggest modifications in learning environments.
GT8S10	Evaluate learner products and portfolios.
GT8S11	Report assessment results to all stakeholders using effective communication skills.
GT8S12	Create and maintain records.
GT8S13	Use technology to conduct assessments.

Special Education Standard #9: **Professional and Ethical Practice**

Gifts and Talents

Knowledge:	
GT9K1	Personal cultural biases and differences that affect one's teaching.
GT9K2	Organizations and publications, relevant to the field of gifted education.
GT9K3	Continuum of lifelong professional development.
Skills:	
GT9S1	Articulate personal philosophy of gifted education.
GT9S2	Access information on meeting the needs of students with gifts and talents.
GT9S3	Conduct self-evaluation of instruction.
GT9S4	Evaluate program activities for continued improvement.
GT9S5	Maintain confidential communication about individuals with gifts and talents.
GT9S6	Use verbal, nonverbal, and written language effectively.
GT9S7	Demonstrate commitment to developing the highest educational potential of individuals with gifts and talents.
GT9S8	Demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status, and sexual orientation of individual students.
GT9S9	Uphold high standards of competence and integrity and exercise sound judgment in the practice of the profession.
GT9S10	Engage in professional activities that benefit individuals with exceptional learning needs, their families, and colleagues.
GT9S11	Conduct professional activities in compliance with applicable laws and policies.
GT9S12	Practice within one's skills limit and obtain assistance when needed.
GT9S13	Practice within the CEC Code of Ethics and other standards of the profession.
GT9S14	Maintain knowledge of research and literature in special and gifted education.
GT9S15	Participate in the activities of professional organizations related to gifted and talented education.
GT9S16	Reflect on one's practice to improve instruction and guide professional growth.
GT9S17	Act ethically in advocating for appropriate services.

Special Education Standard #10: **Collaboration**

Gifts and Talents

Knowledge:	
GT10K1	Culturally responsive factors that promote effective communication and collaboration with individuals, families, school personnel, and community members.
GT10K2	Concerns of families of individuals with gifts and talents and strategies to help address these concerns.
GT10K3	Services, networks, and organizations for individuals with gifts and talents.
GT10K4	Models and strategies for consultation and collaboration.
Skills:	
GT10S1	Collaborate with families and others in assessment of individuals with gifts and talents.
GT10S2	Foster respectful and beneficial relationships between families and professionals.
GT10S3	Assist individuals with gifts and talents and their families in becoming active participants in the educational team.
GT10S4	Plan and conduct collaborative conferences with individuals with gifts and talents and their families.
GT10S5	Use group problem solving skills to develop, implement, and evaluate collaborative activities.
GT10S6	Communicate with school personnel about the characteristics and needs of individuals with gifts and talents.
GT10S7	Communicate effectively with families of individuals with gifts and talents from diverse backgrounds.
GT10S8	Model techniques and coach others in the use of instructional methods and accommodations.

APPENDIX B

Sandra Shephard
1832 Wedemeyer Ct.
Marina, California 93933
Email: Sandra_Shephard@csumb.edu
Phone: 831-883-1066

January 4, 2004

Dear:

I am a Master's degree candidate at California State University, Monterey Bay. For my graduate thesis I have devised a model for a professional development program with an emphasis on serving typically underserved populations for educators working with gifted and talented students. A rationale for the program and a detailed description are included in this letter. I have been working in the field of gifted education for over twenty years, and recently was involved with a consortium of professionals from the Monterey County Office of Education, which designed a certificate program in gifted education for Monterey County educators. After reviewing the literature, I decided to build on the consortium's work to reflect the newest thinking regarding gifted children from across cultures and within typically underserved populations.

In order to refine my model, I am asking for feedback from education professionals. After receiving feedback, I will be modifying the professional development model and sending copies to the State Department of Education, The California Association for Gifted Children, various California Universities and County Offices of Education in order to begin a dialogue concerning furthering teacher preparation in the area of gifted education. Your comments, ideas and questions are valuable to me in this endeavor.

Please take time to read the enclosed materials and fill in the Program Reviewer Response Form. Please insert the completed form in the attached self-addressed stamped envelope. Or, if you have received this information as an email, and prefer to use this format, please fill out the form as an attachment in Word and return it to me via the email address provided. If you prefer to speak with me directly, please use the phone number in the return address above. Thank you for your participation.

Sincerely,

Sandra Shephard
MAE Candidate California State University Monterey Bay

A Model of a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students

THIS PROPOSED COURSE OF STUDY CONSISTS OF 16 HOURS OF CORE COURSES AND 6 HOURS OF ELECTIVES IN THE EDUCATION OF GIFTED CHILDREN FROM ACROSS CULTURES AND WITHIN UNDERSERVED POPULATIONS. [6]

Core Courses			
Course Title	Course Description	Major Learning Outcomes	Semester Hours
Nature and Needs of the Gifted and Talented Child From Across Cultures and Within Underserved Populations	This course will investigate the nature and concomitant needs of gifted students with special emphasis on the education of gifted children from across cultures and from underserved populations, such as learning disabled gifted, handicapped gifted, underachieving gifted, profoundly gifted, etc.	Students will critically analyze the history of intelligence theory and intelligence testing and the history of the field of gifted education, understand the changing ideas surrounding the incidence and prevalence of gifted children across cultures and articulate a rationale for the education of gifted children from across cultures and within underserved populations.	4 Hours
		Students will be able to assess characteristics and concomitant educational needs of gifted children across cultures and within underserved populations.	

[6] Major Learning Outcomes use the following source as a guideline
CEC Knowledge and Skill Base for All Beginning Special Education Teachers of Students with Gifts and Talents. (2003). Retrieved 9-29-2003, 2003, from http://www.cec.sped.org/ps/gifted.doc

		Students will be able to assess, interpret and recommend for use various identification instruments and procedures of gifted children across cultures and within underserved populations and discuss issues surrounding due process rights relating to assessment, eligibility and placement within a continuum of services. Students will become especially aware of and be able to address issues related to definition and identification of gifted children from culturally and linguistically diverse backgrounds and from underserved populations.	
		Students will be able to recognize psychological profiles and concomitant psychosocial needs of gifted children across cultures and within underserved populations and understand how teacher attitudes and behaviors influence behaviors of all children with gifts and talents.	
Meeting the Educational Needs of the Gifted and Talented Child From Across Cultures and Within Underserved Populations	This course will investigate ways to meet the educational needs of gifted children in homogeneous or heterogeneous classroom settings. Students will investigate programming models, curricular modifications, and exemplary curricula for gifted children from across cultures and within underserved populations.	Students will be able to argue for and against the utilization of various gifted education program models in individual educational settings.	4 Hours
		Students will be able to design lessons/units using various	

		curricular modifications to allow for depth, complexity and student choice and self-direction.	
		Students will redesign a regular classroom lesson using "backwards" design to allow for depth, complexity and student choice and self-direction.	
		Students will understand the nature of creativity, thinking skills and questioning techniques and employ strategies to teach these to children.	
		Students will research, teach and participate in lessons from established exemplary programs for gifted children such as Junior Great Books, Odyssey of the Mind, Future Problem Solving, Creative Problem Solving, etc.	
		Students will understand the impact of the dominant culture on shaping schools and gifted education programming and the historical points of view and contributions of peoples across cultures.	
Differentiating Curriculum in the Regular Classroom With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	This course will concentrate on techniques and approaches regular classroom teachers might use to differentiate the curriculum for gifted students from across cultures and within underserved populations.	Students will assess the suitability of various textbooks in core subjects for use with heterogeneous classrooms concentrating especially on gifted students from across cultures and within underserved populations.	4
		Using various differentiation models students will design and teach classroom units in core subjects to meet the needs	

		of a heterogeneous classroom population.	
		Students will design and teach a short classroom unit without textbooks, which utilizes individual student or cooperative group research techniques and methods.	
		Students will investigate and employ various assessment techniques for use with differentiated curriculum.	
		Students will demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status, and sexual orientation of individual students.	
		Students will learn and use strategies to create learning environments that allow students to retain their own and appreciate other's language and cultural heritage.	
Practicum in Gifted Education With Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	In this supervised practicum, students will design and teach curriculum for gifted children in a homogenous or heterogeneous setting.	Students will differentiate and teach curriculum for a heterogeneous classroom or homogenous gifted education program.	4
		Students will differentiate a specific unit of curriculum that emphasizes multiculturalism and helps prepare students to live in a culturally diverse world.	
		Students will critically question their practice in a reflective journal.	

Electives			Choose 3
Course Title	**Course Description**	**Major Learning Outcomes**	**Semester Hours**
Working with Parents and the Community to Meet the Needs of the Gifted Child From Across Cultures and Within Underserved Populations	This course is designed to aid professionals in working with parents of gifted children from across cultures and within underserved populations. This course will also look for ways to involve local communities in the education of gifted children from across cultures and within underserved populations.	Students will research various models promoting parent support groups from among gifted education students from across cultures and within underserved populations and understand the culturally responsive factors that promote effective communication and collaboration.	2
		Students will implement research to initiate a local parent support group, which responds to concerns of families of gifted children for gifted children from across cultures and within underserved populations.	
		Students investigate ways local education and community organizations and/or resources can collaborate for the benefit of gifted children from across cultures and within underserved populations.	
		Students will initiate a project involving gifted students from across cultures and within underserved populations and a community organization and/or resource.	
Special Populations in Gifted Education With Emphasis on the Gifted Child from Across Cultures and Within	In this course students will identify, describe and analyze typically underserved populations in gifted education and propose a plan of action to meet the needs of gifted children from across	Students will search, navigate and critically consume research on typically underserved populations of gifted children. Students will understand culturally responsive factors that	2

Underserved Populations	cultures and within underserved populations.	promote effective communication and collaboration.	
		Students will use, apply, design and/or implement research to bring about change for gifted children from across cultures and within underserved populations.	
Creating Gifted Education In-service With Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations	This course will prepare educators to create in-services on various aspects of gifted education for appropriate audiences (parents, fellow educators, administrators, etc.)	Students will search, navigate and critically consume research on one or more aspects of gifted education to address needs in an academic setting.	2
		Based on critical research on one or more aspects of gifted education, students will design an in-service to address needs in an academic setting.	
Psychology of the Gifted and Child From Across Cultures and Within Underserved Populations	This course will investigate etiology of psychosocial strengths and possible concomitant problems among gifted students from across cultures and within underserved populations.	Students will search, navigate and critically consume research on one aspect of the psychosocial needs of gifted students from across cultures and within underserved populations.	2
		Students will investigate school district and/or community resources to address psychosocial needs in gifted children from across cultures and within underserved populations.	
Creativity and Thinking Skills in Depth With	This course will investigate the theoretical foundation of creative and critical thinking	Students will search, navigate and critically consume scholarship in the field of	2

Emphasis on the Gifted Child from Across Cultures and Within Underserved Populations	and explore ways to infuse high-level thinking within curriculum.	critical and creative thinking.	
		Students will research and teach various methods to infuse high-level thinking within curriculum.	
Seminar: Special Topics in Gifted Education With an Emphasis on the Gifted Child From Across Cultures and Within Underserved Populations	This seminar will investigate topics current in gifted education literature.	Students will search, navigate and critically consume recent research and scholarship in the field of gifted education.	2
		Students will express orally and in writing a critical, questioning perspective concerning recent research and scholarship in the field of gifted education.	

A Model for a Professional Development Program With an Emphasis on Serving Typically Underserved Populations for Educators Working With Gifted and Talented Students

Program Rationale

Addressing the Newest Research on the Nature of Gifted Children

Providing adequate services to meet the advanced educational and psychosocial needs of gifted students, K-12, has long been a challenge in U.S. public schools. This problem has been especially prevalent within culturally and linguistically diverse populations. In order to begin to remedy the situation, a new federal definition of giftedness, aligned with recent intelligence theorists, moves well beyond mere recognition of "school house" intelligence to a more encompassing theory of intelligence as developing expertise. This definition has been proposed at the federal level to draw attention to the needs of the gifted, especially those typically underserved. The Jacob K. Javits Gifted and Talented Education Act defines giftedness as:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. **Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (O'Connell Ross, 1993).** (my emphasis)

This newest federal definition of giftedness highlights the need to seek and serve typically underrepresented and underserved students from culturally and linguistically diverse populations as well as other typically underserved populations: gifted females, underachieving gifted, learning disabled, handicapped, behavior disordered gifted and the profoundly gifted. This definition also reinforces the need to focus on and serve the neglected talent aspect of the term "gifted *and* talented." It is now up to state, local and federal agencies, school districts and institutions of higher education to rededicate efforts to reach and serve all gifted children and to extend services to regular classroom teachers, so that the needs of these, and other children can be met "all day, every day." Education of teachers, administrators and specialists who work with gifted students is needed to realize the intent of the new legislation to find and serve all gifted children.

The Need to Facilitate Expanded Child-Find Practices in Gifted Education in California

The state of California's best practices echo the above national concerns and states, "All children are eligible for the nomination process regardless of socioeconomic, linguistic or cultural background and/or disabilities" and that the school district "establishes and implements both traditional and nontraditional instruments and procedures for searching for gifted students." In addition, schools are encouraged to actively seek "for referrals among underrepresented populations" ("Recommended standards for programs for gifted and talented students," 2003). How will the intent of the legislators be met at the district level? Teachers are largely responsible for referrals for gifted education programming. Teacher education regarding the broadened concept of intelligence and the need to emphasize meeting the needs of all gifted children may go a long way to upset the status quo and ensure that the needs of a wider population of gifted and talented students are understood and addressed in the State of California.

This program with its emphasis on identification, understanding the needs, and programming for gifted children focusing on underserved populations is an attempt to translate the intent of national and state legislations to local action.

Recent Changes in California's Approach to Gifted Education

In 1961, the California Legislature instituted a program for the state's academically gifted students. In 1980 the law was amended to allow districts to set their own student qualification criteria and broadened services to include those with talents in a variety of areas. In January of 2001, The California Legislature eliminated the requirement that there be 200 minutes per week set aside for direct services to gifted students for schools receiving gifted education monies from the state (Gosfield, M. (2002). Gifted all day. *Leadership* (September/October), 16-18). The emphasis from the State Department of Education places the onus of meeting the needs of gifted students on regular classroom teachers in regular classroom settings. The ruling does not eradicate pull-out programs, but relegates them to an adjunct role. The intent of the legislature is that Gifted and Talented Education (GATE) programs "must be an integral part of the school day, and include modification and extensions of the core curriculum appropriate for gifted learners" (Gosfield, 2002, p. 16). Thus there is a need for professional development of all teachers, not just those who have typically been assigned pull-out classes. **This program is intended help train all teachers to identify and serve gifted students, especially those from typically underserved populations who have been largely excluded from traditional gifted and talented services.**

The Need for Gifted Education In-Service

Many classroom teachers are not addressing the needs of the gifted in their classrooms. According to a National Research Center on Gifted and Talented study entitled "The Classroom Practices Survey," there are few modifications for gifted in third and fourth grade classrooms across the country. Strategies to meet needs of the gifted and talented are used infrequently, many only a few times per month or less. The study also noted that many schools still do not have formal gifted programs. Even where there are gifted programs, their impact has not been felt in the regular classroom possibly because of lack of time and inadequate training of gifted education personnel. In addition, economic and equity issues are resulting in the elimination of formal programs for gifted and talented. Sixty-one percent of respondents in the above survey have had no staff development in gifted education (Archambault et al., 1993). In order to expand gifted education services to benefit a wider circle of students, and to help ensure that the needs of these students are met "all day, every day," it seems obvious that teachers need more training and expertise especially in the areas of identification and curriculum differentiation of a wide spectrum of gifted students. This program is designed to emphasize classroom practices that enhance higher level thinking through differentiation of curriculum for depth, complexity, and student choice and self-direction.

Improving In-Service Opportunities for Regular Classroom Teachers and the Expanding Role of Gifted Education Facilitators

California is one of only twelve states that does not mandate programming for its gifted and talented students (Clark, 1995). While funding for gifted education is available, it is not mandated and is constantly in danger of being reduced or eliminated in tough financial times. In addition, California does not require certification or credentialing of those working with gifted students. However, currently monies granted are tied in to providing some certification for all teachers who work with gifted students, including classroom teachers, although levels and quality of this certification is left up to individual districts. Fifteen years ago, California had a thorough credential for teachers working with gifted children, and nine California universities prepared teachers for that credential. The Commission on Teacher Credentialing deleted the Specialization Credential in Gifted Education, and thus most universities do not offer classes in gifted education at this time. Currently no doctoral program and only a few advanced degree programs and occasional gifted education classes exist in the state (Clark, 1995)

> The state of California needs rigorous, relevant and more binding requirements for those working with gifted children. This includes not only gifted education facilitators, but also classroom teachers with whom these children spend most of time. My designed model will help fill the need for teacher preparation with an inclusionary view of gifted programming.

There are no guidelines from the California State Department of Education and only a handful of examples from state universities as to appropriate coursework for teachers of the gifted and/or classroom teachers wishing to understand, identify and serve this expanded population of gifted students. More needs to be done to ensure that teachers of the gifted, regular classroom teachers, and administrators understand and are able to implement the new standards of identifying and serving typically underrepresented gifted education students. This is especially critical in light of elimination of gifted education specialists and decreased funding for gifted education.

I have developed a model of a professional development program with an emphasis on serving typically underserved populations that could be used as a supplement to a teaching credential for any teacher working with gifted and talented. Such training would not only serve the intended population (gifted students regardless of socioeconomic, linguistic or cultural background and/or disabilities) but also advance the learning of all students in the regular classroom through the dispersal of knowledge of the nature and needs of this population and classroom differentiation strategies outside the field of gifted education. ("Recommended standards for programs for gifted and talented students," 2003). In addition my program is designed to aid Gifted Education Facilitators in their expanding roles as program developers, in-service providers and parent and community liaisons.

Please take time to read the enclosed materials and answer the Program Reviewer Response Form. Insert the completed form in the attached self-addressed stamped envelope. If you have received this information as an email, and prefer to use this format, please fill out the form as an attachment in Word and return it to me via the email address provided in the heading. If you prefer to speak with me directly, please use the phone number also in the heading. Please feel free to add any comments, questions or suggestions so that I may refine this model to better meet the needs of professional educators. Thank you for your participation.

Sandra Shephard

APPENDIX C

Program Reviewers

Title	Number Contacted	Number Responded
State Superintendent	1	0
Elementary School Principal	1	1
High School Teacher	1	1
Elementary Classroom Teacher	5	2
Gifted Education Teachers	6	5
County Office Instructor	1	0
University Professor	1	0
California Association for the Gifted Certificate of Completion Coordinator	1	0

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