The document provides guidelines for the education of gifted and talented students in Hawaii. Following an introduction which includes a brief historical overview of gifted and talented programs in Hawaii, the document addresses nine major topics (sample subtopics in parentheses): the nature of giftedness and talent (definitions, student characteristics); program planning (goals, program rationale, program implementation guidelines); identification and selection of students (measures for first and second screening, class size); provision of appropriate educational opportunities (models, framework for developing differentiated curriculum); teachers of gifted and talented (selection, desired characteristics, teaching styles); staff development (phases); parent involvement (community awareness); roles and responsibilities (10 staff categories, including state and district personnel, school counselor, and regular teachers); and evaluation, monitoring, and reporting (program and student evaluation). (CL)
Hawaii State
Guidelines and Procedures for Gifted and Talented Education

Office of Instructional Services/Special Needs Branch ● Department of Education ● State of Hawaii ● RS 82-2889 ● June 1982
FOREWORD

The Department's goal is to individualize the education of the gifted and talented in the public schools by providing a more flexible system wherein students who demonstrate superior achievement or who possess the potential for superior achievement, are provided with the encouragement and opportunities necessary for them to perform at a rate and level commensurate with their level of ability and achievement:

(State Plan, September 1977)

This document is intended to assist districts and schools in the identification and provision of appropriate educational opportunities for the gifted and talented in the public schools of Hawaii. As a State guide, it provides guidelines and procedures to implement the Department's A State Plan for Providing Appropriate Educational Opportunities for the Gifted and Talented adopted by the Board of Education in September 1977.

I hope that there will be a synergistic effort to achieve excellence in our gifted and talented programs in all of our schools.

Donnis H. Thompson, Superintendent
DEPARTMENT OF EDUCATION POSITION STATEMENT

Our society maintains that all children and youth have the right to develop their potential to the fullest.

The Department of Education accepts the obligation to assist all students to develop their potential and recognizes that this goal can best be accomplished by providing individualized educational opportunities.

The Department further recognizes the wide range of interests, motivations, needs, and talents among students and believes that this diversity must be considered in the design and delivery of educational opportunities. Among these students are those who have demonstrated superior achievement or possess the potential for superior achievement.

Because of their potential for making significant contributions to society, they constitute a valuable human resource. It is not possible to measure the loss to society as well as to themselves, when educational opportunities are not in keeping with the particular needs and abilities of such students.

The Department therefore acknowledges the necessity to identify such students and to make available appropriate educational opportunities to meet their needs.

State Plan, September 1977
ACKNOWLEDGMENTS

The Hawaii State Department of Education extends grateful acknowledgment to the many individuals who willingly contributed much of their time and thoughts to the completion of this document.

Special thanks go to the State Advisory Council for Gifted and Talented, a special task force, and the Gifted and Talented Committee of Volunteer Teachers for assisting the major author, Pearl Ching, Educational Specialist for Gifted and Talented:

*State Advisory Council for Gifted and Talented

Elizabeth Arakaki
Hugh Beaton
Kathy Berger
Inez Butterfield
Andrew Corcoran
Dr. Frances Cottingham
Dr. Margaret Donovan
Ronald Flegal
Faith Fujimoto
Grace Furukawa
Susan Fuller
Anne Hayes

Dr. Richard Hinze
Helen Matsui
Edward Morita
Bettie Nakagawa
Shigeko Ogawa
Dr. Hilda Ornitz
Dr. Elaine Takenaka
Evelyn Tando
Janice Tashiro
Wayne Travillion
Stanley Yamamoto
Barbara Yoshimura

Special Task Force

Dr. Doris Ching
Brooke Davis
Stanley Koki
Walter Luke

Irvin Sasaki
Liberato Viduya, Jr.
Edith Watanabe
National Consultant
Irving Sato, Director of
Leadership Training Institute

Gifted and Talented Committee of Volunteer Teachers
Elementary: Pat Aki, Ruth Chu, Shizuko Hanaumi, Vivian Hee, Mary Neumann, Evelyn Teramae, Fred Trujiano, Karen Yanagida

Intermediate: Linda Dutcher, Edith Tamashiro, Dennis Tamashiro, Barbara Yamamoto

High: Lyle Hendricks, Harold Sung, Rod Todorovich

Much appreciation is also extended to Judith Matsumura and Edna Tanigawa for the production tasks.

*Members represent a cross-section of the community: parents, Hawaii Association for Intellectually Gifted Children, Mensa, Sertoma-Serteens; Catholic Diocese, teachers, Department of Education district and state offices.
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I. INTRODUCTION
BRIEF HISTORICAL OVERVIEW OF GIFTED AND TALENTED PROGRAMS IN HAWAII

In Hawaii, programs for the academically gifted students in our public school system began in 1959. The academically gifted students were identified by achievement test scores and by an IQ test score of 130 at least. By 1971, all of these programs which provided off-ratio teachers were abolished and replaced with individualized instruction in heterogeneous classes. However, by 1975, it became evident that only sporadic efforts were being made to provide for these students. Consequently, the Department of Education organized a State Advisory Council for the Gifted and Talented to help in the redesigning of programs for the gifted. Members who were selected represented a cross-section of the community.

In 1976, Senate Resolution 364 helped to establish and support the Program for Gifted and Talented.

When the "three on two" teams began redeploying personnel in 1977, many schools recognized the need to use some of these positions for their gifted and talented programs. The Federal and State funds also gave schools the financial support to enable them to once again identify the gifted and talented and provide for them the special programs with differentiated curriculum to meet their needs, abilities and interests.

*The Hawaii "three on two" team was a three-teacher team who taught an equivalent of two classes (60 students) at the K-3 level.
GOVERNANCE: Federal and State Legislation

Federal:

1958
P.L. 85-864; the National Defense Education Act included the efforts to develop precious talents and to identify potential abilities in math, science and foreign languages.

1970
P.L. 91-230, Elementary and Secondary Amendments Title II & V. A study of gifted and talented was mandated.

1972
Commissioner of Education Sidney Marland made the Congressional Report on Gifted and Talented.

1972
The Office of Gifted and Talented, Bureau of Education for the Handicapped was established.

1974
Education Amendments of Title IV, P.L. 93-380, sec. 404, Special Projects Act was made for gifted programs.

1978

1979
Amendment of the definition to exclude psychomotor. Increased grant awards were authorized for the next five years.

1982
The Office for Gifted and Talented was dissolved. Federal funds for gifted and talented were placed into block grants.

State:

3/76
Senate Resolution 364 supported and encouraged programs and services for gifted and talented.

7/76
Hawaii Revised Statutes 301-21 Attorney General's opinion was that gifted and talented were included in the definition of "exceptional children."

2/80
Hawaii Revised Statutes 301-21 Deputy Attorney General's opinion supersedes the preceding Attorney General's opinion; gifted and talented are not included in the definition of "exceptional children."

4/82
Hawaii Revised Statutes 301-21 was amended by adding Part III. Gifted and Talented Children to recognize and provide for their unique needs.
Research shows that throughout history, the gifted were seen as a society's resource, and when needed, they were given attention in order to develop their countries' political and/or scientific leaders. Gifted persons were regarded as advocates of change.

Plato is known to be the first person to advocate selecting potentially gifted children and preparing them for leadership through education. This was in direct contrast to the belief that abilities were inherited and, therefore, the bloodlines of society's aristocracy should provide the leadership.

Others who believed in identifying the gifted regardless of economic or social background were Emperor Charlemagne in 800 A.D., Comenius in the 17th century, and Thomas Jefferson in the 18th century. Through gifted persons, nations sought to acquire or maintain a role of world leadership, but interest in them waned as national goals were met or as people needed to be "stabilized" to conformity and unity after a war or rise to power.

By the nineteenth century, people were pressed to a "status quo" state of being and thinking. There was a growing value for equality and conformity rather than excellence and innovation. Direct efforts were begun to help raise the dull child to become a more "typical" or average normal student.

Once again, there is a recognized need for leadership to solve today's concerns and problems, such as overpopulation, diminishing energy sources and natural resources, inflation, corruption in government, crime, threat of nuclear war. However, the trend today is for more consistent, sustained programming with more commitment to helping the gifted and talented as persons in their own right and not just a resource to be exploited.
under great pressure to perform for the benefit of society.

The concept of giftedness has broadened greatly (Appendix A). Many myths have been discredited through sixty years of research studies. Galton and Terman showed that the "geniuses" had great natural ability and were not freaks of nature or insane. Hildreth began a movement to study the gifted as individuals rather than groups or "typically gifted." This motivated Guilford to present a new model of 120 specific mental abilities, all different for each individual. Shattered also is the "Terman Myth" that gifted students are only those who excel in all areas of endeavor and score very high in achievement and aptitude tests.

Through Public Law 94-142, multiple methods of assessment for educational planning became a requirement. Therefore, intelligence tests could no longer be the single determining factor in identification and selection of gifted and talented students. Attacks on I.Q. tests were based on data which showed that those who scored well were from the white middle and upper classes.

In the 1940's, research focused on the social and emotional adjustments of the gifted; maladjustments and underachievement were found more frequently among the highly gifted.

In the 1950's the most significant change was the focus on evaluating accurately the appropriateness of curriculum content and the various educational provisions for the specific needs of the gifted. Also, research findings indicated a need to expand the identification process to include more than high intelligence and to seek out those with potential ability in other areas. Interest grew in research of creativity and methods for measuring and developing it. A corresponding interest during the space age was the study of psychological and educational factors contributing to the underachievement of able students.

Simpson and Martinson studies in 1967 found that any special provisions for the gifted child were better than placement in a "regular" classroom with no special programming. There were gains in achievement and in personal
and social attributes. Sears in 1962 found that the learning environment is of greater importance to gifted children than average students. Interaction within a peer group of children with similar mental abilities is very important to the emotional health and social development of the gifted.

Whitmore (1980) found in her studies that until the middle of the nineteenth century many parents provided mentors or tutors for their precocious children at home or enrolled them in prestigious private schools. Common practice for the public schools in the early 1900's was acceleration. Interest in gifted and talented reached a peak in the post-Sputnik years when federal and state funds were provided for programs that were "qualitatively different" from regular instruction. Documentation has been made to show that, in general, there are beneficial effects of special classes on the emotional, social and intellectual development of gifted children.

The Congressional Marland Report of 1972 found only 4 percent of the estimated population of 1.5 to 2.5 million gifted and talented students were benefiting from special educational services. Some other findings included:

1. Differentiated education for gifted and talented was of low priority.
2. Twenty-one states had legislation for gifted and talented, but only of intent.
3. Gifted and talented were deprived and had suffered psychological damage and permanent impairment of their abilities.
4. Programs were miniscule and theoretical.
5. There was enormous individual and social cost when gifted and talented were not discovered and developed; the gifted and talented could not ordinarily excel without assistance.
6. When services were provided, the gifted and talented were able to produce significant and measurable outcomes.
7. States and local communities looked to Federal government for leadership.
8. Many administrators and teachers were unable to identify the gifted:

Five priorities were established by the Federal government.
2. Systematic in-service preparation for school personnel.
3. Support for research and experimental programs.
4. Support for evaluation and dissemination of new findings.
5. Continuing support of exemplary programs.

There was subsequent authorization of substantial amounts, but actual appropriations were cut drastically due to the fierce competition for funds for other areas.

Due to the difficulty of managing the complexity of "mainstreaming," the gifted and talented may become even more neglected unless provided appropriate guidance by their teachers. Pragmatically, there is a need for specially trained teachers who are enthusiastic, competent, skillful, knowledgeable and committed to gifted education.

For significant improvements to occur, more research, more teacher education courses and more in-service training on the gifted and talented are needed. A change of attitude or a better understanding of giftedness is needed, for there still exists today, as has prevailed throughout history, an ambivalent attitude toward the gifted and talented. In America, this ambivalence has been largely due to the conflict between the desire to find and nurture its outstanding individuals on the one hand and the society's contrary impulse that insists that nobody in this country is any better than anyone else, or merits special treatment. Excellence versus egalitarianism is still an issue to be resolved for many. To resolve this issue we must accept the fact that the gifted and talented have special needs and also have the right to equal educational opportunity to pursue excellence.
II. THE GIFTED AND TALENTED LEARNER
CONCEPT OF GIFTEDNESS

Giftedness is a concept or philosophical position which evolves from research, values and speculation. All decisions concerning identification and programming depend on an understanding of what makes giftedness. We infer giftedness by observing certain characteristics or behaviors of individuals. Our inferences about giftedness will be accurate to the extent that the characteristics or behaviors we choose to observe prove to be valid and reliable as appraised by others. This concept that gifted children are those who are potentially gifted adults, proposes that the gifted and talented individual is one who is a successful, creative "producer".

Others use the concept of giftedness for those who have exceptional test scores in academic areas and talented for those who show exceptional performance in art, music or drama. Some others distinguish the terms solely by the degree of exceptionality of I.Q. scores. However, these are too narrow and limited because they focus on only one characteristic of an individual, whereas giftedness in any area results from a complex interaction of many characteristics of an individual.

After many research studies of gifted and talented persons, Joseph S. Renzulli, one of the leading educators in gifted and talented education, summarized the major conclusions and generalizations with the following definition:

"Giftedness consists of an interaction among three basic clusters of human traits - these clusters being above average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest, or who are capable of developing an interaction among the three clusters require a wide variety of
educational opportunities and services that are not ordinarily provided through regular instructional programs."

A graph representing this definition is presented in Appendix B. This is recommended for use because it has met three important criteria:

1. It is derived from the best available research studies on gifted and talented.
2. It provides guidance for the selection and/or the development of instruments and procedures for identification.
3. It provides direction for programming according to the special characteristics of the gifted and talented students.

There should be equal emphasis on each of the three major clusters since it is the interaction of these traits that research has shown to be the essential ingredient for creative and productive accomplishments.

**ABOVE AVERAGE ABILITY**

The trait of **ABOVE AVERAGE ABILITY** is considered in order to place less reliance on the traditional intelligence measures such as I.Q. scores and less severe cut-off points in making selections. There has been confusion between student proficiency (as measured by test scores) and creative productivity. Terman has stated in his later writings that high intelligence and giftedness were not necessarily synonymous. Research showed that more creative and productive persons come from below the 95th percentile than from above it. By using high cut-off scores, educators might be discriminating against persons who have the greatest gifts and talents. According to Wallach (1976) test scores should be used only to screen out persons who score in the lower ranges.

For identification and selection, other researchers have concluded that greater use be made of indicators of creative thinking, ratings of past accomplishments, and ratings of creative productions or work samples. Hoyt (1965) has suggested greater reliance on "profiles of student growth"
and development."

CREATIVITY

The trait of CREATIVITY is prima-facie evidence that a person is gifted because it is usually the originality or uniqueness of a person's contribution that brings the individual to the attention of the public. The dimensions or criteria should be formulated within the specific performance area (such as architecture) and judged by persons with expertise. The difficulty is with test instruments. Although several creativity tests have been designed, only a few have been validated against real-life criteria of creative accomplishments. Idea fluency is a good indicator and work samples or creative products can help.

TASK COMMITMENT

"TASK COMMITMENT represents energy brought to bear on a particular problem (task) or specific performance area." Renzulli has based this cluster of traits from autobiographical accounts of gifted and talented persons. The studies of Francis Galton and Lewis Terman express task commitment as the "indrive" or "intrinsic motivation." Roe and Mackenon found that all of the eminent scientists in the study had a "driving absorption" in their work. Attempts are still being made to design objective measures to determine "task commitment."

However, simply having all three traits does not make giftedness. All three characteristics have to be brought to bear upon specific performances. (Appendix B)
Other factors learned about giftedness include the following:

1. Giftedness is not an absolute trait of certain persons; some are observed to have more of certain characteristics than others.

2. The characteristics of people who contribute to outstanding achievement in one area such as math, may be different from those outstanding in art.

3. A person can be gifted and/or talented in areas in science and/or math and only average or below average in writing, music or art.

4. Accuracy in identifying the gifted and talented is influenced greatly by chronological age; it is much more difficult to identify three year olds because of the inconsistencies of behavior, less experience and fewer opportunities for them to develop in a shorter period of time.

The definition and other distinguishing characteristics manifested in performance areas of gifted and talented are now described.
DEFINITIONS OF GIFTED AND TALENTED

Federal Definition of Gifted and Talented

"Gifted and talented children means children and whenever applicable, youth who are identified at the preschool, elementary or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic or leadership ability, or in the performing and visual arts, and who by reason thereof require services or activities not ordinarily provided by the school."

Hawaii State Definition of Gifted and Talented

"Gifted and talented are children and youth whose superior performance or potential indicates possible giftedness in intellectual, creative, or specific academic abilities, leadership capability, psychomotor ability, or talent in the performing and visual arts."

Giftedness is the interaction of three basic traits: (1) above average ability, (2) high creativity ability and (3) high task commitment which bear upon a specific performance area. Gifted students are those with test scores and/or performances substantially and consistently above average who also meet other multiple identification and selection criteria. Talented students are those meeting the multiple identification and selection criteria largely based on products or performances. Potential can be determined through analysis of test scores, performances, or other means of identification.
PERFORMANCE AREAS OF GIFTED AND TALENTED*

Intellectual Ability

Intellectual ability refers to the mental capacity to learn which is usually measured by an intelligence test. Students who excel in this area demonstrate mental development accelerated well beyond the average to the extent that they can profit from and should be challenged by educational opportunities of a higher level than normally provided others in their age group. Some characteristics which might be manifested by the intellectually gifted are the following:

1. Scores 95%ile or above on standardized ability test.
2. Is advanced in achievement for age.
3. Has quick mastery and recall of facts.
4. Enjoys intellectual and complex tasks.
5. Is interested in cause and effect; has a questioning attitude.
6. Has outstanding abilities in more than one area.
7. Has unusually advanced vocabulary for age or level.
8. Has a sense of humor.
9. Possesses a large storehouse of information, has depth of knowledge.
10. Reads a great deal.
11. Has ready grasp of underlying principles.
12. Is a keen and alert observer.
13. Can concentrate on a task for extended periods of time.

The purpose of programs in this area is to enable the students to increase their general intellectual operations at higher or more creative levels.

*Most of these are from the Renzulli-Hartman Rating Scales.
Specific Academic Ability

Specific academic ability is exhibited by those students whose academic potential or whose academic performance in specific curricular areas, such as social studies, mathematics, or language arts, exceeds that which is normally expected of students according to established norms for their age/grade level. Some characteristics which might be manifested by the specifically academically gifted are the following:

1. Scores 95th percentile or stanine 8-9 on academic achievement test.
2. Is very knowledgeable in a particular subject/skill.
3. Becomes absorbed and involved in a particular subject/skill.
4. Is keen and alert.
8. Is often self-assertive.
9. Prefers independent work.
10. Seeks new creative ideas.

The purpose of programs in this area is to enable the students to increase their academic achievement and production.

Creative Ability

Creative ability, a descriptive phrase often used synonymously with productive thinking, is manifested in those students who consistently engage in divergent thinking, or conceptualize in abstract terms at high levels. Such students are generally very insightful, exceptionally imaginative and original, and excellent problem solvers who are able to set aside established conventions and procedures when appropriate. Some characteristics which might be manifested by the creatively gifted and talented are the following:

1. Displays a great deal of curiosity.
2. Is uninhibited in expression of opinion.
3. Generates a large number of ideas or solutions.
4. Is tolerant with ambiguities.
5. Improvises and accepts disorder with imagination.
6. Is keenly observant and sensitive to beauty.
7. Is innovative.
8. Criticizes constructively.
9. Is a high risk taker.
10. Displays a sense of humor.

The purpose of programs in this area is to enable the students to develop and demonstrate their creativity.

**Leadership Ability**

Leadership ability is evident in those students who manifest a natural propensity to assume leadership roles in group activities. Their ability to organize and promote such activities is generally recognized and accepted by their peers, who legitimize their role as leaders. Some characteristics which might be manifested by the gifted and talented with leadership abilities are the following:

1. Carries responsibilities well.
2. Is self-confident.
3. Is well liked by peers.
4. Is cooperative.
5. Expresses self well.
6. Adapts readily to new situations.
7. Is sociable.
8. Tends to dominate others.
9. Participates in most social and/or athletic activities.
10. Is sensitive to needs and feelings of others.
11. Has a desire to help others.

The purpose of programs in this area is to enable students to develop and demonstrate responsible leadership.
Visual/Performing Arts Talents/Ability

Gifts and talents in the performing and visual arts are in reference to students who, as compared to their age-mates, demonstrate exceptional skill or potential in areas such as art, dance, music, drama, or speech. Some characteristics which might be manifested by the gifted and talented in the visual and performing arts are the following:

1. Is outstanding in expressive or performing arts (art, crafts, music, drama, speech, movement, film).
2. Has received some recognition for his/her ability.
3. Has sustained interest.
4. Has large fund of information in area.
5. Has high standards.
6. Is critical of own work.
7. Is a keen observer.
8. Eagerly participates in activities.
9. Is creative.
10. Willingly tries different media and/or techniques.

The purpose of programs in this area is to enable students to develop their talents in the artistic and performing arts.

Psychomotor Ability

Psychomotor ability is aptitude displayed through body movements, with demonstrated high ability or attainment in either gross or fine manipulative activities. It may manifest itself in areas such as gymnastics, dance, crafts, or through manual dexterity in an individualized activity such as sculpturing, and fine mechanical skills. Some characteristics manifested by the gifted and talented in the psychomotor areas are the following:

1. Handles body with outstanding coordination, ease, and poise for age or level.
2. Excels in endurance, strength, movement and rhythm.
3. Is highly competitive.
4. Enjoys machines, tools, motors.
5. Has outstanding perception of spatial relationships.
6. Enjoys a wide variety of activities.
7. Is well disciplined for practicing at length.
8. Explains rules and plans clearly.
9. Strives for improved performances.
10. Is anxious to use special abilities.

The purpose of programs in this area is to enable students to develop special psychomotor talents and skills.
GENERAL CHARACTERISTICS

In general, gifted and talented students have some common characteristics. According to May V. Seagoe, some of these characteristics and concomitant problems are as follows:

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<th>Characteristics</th>
<th>Concomitant Problems</th>
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<tr>
<td>1. Keen power of observation; naive receptivity; sense of the significant; willingness to examine the unusual.</td>
<td>1. Possible gullibility.</td>
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<tr>
<td>2. Power of abstraction, conceptualization, synthesis; interest in inductive learning and problem solving; pleasure in intellectual activity.</td>
<td>2. Occasional resistance to direction; rejection or remission of detail.</td>
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<td>3. Interest in cause-effect relationships, ability to see relationships; interest in applying concepts; love of truth.</td>
<td>3. Difficulty in accepting the illogical.</td>
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<td>4. Liking for structure and order; liking for consistency, as in value systems, number systems, clocks, calendars.</td>
<td>4. Invention of own systems, sometimes conflicting.</td>
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<tr>
<td>5. Retentiveness.</td>
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<tr>
<td>6. Verbal proficiency; large vocabulary; facility in expression; interest in reading; breadth of information in advanced areas.</td>
<td>6. Need for specialized reading early.</td>
</tr>
<tr>
<td>Characteristics</td>
<td>Concomitant Problems</td>
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<td>7. Questioning attitude, intellectual curiosity,</td>
<td>7. Need for early home or school stimulation.</td>
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<td>inquisitive mind; intrinsic motivation.</td>
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<tr>
<td>8. Power of critical thinking; skepticism,</td>
<td>8. Critical attitude toward others;</td>
</tr>
<tr>
<td>evaluative testing; self-criticism and</td>
<td>discouragement from self-criticism.</td>
</tr>
<tr>
<td>self-checking.</td>
<td></td>
</tr>
<tr>
<td>9. Creativeness and inventiveness; liking for new</td>
<td>9. Rejection of the known; need to invent</td>
</tr>
<tr>
<td>ways of doing things; interest in</td>
<td>for oneself.</td>
</tr>
<tr>
<td>creating, brainstorming; free-wheeling.</td>
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<tr>
<td>excludes all else; long attention span.</td>
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<tr>
<td>11. Persistent, goal-directed behavior.</td>
<td>11. Stubbornness.</td>
</tr>
<tr>
<td>need for emotional support and a</td>
<td>sensitivity to criticism; vulnerability to</td>
</tr>
<tr>
<td>sympathetic attitude.</td>
<td>peer group rejection.</td>
</tr>
<tr>
<td>13. High energy, alertness, eagerness; periods of</td>
<td>13. Frustration with inactivity and absence</td>
</tr>
<tr>
<td>intense voluntary effort preceding</td>
<td>of progress.</td>
</tr>
<tr>
<td>invention.</td>
<td></td>
</tr>
<tr>
<td>individualized work; self-reliant.</td>
<td></td>
</tr>
<tr>
<td>15. Versatility and virtuosity; diversity of</td>
<td>15. Need for flexibility and individualization; need for help in exploring</td>
</tr>
<tr>
<td>interests and abilities; many hobbies;</td>
<td></td>
</tr>
</tbody>
</table>
Characteristics

proficiency in art forms such as music and drawing.

Concomitant Problems

and developing interests; need to build basic competencies in major interests.

16. Friendliness and outgoingness.

16. Need for peer group relations in many types of groups; problems in developing social leadership.
ADDITIONAL CONSIDERATIONS FOR GIFTED AND TALENTED LEARNERS

The Underachieving Gifted and Talented

We ignore or overlook many gifted and talented students who are capable of functioning two to four levels above grade placement but are achieving so far below their potential and even grade placement that they are seriously retarded in performance. From test scores and other measures, there is found a great discrepancy between aptitude and achievement.

Underachievement among gifted students is a more serious problem than most educators realize. The U.S. Office of Education estimates that approximately one-half of all males of above average ability are underachievers compared with one-fourth of all females. However, the gifted female underachievers become more evident beginning at grade six.

Special needs of gifted and talented underachievers may include:

1. Improved self-image.
2. Remedial instruction.
3. New experiences for motivation.

Whitmore has found that the following characteristics may be regarded as "keys" to the discovery of giftedness in underachievers.

1. Superiority in comprehension and retention of concepts even though student does not master or complete work.
2. Vitality of imagination.
3. An exceptionally large repertoire of facts.
4. Superior oral expression.
5. Acute sensitivity and perceptions.
6. Persistent dissatisfaction with work accomplished.
7. Wide range of interests.
8. Initiative in pursuing self-selected projects.
Causes of Underachievement

There are several kinds of underachievers and more than one cause is usually responsible for a child's problem:

1. **Physiological**
   
   There may be impaired hearing, poor vision, specific health problem, physical disability and specific learning disability. Undiscovered physiological factors account for a certain number of underachievers and can usually be treated successfully once noticed. However, because we tend to interpret such conditions as evidence of retardation, we often overlook gifted underachievers of this type.

2. **Sociological**
   
   Education may be devalued in the neighborhood or culture, in the child's circle of friends, and by the child's parents. Home conditions may be disruptive instead of supportive of education.

3. **Pedagogical**
   
   There may be a lack of intellectual stimulation which results in conflict of priorities, ineffective teaching methods, poor teacher/pupil relationships and unfavorable classroom conditions.

4. **Emotional**
   
   There may be hostility toward parents and other authority figures. Both over-involved and under-involved parents unknowingly foster underachievement by being perfectionistic or indifferent.

Possible Ways to Help Gifted Underachievers Include:

1. Placement in a gifted and talented program.
2. Special guidance to develop positive self-concepts.
3. Use of films and filmstrips/tapes.
4. First-hand experiences.
5. Adjustment of assignments and teaching methods to individual interests, abilities, and goals.
6. Teacher/pupil planning sessions of work to be covered.
7. Special opportunity class for underachievers of mixed ages with similar problems.
8. Tutoring by willing and able senior citizens who can provide warmth and understanding.
9. Group therapy with a warm, understanding counselor or teacher.
10. Team approach to working with underachievers.
11. Use of grades and tests only as measures of progress.
12. Instruction in how to learn (how to concentrate, to remember, to understand and follow directions, to use keyword, etc.).
13. Instruction in problem solving techniques and inquiry method.

Early identification of underachievers is essential, but modification of the educational programs throughout the school years K-12 is also needed to sustain the motivation and positive attitudes engendered.
The Handicapped Gifted and Talented

Gifted and talented programs are also needed by those persons of outstanding ability or potential who are capable of high performance despite their handicaps such as visual, hearing or orthopedic impairments, emotional disturbances or learning disabilities.

Some prominent examples include Helen Keller (blind, deaf and mute), Leonardo da Vinci (learning disabled), Franklin D. Roosevelt (orthopedically handicapped), and rock star Stevie Wonder (blind).

It is estimated that there may be 300,000 school age children in the United States. The needs of these students cannot be met by the regular school program. Some adjustments which can be made for them to express themselves are:

1. Use of typewriter or tape recorder.
2. Use of volunteer readers for braille or talking books.
3. Use of volunteer writers.
4. Use of overhead projector.
5. Grades based on performance rather than time.
6. Allowance for rest.
7. Opportunities for affective development and interaction with non-handicapped.
8. Encouragement of partners that are non-handicapped.

Some ways to help the handicapped gifted and talented include:

1. Challenging activities suited to their abilities.
2. Opportunities for self-expression of feelings, attitudes, frustrations.
3. Encouragement in the arts.
4. Extra time for assimilation and completion of work.
5. Many sensory experiences.
6. Emphasis on developing independence.

Needed are better methods for identification, development of social programs with appropriate curricula and materials, more research and more support. Some special identification measures which can be used include:

1. Biographical information from a wide variety of persons who know the student.
2. Behavioral checklists.
3. Play observations for peer relating abilities, leadership qualities and creativity.
4. Peer evaluation.

Other possible ways to determine potential are:
1. Torrance Tests of Creative Thinking.
2. Thinking Creatively with Sounds and Images.
3. Checklist of Creative Positives.
4. Comparison of those who are disabled with others of their own subgroup.
5. Weighting more heavily those characteristics which allow a disabled individual to compensate for his/her disability, e.g., visual perception for the deaf.
6. Sections of Wechsler Intelligence Scale, e.g., Verbal Scale for Blind.
Disadvantaged Gifted and Talented

In recent years, focus has been on the means for identifying and providing for the gifted youth who are disadvantaged economically or culturally.

Passow believes that teachers need to have a better understanding of these students and then provide the proper match between their abilities, needs and curriculum activities. Gowan believes that the following are also necessary for effective intervention:

1. Individual guidance to change self-concept.
2. Group guidance with suitable “model figures.”
3. Remedial skills taught.

Witt designed a successful three-year program for Black children grades two through four which incorporated the following major elements:

1. Clearly structured but flexible.
2. Opportunities to be rewarded for solving problems.
3. Viewed by all in a positive light.
4. Tangible with activities conducted in the home.
5. Sufficient number of competent adults in charge.
6. Controls continued indefinitely.
7. Exciting people from inner and non-inner city involved.
8. Learning experiences designed so that perceptual-motor experiences precede, accompany and follow cognitive growth.
9. Intimately coordinated by a director expert in individual group and community dynamics.
10. Support, control and involvement of the children's families, parents and siblings provided.

Much else is needed, however, before unrecognized potential can be awakened. Children need the basics: love, truth, beauty, justice and purpose. It takes time, energy, imagination, hard work and money.
Identification

To deal with the issue of middle-class, mainstream basis of measurement instruments, there have been several measurements for compensation, "cultural-loading" or "creative positives" (Curry, 1980):

1. SOMPA (Mercer), System of Multi-cultural, Pluralistic Assessment (Points given to compensate), Psychological Corporation.
2. ABDA (Bruch), Abbreviated Binet for the Disadvantaged (Modify to strengthen weaknesses).
3. Structure of Intellect, (Meeker), (Skills Approach).
4. Creative Positives, (Torrance), (Sub-group Values).
5. Stallings Environmentally Based Screen, (SEBS).

Some characteristics of the Gifted Disadvantaged are:

Learning Style (Reismann 1962)

1. Physical not verbal.
2. Content-centered not form-centered.
3. Externally oriented not introspective.
4. Problem-centered not abstract-centered.
5. Inductive not deductive.
7. Slow and patient not quick and facile.

Strengths (Torrance 1962)

1. High non-verbal fluency and originality.
2. High creative productivity in small groups.
3. Adept at visual art expression.
4. Highly creative in movement, dance and physical activity.
5. Highly motivated by games, music, sports, humor, concrete objects and language rich in imagery.
The Culturally Different Gifted and Talented

Those who are American Indian/Alaskan Native, Asian/Pacific Islander; Black, and Hispanic are generally considered to be culturally different because their behavior patterns and responses are atypical from the dominant culture (U.S. white middle class). They are often penalized when assessed by instruments and measures normed on the dominant culture. Cautions therefore should be taken regarding the use of selection criteria and measurements which may be culturally biased or discriminatory against a limited-English proficient student.

Often the behavior of these culturally different students is misinterpreted. What is really boredom or dissatisfaction may be interpreted as anti-intellectual or disruptive, aggressive and impulsive behavior.

However, the Asian Americans who are natives of Hawaii are included in the dominant culture and should not be considered culturally different unless there is a conflict and access to the dominant culture is restricted (e.g., immigrants).

The most recent trend is to accept the pluralistic nature of our society. Some guiding principles by Torrance (1977) that now seem to be important are:

1. Differences are not necessarily deficits.
2. Creativeness should always be one of the criteria.
3. A variety of kinds of giftedness should be considered in both the discovery and nurturing process.
4. The particular strengths of the culturally different should be used in designing the content of the curriculum and in making decisions regarding methods of instruction.
5. There should be careful avoidance of unreasonable financial demands.
6. Learning activities, administrative procedures, and classroom management practices should be so planned and executed as to help them to cope with and grow out of their feelings of alienation.
7. There should be heavy reliance on learning and working in teams or small groups.
8. There should be sponsors who can encourage and protect their rights.
9. There should be communication and awareness programs for parents and
the community.

Specialized measures should be developed especially in consideration of the language barriers. Some of these resources include:

1. System of Multi-Cultural Pluralistic Assessment (SOMPA)

   Contact: Dr. Jane Mercer
   Department of Sociology
   University of California
   Riverside, CA 92502

2. Abbreviated Binet-WISC R.

   Contact: Dr. Catherine Bruch
   Department of Educational Psychology
   University of Georgia
   Athens, GA 30602

Some tests that may be used are:

1. Arthur Point Scale of Performance Tests Form I and II, 1947
   (4.5 to adult), Stoelting Company.

2. Chicago Non-Verbal Examination, 1963, (Age 6 to adult),
   Psychological Corporation.

3. IPAT Culture Fair Intelligence Test: Scales I, II, III, 1963
   Gr. 9-12), Institute for Personality and Ability Testing.


5. Test of General Ability, 1960 (Gr. 9-12), SRA.

6. Torrance Tests of Creative Thinking (K-adult), 25 Different Languages,
   Personnel Press.

Inventories and questionnaires developed are:

1. Alpha Biographical Inventory

   Institute for Behavioral Research in Creativity
   University of Utah
   Salt Lake City, UT 84112

2. Relevant Aspects of Potential (RAP)

   RAP Researchers
   Sandy Lane
   Marlborough, CT 06244
3. Behavioral Identification of Giftedness Questionnaire (BIG)
   Western Behavioral Science Institute
   1150 Silverado, La Jolla, CA 92037

4. Stallings Environmentally Based Screen (SEBS)
   Dr. Clifford Stalleys
   U. S. International University
   10455 Pomerado Road
   San Diego, CA 92131
III. PLANNING FOR GIFTED AND TALENTED PROGRAMS
GOALS FOR GIFTED AND TALENTED STUDENTS

To help prepare the gifted and talented for responsible and productive roles in our democratic society, we need to help them to develop realistic and healthy self-concepts. They should be intellectually alive, creatively capable and independent life-learners who also have the capacity to be compassionate human beings. There should be provision for many opportunities for them to strive for excellence and meet or go beyond the greatest expectations and highest performance levels of the department's foundation program objectives:

1. Develop basic skills for learning and effective communication with others.
2. Develop positive self-concept.
3. Develop decision-making and problem-solving skills.
5. Develop physical and emotional health.
6. Recognize and pursue career development as an integral part of personal growth and development.
7. Develop a continually growing philosophy that reflects responsibility to self as well as to others.
8. Develop creative potential and aesthetic sensitivity.

A chart developed by the Leeward District shows the relationship between the state's foundation program objectives and gifted and talented program, teacher and learner goals.
### RELATIONSHIP BETWEEN THE STATE'S AND GIFTED/TALENTED PROGRAMS

<table>
<thead>
<tr>
<th>SCHOOL PROGRAM FOCI</th>
<th>FOUNDATION PROGRAM OBJECTIVES, DOE</th>
<th>GIFTED/TALENTED PROGRAM GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELF CONCEPT</strong></td>
<td>2. Develop positive self-concept.</td>
<td>The student will be helped to accept, become aware of and understand the unique characteristics which contribute to his/her being gifted/talented.</td>
</tr>
<tr>
<td></td>
<td>5. Develop physical and emotional health.</td>
<td></td>
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<tr>
<td><strong>RELATIONSHIP</strong></td>
<td>7. Develop a continually growing philosophy that reflects responsibility to self as well as others.</td>
<td>The student will be provided with opportunities to interrelate and communicate with individuals like/unlike himself/herself, and to share his unique talents and products with them.</td>
</tr>
<tr>
<td><strong>AFFECTIVE LEARNING</strong></td>
<td>6. Recognize and pursue career development as an integral part of personal growth development.</td>
<td>The student will be helped to become a productive individual while developing responsibility for self and society commensurate with his giftedness.</td>
</tr>
<tr>
<td></td>
<td>7. Develop a continually growing philosophy that reflects a responsibility for self and others.</td>
<td></td>
</tr>
<tr>
<td><strong>CREATIVE THINKING</strong></td>
<td>8. Develop creative and aesthetic sensitivity.</td>
<td>The student will be provided with opportunities to create ideas and/or products as a result of interaction with his/her environment.</td>
</tr>
<tr>
<td><strong>HIGHER LEVEL THINKING</strong></td>
<td>1. Develop basic skills for learning and effective communication with others.</td>
<td>The student will be provided with opportunities to operate at higher levels of thinking utilizing advanced or accelerated content for certain sustained periods of time.</td>
</tr>
<tr>
<td></td>
<td>6. Recognize and pursue career development.</td>
<td></td>
</tr>
<tr>
<td><strong>SELF DIRECTED LEARNING</strong></td>
<td>1. Develop basic skills for learning and effective communication.</td>
<td>The students will be given opportunities to select strategies for making use of learning resources and perform these strategies skillfully and with initiative.</td>
</tr>
<tr>
<td></td>
<td>3. Develop decision-making and problem solving skills.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Recognize and pursue career development.</td>
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## Teacher Goals

<table>
<thead>
<tr>
<th>Teacher Goals</th>
<th>Learner Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher will consciously create a learning environment where the gifted student can appreciate the feeling of he/she experiences.</td>
<td>The student will develop a better understanding of him/herself and to recognize and deal with his/her feelings about being identified as gifted or potentially gifted.</td>
</tr>
<tr>
<td>The teacher will encourage the student to interact freely with his peers as well as adults and provide opportunities for the development of honest and direct communication.</td>
<td>The student will relate with individuals like himself/herself and to share his unique talents and products with them.</td>
</tr>
<tr>
<td>The teacher will assist the student in becoming a compassionate, responsible and self-actualizing individual by developing his/her ability to recognize, internalize, and utilize his potential.</td>
<td>The student will become a productive individual developing responsibility for self and others commensurate with his/her giftedness.</td>
</tr>
<tr>
<td>The teacher will establish a challenging environment where curiosity, imagination, exploration and excitement can occur by providing opportunities for reflective, critical, intuitive and innovative thinking.</td>
<td>The students will create novel ideas or products as a result of interaction between individual and his/her environment. The student will engage in fluent, flexible, original and elaborative thinking.</td>
</tr>
<tr>
<td>The teacher will provide differentiated learning activities where higher thought processes can occur in accelerated content and the exploration of cross-disciplinary issues/themes.</td>
<td>The student will demonstrate advanced levels of thinking that can occur in accelerated content and cross-disciplinary study of issues/themes.</td>
</tr>
<tr>
<td>The teacher will organize the program around unit topics, projects, interests or study themes and provide opportunities for exploratory, self-directed, conceptual, and research experiences.</td>
<td>The student will demonstrate independent learning skills and self-directedness in planning and carrying out investigative projects using a variety of learning resources.</td>
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</tbody>
</table>
RATIONALE FOR PROGRAMS FOR GIFTED AND TALENTED

The following responses by Sandra Kaplan, (1975) to some commonly asked questions provide a rationale for programs for gifted and talented.

1. Do programs for the gifted and talented reinforce the segregation of students?

   The definition of gifted and/or talented naturally segregates these children from others. Isolation, as differentiated in meaning from segregation, is not the aim of a program for these pupils. Segregation is the program's goal only as it applies to the separateness of learning experiences from the general curriculum but not as it applies to the separation of children from children. The segregation of the gifted and talented for various purposes at various times can promote the use of techniques and materials which enhance the quality of education for all children.

2. Why doesn't individualized instruction abolish the need for separate programs for the gifted and talented?

   Individualized instruction is a term which has become misused and misinterpreted. It can be identified as a method of teaching or as an organizational pattern for teaching. Regardless of its definition, individualized instruction implies the need to provide for individual differences within the context of a given administrative arrangement. In its purest form, individualized instruction should provide a separate educational program for every child. Even though individualized instruction accommodates the gifted and talented to a greater degree than the traditional classroom operation, it cannot replace separate programs which expose the students to learnings that exist beyond the confines of even the best individually instructed classroom. The idea
that one type of provision will satisfy the needs of these gifted
students is unacceptable.

3. Will overemphasizing the gifted and talented through a special pro-
gram create an elitist population?

In programs where the gifted and talented spend some portion
of their school time interacting with other students, the proba-
bility of their becoming an elite group is minimized. If the
students perceive participation as a reward for their intelligence
and if attendance promotes status by virtue of the design and offer-
ings of the program, then the student cannot be held responsible for
flaunting or misrepresenting the group to which he belongs. Like-
wise, where the gifted and talented program is not seen in relation-
ship to other programs, it presents a faulty picture of both its
purpose and its participants. When students understand the reason
for their participation and where opportunities are created for them
to share outcomes from the program, research has shown that they
relate more successfully and are well received by others.

4. Is it correct to say that what is good for the gifted and talented is
good for all children?

The premise that gifted and talented children are still children
does not mean that they are like all other children. Recognition of
their capacity and potential for learning characterizes them as de-
viating from the norm. The argument that all children should have the
educational experiences, to a greater or lesser degree as it relates
to their ability to learn, is one which at least gives the gifted and
talented some special attention. A program tailored to the gifted
and talented but applied to the average causes frustrations and fail-
ure for the average; conversely, a program designed for the average
and made available to the gifted and talented restricts self ful-
fillment for the gifted and talented and can also cause frustration
and failure for the gifted!
5. Is it true that if classroom teachers were doing their job, there would be no need to offer a special program for the gifted and talented?

In most situations, the classroom teacher lacks the specialized preparation needed to work with the gifted and talented. The classroom teacher with a heterogeneous population can only be expected to find alternatives for the gifted and talented and to guide them toward these alternatives. The teacher is not a failure because he/she realizes his/her inadequacies and inability to be all things to children.

6. Should the offerings to gifted and talented be commensurate with what is offered to the students in other special education programs?

Research indicates the predominance of fiscal and professional support for programs for the handicapped without the same degree of support for programs for the gifted and talented. Equality of need for all special programs must be stressed without mandating equality of the type or scope of the program. The cliché that gifted are not handicapped is incorrect, for the lack of educational means for the gifted and talented results in handicapping their potential. The amount of attention and acceptance given to "special education" must include appropriation for gifted and talented programs as part of the same title.*

*To date, legal definition of handicapped does not include gifted and talented.
Program prototypes are organizational patterns established for the learning environments that best accommodate the needs of the gifted and talented. Selection of a prototype is based on the degree to which it fits into the school setting and to which it matches the objectives developed for the gifted and talented program. No one prototype will do everything and therefore a program can be a composite of several prototypes which combine and adapt what is ideal with what is practical and feasible.

The basis for developing any program prototype is found in using some form of enrichment, grouping, acceleration and guidance. Appendix C shows how they are organized as prototypes.

A. Prototypes Using Acceleration, Enrichment and Guidance.

Acceleration: Acceleration are those means for providing students with instruction in a given area or subject at a more advanced level. Careful assessment of the student is required before placement is made. Not only should there be documentation that the student has met the competencies or performance expectations of the grade or course, but the student and parents should be counseled regarding the social-emotional aspects and the physical stamina expected at the advanced level. Advantages and disadvantages, if any, should be presented before placement.

The main purpose for advancing or accelerating students is to place them with a group at their level in order that they may be more adequately challenged and stimulated. However, there are some with special needs for counseling and special activities. To minimize
risks, the following should be validated for each student:
1. Mental ability estimated in the upper five percent.
2. High academic achievement in all skill areas and in the upper five percent.
3. School grades at "B" level or higher.
4. Social and emotional maturity at "normal" or higher levels.
5. Stature, health and physical characteristics at average or higher levels of performance.
6. Personal commitment as shown by initiative, work habits, self-direction, and persistence in completion of tasks.
7. Parent involvement as shown by attendance of parents at conferences and meetings.

Enrichment:
Enrichment is any educational procedure beyond the usual ones for the subject or grade which does not accelerate the student's placement in the grade. In these models, there should be opportunities for students to learn at more advanced, mature and creative levels. Enrichment can be experiences which replace, supplement or extend learnings vertically or horizontally. Students learn much more in depth and breadth. The experiences should respond to their specific gifted and talented characteristics.

These alternative learning environments and/or experiences should differ in the approach or method of grouping students by the type, number, ages of students, the scheduling and/or purposes for lessons, location and facility for lesson, and the type and number of teachers in and out of the school site.

Guidance:
Also underlying any program prototype are experiences which help to promote the students' better understanding of themselves and others and their opportunities for careers through individual and group conferences, meetings, and counseling sessions.
B. Guidelines for Selecting the Program Prototype.

According to S. Kaplan, selecting the most appropriate program prototype will be easier if some common factors are acknowledged:

1. A program for gifted and talented does not always, nor will it ever, meet all the needs of the student it serves.
2. There may be students in the program that may not "really" be gifted but highly motivated.
3. There may be a gap for the gifted who spend part of their time in the regular school program.
4. Whether a gifted program should remediate or enhance the student's abilities should be resolved on an individual basis rather than as a total program.
5. Gifted students are students first and gifted second.
6. The need for money, time and personnel to facilitate the needs of the gifted is always present.
7. Factors that will influence choice(s) are; the target group, size and geography of school, resources, scheduling, and sequential development.
C. **Guidelines for Developing a Prototype**

Some guidelines for developing a program prototype as presented by S. Kaplan include:

1. **Flexibility of program** . . . . . . . . so students can:
   a. regulate their own attendance according to self-determined needs and interests.
   b. schedule their own learning time.
   c. have experiences with large and small group dynamics.
   d. work independently.
   e. have individual contact with peers, teachers, and mentors to develop interpersonal relationships.

2. **Accessibility to unique and multiple resources** . . . . . . . . so students can:
   a. make use of adjunct facilities within the community.
   b. develop research skills.
   c. utilize the environment for first-hand experiences and real-life learnings.
   d. be exposed to new and different careers, technology, and opinions.
   e. make use of experts and professionals in various fields.
   f. practice a variety of learning strategies.

3. **Provisions for feedback and knowledge of progress** . . . . . . . . so students can:
   a. share and exchange ideas with their peers as a means of intellectual stimulation and self-development.
   b. develop and practice dialogue and discussion skills.
   c. so the program/students can be continuously examined for improvement.

4. **Attending to individual needs** . . . . . . . . . . . . . . so students can:
   a. pace and select their own learning experiences through individualized instruction, independent study, or an ungraded program.
   b. have time to pursue and master learning to their own satisfaction.
STEPS FOR PROGRAM PLANNING

Writing long range and short range plans are necessary steps before implementing any program. Application of the Foundation Program Assessment and Improvement System (FPAIS) would be helpful.

A. Long Range Plan:

A long range plan should reflect how the school or district will provide a system for an ideal comprehensive program for gifted and talented, including the intellectual, creative, specific academic abilities, leadership, psychomotor and the performing and visual arts in a span of three to five years. It should be tailored to meet the needs of the school or district. The school plan should also mesh with the district/state plans for continuity, consistency, and articulation. The time, thinking and energy spent in planning by the administrators and key personnel will make the difference whether a program will be implemented or not.

The plan can be written by the principal with the cooperation of the faculty, local school and community council and the assistance from the district and state offices.

A clear definition and position statement are needed. The goals, objectives, enabling activities, persons responsible and target dates also need to be planned for identification, program and curriculum development, in-service and evaluation. See Appendix D for sample format.
B. **Short Range Plan:**

A short range plan should specifically show how in reality the school or district will begin to meet some of the objectives within a span of one to three years. To ensure success, it is recommended that the school program begin on a small scale with a competent and enthusiastic teacher, adequate materials and equipment and a pleasant environment.

For the short range plan, the school and district are advised to do the following in writing:

1. **Needs Assessment:**

   Assess the needs of the school, district, and target population as to the estimated numbers of students in the different categories to be served in various options, including those special populations such as the bi-lingual, disadvantaged, and handicapped. Assessment can be made by reviewing test scores such as Stanford Achievement Test Stanine 9, and teacher, parent, and student surveys.

2. **Program Goal and Objectives:**

   a. Describe the philosophy in a position statement.
   b. Define the goal with measurable objectives and the evaluation procedures in accordance with them.

3. **Program Design:**

   a. Set up the identification and selection criteria in consonance with the district and state guidelines.
   b. Determine the program option(s) and the curriculum framework.
   c. Determine the special arrangements for space and facility.
   d. Determine the numbers of students at grade level(s) or course(s) for category or categories.
   e. Determine the staff (teachers) qualified, interested and needed.
   f. Determine the channels of communication among teachers, parents and students; and coordination with the library and counselor.
   g. Determine the time needed for program delivery to students, for planning, preparation and in-service training and for schedule...
development with the faculty.

h. Determine the materials, resources and equipment needed.
i. Determine the budget and expenditure plan.

4. **Program Evaluation**

   Define the evaluation procedures to meet the objectives.
GUIDELINES FOR PROGRAM IMPLEMENTATION

After determining the program prototype(s) to be initiated for the students, the following components can serve as guidelines for effective implementation. The program design should include:

1. Written long (3-5 years) and short (1-3 years) range plans with goals and objectives.
2. An opportunity for the total school population to be considered on the basis of a screening, testing, selecting and placement system.
3. Activities, experiences and administrative arrangements that are different from those provided in the regular school curriculum.
4. Differentiated curriculum to denote content, process and products at more advanced, complex and creative levels.
5. Instructional strategies to meet the varied learning styles of the students.
6. A program or service for a sufficient length of the regularly scheduled school time to assure that the activities will have a significant and measurable effect.
7. Adequate space for equipment and materials for classroom instruction and various student experiences.
8. Evaluation of both the student's progress and the progress of the program administration.
9. Continuous activities and experiences in the student's educational development by use of Appropriate Educational Plans.
10. Training for staff and parent needs.
11. The student's individual schedule coordinated and integrated with the regular school's activities, schedules and regulations.
12. Coordination and communication with other programs and agencies such as career education, guidance and counseling, business and professional organizations, community based programs, community colleges and
universities.

13. Maintenance of Appropriate Educational Plans and records of students and also maintenance of fiscal matters pertaining to the program.

14. Procedures should be outlined for the proper treatment of the student's confidential data.

15. Options for students to be placed in special or regular programs.


17. Involvement of parents, teachers and administrators.

18. Some time for gifted and talented students to work with regular students, some time with gifted and talented students, and some time to work independently.
IV. IDENTIFICATION AND SELECTION OF STUDENTS
IDENTIFICATION AND SELECTION OF STUDENTS

A systematic approach such as described below should be used for identifying and selecting students who demonstrate superior achievement or possess the potential for superior achievement in all areas: intellectual, creative, specific academic abilities, leadership, psychomotor, and performing and visual arts.

A. Identification and Selection Criteria

Since students from like socio-economic situations are apt to attend the same schools in their attendance areas, each school population differs considerably from each other. Each school must then select its criteria in terms of its own population and program objectives. The gifted and talented program is an extension of the effort to provide for individual differences. Every effort should be made to seek and include in the program those students for whom, because of their special abilities, the regular curriculum is not sufficiently challenging. In these terms, the group to be provided for will include those toward the upper end of the intelligence scale, plus other students with outstanding abilities.

Schools should write their identification selection criteria to show that students:

1. Demonstrate or show potential for superior achievement in one or more of the following areas of gifted and talented:
   a. intellectual
   b. specific academic abilities
   c. creative
   d. leadership (psycho-social)
   e. performing and visual arts
   f. psychomotor
2. Have traits of giftedness: above average ability, high creative potential and task commitment. (For underachievers, disadvantaged, culturally different, and handicapped, development of task commitment may be needed.)

3. Meet the multiple criteria for the particular school program.

4. Rate in the top 3-5% of the target population after the screening and testing process.

5. Require a special enriching educational program and a service which are different from those normally provided in the regular school program.
B. The Identification and Selection Process

The flow charts in Appendix E and F show the complete process. The identification and selection process includes the following steps:

1. Establishing a school Gifted and Talented Review Committee which shall include at least three of the following: classroom teachers, administrators, staff of gifted, psychologist or counselor, experts from area being addressed.

2. Establishing the multiple criteria for identification.

3. Selecting appropriate tests and other measures.

4. Screening the total school for a target population of approximately ten to twenty percent by using various appropriate measures including group tests.

5. Individual testing for approximately the top five to ten percent of the target population to be considered.

6. Compiling and organizing data gathered by using the Baldwin Identification Matrix (Appendix G) and the Sample Case Study Information Form (Appendix H).

7. Reviewing their individual profiles and rating them by the review committee; interviewing may be included.

8. Selecting approximately the top three to five percent of the students who meet the criteria in a program option according to individual appropriate education plans.

9. Informing the students and parents for their acceptance of entry into the program option. This constitutes minimal due process and should be in writing.

10. Providing information to parents and students that predictions of student performance are not infallible, and therefore if the placement proves to be inappropriate, a change will be necessary; and the parents and student will be so informed.

11. Placing the students in appropriate program(s).

12. Filing complete records of the review committee's membership, activities, and decisions.

13. Monitoring the appropriateness of the student's placement after four to six weeks.

14. Reassessing students at least once a year.
C. **Identification Guidelines**

1. Before initiating the identification process, the school plan should have some possible or feasible program options or alternatives for those students to be selected in any of the areas.

2. All students should have opportunities to be identified. Multiple criteria should be established such as nominations, test scores, work samples, etc. Opportunities for nominations should be open to all.

3. There needs to be involvement of professionals acquainted with the students through direct observation of behavior and performances.

4. The best qualified persons need to judge the quality of a performance or product such as visual and performing arts.

5. There should be opportunity for students to present required and self-chosen performances.

6. In the event that the number of eligible participants exceeds the available openings, participants shall be selected according to the extent that they meet the criteria.

7. Those who are eligible but not selected for special programs should have other options to meet their needs within the regular program.

8. The identification system should be evaluated continuously for improvement; study should follow-up on those not selected as well as those in programs.

9. Data obtained in the identification process should be used for programming experiences and opportunities.

10. There should be information about students on: early childhood development, scores on ability, achievement, creativity and other tests, inventories and ratings, performances and actual work, interests, expressions and ambitions, social and emotional development.

11. Students who deviate markedly from the mean should be considered prime candidates in a school.
12. Students should be identified as early as possible.

13. Mere identification of giftedness does not accommodate the needs of gifted, but it should serve to alert many to their abilities and help them to plan effective programs.

14. Written expectations of students who are selected to participate in a program and written procedures for students to exit a program should be made. Before the program is implemented, this condition must be communicated clearly to all involved - students, teachers, parents and others. A student should not remain in a gifted and talented program if it is not beneficial for the student.
D. **Identification Measures**

1. **Use of Multiple Criteria:**

   Schools should use one or more measures from the four areas of measures in order to ensure that no student is overlooked on the basis of one criterion and to insure that sufficient and valid data are provided on each student to substantiate placement or recommendations. One of the measures considered must be data concerning student's performance in the regular classroom(s) and must be collected from the appropriate classroom teacher(s). Standardized tests must have enough ceiling to assess the upper limits of a student's knowledge and abilities.

A. **Current Performance Tests**

   1. Intelligence
   2. Achievement
   3. Creativity

B. **Pupil Products**

   1. Work samples
   2. Autobiographies
   3. Interest, motivation
   4. Auditions
   5. Interviews

C. **Nominations**

   1. Rating scales
   2. Observations
   3. Teacher and/or Professional judgements

D. **Cumulative Records**

   1. Anecdotal
   2. Counselor
   3. Medical

Measures selected for identification should reveal the following about each student:

1. Current functioning level as observed by parents, teachers and peers.
2. Strengths and weaknesses as measured objectively by standardized tests or other means.
3. Social, emotional and adaptive behavior.
4. Communicative skills and language development.
5. Special abilities and needs.
6. Special interests.
2. **Appropriate Measures for First Screening Using Group Tests:**

   Standardized tests and measurement instruments are valid only if they fit the purpose for administering them. Recommended as measures for screening are the following for the different areas:

   **A. Intellectual**
   1. Otis Lennon, Psychological Corporation.
   2. Henmon Nelson (age 3-17), Houghton Mifflin.
   3. Preliminary Scholastic Aptitude Test (PSAT), College Exam Board 11-12.
   5. Raven Progressive Matrices (5 years to adult).
   6. Differential Aptitude Test (DAT), gr. 8-12, Psychological Corporation.

   **B. Specific Academic**
   2. California Achievement Test K-12, CTB-McGraw Hill.
   3. Iowa Test of Basic Skills K-12, Houghton Mifflin.
   4. Comprehensive Test of Basic Skills 2-12, McGraw Hill.
   5. Metropolitan Achievement Test K-10, Harcourt Brace.
   7. Screening Test of Academic Readiness (age 4.0 to 6.5).
   8. Hawaii Competency Based Measures 3, 6, 8, 10.
   9. Ross Test of Higher Cognitive Skills, 4-6, Academic Therapy Publications.

   **C. Creative**
   1. Torrance Figural Test gr. 1-12.
   2. Creative Products.
   3. Torrance List of Creative Positives.
   5. Williams Observational Checklist.
   6. Biographical Inventories gr. 6-12.
7 Creativity Test for Children gr. 4-6, Sheridan Psychological Services, Inc.

D. Leadership
1. Barclay Classroom Climate Inventory.
2. Bonney Fessondon Sociogram.
3. Personality Questionnaire.
4. Professional Judgement.

E. Visual Performing Arts
2. Samples of Student Work.
3. Auditions of Student Performance.

F. Psychomotor
1. AAHPER, gr. 5-16.
2. CAHPER, age 7-17.
3. Arthur Point Scale, age 4.5 to adult.
4. Crawford Small Parts, high school and over.
3. **Appropriate Measures for Second Screening Using Individual Tests**

Depending on the area of gifted and talented program planned, the following are the appropriate measures recommended for individual testing:

A. **Intellectual**
   1. Slosson (Stanine 7 and above), infancy to adult.
   2. Stanford-Binet, 2 years to adult.
   4. Peabody Picture Vocabulary, 2½ to 18 years, American Guidance Service.
   5. Wechsler Preschool and Primary Scale of Intelligence (WPPSI), 4 to 6½ years.

B. **Specific Academic**
   1. Modern Language Aptitude Test, gr. 9 to adult.

C. **Creative**
   2. Torrance Test of Creative Thinking, Personnel Press, Verbal gr. 4-12 and Figural gr. 1-12.
   3. Thinking Creatively with Sounds and Words, Personnel Press.
   4. Goodenough-Harris Drawing Test, 3.2 to 13 years.
   5. Mooney Problem Checklist, Psychological Corporation.

D. **Leadership**
   1. Alpha-biographical Inventory, gr. 9-12, Institute for Behavioral Research in Creativity, Salt Lake City, Utah.
   2. Piers-Harris, gr. 5-12, Counselor, Recordings and Tests, Box 6184, Acklen Street, Nashville, TN.
   3. Scamin gr. 1-12, Person-O-Metrics.

E. Visual/Performing Arts
1. Groves' Design Judgement Test, gr. 7 to adult, Psychological Corporation.
2. Baron Welsh Art Scale, age 6 and over.
3. Seashore measure of Music Literacy, gr. 4 to 16.
4. Music Aptitude Profile, gr. 4-12.
5. Iowa Test of Music Literacy, gr. 4-12, Bureau of Educational Research and Service.
6. Vaughn's Test of Musical Creativity.

F. Psychomotor
1. Bennett Hand Tool Dexterity Test, gr. 7-12.
2. Crawford Small Parts Dexterity Test, gr. 7-12, Psychological Corporation.
3. DAT Mechanical Reasoning Test, gr. 7-12.
4. MacQuarrie Tests of Motor Proficiency, gr. 7 and over.
E. Rating and Selecting Students

Each school should have a review committee to ensure that no one person rates and selects the students who participate in a program. Students will be assured that the committee will make careful case study reviews substantiated by sufficient and valid data without any biases or prejudices. The committee should have representation from various groups such as teachers, administrators, counselors and professional experts. If possible, different ethnic groups should be represented.

An individual student rating matrix in relationship to the criteria should be used by the committee for its discussion and evaluation of each candidate. The top three or five percent of the local student population meeting the criteria should be selected on an acceptance basis. Acceptance for a few of the students could be made by "gut instinct" especially in consideration for the potentially gifted, the disadvantaged, culturally different and under-achieving gifted and talented who might benefit from the program. Students should not be selected if undue stress and pressures will be put upon them. See Appendix G for the Baldwin Identification Matrix Form.

F. Class Size

The size of the class will depend on the objectives and type of program, space, equipment, facilities and materials available, personnel involved and time scheduled. Ideally special gifted and talented classes should have a teacher-pupil ratio of 20 to 1.
V. PROVIDING APPROPRIATE EDUCATIONAL OPPORTUNITIES
APPROPRIATE EDUCATION PLANNING FOR INDIVIDUAL STUDENTS

Before placing students in the program options or alternatives, an Appropriate Educational Plan for each selected student is recommended (see Appendix I for sample forms).

This plan focuses attention on the student's specific and unique characteristics in order to address these in the teacher-learning experiences. Differentiated curriculum and instruction can be better planned for the student's gifts and talents, levels of abilities, needs and interests. Students should be given increasing opportunities to be involved with the planning of their own education as they progress from early elementary grades to senior level. The appropriate educational plan can also be used as a communicative tool for the student and parent as to the differentiated curriculum provided. Written goals and objectives will help to articulate the learning experiences and integrate them as realistic student expectations. It will also help the teachers to document the defensible curriculum for the student. To avoid duplication, all recommendations will be recorded. Entry and exit levels for better articulation would be recorded as the students move from program to program, school to school or from one level to the next. There would be a continuous and developmental plan instead of fragmented piece-meal education. Also, the best "match" or "fit" would be coordinated or arranged between the learner and teacher, or between learner and program option. As much as possible, the plan should be practical. Adequate time should be given teachers to complete these plans.

The Appropriate Educational Plan should be developed in consonance with the philosophy, goals and objectives and/or expectations for the school's gifted and talented program. It is important that a continuous developmental program is offered instead of numerous provisions. There should be a systematic accomplishment of long range goals and objectives for the students from identification to graduation. Whether they are placed in special classes, kept in regular classes or served by other.
administrative and organizational arrangements, the important point is that the attention given to the students should be comprehensively planned, systematic and focused on their individual needs. They should have the opportunity to:

1. Acquire basic skills and explore ideas and issues earlier and faster than their peers.
2. Satisfy their unusually high desire for self-fulfillment.
3. Find productive ways of expressing their gifts and talents.
4. Receive special guidance in making choices and plans appropriate to their different rates of personal growth and development.
5. Be exposed to a wide variety of learning experiences in and out of a formal school setting.

For transfer and application of learnings an appropriate education plan should articulate the relationship between the differentiated curriculum of the gifted program and the basic curriculum of the regular program.

Principles of Appropriate Education Plans for Students (AEP)

For each student's plan, some general principles that D. Treffinger has found are:

1. There must be adequate time for thoughtful planning and training in instructional design so the planning will not be busy work.
2. Effective planning requires accurate assessment data that will be relevant to the instructional decisions to be made.
3. An individualized appropriate education plan does not mean the student learns only in isolation.
4. An effective AEP may lead to the implementation of different learning outcomes for various students.
5. An effective AEP provides for the utilization of many different instructional activities.
6. AEP development should involve a cooperative planning model utilizing input from many different sources.
7. There must be sufficient opportunity for effective implementation of many alternatives devised in the AEP.

8. The AEP should be a flexible contract for services to the student:
   a. Attention should be given to the unique talents and characteristics of the student.
   b. The AEP should also take into account student interests, motivation, and learning styles or preferences.
   c. There must be attention in the general goals to each of the basic components of an effective instructional program for the gifted and talented.
   d. The AEP for gifted, talented, and creative students should be as much concerned with the "Unknown" as with the "Known," and as much concerned with the future as with the past or present.
   e. The AEP should be concerned with methods for funding and solving problems, making inquiries, and doing research, as well as with curriculum content.
   f. Participation of the student is highly desirable in planning the AEP.
   g. The AEP should provide a basis for effective coordination of learning resources at school, at home, and in the community.
   h. The AEP provides a foundation for effective coordination of regular educational programming and special educational services.
   i. The details of the AEP should be open to continuous monitoring and to revisions as appropriate.
   j. Record keeping should be explicit and objective, and should involve the student directly in the process.
   k. The flexibility of the AEP for gifted, talented, and creative students does not remove the responsibility for systematic evaluation.
Models of Appropriate Education Plans

Samples of three models (Renzulli, Kaplan, Idaho) are provided in Appendix I, J, K. Schools may wish to design their own model. For best results, the Appropriate Education Plan should include:

1. A written statement of the student's present levels of performance.
2. A statement of annual goals to be achieved.
3. Appropriate objectives to achieve the goal.
4. Evaluation criteria and procedure.
5. Schedule of attendance and mastery dates.
6. Related services needed.
7. Starting date(s) of program and services.
FRAMEWORK FOR DEVELOPING
DIFFERENTIATED CURRICULUM FOR GIFTED AND TALENTED

The heart of any program is in its curriculum. Qualitative differentiated curriculum is the educational response to the differences that reside in gifted and talented children. When developing the differentiated curriculum, the characteristics, needs, interests, and abilities of the target gifted and talented population should be the basic framework for decisions to be made. In general, there should be opportunities for more advanced, complex and creative levels for the content, processes and products.

For gifted and talented education, it is recommended that the "Principles of a Differentiated Curriculum for the Gifted and Talented" are followed by teachers in any program design. These principles were written by the National Curriculum Council: James Gallagher, Sandra Kaplan, Harry Passow, Joseph Renzulli, Irving Sato, Dorothy Sisk, Paul Torrance and Janice Wickler.

A. Principles of a Differentiated Curriculum for the Gifted and Talented

Whether planning for an individual and his/her unique gifts and talents or for a group's general characteristic, these principles should be used:

Content: Present content that is related to broad-based issues, themes, or problems.

Integrate multiple disciplines into the area of study. Present comprehensive, related, and mutually reinforcing experiences within an area of study.

Allow for the in-depth learning of a self-selected topic within the area of study.

Encourage the development of self-understanding, i.e., recognizing and using one's abilities, becoming self-directed,
appreciating likenesses and differences between oneself and others.

**Process:** Develop independent or self-directed study skills. Develop productive, complex, abstract, and/or higher level thinking skills.

Focus on open-ended tasks.

Develop research skills and methods.

Integrate basic skills and high level thinking skills into the curriculum.

**Product:** Encourage the development of products that challenge existing ideas and produce "new" ideas.

Encourage the development of products that use new techniques, materials, and forms.

Evaluate student outcomes by using appropriate and specific criteria through self-appraisal, criterion-referenced and/or standardized instruments.

The **Curriculum Flow Chart** (Appendix L) and **Curriculum Development Possibilities** (Appendix M) are suggested as helpful organizational aids for planning.
B. Extension of Regular Program

A Gifted Extension Model developed by Tennant on page 77 describes how the regular program core can be expanded for the gifted. The innermost circle is for the regular subject areas. The next circle is the regular program core or basic learnings all students need. The third circle indicates the qualitatively differentiated extension for gifted and talented:

The **Content Area** is divided into knowledge, skills and attitudes. Enrichment opportunities include exploratory activities, interest center, involvement type field trips and speakers. The basic knowledge may be telescoped or accelerated to allow more time for field expansion (studies in depth), supplementary subjects (a typical subject, e.g. geopolitics) and activity orientation (relating to community activities). Skill development should be extended and perfected, e.g. research skills. Attitudinal development can be extended into more complex topics and special concerns of students themselves.

The **Process Area** is transformed into decision making, creativity, and cognitive abilities. Students should weigh more complex social and personal implications, seek more far-ranging alternatives and broaden, sharpen or even change the original objective. Opportunities for creativity should be increased and made as broad or deep as possible for cognitive abilities, students should be able to digress with divergent thinking and find appropriate strategies.

The **Output Area** may be secondary since the major objective is to enhance the students' gifts or talents. Renzulli however believes that "production" is natural for them and they should be encouraged to study real-life problems and produce real-life products or solutions for real audiences.
Evaluation can be done by gifted and talented students themselves by determining their own criteria and by learning how to make necessary changes for improvement.

Tennant says, "the focus of curriculum development must therefore go beyond the regular program core and provide additional content for gifted students, to emphasize improving and challenging their thinking skills, encouraging their creative talents, allowing them opportunities to be producers of knowledge as well as consumers, and helping them to evaluate and upgrade their products."
C. Types of Activities for Gifted and Talented

Joseph Renzulli's Enrichment Triad Model includes three types of activities: (Appendix N)

Type I: General exploratory activities.

Type II: Group training activities.

Type III: Individual and small group investigations of real problems.

The Type I general exploratory activities are like floodlights. Students are exposed to issues, topics, and events that are not ordinarily taught in the regular curriculum. They are existential experiences that could "turn on" students.

The Type II activities are the systematic, purposeful and selected activities including the cognitive and affective. These group training activities could include critical thinking skills, creativity, research skills, valuing, planning, etc.

The Type III activities are especially appropriate for gifted and talented. Activities include individual and small group investigations of real problems. Students learn to focus on a real problem, become first hand inquirers using raw data and work towards a real product for a specific different and/or new target audience. The learning environment is extended into the community.

Students who experience these three types of activities are then able to move from the reproduction of old knowledge and information to the production of new data, and from being consumers of knowledge to producers of knowledge; from question answerers to question askers; and from being externally directed to internally directed.
In all of the three types of activities, the key is to afford the students the opportunities to develop their "gifts" or strengths; to zero in on their interests and to realize success with real creative products for real and different audiences.

Renzulli believes that these "first hand inquirers" are researchers rather than practitioners, the composers rather than performers, medical researchers rather than doctors. They are active rather than passive learners, investigators instead of reporters.

The easiest way to escalate the level of a gifted person's learning environment he believes is to "escalate ways of retrieving, managing, and using information...students need ample time to select a topic of genuine interest." The teacher can help in translating and focusing the area into a solvable problem. She/he should provide tools of technique for the investigation and assist in communicating the results.

Renzulli contends that while students are achieving products, they develop process skills. However, he believes that not all persons can or want to engage in investigative activity or intensive endeavors. He believes that providing special services for a few hours per day or week is certainly a step in the right direction, but says, "we are fooling ourselves if we do not also take major steps to modify the regular curriculum."
VI, THE TEACHER.
SELECTION OF TEACHERS OF THE GIFTED AND TALENTED

The key to any successful program is the teacher. Because of personal characteristics, attitudes, interests, and professional background, some people will be more suited than others to work with these children. All teachers of the gifted and talented need not be gifted persons. However, they should be secure and self-confident enough to accept a child's superior capabilities and be able to encourage even greater achievement.

Imagination and curiosity are highly desirable qualities if the teacher is going to be able to recognize, appreciate and encourage them in students. She/he needs a broad academic education as well as professional expertise to be a facilitator, questioner, stimulator and guide. Organizational and planning skills are needed for programming open-ended learning. It is vital to the program that teachers understand giftedness, show genuine interest in working with gifted and talented students, demonstrate proficient knowledge and skills, and set a conducive environment for challenging experiences.

After the selection of the teacher, encouragement and support should be provided by the administrators, staff and parents. Some ways to show support include the provision of staff development activities, new and adequate supplies and equipment, flexible scheduling patterns, funds for field study trips and others.

A rating scale developed by Martinson-Wiener can be used to aid in the selection of teachers. (Appendix 0)
A. General Characteristics Desired of Teachers of Gifted and Talented

James Gallagher in his studies has found some characteristics of teachers highly desirable. Few teachers can realistically meet all of the following ideal qualifications, but they should possess many of them.

1. Superior teaching proficiency.
2. Creativity.
4. Maturity and emotional stability.
5. Good health, abundant energy, and stamina.
6. Genuine interest in and understanding of the gifted.
7. Enthusiasm and high ability for motivation.
8. Excellent sense of humor and common sense.
9. Honesty and willingness to admit limitations.
10. Confidence in themselves and their pupil's abilities.
11. Flexibility.

B. Other General Characteristics That Should Be Considered Are:

13. Understanding of the affective and cognitive domains.
15. Patience.
16. Ability to allow students freedom of expression and movement.
17. Organizational skill in curriculum and classroom management.
18. Ability to work with minority groups, culturally different, disadvantaged and handicapped.
19. Ability to involve others.
20. Ability to get along well with the faculty.
C. Special Characteristics

Creativity in:
- thinking.
- classroom management.
- teaching strategies.
- utilizing materials.
- planning educational experiences.
- use of community resources.

Knowledge in:
- the area of gifted children, needs and characteristics.
- one field or area of expertise.
- the problem solving methods utilized to relate various broad areas or disciplines.
- teaching strategies specifically geared to the gifted.

Organizational Skills in:
- curriculum.
- utilizing physical environment.
- locating and working with community resource people.
- classroom management.

Enthusiasm for:
- the learning process.
- the development of a gifted program.
- the individualization of learning.
- creativity in teaching and learning.

Flexibility in:
- utilizing the physical environment.
- utilizing a variety of materials and equipment.
- re-structuring and re-structuring interest and learning groups.
- modifying lessons to capitalize on opportunities for spontaneous learning.

Resourcefulness in:
- locating supplementary materials.
- identifying resource individuals.
- locating sites for meaningful educational experiences.

Warmth and Sincerity:
- in accepting and encouraging individual differences and non-conformity of gifted children.
- for fellow professionals and colleagues.
- in working with parent relationships.

LEARNING TEACHING STYLES

Joseph Renzulli stresses the importance of learning styles in differentiated curriculum for gifted and talented students and insists upon a product. (Appendix P)

Teachers usually think of perceptual abilities as determiners of learning style. Through which modality does the student learn best - visual, auditory, kinesthetic, tactile, or a combination? Can he handle complex as well as simple input? Through which medium or media does he function best?

Answers to the above questions, as well as awareness of the developmental stage of the student, are factors to consider in planning learning experiences for any student, including the gifted and talented. Where is the student on a continuum of concrete to abstract?

Renzulli is concerned about the student's preferences for ways of being taught. What do they prefer?

- Projects
- Independent Study
- Lecture
- Games
- Simulated Environments
- Recitation and Drill
- Discussion
- Programmed Instruction
- Peer Teaching
- Other

In order for teachers to plan differentiated learning experiences, they need to know what their student's abilities, interests and learning styles or preferences are and be cognizant of what they can offer according to their own abilities, interests and teaching styles. Matching these into the curriculum will result in relevant and challenging experiences for both the student and teacher.
COMMUNICATING WITH REGULAR CLASSROOM TEACHERS

The teacher of the gifted and talented should communicate with other teachers in the school, especially with those who work with the same students. This is crucial to the success and maintenance of a gifted and talented program.

Some suggested ways of establishing communication and a close working relationship with regular classroom teachers are the following:

A. Meetings
1. Teachers of the gifted may be invited to explain their programs to total school faculties.
2. Teachers of the gifted may plan meetings for small groups of teachers with whom they share educational responsibilities.
3. Teachers of the gifted may arrange telephone conferences.
4. Teachers of the gifted may arrange individual conferences with regular classroom teachers.

B. Written Communications
1. Newsletters may be sent to classroom teachers to inform them of activities, projects, etc.
2. Teachers of the gifted may share written evaluation of a child's progress with the regular classroom teacher.
3. Teachers of the gifted may solicit exemplary ideas or activities from regular classroom teachers for inclusion in the gifted program.

C. Visitations
1. Classroom teachers may be encouraged to visit the program for gifted.
2. Classroom teachers may accompany teachers of the gifted on visits to other programs or conferences.

Viable alternatives to cover regular classes may be team teaching, back to back teaching, and others.
The gifted child may be intimidating to some teachers. When this is coupled with having the child taken out of the regular setting and spending some time with a specially trained teacher, the insecurity may be compounded and requires careful and tactful handling. The problem of interpreting the rights of children to deviate upward is very difficult. One of the recurring problems of the teachers of the gifted may well be that of assisting classroom teachers to accept the gifted child and give that child the freedom needed to explore and develop unique talents.
VII. STAFF DEVELOPMENT
A. Definition

For purposes of this guideline, staff development refers to systematic efforts of educational administrators and others including colleges and universities to improve the performance of personnel, which in turn will promote improvement of instruction and educational opportunities for children.

Staff development efforts are mainly workshop sessions, but may also include conferences, seminars, meetings, courses, materials and institutes. Continuous experiences are provided for the purpose of having more effective people working with the gifted and talented students. If successful, communication between the instructors and participants will result in desirable changes of behavior.

Participants may be teachers, counselors, librarians, students, administrators and parents to work toward common goals and objectives. (State and District).

Instructors may be a cadre of teachers with gifted and talented classes and state and district educational specialists who coordinate the gifted and talented program. Other resource persons will also be asked to help; educational specialists of the Office of Instructional Services, professors of the universities and colleges, evaluation staff specialists of the Department of Education, psychometrists and psychologists, parents, other community resources, and above all, the gifted and talented students.

Various delivery systems will be used including A State Plan for Providing Appropriate Educational Opportunities for the Gifted and Talented, district plans and guides, reports, demonstrations, case studies, discussions, simulations, games, lectures, encounters and audio-visual kits.
Staff development, including pre-service-and in-service training, is essential for the successful implementation of a gifted and talented program. To ascertain the current status of programs and needs for staff development, a survey form may be used. (Appendix Q).

B. Assumptions

Some basic assumptions for the basic staff development activities are listed below:

1. Participants attend in-service to review or learn something new which will help them to become more effective.

2. In-service instructors or leaders have updated knowledge and skills, and carefully designed plans to present sessions based on the particular needs of the participants.

3. To learn, participants become involved with various learning modes, especially learning by doing projects.

4. Appropriate materials and resources are readily on hand.

5. Program content and schedule have some alternatives and options for decision-making by participants.

6. The objectives for each session are specific and used for evaluation at the end of the sessions.

7. A limited number of participants, adequate number of sessions, adequate time and spacing of activities ensure long-lasting effects and follow-up activities in school.

8. Some time is needed for providing in-service training during teachers' work week.
C. **Phases**

When developing a systematic plan, it is suggested that phases for meeting the objectives of the program be included. The Department of Education recommends the cooperative involvement of staff at all levels, a conducive climate for staff development, delineated roles and responsibilities of personnel responsible and provision of a reasonable amount of time for change to occur. It is recommended that six phases of staff development be considered.

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Orientation</th>
<th>Phase IV</th>
<th>Growing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II</td>
<td>Developmental</td>
<td>Phase V</td>
<td>Reaching Out</td>
</tr>
<tr>
<td>Phase III</td>
<td>Interaction</td>
<td>Phase VI</td>
<td>Evaluation</td>
</tr>
</tbody>
</table>

The objectives of each of the phases are:

1. **Organizing Orientation Phase**
   a. To inform participants of the need for gifted programs and the reasons the gifted and talented students need a differentiated curriculum.
   b. To orient school personnel with the use of *A State Plan for Providing Appropriate Educational Opportunities for the Gifted and Talented*, and the *Hawaii State Guidelines and Procedures for Gifted and Talented Education*, and the district plans and guidelines.
   c. To assist individuals with their written school plans including objectives, identification, program and evaluation components.
   d. To provide resource materials for research and independent study.

2. **Developing Phase**
   a. To present the *Hawaii State Resource Book for Gifted and Talented* and other resources for use in the development of differentiated curriculum in each participant's classroom.
   b. To assist teachers in the development of their own units/lessons appropriate for their students.
   c. To help develop teachers' feelings of self-worth in order to provide a positive classroom atmosphere.
   d. To field test units/lessons for validation and/or improvements.

* to be developed
To exchange and share successes.

f. To express concerns and/or problems for follow-up.

3. Interacting Phase
   a. To present maintaining techniques which will help to strengthen the gifted and talented programs and encourage total school support.
   b. To aid in ways to coordinate the school with home in planning, implementing and evaluating gifted and talented programs.
   c. To communicate new ideas and trends for other areas not explored.

4. Growing Phase
   a. To work together on alternatives and/or solutions to concerns and problems.
   b. To present ways for articulating gifted and talented programs of high schools with their elementary and intermediate feeder schools.
   c. To coordinate the school with home and community resources for the development of improved gifted and talented programs.
   d. To develop a communication system with all involved at school, district, state and national levels.
   e. To make happen "real-life" learning experiences with possible internship, mentor, laboratory, exchange and other extension programs.
   f. To establish regular meetings for sharing and seeking solutions.

5. Reaching Out Phase
   a. To extend and expand programs and increase personnel and funds for the gifted and talented.
   b. To reassess and redirect programs in accordance to concerns and discrepancies.
   c. To support leaders to reach out and develop more leaders and other personnel.

6. Evaluating Phase
   a. To present summative evaluation.
   b. To seek new dimensions.

*For a suggested long range plan for staff development see Appendix R
VIII. PARENT INVOLVEMENT
PARENT INVOLVEMENT

Parents need to be involved with their children's gifted and talented program because they can observe their children under a wide variety of conditions and have a more extensive sample of behavior.

They should understand the program purposes, identification system and activities. Their nominations can be instrumental in identifying those not usually found by tests or other means. They need to be able to collaborate with the school personnel in helping to implement the best possible program design and delivery service. They can be helpful in providing information and suggestions at conferences and meetings regarding their child's progress.

They can also be involved as volunteers in the school as resource speakers or field trip leaders for the classrooms and also as mentors for students.
The Department of Education's Parent Involvement Model should be used for best results. See Appendix R-1.

1. **Component A - Information Exchange**

   The focus of this component is basically communication among parents, students, and the school. Some vehicles for information exchange are bulletins, notices, newsletters, meetings, open houses, group discussions, and conferences. Information should be exchanged on a timely basis.

2. **Component B - Hands On**

   The focus of this component is on parents getting directly involved with hands on activities in school or at home. Parents can be involved in making observations, tutoring, preparing instructional materials, assisting with field trips, serving as resource persons, and sharing talents.

3. **Component C - Advisory**

   The focus of this component is on parents serving in an advisory capacity on school matters through advisory groups including school advisory councils, parent advisory councils, parent-teacher-student association/groups, school-community councils, interest groups (band, athletics, language, subject area, etc.), and ad-hoc committees.

   Implementation of these three components can help to involve parents systematically in a variety of ways. Some benefits which can be derived from effective parent involvement efforts are:

   1. Students will achieve educational growth in a positive and supportive environment.
   2. Parents will learn more about the school's program, and gain in their own development.
   3. School personnel will learn more about the aspirations and concerns of parents, and the family, culture and community influences upon the students.
COMMUNITY AWARENESS

People in the community need to be aware of the gifted and talented programs' purposes, needs, activities and how they can be of help and support.

Some ways are for them to be community mentors, sponsors, legislative lobbyists, and others. They can help to provide some resources and facilities not available in the school.

Councils, advocacy groups and associations also need to be in direct communication regularly. Some groups in Hawaii include the Department of Education's State Advisory Council for Gifted and Talented, the Hawaii Association for Intellectually Gifted Children (HAIGC), SERTOMA, and Mensa.

Providing maximum opportunity for these young students should expand to the community to also involve the media, professional education associations, honorary scholarship societies, public and private institutions of higher learning, the different professions and industries.

Work-study, mentorship, and career exploration options are needed for the career education and future of the students.
IX. ROLES AND RESPONSIBILITIES
1. Provide state definition and direction for gifted and talented programs.
2. Prepare long and short range state plans for gifted and talented.
3. Advise and assist districts in determining the need for programs for the gifted.
4. Assist districts and schools in establishing programs for the gifted.
5. Interpret and apply State Law and administrative regulations.
6. Secure and compile information about local programs for the gifted and disseminate information to all districts.
7. Prepare budget requests for the necessary staff to implement and support all identification, program development, material acquisition, in-service training, publicity, evaluation, and related procedures that are required to provide a qualitatively differentiated program for the gifted and talented.
8. Provide in-service education for interested administrators, teachers, and other school personnel. Provide workshops, conferences or institutes for parents and other interested community members.
9. Advise school districts regarding identification procedures, program development, and evaluation.
10. Prepare guides for suggested goals and objectives, identification procedures, qualitatively-different curriculum activities, administrative planning, and evaluation techniques.
11. Visit, monitor and evaluate programs for improvements.
12. Provide technical assistance when needed.
13. Secure and distribute federal funds for the gifted.
14. Provide statewide publicity and visibility for the program.
15. Serve as an information center on gifted and talented education.
DISTRICT PERSONNEL

1. Provide district direction for gifted and talented programs.
2. Work cooperatively with state and school personnel.
3. Acquire and disseminate extensive background materials/information on the needs of the gifted and talented.
4. Develop appropriate identification and program development procedures for district.
5. Develop long and short range plans for district.
6. Actively support the gifted program with needed materials, adequate facilities, sufficient freedom for teachers, expert resource and consultant help, and democratic administrative guidance.
7. Develop program development and evaluation models.
8. Visit, monitor and evaluate programs for improvements.
9. Provide technical assistance when needed.
SCHOOL ADMINISTRATOR

1. Prepare a long and short range plan.
2. Provide school direction for gifted and talented programs.
3. Become knowledgeable about the unique needs of the gifted.
4. Become acquainted with gifted students in the school.
5. Stimulate interest in and concern for the gifted.
6. Urge teachers to provide qualitatively differentiated programs for the gifted in their classrooms.
7. Assess and coordinate in-service activities for staff.
8. Cooperate with district personnel in identifying the gifted and implementing programs.
9. Encourage and assist teachers in securing appropriate instructional materials for the gifted.
10. Meet regularly with parents to explain the program to them, provide other activities as needed.
11. Work cooperatively with other personnel in objectively evaluating the program.
12. Visit, monitor and evaluate program for improvement.
SCHOOL ADMINISTRATOR/COORDINATOR
(Vice-principal, department head or grade level chairperson)

1. Design, develop, coordinate and evaluate program.
2. Develop and implement curriculum (techniques, materials) related to enriching the total program.
3. Prepare financial, statistical, and descriptive reports as needed to develop, maintain, and account for the program.
5. Assess in-service needs for staff and parents.
6. Serve as a consultant and resource to the staff, students, and parents involved in the program.
7. Participate as part of the Educational Services Staff.
8. Promote public relations activities at the local, county, and state levels.
GIFTED AND TALENTED TEACHER

1. Prepare plans for the program.
2. Facilitate the screening and selection process of students.
3. Provide an enriched individualized program for the gifted which encompasses the eight foundation program objectives.
4. Write Appropriate Educational Plans for each student.
5. Assist students in planning, organizing, and evaluating tasks.
6. Screen, develop, and provide appropriate materials for the gifted.
7. Evaluate pupil progress.
8. Interpret the program to parents.
9. Assist in the staff development of teachers and training of parents.
10. Attend in-service training sessions for latest developments and trends.
11. Maintain effective relationships with staff and general public.
12. Communicate effectively with others.
DISTRICT RESOURCE TEACHER

1. Support classroom teachers and building principals in their teaching relationships with the gifted and talented.
2. Provide an enriched extension of the regular curriculum for gifted students in intra and extra-classroom settings.
3. Demonstrate diverse methods of instruction appropriate for the gifted, such as problem solving, independent study, etc.
4. Serve as communicative liaison person between district and school.
5. Participate in parent involvement activities.
SCHOOL COUNSELOR

1. Participate in screening and selecting students for the program.
2. Provide guidance to help students to know their potential and responsibilities and to have pride in their abilities.
3. Provide students with opportunities for personal and social growth.
4. Provide help for parents to understand the unique characteristics and special needs of their children.
5. Help students with their educational and career development.
SCHOOL LIBRARIAN

1. Work closely with the gifted and talented teacher to plan instruction that will integrate gifted learner needs with library/study skills, accessible resources and consultative help.
2. Provide as much guidance as possible in individualized reading, viewing and listening of library resources.
3. Help the gifted and talented students with imaginative and creative ways to share the products of their learning experiences.
4. Help with the identification, selection, evaluation and dissemination of appropriate instructional resources for the gifted and talented program.
REGULAR TEACHERS AND OTHER SCHOOL PERSONNEL

Provide support and assistance to meet the goals and objectives of gifted and talented education in the following ways:

1. Attend in-service sessions to gain knowledge about giftedness.
2. Interact and communicate with teachers of gifted and talented and others to effect improvement.
3. Be aware of characteristics of gifted and talented in order to nominate potential candidates.
4. Be sensitive to the unique needs of the students and provide for them as best as possible.
5. Collaborate in the appropriate educational planning of gifted and talented students.
6. Become acquainted with the gifted and talented students in the school.
7. Provide a conducive environment with opportunities and resources to enable students to learn at advanced and creative levels.
8. Share expertise and talents where appropriate.
GIFTED AND TALENTED STUDENT

1. Attend regular or specially scheduled programs or events.
2. Complete selected tasks and strive for excellence.
3. Communicate and share learning experiences with peers, teachers and parents.
4. Practice decision-making and independent learner skills.
5. Develop self-awareness, understanding and positive values and attitudes.
6. Participate in planning and evaluating own learning experiences within the program and making post-secondary educational and career plans.
7. Use initiative, self-direction and originality in dealing with problems and/or tasks.
X. EVALUATING, MONITORING AND REPORTING
EVALUATING, MONITORING AND REPORTING

The main purpose of evaluation is to determine the extent to which the program goals and objectives are being achieved; and the impact of learning activities on student progress.

Evaluating or monitoring the successf ulness or effectiveness of the program should be done continuously as a formative evaluation (progress reporting or checkpoints) and as summative evaluation (terminal reporting at end of year or cycle). Findings should be used for future improvements of the program.

An overview of the key features of an evaluation system and the process involved is shown in Appendix S.

For Formative Evaluation, tests and other measurements to be used for evaluation may need to be designed by the school or district to determine to what extent and how well the objectives have been met. However, some standardized tests may be appropriate.
EVALUATING STUDENT PROGRESS

Techniques particularly relevant to evaluating student objectives and activities include: (See Appendix T).

1. Criterion referenced or standardized tests.
2. Student and parent interviews or questionnaires.
3. Teacher observations.
4. Attitude checklists.
5. Sociograms.
6. Student journals and logs.
7. Community interviews or questionnaires.
8. Comments or statements from mentors or experts.
9. Anecdotal records.
EVALUATING PROGRAM EFFECTIVENESS

Techniques which provide documentation of activities as planned might include:
1. Data on activities and meetings.
2. Materials, supplies and equipment purchased.
3. Records of in-service sessions and evaluation of results.
4. Checklist of dates and program activities planned.
5. Questionnaires to measure changes in perception of program by staff, students and others.
6. Test measurement of student learning and/or development.
7. Inventories.

Some measures can be selected and others may need to be constructed by the teacher or private agency. After administering the instruments, conducting the observations and interviews, tabulation and analysis of the data are needed before summarizing in a narrative, statistical or graphic form. Recommendations should also be included.

When preparing the report, identify the audiences and decision makers who will use the data, whenever possible, use charts, graphs, and illustrations.
MONITORING AND REPORTING

The most accurate and best means for monitoring and reporting the progress of programs are personal observations of student and teacher performances in the classes and interviews with them. Since this is not possible or practical to accomplish for all programs, a monitoring system through written reports is suggested for communicating the status and progress of programs at the school, district, and state levels.

At the classroom/school level, it is necessary to have a record-keeping retrieval system which shows individual/class/school report of student by student identification scores, placement of program, the student and program gains, and recommendations/comments. Teachers should have some time to do this. A form is recommended for uniform reporting of consistent data to the district and state levels. (See Appendix U).

At the district level, it is necessary to have a record-keeping retrieval system which shows school by school report for submittal to the state level. The system would include the identification criteria used, program options and number of students served, program gains and recommendations/comments. A form is recommended for uniform reporting of consistent data to the state level. (See Appendix V).

At the state level, it is necessary to have a record-keeping and retrieval system which shows district by district reports for use in state status reports, program planning, biennium budgeting, improvement strategies and dissemination. (See Appendix W).

For a summative evaluation, a design, implemented either at the school, district or state levels or evaluation agency will be required. The summative evaluation should determine if the program should expand, continue as status quo, be modified or terminated. It should also provide the Department with constructive recommendations for the future.
THE CHANGING CONCEPTION OF GIFTEDNESS

1869

1920

1947

1960

1970

GENIUS

INTELLECTUALLY GIFTED

GIFTED

DIVERGENT (CREATIVE)

NON-ACADEMIC
HUMANISTIC

MULTI-TALENTED

CONVERGENT (HIGH IQ)

UTILITARIAN
ACADEMIC

GALTON

IQ 120

"GIFTEDNESS IS HEREDITARY"

IQ 120

HIGH LEVEL APTITUDE

DEMONSTRATED OR
POTENTIAL

95% SCORE

95% SCORE

INTELLECTUAL
ACADEMIC

CREATIVE
LEADERSHIP

VISUAL/PERFORMING
PSYCHOMOTOR

Appendix A
Graphic Representation of the Definition of Giftedness

<table>
<thead>
<tr>
<th>GENERAL PERFORMANCE AREAS</th>
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</thead>
<tbody>
<tr>
<td>Mathematics</td>
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<tr>
<td>Visual Arts</td>
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<tr>
<td>Physical Sciences</td>
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<tr>
<td>Philosophy</td>
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<tr>
<td>Social Sciences</td>
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<tr>
<td>Law</td>
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<tr>
<td>Religion</td>
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<tr>
<td>Language Arts</td>
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<tr>
<td>Music</td>
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<tr>
<td>Life Sciences</td>
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<tr>
<td>Movement Arts</td>
</tr>
</tbody>
</table>

**This arrow should read as
"...brought to bear upon...."

<table>
<thead>
<tr>
<th>SPECIFIC PERFORMANCE AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartooning</td>
</tr>
<tr>
<td>Astronomy</td>
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<tr>
<td>Public Opinion Polling</td>
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<tr>
<td>Jewelry Design</td>
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<tr>
<td>Map Making</td>
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<tr>
<td>Choreography</td>
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<tr>
<td>Biography</td>
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<tr>
<td>Film Making</td>
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<tr>
<td>Statistics</td>
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<tr>
<td>Local History</td>
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<tr>
<td>Electronics</td>
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<tr>
<td>Musical Composition</td>
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<tr>
<td>Landscape Architecture</td>
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<td>Chemistry</td>
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<tr>
<td>Demography</td>
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<td>Microphotography</td>
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<tr>
<td>City Planning</td>
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<tr>
<td>Pollution Control</td>
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<tr>
<td>Poetry</td>
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<tr>
<td>Fashion Design</td>
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<tr>
<td>Weaving</td>
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<tr>
<td>Play Writing</td>
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<tr>
<td>Advertising</td>
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<tr>
<td>Costume Design</td>
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<tr>
<td>Meteorology</td>
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<tr>
<td>Puppetry</td>
</tr>
<tr>
<td>Marketing</td>
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<tr>
<td>Game Design</td>
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<tr>
<td>Journalism</td>
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<tr>
<td>Electronic Music</td>
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<tr>
<td>Child Care</td>
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<tr>
<td>Consumer Protection</td>
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<tr>
<td>Cooking</td>
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<td>Ornithology</td>
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<td>Furniture Design</td>
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<td>Navigation</td>
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<tr>
<td>Genealogy</td>
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<td>Sculpture</td>
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<tr>
<td>Wildlife Management</td>
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<tr>
<td>Set Design</td>
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<tr>
<td>Agricultural Research</td>
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<td>Animal Learning</td>
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<td>Film Criticism</td>
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<td>Etc.</td>
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<td>Etc.</td>
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</tbody>
</table>
ACCELERATION

Students are placed and provided instruction in a given area or subject at a more advanced level.

- Grade skipping
- Subject advancement
- Credit by exam
- Advanced placement
- Early admissions
- Correspondence courses
- Internships
- Honors classes
- Independent study

ENRICHMENT

Students are provided experiences which replace, supplement or extend learnings vertically or horizontally.

- Cluster grouping within regular class
- Special classes
- Pull-out classes
- Part-time groups before, during, after school or Saturdays
- Seminars
- Mini-courses
- Team teaching
- Resource center
- Itinerant or Culture events
- Special electives
- Special summer
- Independent study
- Directed research
- Community mentors
- Field study

GUIDANCE

Students are provided experiences which help to promote better understanding of self and others.

- Individual conferences and counseling
- Group meetings
- Career and vocational counseling
- Educational counseling
- Peer counseling
- Community programs and sponsorship
- Scholarships
- Study groups
- Tutoring
LONG RANGE PLAN - 1980-83

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>ENABLING ACTIVITIES</th>
<th>PERSON RESPONSIBLE</th>
<th>TARGET DATES</th>
</tr>
</thead>
</table>

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115

115
IDENTIFYING AND PROVIDING FOR GIFTED AND TALENTED AT THE SCHOOL LEVEL

HIGH LEVEL

- Special Electives
- Advanced Placement
- Early Admissions
- Correspondence
- Field Study
- Internship

INTERMEDIATE LEVEL

- Credit By Exam
- Honors
- Seminars
- Community Mentor
- Counseling

ELEMENTARY LEVEL

- Acceleration
- Enrichment (G/T)
- Pull Out
- Resource Ctr.
- Librarian

Identification and Selection Process

1. Concept of Giftedness
2. District Plans & Guidelines
3. State Plans & Guidelines
4. Needs Assessment (School)
5. Long Range Plan
6. Short Range Plan
7. Multiple Criteria Identification & Selection
8. Case Study Review Rating by G/T Committee approx. 5-10%
9. Individual Testing of Student Performances Approx. 10-20%
10. Group Testing Nominations by checklists, school records and other data 100% of student population
11. Appropriate Educational Plan Selection by G/T Committee Approx. 3-5%
12. Appropriate Educational Plan Selection by G/T Committee Approx. 3-5%
# Identification and Selection Process

## Matrix for the Identification and Selection Process

### Identification

<table>
<thead>
<tr>
<th>Area and Characteristics</th>
<th>1st Dimension</th>
<th>Appropriate Measures and LANP Tests</th>
<th>IEP Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual</td>
<td>(100% of Population) Select to Identify</td>
<td>Multiple Criteria</td>
<td>(10-20% of Population) Select for consideration</td>
</tr>
<tr>
<td>Specific Academic</td>
<td>Multiple Criteria</td>
<td>Individual I-O tests</td>
<td>Individual I-O tests</td>
</tr>
<tr>
<td>Specific Academic</td>
<td>Multiple Criteria</td>
<td>Team Placement Test</td>
<td>Team Placement Test</td>
</tr>
<tr>
<td>Specific Academic</td>
<td>Multiple Criteria</td>
<td>Personal and Interpersonal Skills Test</td>
<td>Personal and Interpersonal Skills Test</td>
</tr>
<tr>
<td>Specific Academic</td>
<td>Multiple Criteria</td>
<td>Mastery Tests</td>
<td>Mastery Tests</td>
</tr>
<tr>
<td>Specific Academic</td>
<td>Multiple Criteria</td>
<td>Competency Test</td>
<td>Competency Test</td>
</tr>
</tbody>
</table>

### Selection

<table>
<thead>
<tr>
<th>Appropriate Measures</th>
<th>Rating, Selection, Planning by Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Ability</td>
<td>(10% of Population) Select for Participation</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Review of Data</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Development of matrix (Balanced)</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Matching students with programs</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Learning styles and teaching styles</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Establishment of criteria for inclusion</td>
</tr>
<tr>
<td>Special Ability</td>
<td>Inclusion of 3-100 &quot;Get Inactive&quot;</td>
</tr>
</tbody>
</table>

### Program Prototype

<table>
<thead>
<tr>
<th>Program Prototype</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary (K-5)</td>
<td>Special Elective</td>
</tr>
<tr>
<td>Intermediate (6-8)</td>
<td>Special Elective</td>
</tr>
<tr>
<td>High School (9-12)</td>
<td>Special Elective</td>
</tr>
<tr>
<td>Special Elective</td>
<td>Special Elective</td>
</tr>
</tbody>
</table>

### Guidance

- Independent Study
- Correspondence Courses
- Field Study
- Electives in Music (Specialized areas an option)
- Internships (outside)
BALDWIN IDENTIFICATION MATRIX

This design is called the Baldwin Identification Matrix (BIM). It has been successfully used in several school districts to help pull together all of the assessment techniques into a profile which allows a child equal access to a specially designed program for children who exhibit exceptional ability in a wide range of abilities.

The vertical axis of the matrix includes the selection of assessment techniques. The horizontal axis gives the weightings of the score made on each assessment.

The number 1 on the horizontal scale represents the median score. The median for the I.Q. score is 100. The range of scores for each weighting is calculated by subtracting the median score from the established upper limit. In the case of I.Q. scores, this upper point is 140+ and dividing by 4 you will get a point spread of 10. In the case of percentiles, the median point is the median for that population. In the case of one school the median was 75%ile. The upper point was 95%ile. The point spread in this case was 5. With stances the median point is 5, the upper limit is 9; therefore, the point spread is 1. In the case of verbal assessment, it is necessary for qualities to be quantified as in Superior which is rated 5 and so on to Below Average which is rated 1.

The extra column headed B-NA gives the investigator additional information. B stands for below the median and NA stands for information not available. This can be useful in activities that follow up screening.

GOOD LUCK!!

Alexinia Y. Baldwin
Judith S. Wooster

The Baldwin Identification Matrix Training Kit for Identifying Gifted and Talented Students is available from:

D.O.K. Publishers
71 Radcliffe Road
Buffalo, New York 14212

Kit Price: $6.95

Kit includes a leader's guide and sufficient material for conducting the simulation with 10-45 participants. Pad of 30 BIM forms, and Student Data forms, available separately for $1.00 each pad.
INSTRUCTIONS FOR USING THE BALDWIN IDENTIFICATION MATRIX

Step One: Select an array of assessment devices for establishing exceptional strengths in one or more of the six ability areas as defined in the Alaska Special Education Handbook or the State Plan for Gifted/Talented Students.

Step Two: List selected techniques or devices in the vertical column labeled "Assessment Items." The attached example includes standardized group intelligence and achievement tests, as well as behavior checklists and informal techniques developed by school.

Step Three: Determine the median score or percentile for each assessment item. Then establish an upper limit score or percentile by using the highest scores attained by students in local district on that particular assessment item. In the attached example the median score on the Cognitive Abilities Test was 100, while the upper limit was 140.

Step Four: Determine the range of scores for each assessment item by subtracting the median from the established upper limit.

Step Five: Divide the range (obtained in Step Four) by 4. This will give the point spread. In the example the range of score was 140-100 which equals "40." The point spread was 40 - 4 which equals "10."

Step Six: Enter the upper limit score under the vertical column labeled "5."

Step Seven: Enter the median score under the vertical column labeled "1."

Step Eight: Set up the range in points for the vertical columns 1 through 4. Start with column 1 and count up from the median score by the point spread (obtained in step five). Write the upper range for column 1 down. Now start with the next number in column "2." This will be the lower range for this column. Again count forward up to the point spread to get the upper range for column "2." Repeat through column "4." Refer to the attached example.

Step Nine: Once you have established the ranges in scores for each assessment item you have set up the matrix. This matrix should
be used in rating all potential candidates for gifted students within a school. Now the Matrix is used as a checklist for rating the abilities of the potential candidates.

In the example attached the scores attained by one student, Susan, are indicated by checking the appropriate columns. From the example, one can tell that Susan earned between 130-139 on the Cognitive Abilities Test. Her score on the Metropolitan Reading Test was at or above the 95th percentile.

Susan's scores on the nine assessment items are converted to a single score through the process indicated at the bottom of the matrix.

*Step Ten:* The total scores obtained by each potential candidate can be rank-ordered by the school or district. Then a predetermined number or percentage of students can be selected starting from the top of the ranked list.
<table>
<thead>
<tr>
<th>ASSESSMENT ITEMS</th>
<th>SCORES</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>B-NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cognitive Abilities Test</td>
<td>140+</td>
<td>139-130</td>
<td>129-120</td>
<td>119-110</td>
<td>109-100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Metropolitan Achievement</td>
<td>95%ile</td>
<td>94-90%ile</td>
<td>89-85%ile</td>
<td>84-80%ile</td>
<td>79-75%ile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Metropolitan Achievement</td>
<td>sta. 9</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Renzulli Leadership</td>
<td>40</td>
<td>39-35</td>
<td>34-30</td>
<td>29-25</td>
<td>24-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Renzulli Creativity</td>
<td>40</td>
<td>39-35</td>
<td>34-30</td>
<td>29-25</td>
<td>24-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. In-school Psychomotor</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Renzulli Motivation</td>
<td>36/34</td>
<td>33-30</td>
<td>29-26</td>
<td>25-22</td>
<td>21-18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Teacher recommendation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COLUMN TALLY OF CHECKS**

- 2
- 4
- 1
- 2
- 0

**WEIGHT**

- $5 \times 2$
- $4 \times 4$
- $3 \times 3$
- $2 \times 2$
- $1 \times 1$

**ADD ACROSS**

- $10 + 16 + 3 + 4 + 0 = 33$

**TOTAL SCORE**

- 33

**APPENDIX G-3**

**ADAPTED FOR USE BY:** Gifted Talented Screening Committee

**DATE:** 5/77

**STUDENT:** Susan

**AGE:** 9

**GRADE:** 3

**SEX:** F

**SCHOOL:** Longsworth Elementary

**SCHOOL DISTRICT:** Waverly
SAMPLE CASE STUDY SUMMARY INFORMATION FORM

Name: ___________________________ Date of Birth: ____________ Date Form Prepared: ____________

School: __________________________ Grade: ________ Sex: ________ Teacher: __________________

Section A: Intelligence Test Information

<table>
<thead>
<tr>
<th>Group Test:</th>
<th>Grade When</th>
<th>Name of Test</th>
<th>Verbal Score</th>
<th>Non-Verbal Score</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Test:</td>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examiner's Comments and Recommendations:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
### Section B: Achievement Test Information

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Test</th>
<th>Vocabulary</th>
<th>Read Comp.</th>
<th>Math Comp.</th>
<th>Math Appl.</th>
<th>Spelling</th>
<th>Language</th>
<th>Total Read.</th>
<th>Total Math.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
<td>G.E. %tile</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* G.E. = Grade Equivalency

### Section C: Aptitude Test Information

<table>
<thead>
<tr>
<th>Date</th>
<th>Numerical %tile</th>
<th>Verbal %tile</th>
<th>Abstract Reasoning %tile</th>
<th>Language Usage %tile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Academic Promise Test
(Grades 6-9)

<table>
<thead>
<tr>
<th>Date</th>
<th>Verbal Reasoning %tile</th>
<th>Numerical Ability %tile</th>
<th>Abstract Reasoning %tile</th>
<th>Mechanical Reasoning %tile</th>
<th>Space Relations %tile</th>
<th>Language Usage %tile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section D: End-of-Year Grades

List grades for current year plus two preceding years, if available.*

<table>
<thead>
<tr>
<th>Date</th>
<th>Grade</th>
<th>Teacher</th>
<th>Reading</th>
<th>Mathematics</th>
<th>Lang.Arts</th>
<th>Social Studies</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* NOTE: If secondary level, specify courses.

Section E: Guided Teacher Judgement

1. Scale for Rating the Behavioral Characteristics of Superior Students (Weighted totals).

<table>
<thead>
<tr>
<th>Date</th>
<th>Grade</th>
<th>Teacher</th>
<th>Learning</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low 8-16</td>
<td>Med 17-24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low 9-18</td>
<td>Med 19-27</td>
</tr>
</tbody>
</table>

2. Additional teacher information:

(a) Student's best area(s) of performance: _____________________________

(b) Student's poorest area(s) of performance: ___________________________

(c) Additional comments: ____________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

133
### Section F: Consensus of Observations by Teachers, Counselors, et al.

<table>
<thead>
<tr>
<th></th>
<th>Below Average</th>
<th>Average</th>
<th>Above Average</th>
<th>Well Above Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size relative to age.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social/emotional maturity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-direction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence in completing tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study habits.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creativity, originality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra-curricular activity participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section G: Special Aptitudes and Talents

List any exceptional accomplishment(s) by the student, such as creative products, artistic talents, or student self-reports about creative accomplishments.
Section II: Parent Observations

In the space below, summarize comments from parent nomination form.


Section I: School Records

In the space below, summarize pertinent information from the student's cumulative folder (e.g. special academic accomplishments, special awards, health and attendance records, etc.).


INDIVIDUALIZED EDUCATIONAL PROGRAMMING MODEL ---- GIFTED/TALENTED

Joseph S. Renzulli
Bureau of Educational Research
The University of Connecticut

CHARACTERISTICS OF GIFTED AND TALENTED

LEARNING PROCESS (MATCHING) COMPONENTS

THE ENRICHMENT TRIAD

Types of Information

Sources of Information

- Psychometric: Test Scores
- Developmental: Teacher Ratings, Parent Ratings
- Performance: Product Analysis, Classroom Achievements
- Motivational: Self-Expressions
- Sociometric: Peer Nominations

THE STRENGTH-ALYZER

THE COMPACTOR

THE MANAGEMENT PLAN

Curricular Areas

Areas

Procedures

Alternatives

Audiences

Products

Resources

Steps

Summary

Objective

Reference: The Strength-Alizer, Learning Styles Inventory, and Enrichment Triad Mode are published by Creative Learning Press, Inc., P.O. Box 320, Mansfield Center, Ct. 06250. The Strength-Alizer, Compactor, and Management Plan are available from the same publisher.
RENZULLI MODEL

INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE

Strength - A - Lyzer

Prepared by: Joseph S. Renzulli
Linda H. Smith

NAME ___________________ AGE ________ TEACHER(S) ___________________

SCHOOL ___________________ GRADE ________ PARENT(S) ___________________

Individual Conference Dates And Persons Participating In Planning Of IEP

<table>
<thead>
<tr>
<th>ABILITIES</th>
<th>INTELLIGENCE - APTITUDE - CREATIVITY</th>
<th>INTERESTS</th>
<th>LEARNING STYLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>Area</td>
<td>Date</td>
<td>Raw Grade</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEACHER RATINGS</th>
<th>CHARACTERISTICS OF SUPERIOR STUDENTS</th>
<th>LEARNING STYLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score Mean</td>
<td>Group</td>
<td>Score Mean</td>
</tr>
<tr>
<td>Learning</td>
<td>Musical</td>
<td>Learning Style</td>
</tr>
<tr>
<td>Motivation</td>
<td>Dramatic</td>
<td>Score</td>
</tr>
<tr>
<td>Creativity</td>
<td>Comm.: Precision</td>
<td>Learning Style</td>
</tr>
<tr>
<td>Leadership</td>
<td>Comm.: Expressive</td>
<td>Score</td>
</tr>
<tr>
<td>Artistic</td>
<td>Planning</td>
<td>Learning Style</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECIFIC AREAS OF INTEREST</th>
<th>LEARNING STYLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a result of individual discussions with the student, indicate particular topics, issues, or areas of study in which the student would like to do advanced level work.</td>
<td>Enter the scores from the Learning Styles Inventory in the spaces below. Circle the highest area(s).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Style</th>
<th>Score Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td></td>
</tr>
<tr>
<td>Simulation</td>
<td></td>
</tr>
<tr>
<td>Drill and Recitation</td>
<td>Programmed Instruction</td>
</tr>
<tr>
<td>Peer Teaching</td>
<td>Lecture</td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUMMARY AND RECOMMENDED ACTION BASED ON ASSESSMENT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the space below summarize (1) strengths; interests; and learning styles; (2) areas in which remedial work or additional skill building appears to be warranted; and (3) specific higher mental processes and advanced skills that should be developed.</td>
</tr>
</tbody>
</table>

END OF YEAR GRADES

Enter final grades for the past two years.

<table>
<thead>
<tr>
<th>Reading</th>
<th>Art</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foreign Language</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts</td>
<td>Other</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Other</td>
</tr>
</tbody>
</table>

130
# RENZULLI MODEL

## INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE

### The Compactor

<table>
<thead>
<tr>
<th>NAME</th>
<th>AGE</th>
<th>TEACHER(S)</th>
<th>Individual Conference Dates And Persons Participating in Planning Of IEP</th>
<th>SCHOOL</th>
<th>GRADE</th>
<th>PARENT(S)</th>
</tr>
</thead>
</table>

### CURRICULUM AREAS TO BE CONSIDERED FOR COMPACTING

Provide a brief description of basic material to be covered during this marking period and the assessment information or evidence that suggests the need for compacting.

### PROCEDURES FOR COMPACTING BASIC MATERIAL

Describe activities that will be used to guarantee proficiency in basic curricular areas.

### ACCELERATION AND/OR ENRICHMENT ACTIVITIES

Describe activities that will be used to provide advanced level learning experiences in each area of the regular curriculum.
KAPLAN MODEL

EMPTY FLOW CHART FOR DEVELOPING AN IEP FROM A STATEMENT OF PHILOSOPHY OR RATIONALE

STATEMENT OF PHILOSOPHY OR RATIONALE

EXPECTATIONS

Student | School | Home

DATA ACCUMULATED ABOUT LEARNER

COMPETENCIES

GOALS AND OBJECTIVES

IEP
KAPLAN MODEL

RELATING REGULAR AND GIFTED PROGRAM OBJECTIVES AND GOALS

<table>
<thead>
<tr>
<th>STUDENT DATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABILITIES</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>LONG-TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals</td>
</tr>
<tr>
<td>Objectives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHORT-TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals</td>
</tr>
<tr>
<td>Objectives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGULAR PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROLE IN REINFORCING</td>
</tr>
<tr>
<td>THE GOALS/OBJECTIVES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RELATIONSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTED GOALS/OBJECTIVES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIFTED PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROLE IN REINFORCING</td>
</tr>
<tr>
<td>THE GOALS/OBJECTIVES</td>
</tr>
</tbody>
</table>
School-to-home-to-school memo to the Parents of [Name]

The following objective is currently being emphasized at school. Some of the ways you can help your child attain this objective at home are listed below.

<table>
<thead>
<tr>
<th>Objective:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>While Watching TV</th>
<th>While Taking an Excursion</th>
<th>While Reading</th>
<th>While Having Discussions</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
### INDIVIDUAL EDUCATION PROGRAM
#### Instructional/Implementation Plan

**Student Name:** Mary Smith  
**School:** Central Junior High  
**Teacher:** Ted Green  
**I/IP for Skill Area:** Higher Cognitive Skill  
**Date of I/IP:** 9/10/77  
**Special Education Program and/or Related Service:** Gifted/Talented

**Long-term Program Goal (from Total Service Plan):**
To develop higher level cognitive skills in knowledge synthesis and divergent thinking

**Student has/has not reached long-term goal:** Date:

---

#### SHORT-TERM INSTRUCTIONAL OBJECTIVES
(in sequence of estimated achievement)

<table>
<thead>
<tr>
<th>Date Begin</th>
<th>Target Completion Date</th>
<th>Objectives</th>
<th>Behavior Conditions</th>
<th>Mastery Criteria</th>
<th>Mastery Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/15/77</td>
<td>10/9/77</td>
<td>Describe functions of research</td>
<td>in County Planning Agency</td>
<td>To satisfaction of Marshall Brown, Director of County Planning Office and Mary Johnson, State Planning Officer</td>
<td>10/9</td>
</tr>
<tr>
<td>9/30/77</td>
<td>11/15/77</td>
<td>Prepare 5-year population projections</td>
<td>in Polk County Government</td>
<td>Procedures for Statistical analysis will be evaluated by Marshall Brown and Ben Blue, Math Teacher</td>
<td>11/15</td>
</tr>
<tr>
<td>10/20/77</td>
<td>1/15/78</td>
<td>Write a Synthesis paper on leadership requirements</td>
<td>in County Government</td>
<td>Paper will be reviewed by 3 county commissioners, Marshall Brown, &amp; Rex Thompson, Social Studies Teacher</td>
<td>1/15/78</td>
</tr>
<tr>
<td>11/15/77</td>
<td>1/15/78</td>
<td>To describe potential growth on Implication Polk County’s Economy</td>
<td>Evaluation of paper by Rex Thompson, Tom Ford, Chairman of Chamber of Commerce, and Marshall Brown.</td>
<td>11/15/78</td>
<td></td>
</tr>
</tbody>
</table>
INDIVIDUAL EDUCATION PROGRAM: Total Service Plan and Annual Review

Name: Mary Smith
Sex: F Grade: 7
Address: 1230 Main Street Zip: 90000 Phone: 621-3456
Parents: John and Marsha Smith Placement: Gifted/Talented
Date of Birth: 8/13/65 C.A. 12

Permission is given for the educational placement described.

Date of Review: 5/15/78

Date of Child Study Team Meeting: 9/10/77
Signatures and Positions of Team Members:

- George Brown, Director
- Billy White, Psychologist
- Ted Green, Gifted Talented Facilitator
- Ben Blue, Math Teacher
- Marsha Jones, Librarian

Placement recommendations (including extent of time in regular education and legal category of exceptionality for state funding purposes only): Mary should be placed with a mentor four hours a week for continued development of math & reading skills as well as leadership ability. She should spend an additional three hrs. per week in the learning resource center.

Summary of Present Level of Student Performance:
Mary is functioning in reading skills at the eleventh grade level; math skills at the tenth grade level. Last year's mentor, Mr. Williams, has recommended development of leadership skills potential.

Long-term Program Goals
To develop higher cognitive skills in synthesis and divergent thinking.
To develop skills in statistical analysis

Special Education Program and/or Related Services
Mentorship in County Planning Office (4 hours per week)
Math class
Independent Study, Learning Resource Center (3 hours per week)
Mentorship

Person(s) Date of Responsible Placement
Ted Green, 9/15/77 Facilitator
Marshall Brown, Director
County Planning Office
Ben Blue, Math Teacher 9/10/77
Marsha Jones, Librarian

Recommended Placement:
CURRICULUM FLOW chart

CHARACTERISTICS
(needs, interests, abilities of the gifted population)
CURIOUS, ABSTRACT THINKING, MULTIPLE INTERESTS, RETENTIVENESS

IMPLICATIONS
- INTRODUCE NEW TOPICS
- PROVIDE A STIMULATING ENVIRONMENT WITH MANY RESOURCES
- ALLOW TIME TO PURSUE A TOPIC IN DEPTH
- DECREASE AMOUNT OF TIME NECESSARY FOR LEARNING • STRESS THINKING SKILLS

REFERENCE TO PRINCIPLES FOR A DIFFERENTIATED CURRICULUM

Present content that is related to broad-based themes, issues, or problems.
Integrate multiple disciplines into the area of study.
Present comprehensive, related, and mutually reinforcing experiences within an area of study.
Allow for the in-depth learning of a self-selected area within the area of study.
Develop independent or self-directed study skills.
Develop complex, productive, abstract and/or higher level thinking skills.
Focus on open-ended tasks.
Develop research skills and methods.
Integrate basic skills and higher level thinking skills into the curriculum.
Encourage the development of products that challenge existing ideas and/or produce "new" ideas.
Encourage the development of products that use new techniques, materials, and forms.
Encourage the development of self-understanding, i.e., recognizing and using one's abilities, becoming self-directed, appreciating likenesses and differences between oneself and others.
Evaluate student outcomes by using appropriate and specific criteria through self-appraisal, criterion referenced and/or standardized instruments.

TRANSLATION INTO SPECIFIC TEACHING/LEARNING ELEMENTS

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>PROCESS</th>
<th>PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCORPORATE BASIC SUBJECTS UNDER NEW THEMES</td>
<td>TEACH PROBLEM-SOLVING SKILLS</td>
<td>REQUIRE RESEARCH-RELATED WRITTEN WORK</td>
</tr>
</tbody>
</table>

151

National/State Leadership Training Institute on the Gifted and the Talented
## CONTENT

**ISSUES:**
- Urban vs. Suburban and Rural Life Styles
- Cultural Monism vs. Cultural Pluralism
- Balancing Individual Freedoms and Group Responsibility
- Good vs. Evil
- Helpful and Harmful Effects of Technology

**PROBLEMS:**
- Life in the Future
- Conservation
- Human Relations
- National Security
- Decay of the Big Cities
- Inevitability of War
- Effect of Current Events on Public Morale

**THEMES:**
- Courage
- Communication
- People's Need to Explore Magic
- Patterns of Change

## PROCESSES

- Bloom's Taxonomy of Cognitive Objectives
- Guilford's Structure of the Intellect
- Inquiry Training
- Creative Problem Solving
- Synectics
- Taba Teaching Strategies
- William's Cube
- Critical Thinking

## PRODUCTS

**ORAL**
- panel discussion
- debate
- teaching a lesson
- giving a lecture
- cassette
- film/slide - tape

**VISUAL**
- display
- charts
- tables
- illustrations
- filmstrip
- film
- graph
- collage
- mural
- picture/story book
- coloring book
- bulletin board
- map
- time line
- flow chart
- diagram

**KINESTHETIC**
- model
- diorama
- sculpture
- puzzle
- game
- worksheet

**WRITTEN**
- journal/diary/log
- letter
- report
- textbook
- editorial

## RESEARCH

**VARIOUS RESEARCH DESIGNS:**
- Experimental, correlational, historical, descriptive, case study

**SKILLS:**
- Observation reporting, note-taking, interviewing, questionnaire construction, tabulation and analyses of data, use of data retrieval systems
RENZULLI'S ENRICHMENT TRIAD

TYPE I
- General
- Exploratory
- Activities

TYPE II
- Group Training
- Activities

TYPE III
- Individual & Small Group
- Investigations of Real Problems

Regular Curriculum

Environment in General
### Martinson—Wiener

**Rating Scale of Significant Behaviors in Teachers of the Gifted**

**To the Rater:** A minimum of 40 minutes should be used for each observation. Use every opportunity to examine folios of materials, files of children’s products, and other evidence, as well as teacher behavior, to confirm impressions.

<table>
<thead>
<tr>
<th>Teaching Process</th>
<th>-Seldom</th>
<th>Occasionally</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Utilizes specialized pupil interests constructively.</td>
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<tr>
<td>a. Students work in areas of interest.</td>
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<tr>
<td>b. Teacher capitalizes on student interest in classroom.</td>
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<tr>
<td>2. Utilizes special talents and abilities of the students.</td>
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<tr>
<td>a. Students are involved in activities which display or include their special abilities and talents.</td>
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<tr>
<td>b. Individualized materials are available for development of special talents and abilities.</td>
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<tr>
<td>3. Encourages self-selection of materials</td>
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<tr>
<td>a. Students have freedom to select materials at high conceptual levels of difficulty.</td>
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<td>b. Teacher encourages pupils to make own selections and decisions.</td>
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<td>4. Makes classwork interesting through use of different sense media.</td>
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<tr>
<td>a. Teacher encourages effective pupil displays, not teacher-made displays.</td>
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<td>b. Teacher uses maps, charts, TV, radio, and/or films to augment or advance the qualities of instruction.</td>
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<td>5. Maintains or uses classroom resource center containing materials at appropriate advanced levels.</td>
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<tr>
<td>a. Learning resources are openly available to students.</td>
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<td>b. Teacher serves as a resource to pupils.</td>
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<td>6. Clarifies classroom goals and purposes using broad concepts rather than detail.</td>
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<td>a. Relates discussion to course objectives.</td>
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<td>b. Student's performance indicates understanding of course objectives.</td>
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<tr>
<td>7. Uses varied teaching strategies effectively.</td>
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<tr>
<td>a. Teacher is sensitive to students' responses, both verbal and non-verbal.</td>
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<tr>
<td>1. Teacher responds to visible cues in physical behavior of students.</td>
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<td>2. Teacher uses student verbal reactions to extend student insights and understandings.</td>
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<td>8. Conducts group discussions skillfully.</td>
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<tr>
<td>a. Teacher withholds own ideas and conclusions.</td>
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<tr>
<td>b. Teacher encourages participation of students in discussions.</td>
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<td>9. Selects questions that stimulate higher-level thinking.</td>
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<tr>
<td>a. Questions encourage students to draw analogies and to indicate relationships.</td>
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<tr>
<td>b. Students are able to ask analytic questions.</td>
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<tr>
<td>c. Students generalize from concrete to abstract at advanced levels.</td>
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</tbody>
</table>
10. Utilizes synthesis and analysis in appropriate areas.
   a. Teacher utilizes effectively inductive and deductive reasoning and is able to apply techniques in classroom.
   b. Teacher assists and/or encourages students to relate theory to practice.

11. Draws examples and explanations from various sources and related fields.
   a. Interrelationships are emphasized by teacher and students.

12. Presents activities that challenge and stimulate the students.
   a. Students are eager to work on activities.
   b. Teacher varies the kind of assignment to the learning abilities and interests of the students.
   c. Teacher emphasis is on broad ideas and not drill and rote memory activities.

13. Utilizes evaluation in various forms.
   a. Teacher helps students in self-evaluation and self-improvement.

14. Encourages independent thinking, including difference of opinion.
   a. Students are encouraged to examine thoroughly and accurately controversial issues.
   1. Students compare and contrast different issues, using objective evidence.

15. Gives appropriate encouragement to pupils.
   a. Teacher gives praise when deserved.
   b. Teacher makes students feel worthy.
   c. Teacher provides for recognition of outstanding creative and/or scholarly performance.

16. Understands and encourages student ideas.
   a. Teacher encourages students to try new approaches.
   b. Teacher is tolerant to students' attempts to find solutions of problems.
   c. Teacher encourages "guesses" by students and facilitates evaluation of guesses by students.
   d. Teacher helps students to realize that research involves trial and error.
   1. Students are encouraged to apply principles of scientific procedure.

Teacher Background

17. Is unthreatened by own mistakes.
   a. Teacher is undisturbed and unembarrassed by own mistakes or criticism of students.

18. Teacher displays enthusiasm and employs humor constructively.
   a. Teacher is energetic and animated.

Summary Item:

19. Demonstrates understanding of the educational implications of giftedness.
   a. Teacher uses implications of characteristics in the classroom operation, selection of materials, schedules, and questions.
LEARNING - TEACHING STYLES (Renzulli)

TEACHER
Abilities
Interests
Teaching Styles

LEARNER
Abilities
Interests
Learning Styles

CURRICULUM
Content Objectives
Process Objectives
Epistemological Objectives

INPUT → PROCESS → PRODUCT
**SURVEY OF CURRENT STATUS OF GIFTED/TALENTED PROGRAM**

*Prepared by National/State Leadership Training Institute on the Gifted and Talented*

**Directions:** The purpose of this survey is to ascertain the current status of programs for gifted/talented in your school district. The data collected will assist in providing technical assistance which more accurately interfaces with your present level of program development.

Following are brief definitions which may assist in completing this form:

- **Organizing** - getting started; planning
- **Developing** - beginning to implement written plan
- **Interacting** - attending to strengthening program(s) in progress
- **Growing** - articulating K-12 and integrating home/school/community
- **Extending** - enlarging existing program(s)
- **Evaluating** - determining effectiveness in summative form

<table>
<thead>
<tr>
<th>Activity or Task</th>
<th>CURRENT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. District/school has a completed written plan (including all appendices) on</td>
<td>Organizing Developing Maintaining Growing Extending Evaluating</td>
</tr>
<tr>
<td>file in the central office.</td>
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<tr>
<td>2. District/school is updating written plan at least once each year.</td>
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<tr>
<td>3. District/school has a K-12, in-district program for the gifted/talented.</td>
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<td>4. District/school is studying ways to expand gifted/talented program to areas</td>
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<td>other than academic.</td>
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<tr>
<td>5. District/school has a defensible and visible gifted/talented program to</td>
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<tr>
<td>include the following areas of giftedness:</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>✗</td>
</tr>
<tr>
<td>Creative</td>
<td>✗</td>
</tr>
<tr>
<td>Kinesthetic</td>
<td>✗</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>✗</td>
</tr>
<tr>
<td>6. District/school has differentiated curricula as an integral part of all</td>
<td></td>
</tr>
<tr>
<td>existing gifted/talented programs.</td>
<td></td>
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<tr>
<td>7. District/school has ongoing inservice for staff and parents at all grade</td>
<td></td>
</tr>
<tr>
<td>levels.</td>
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<tr>
<td>8. District/school has a comprehensive evaluation design to provide adequate</td>
<td></td>
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<tr>
<td>feedback to assist in upgrading gifted/talented programs.</td>
<td></td>
</tr>
</tbody>
</table>

I.S. Sato, *Modified, Rev. 4/79, 8/80
Development of CURRICULUM

Phase I:
- Identifying Needs
- Setting Objectives
- Developing Goals
- Selecting Strategies
- Writing a Staff Development Plan
- Evaluating the Plan

Phase II:
- Developing a Comprehensive Plan
- Implementing the Plan
- Evaluating the Implementation

Phase III:
- Developing a Staff Development Plan
- Implementing the Plan
- Evaluating the Implementation

Phase IV:
- Developing a Staff Development Plan
- Implementing the Plan
- Evaluating the Implementation

Phase V:
- Developing a Staff Development Plan
- Implementing the Plan
- Evaluating the Implementation

Phase VI:
- Developing a Staff Development Plan
- Implementing the Plan
- Evaluating the Implementation

According to identified needs, the following resources are recommended:

- Professional Materials
- Professional Books
- Professional Associations
- Professional Organizations
- Professional Networks
- Professional Conferences
- Professional Workshops
- Professional Seminars
- Professional Institutes
- Professional Associations
PARENT INVOLVEMENT MODEL

COMPONENT A
INFORMATION EXCHANGE

COMPONENT B
HANDS ON

COMPONENT C
ADVISORY

PARENT
PERSONAL GROWTH
AND CONTRIBUTIONS
OF PARENTS

SCHOOL
INTERACTION

STUDENT
TOTAL GROWTH
OF STUDENTS
OVERVIEW OF THE KEY FEATURES EVALUATION SYSTEM
(Renzulli, 1975)

Front-End Analysis (Input)

Synthesis of Input Information
A. DEVELOPMENT OF A DATA GATHERING MATRIX
B. INSTRUMENT DEVELOPMENT

Data Collection And Analysis

File Evaluation Reports:
A. INTERIM
B. BRIEFS
C. FINAL
# ALPHA PROJECT - EVALUATION OF STUDENT GROWTH

<table>
<thead>
<tr>
<th>NAME</th>
<th>GRADE</th>
<th>TEACHER</th>
<th>SCHOOL</th>
</tr>
</thead>
</table>

## AREAS OF STUDY (Check all that apply)
- Language Arts/Humanities
- Science
- Social Development
- Social Studies
- Music
- Other (Specify)
- Mathematics
- Art
- Other (Specify)

### Brief Description of the Content of the Study

Beginning Date _______ Ending Date _______ Number of Days _______

## OBJECTIVES (List in order of importance)

1. 
2. 
3. 
4. 
5. 

## ACTIVITIES (Briefly list what the student did to accomplish these objectives. Underline any activity that you consider to be relatively unique)

## RESOURCES (Reference Books, Films, People, Etc.)

## PRODUCT (Briefly describe any projects, stories, plays, filmstrips, etc. that resulted from this study. Attach samples if available.)

Prepared by: Dr. Joseph S. Renzulli - The University of Connecticut
Bureau of Educational Research

Sponsored by: Superintendent of Public Instruction - State of Washington
## EVALUATION OF GIFTED AND TALENTED PROGRAM
### SCHOOL LEVEL

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHOOL YEAR</td>
<td></td>
</tr>
<tr>
<td>TITLE</td>
<td></td>
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<tr>
<td>AREA</td>
<td></td>
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<tr>
<td>GRADE(S)</td>
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</tbody>
</table>

**Program Progress Rating:**

Completed by:

**Name:**

**Position:**

*(1) Excellent, (2) Good, (3) Average
(4) Fair, (5) Poor*

### IDENTIFICATION

<table>
<thead>
<tr>
<th>STANDARDIZED SCORES</th>
<th>PLACEMENT/AIP</th>
<th>STUDENT ACHIEVEMENT</th>
<th>RECOMMENDATIONS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IN OBJECTIVES AND</td>
<td>COGNITIVE</td>
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<td></td>
<td></td>
<td>EXPECTATIONS</td>
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</tr>
<tr>
<td>1. Acceleration</td>
<td>1. 80%</td>
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<td>2. Pull Out</td>
<td>2. 70%</td>
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<td>3. Spot</td>
<td>3. 60%</td>
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<td>4. Spot</td>
<td>4. 50%</td>
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<td>5. Below 30%</td>
<td>5. Below 30%</td>
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</table>

### STUDENT

<table>
<thead>
<tr>
<th>NAME</th>
<th>I.D. NUMBER</th>
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F. Ching 10/60
<table>
<thead>
<tr>
<th>Area</th>
<th>District Code</th>
<th>School Year</th>
<th>Level:</th>
<th>Total Number of Students</th>
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**EVALUATION OF GIFTED AND TALENTED PROGRAM**
**DISTRICT LEVEL**

**IDENTIFICATION CRITERIA**
- Ability Test
- Achievement Test
- Creativity Test
- Renzulli Test
- Nominations

**PROGRAM OPTIONS**
- Acceleration
- Cluster in Regular Classrooms
- Pull Out
- Learning Center
- Independent Study
- Honors
- Community Mentor
- Advanced Placement
- Early Admissions (Other)

**PERCENT OF STUDENTS ACHIEVING OBJECTIVES**
1. 80% above
2. 70%
3. 50%
4. 40%
5. below 30%

**RECOMMENDATIONS**

**SCHOOLS**

<table>
<thead>
<tr>
<th>Grade</th>
<th><strong>SCHOOLS</strong></th>
<th><strong>Percent Achieving Objectives</strong></th>
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<tbody>
<tr>
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<tr>
<td></td>
<td>1. Alelo Elementary</td>
<td>80%</td>
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<td>2. Aliamanu Intermediate</td>
<td>70%</td>
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<td>3. Moanalua High</td>
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<td><strong>TOTALS</strong></td>
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</table>

**RECOMMENDATIONS**

**COMMENTS**

**District Superintendent**

**District Educational Specialist**
## EVALUATION OF GIFTED AND TALENTED PROGRAM
### STATE LEVEL

<table>
<thead>
<tr>
<th>School Year</th>
<th>Number of Students Served</th>
<th>Identification Criteria</th>
<th>No. of Students Served</th>
<th>Program Options &amp; No. of Students Served</th>
<th>Program Gains (%)</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intellectual</td>
<td>Academic</td>
<td>Arts</td>
<td>Psychological</td>
<td>Above Average</td>
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K. Ching 10/10.
COMMON IDENTIFICATION TOOLS

1. "Slosson Intelligence Test - An individual intelligence test which is quick to administer and score. The scoring procedure is objective, and the test itself consists of items adapted from the Stanford-Binet. Slosson Educ. Publications - Dublin, New Hampshire 03444.

2. "Otis-Lennon Mental Ability Test - This group intelligence test is easy to administer and score, but caution is advised by the manual in using this test with children who do not have normal backgrounds or motivation. Studies indicate high reliability and good validity. Roger Lennon, Harcourt-Brace Jovanovich, Inc.

3. "Stanford-Binet Intelligence Scale, 3rd Revision - The pioneer in intelligence assessment, this individual intelligence test has largely been superseded by the Wechsler. Lewis M. Terman and Maude A. Merrill, Houghton Mifflin Co., 2 Park Street, Boston, Massachusetts 02107.

4. "Lorge-Thorndike - A group intelligence test. The Lorge-Thorndike verbal and nonverbal tests exhibit high correlations with achievement tests. The test appears to measure traits somewhat different from other intelligence tests; nevertheless, Lorge-Thorndike IQ's correlate moderately to well with school achievement and other IQ measures. Lorge-Thorndike, Hagen, Houghton Mifflin Co.

5. "WISC - An individual test of intelligence which includes the subtests: verbal and performance. Generally regarded as the best available individually administered technique which attempts to measure intelligence. The test is considered a 'stable, useful, and valid' measure which correlates well with other tests of intelligence. David Wechsler, Psychological Corporation.

7. "Metropolitan Readiness Test - An individual test of reading readiness for kindergarten and first graders, consisting of seven or eight scores. Scoring is relatively easy, and the manual provides important assistance in score interpretation. Reliability is high. The test requires 60 minutes of the subject. Harcourt-Brace Jovanovich, Inc., 757 3rd Avenue, New York, New York 10017.

8. "Differential Aptitude Test - A speeded multi-aptitude test for grades 8-12. The subtests are easily administered and scored, and interpreted assistance is provided. The test exhibits good reliability. Psychological Corp., 304 E 45th Street, New York, New York 10017.


10. "Torrance Test of Creative Thinking - For kindergartener through graduate school; consists of two parts, verbal and figural. The test is called a "research edition" and is one of the first attempts to reveal and measure creativity. Personnel Press, Inc., 20 Nassau Street, Princeton, New Jersey 08540.

11. "California Test of Mental Maturity - A group intelligence test which attempts to assess abilities believed fundamental to learning, problem-solving, and ability to respond to new situations. No attempt has apparently been made to reduce culture bias. CTB/McGraw-Hill Book Co., 330 W 42nd Street, New York, New York 10036.


14. Screening committee.

15. Teacher checklist.

16. Academic achievement.

17. Renzulli-Hartman Scale for Rating Behavioral Characteristics of Superior Students (SRBCSS)."
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<tr>
<td>American Guidance Service</td>
<td>Peabody Picture Vocabulary Test</td>
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<td>720 Washington Avenue</td>
<td>Kuhlman-Finch Scholastic Aptitude</td>
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<td>Minneapolis, Minn. 55401</td>
<td>Peabody Individual Achievement Test</td>
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<td>Bobbs-Merrill Company, Inc.</td>
<td>Detroit Test of Learning Aptitude</td>
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<td>4300 East 62nd Street</td>
<td>Sample Instruments for the Evaluation of Programs for the Gifted/Talented</td>
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<td>Indianapolis, Indiana 46206</td>
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<td>Bureau of Educational Research</td>
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<td>Henmon Nelson Tests of Mental Ability</td>
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<td>Educational Testing Services</td>
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<td>Lorge Thorndike Intelligence Test</td>
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| Institute for Personality and Ability Testing  
1602 Coronado Drive  
Champaign, Ill. 61820 | IPAT Culture Fair Intelligence Test  
Scales I, II, III, 1963 |
| Leschi School  
Ms. Victoria Raider  
Seattle, Washington 98101 | Alpha Simulation Game |
| McGraw Hill  
330 West 42nd Street  
New York, New York 10036 | California Test of Mental Ability  
California Achievement Test  
Comprehensive Tests of Basic Skills |
| Personnel Press  
20 Nassau Street  
Princeton, N.J. 08540 | Kuhlman-Anderson Test  
Torrance Tests of Creative Thinking  
Verbal/Figural  
Thinking Creatively with Sounds/Words |
| Psychological Corporation  
304 East 45th Street  
New York, New York 10022 | Chicago Non-Verbal Examination, 1963  
Arthur Point Scale of Performance  
Tests Form I and II  
Wechsler Intelligence Scale for Children  
Academic Promise Test  
Differential Aptitude Test  
Mooney Problem Checklist  
Graves Design Judgement Test  
Crawford Small Parts Dexterity Test  
Ravins Progressive Matrices Test  
Wide Range Achievement Test  
Children's Apperception Test |
| Science Research Associates, Inc.  
359 East Eric Street  
Chicago, Ill. 60607 | SRA Achievement Series |
| Scholastic Testing Service  
480 Meyer Road  
Bensenville, Ill. 60106 | Test of Early Learning Skills, Pre-school to gr. 9  
Thinking Creatively in Action and Movement  
Torrance Tests of Creative Thinking |
| Sheridan Psychological Services, Inc.  
P.O. Box 6101 | Guilford-Zimmerman Aptitude Survey  
Creativity Tests for Children  
Guilford Creativity Tests for Children |
| SOI Institute  
214 Main Street  
El Segundo, Ca. | SOI, Learning Abilities |
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| DDK Publishers  
71 Radcliffe Road  
Buffalo, N.Y. 14214 | Baldwin Identification Matrix |
| **Music:**  
Simons Measurement of Music  
Listening Skills (gr. 1-3)  
1350 S. Kostner Avenue  
Chicago, Illinois 60623 | |
| Four Music Conservation Tasks  
Dr. Marilyn Zimmerman  
11 Carriage Place  
Champaign, Ill. 61820 | |
| **Dramatics:**  
The Creative Dramatics Test, pre-school to gr. 3  
Dr. Nancy Hensel  
Dept. of Early Childhood Education  
University of California at Riverside  
Riverside, Ca. 92502 | |
| **Creative Writing:**  
Children's Apperception Test  
Psychological Corporation  
757 Third Avenue  
New York, N.Y. | |
| **Psychomotor:**  
Frostig Movement Skills Test Battery, gr. 6-12  
Consulting Psychologists Press  
577 College Avenue  
Palo Alto, Ca. 94306 | |
| | 171 |
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BIBLIOGRAPHY

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Boeholt, V., Talented and Gifted School Programs, Oregon State Department, 1979.


Correll, M., Teaching the Gifted and Talented, Phi Delta Kappan, 1975.


Gallagher, J., Teaching the Gifted Child, Boston, Allyn and Bacon, 1975.


-----, Providing Programs for the Gifted and Talented, N/S-LTI-G/T, 1975.


-----, and A. Heinemann, Using Knowledge about Intelligence with the Gifted and Talented, 1979.

-----, and A. Heinemann, Searching for Underachievers Among the Gifted and Talented, 1979.


Oregon Series on Talented and Gifted Education, Characteristics of Talented and Gifted Children, Identifying the Talented and Gifted, Talented and Gifted School Programs, Who is Gifted?


----, Creative Learning and Teaching, 1970.


Whitmore, J.R., Giftedness, Conflict and Underachievement, Allyn and Bacon, 1980.