

A DESCRIPTIVE STUDY OF THE BEHAVIOR OF GIFTED
AND NONGIFTED ELEMENTARY STUDENTS

by

VIRGINIA M. SCHWARTZROCK

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Robert Sylwester

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Title: A DESCRIPTIVE STUDY OF THE BEHAVIOR OF SIXTEEN AND NONGIFTED
 ELEMENTARY STUDENTS

Approved:

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Most gifted students are identified as being more creative than their peers in all children, or are more creative than gifted children. The importance of this distinction is related to identification and education of gifted children, an issue that has divided the field.

This study investigated (1) the frequency of sixteen overt behaviors identified in the literature as being more common in gifted than in nongifted students; (2) the awareness level teachers feel when these behaviors are exhibited and (3) the criteria elementary teachers use most important in selecting students for gifted programs.

One hundred and thirty grade 1-5 teachers in District 47, Eugene, Oregon, completed an inventory which (1) requested data on their own teaching experience, experience with gifted students, and gifted education preparation; (2) asked them to rate the frequency of the sixteen behaviors in a recent gifted and nongifted student, and the

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This study investigated (1) the frequency of sixteen overt behaviors identified in the literature as being more common in gifted than in nongifted students; (2) the annoyance level teachers feel when these behaviors are exhibited; and (3) the criteria elementary teachers rate most important in selecting students for gifted programs.

One hundred and thirty grade 3-6 teachers in District 4J, Eugene, Oregon, completed an inventory that (1) requested data on their sex, teaching experience, experience with gifted students, and gifted education preparation; (2) asked them to rate the frequency of the sixteen behaviors in a recent gifted and nongifted student, and the

level of annoyance they felt when the behavior was exhibited; and (3) select from twenty-nine criteria used to place students into their district's gifted program, the fifteen criteria they considered most important.

Findings

1. The study group (96 women, 34 men) had limited preparation in gifted education, and limited experience with gifted students. Teachers with more gifted education preparation had typically not worked with more gifted students.
2. The study group reported that the sixteen behaviors identified as characteristic of gifted children were not common in either their gifted or nongifted students. Some significant differences between the two groups were reported, but the pattern was not as clear as the literature suggests. All frequency means were low; and for each behavior, from 20% to 60% of the teachers reported the behavior was not exhibited by their students. All means were low on teacher annoyance, with no significant differences between the two groups. The response pattern indicated that teachers were slightly more tolerant when working with gifted than with nongifted students.
3. The study group did not reach complete agreement on the most important criteria for gifted program selection. Most agreement was reached on intuitive characteristics: inquisitiveness, comprehension, critical thinking, and interest. The group also rated teacher recommendations highly.

Elementary Teacher, Director of Recreational Activities, The
American International School of Warsaw, Warsaw, Poland,
1968-1971

VITA

Elementary Teacher, Cooperating Teacher for University Student
Teachers, School District 43, Eugene, Oregon, 1972-1977

NAME OF AUTHOR: Virginia M. Schwartzrock

PLACE OF BIRTH: Glendale, California

DATE OF BIRTH: April 25, 1931

UNDERGRADUATE AND GRADUATE SCHOOLS ATTENDED:

Pepperdine University
University of Southern California
Universidad Nacional Autonoma de Mexico
Los Angeles State College
Utah State University
University of Oregon

PUBLICATIONS:

DEGREES AWARDED:

Bachelor of Arts, Pepperdine University, 1953
Master Teacher of the Arts, University of Southern California, 1965
Master of Science, University of Oregon, 1977
Doctor of Philosophy, University of Oregon, 1982

AREAS OF SPECIAL INTEREST:

Elementary Curriculum and Instruction
Supervision for Improvement of Instruction
Education for the Gifted and Talented

PROFESSIONAL EXPERIENCE:

Elementary Teacher and Music Instructor, Los Angeles City Schools,
1953-1957

Elementary Teacher, Music Supervisor, Preston, Idaho, Public
Schools, 1957-1962

Elementary Teacher, Student Teacher Supervisor, Los Angeles City
Schools, 1963-1968

Elementary Teacher, Director of Accelerative Activities, The American International School of Warsaw, Warsaw, Poland, 1968-1971

Elementary Teacher, Cooperating Teacher for University Student Teachers, School District 4J, Eugene, Oregon, 1972-1977

Liaison Supervising Teacher, University of Oregon, 1977-1979

Clinical Professor, University of Oregon/Eugene District 4J Resident Teacher Master's Program, 1979 -

AWARDS AND HONORS:

California Congress of PTA Honorary Life Membership for Exemplary Teaching, 1966

Oregon Education Association Leadership Award, 1982

PUBLICATIONS:

"Future Dimensions in Curriculum," California Parent Teacher Association Journal, March, 1966

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CHAPTER I

THE NATURE AND PURPOSE OF THE STUDY

Introduction

During the latter part of the 1970s, extensive studies were made to determine the learning characteristics and optimum learning climate of intellectually gifted children. Not since the early part of the twentieth century when Lewis Terman (1947) conducted his now famous longitudinal study of 800 gifted men and women and their relative success during adult years, has research on gifted characteristics commanded so much attention among educators nationally.

The results of research on learning characteristics of gifted students has initiated an interesting controversy among leaders and researchers in education for the gifted. This controversy centers around the question of behavior and learning characteristics unique to the intellectually gifted: Do gifted students display behaviors that are different from nongifted students; and are these behaviors threatening to teachers who are not trained specifically in gifted education?

One side of the controversy focuses on the work of J. P. Guilford (1976), Paul Torrance (1970), May Seagoe (1974), and Barbara Clark (1979). These four authorities support the premise that gifted students do display characteristics that are unique to their needs, their intellectual processes, and their natures; and that these characteristics and behaviors

are irritating to classroom teachers who attempt to work with them within the structure of the average classroom. Paul Torrance states the problem:

Counselors and teachers become irritated with creative and gifted children who seem to create problems for themselves by trying consciously to be different--searching for their uniqueness. . . . They reject the demands of their society to surrender their individuality because they want to own themselves totally and because they perceive a shortsightedness in the claim of society that all its members should adapt themselves to a norm for a given time and place (p. 32).

The other side of the controversy regarding behaviors of gifted students focuses on the work of Joseph Renzulli (1975), Walter Barbe (1976), and James Gallagher (1975), who conclude that the range of characteristics and behaviors of gifted students does not differ significantly from non-gifted students; and that, in fact, gifted students are usually better adjusted in their academic and social relationships than their peers. These three authors and researchers conclude that education for the gifted can easily be incorporated into the public school organizational structure. A recent comment of Gallagher (1978) summarizes their conclusions:

There is a growing suspicion that the importance of intelligence in the development of personality characteristics may have been overestimated. We have demolished the point of view that high intellect is associated with instability. In its place, however, we have added the concept that high intellectual ability has actually aided a person in making a good adjustment (p. 43).

Rationale for the Study

My interest in gifted education emanates from my role in Los Angeles

City Schools as a gifted curriculum resource teacher, and as the coordinator of accelerated activities for gifted students in an American international school in Eastern Europe. My experience gained through direct teaching contact with gifted students; my interviews with teachers and consultants involved in PACE and TAG Programs throughout Lane County; and my direct observation lead me to support the latter side of the current controversy regarding characteristics of intellectually gifted students. It appears that gifted students display a similar range of characteristics and behaviors as their nongifted peers; and that teachers seem to react in much the same way, whether the behavior is displayed by a student identified as gifted or one who is not identified.

This background led to the present study, a comparison of gifted/nongifted elementary students on the presence and annoyance level of 16 behaviors identified by Seagoe (1974) and Clark (1979) as being common in gifted children.

In most school districts the task of designing appropriate and equitable criteria for identifying intellectually gifted children is a formidable one. Two factors used by many school districts to identify gifted students are:

1. A score of 135 or above on a Stanford-Binet, SOIC or WISC individual performance test.
2. An evaluation by teachers/counselors that concludes that the student works with superior rationale and ability in several areas: academic/creative/intellectual.

In District 4J (Eugene, Oregon) selection is based on criteria

listed on a student criterion summary sheet (see Appendix A.) Students must achieve a minimum score of twenty-four points on the weighted criteria included on the summary sheet to be considered for the gifted program. In spite of this extensive identification approach, however, teachers in the district complain that students are included in the program who fail to benefit from accelerated and/or enriched activities; and, conversely, other capable students are excluded from enrichment activities. This study will also attempt to determine criteria identified by classroom teachers as appropriate for the selection of gifted students.

Significance of the Study

A research study based on the aforementioned issues can make a significant contribution to current literature available on the design of gifted education. Questions regarding the design of effective instructional strategies for working with gifted students, and the necessity of separating gifted students from their peers for portions of the school day, can be influenced by results of this study and other studies designed to determine the learning and social characteristics of gifted students. In addition, District 4J may benefit from the results of this study since it is a follow-up to a correlated study on teacher attitudes toward gifted children completed by Rhea Forum (1980) of District 4J. The results of Forum's study revealed no significant difference between classroom teachers and gifted education specialists on attitudes toward gifted students.

Eugene District 4J currently operates Project PACE ("Program for Advanced Curriculum and Enrichment") to serve the special needs of nearly 500 identified gifted students in the district in grades one through nine. A research study focusing on behaviors of gifted students, teachers' levels of tolerance toward these behaviors, and teachers' perceptions of the appropriate criteria for identifying gifted students will provide additional information to PACE specialists as they strive to provide guidelines for an effective, equitable enrichment program.

A Statement of the Problem

This study will investigate three areas related to education for intellectually gifted elementary school children:

- A. Do elementary classroom teachers in Eugene, Oregon, District 4J agree that the sixteen overt behaviors identified by Dr. May Seagoe (1974) and Dr. Barbara Clark (1979) are more common to intellectually gifted children than to their nongifted peers?
- B. Do the elementary teachers in the study group find these sixteen overt behaviors more annoying when they are displayed by gifted children than by their nongifted peers?
- C. District 4J uses 29 criteria in the selection of students for the district PACE Program. Which fifteen of the criteria items do elementary teachers consider the most important in the selection of PACE students, and what criteria items would the study group add to the list?

Research Hypotheses

- H₁: The study group's response pattern will show that teachers see no significant differences between gifted and nongifted students in their display of

the sixteen selected behaviors.

- H₂: The study group's response pattern will show that teachers see no significant differences in their tolerance of the sixteen behaviors when they are displayed by gifted as compared to nongifted students.

Definition of Terms Used in the Study

The terminology used in the study generally reflects the standard vocabulary used in research and in the field of education. However, four terms germane to this study are defined below:

PACE: "Program for Advanced Curriculum and Enrichment." The title of the program for identified gifted students currently in use in District 4J, Eugene, Oregon. During the 1981-1982 school year the program operated for students in grades 3-9. Identified students worked with either a gifted specialist or a member of the school faculty each week in accelerative projects and activities.

Overt Behaviors: Student behaviors that can be seen or heard and are therefore measurable.

Behavior Inventories: A term used to describe the format of the questionnaire completed by teachers to indicate the following:

- A. Whether or not each behavior was exhibited by gifted and nongifted students, and the rate of frequency in each group.
- B. Levels of annoyance when behaviors were exhibited by gifted and nongifted students.
- C. The fifteen items of criteria that teachers selected as the most appropriate for the identification of students for PACE.

Demographic Distribution: The range of socio-cultural-economic population factors found among the fourteen schools used in the study.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a review of the relevant literature in three areas that directly relate to this study:

- A. A History of Gifted Education in the United States
- B. Characteristics of the Gifted
- C. Problems Inherent in Attempts to Identify Gifted and Talented Children for Accelerative Public School Programs.

A History of Gifted Education in the United States

In American society there is a love-hate relationship with giftedness and talent. On the one hand, we revere the gifted individual who has risen from humble background. We are proud to live in a society where talent can triumph over poor environment or limited family status. On the other, our nation began by battling an aristocratic elite and we are strong in our commitment to equalitarianism. We do not wish a new elite class to develop. As a result, we waver in our attitudes toward the gifted (Gallagher, Weiss, 1979, p. 1).

Patricia Weiss and James Gallagher's statement regarding the capricious attitudes of American society toward its gifted citizens provides an appropriate introduction to a review of gifted education in the United States. A review of the literature reveals levels of commitment that ebb and flow into three separate time periods. Each period--labeled a "Flowering Period" by Paul Witty (1971)--developed as a result

of events that took place outside of the educational arena, and yet created a hue and cry for increased educational opportunities for the gifted.

Early History - 1860-1925

Most authorities in the field of gifted education trace the beginnings of the concept of "giftedness," and subsequent attempts to provide special education for "giftedness," to the development of the Binet Intelligence Scales (1906-1916); and to Lewis Terman's classic longitudinal study (1921-1977) of 1,528 young students identified as gifted by the Stanford-Binet Individual Test of Intelligence. However, other significant studies and educational endeavors prefaced these two important events.

During the founding years of our American Republic, Thomas Jefferson wrote in his "Notes on the State of Virginia": "We hope to avail the state of those talents which nature has sown as liberally among the poor as the rich, but which perish without use, if not sought for and cultivated" (reported in Gallagher, Weiss, 1979, p. 11).

In spite of these lofty sentiments, however, the first appearance of a gifted child movement following the Civil War emerged as an offshoot of the cynical, anti-reform, social Darwinism that facilitated the growth of American capitalism (Hildebrand, 1978). Since it was widely believed that mental ability was scarce, it seemed vital to find and train the handful capable of leadership. The major trend in this era was multiple tracking: the establishment of fast, medium, and slow

groups. Little evidence exists to suggest that placements resulted in major changes in course content. They were merely devices to allow students to proceed more rapidly through the standard curriculum.

Gallagher and Weiss (1979) cite a number of administrative programs during this period that took cognizance of the gifted student. In 1867, William Harris, then superintendent of the St. Louis Public School System, introduced a plan of flexible promotions that recognized children's different rates of progress. The provision allowed children to advance at their own paces and called for promotions every five weeks if justified by achievement.

The first multiple tracking program probably occurred in Elizabeth, New Jersey, in 1866. Similar programs appeared in the states of Massachusetts and Michigan.

The first attempts to initiate an understanding of the gifted and their behavior were undertaken by three developmental psychologists: Yoder (1894), reported by Terman and Oden (1918), and Dolbear (1912). These studies tended to refute earlier beliefs by Lombroso (1893) and Nisbet (1895) that giftedness related to severe maladjustment, and even insanity.

Erwin Johanningmeier (1978), in his study of the work of Daniel Starch, cites Starch's attempts in 1906 to determine a scale of pupil ability and related achievement in an effort to determine the worth of various school subjects. According to Johanningmeier, Starch was the first psychologist to indicate a relationship between potential ability and motivation.

The Importance of the Binet Scales to Measure Intelligence

Followed by the First Flowering Period

The development of instruments to measure the intellectual ability of young children was one of the major movements of the early period of gifted education. The English scientist, Sir Frances Galton (1902), first expressed interest in an instrument to measure individual differences. However, Alfred Binet (1906) and Theodore Simon (1906), two French scientists, gave practical application to Galton's ideas. Binet and Simon devised the first intelligence test primarily to identify children who were mentally retarded. Their ideas were adapted by Lewis Terman (1954) who revised the Binet scale in 1916 and published the Stanford Binet Individual Test of Intelligence. This test played a major role in the development of programs for the academically gifted. It allowed schools to identify children for placement in special programs for the gifted, and served as the basic identification tool for the next four decades (Renzulli, 1979).

Following the development of the Stanford Binet Individual Intelligence Test, a wide variety of programs emerged designed to individualize instruction for the gifted. In Illinois, New York, and California (San Francisco), contract plans were initiated for individualized instruction for gifted students.

In addition, high ability grouping remained an option for gifted students. One of the best examples of high ability grouping is the Cleveland Major Work Classes, a program that began in 1921 and continues today. In the Cleveland Program considerable emphasis is placed on en-

richment, special curricula, and acceleration of course content rather than merely speeding the child through the standard curriculum (Marland, 1972).

Lewis Terman's Longitudinal Study: A Landmark Study
in the Characteristics of Gifted Individuals

Lewis M. Terman, a Stanford University psychologist, became involved with Binet's intelligence scales in 1908 when he conducted the first revision of the published versions of the mental tests.

The standardization of the scale was based on tests of a thousand children whose intelligence quotients (IQs) ranged from 60 to 145. This contrast in intellectual performance between the dullest and the brightest of a given age so intensified his interest in the intellectually gifted that he determined to launch an ambitious study of gifted children.

In 1921, Terman obtained a large grant from the Commonwealth Fund of New York City for the purpose of locating a thousand subjects with an IQ of 140 and higher. Eventually, his study included more than 1,500 subjects.

Terman identified the purpose of the study as twofold: first, to find what traits characterize children of high IQ; and secondly, to follow these children for as many years as possible to see what kinds of adults they might become (Terman, 1954).

In the beginning of the study, subjects were given comprehensive physical, mental, achievement, character, and interest tests. The child-

ren were tested and interviewed again in 1928, and then assessed by questionnaire or interview in 1940, 1950, 1955, 1960, 1972, and most recently in 1977.

Life study research began with the Terman study, developed in concert with his colleague Melita Oden (1968). Daniel Goleman (1980) delineates the major findings of the study after the latest (1977) assessment:

- A. The subjects were neither physically nor socially inferior. As they grew older they surpassed their peers in accomplishment.
- B. Although most have done well in their careers, none has achieved the summit of true genius. The group included few millionaires, and hardly any creative artists.
- C. Subjects who were accelerated in school generally remained in school for graduate work.
- D. "Life satisfaction" and achievement appear to depend upon the personality traits of persistence in the accomplishment of ends, self-confidence, and freedom from feelings of inferiority.

Terman's study, as it progressed, permanently buried the early myths surrounding giftedness and instability. In addition, his conclusions regarding acceleration fostered the approach of gifted education later on in the 1950s (Sisk, 1980).

A Period of Decline: 1925-1950

The second quarter of the century saw major changes in our American society. Depression followed prosperity, and another World War followed

the depression. The ebb and flow of provisions for gifted children was clearly seen in the decline of special programs. By 1948, less than one percent of the larger school districts described their programs as involving some kind of ability grouping (Gallagher, Weiss, 1979).

During this era the developing science of genetics attracted much attention. The individual intelligence tool became the tool in genetic studies conducted by Hollingsworth (1926), Witty (1951), and Terman and Oden (1947). The role that early experience plays in performance on intelligence tests was ignored in favor of an interpretation that the test measured hereditary characteristics and socio-economic background. Based on the results of her studies, Leta Hollingsworth (1926) devised a special program for students with unusually high IQ (180 and above) in New York. The program allowed students the freedom to explore a wide range of curriculum options.

One of the primary spokespersons for gifted education during the post World War II years was Paul Witty who continually reminded the institution of public education that "there continues to be a very great neglect of gifted and creative people" (Witty, 1951, p. 16).

The 1950s: The Second Flowering Period

Although the shock of the Soviet launch of Sputnik in 1957 triggered an unprecedented action on behalf of the gifted, educators had begun to express their lament over public indifference to gifted children much earlier in the decade (Tannenbaum, 1980).

In 1950, the Educational Policies Commission Report decried the

school's neglect of mentally superior students and the resulting shrinking of manpower in the sciences, arts, and professions.

Criticism of the elementary and secondary schools came also from the academic community. For example, in 1953, Bestor, an academician, published a sensational indictment of public education (Bestor, 1953).

In 1954, Dael Wolfle, then Director of the Commission on Human Resources and Advanced Training, contended that the United States failed to prepare enough men and women in the natural sciences, the health fields, teaching, and engineering. He revealed that only six of ten in the top 5 percent, and only half of the top 25 percent of high school graduates went on to earn college diplomas (Wolfle, 1954).

In spite of these warnings, however, America retained a sense of security and superiority, based on our economic and nuclear advantages, until the launching of Sputnik in 1957. Suddenly the nation was faced with a clear implication that the Soviet Union could now deliver a nuclear attack, and a half decade of frenetic activity followed to improve the curriculum and encourage gifted students to pursue careers in mathematics and the physical sciences.

Public and private money became available for a myriad of special projects. Notable were projects sponsored by the National Science Foundation, the School Mathematics Study Group, and the Physical Sciences Study Group. Jerome Bruner became a prominent spokesperson for the movement, and he later described the major principles of the curricula designed in these projects:

The first principle is that understanding fundamentals

makes a subject more comprehensible. . . . The second point relates to human memory. Perhaps the most basic thing that can be said about human memory is that unless detail is placed into a structured pattern, it is rapidly forgotten. . . . Third, an understanding of fundamental principles and ideas appears to be the main road to adequate transfer of training (Bruner, 1966, pp. 23-25).

On the basis of these principles, the "new curricula" developed during the period required students to approach the subject matter as the specialist approaches it, and introduced important ideas at an early age (Gallagher, Weiss, 1979). The importance of the movement was that for a brief time teachers were encouraged to teach to the highest level of abstraction instead of to "the mean."

Two important works during this period served as a portend of things to come. J. P. Guilford's paper on creativity urged psychometrists to abandon the assumption that only tests of intelligence should be used to locate the total population of gifted children (Guilford, 1950). His ideas about creativity were adapted by Getzels and Jackson in their classic study of "high creative--low IQ" and "high IQ--low creative" students at the University of Chicago High School (Getzels and Jackson, 1962). The study gained immediate attention among educational researchers since it used creativity measures to identify a talent resource that would be overlooked by tests of general intelligence.

The 1960s: Turmoil and the Seeds of the

Third Flowering Period

The decade of the sixties opened with bright promise. The inauguration of John F. Kennedy as President exemplified the promise of

bright, young minds. Kennedy gathered around him a cadre of precocious young people, and the gifted felt that our nation was worth serving.

The dream of service to the nation by the gifted soon eroded with the subsequent assassinations of Kennedy, Martin Luther King, Robert Kennedy; and with the disillusionment of our youth with the Viet Nam War. The life of campus dissidents became strangely paradoxical. Many of them espoused the habits of intellectualism, yet at the same time they rejected excellence and its trappings as violations of democracy and too stultifying to the attainment of joy and total liberation (Tannenbaum, 1981).

The focus on science and technology, fostered in the previous decade, declined as a result of social unrest and a lack of opportunity in technological fields.

In spite of the political and social climate, important work in the areas of problem solving and creativity emerged during this era.

J. P. Guilford further developed his model of the structure of intellect. His theoretical model proposed several major dimensions that were linked to creativity and not covered sufficiently by standard intelligence tests. Among these were the intellectual operation of divergent thinking--the ability to think of many different answers and produce unique solutions to problems (Guilford, 1968).

During the decade from 1960-1970, E. Paul Torrance was responsible for at least seven major books and monographs, as well as a score of professional papers, on the relationship of creativity to giftedness.

Calvin Taylor (1967) in collaboration with Ellison, James, and Fox

(1971) initiated prediction studies to determine characteristics of high ability other than IQ. All of the aforementioned works played a vital role in divorcing the concept of giftedness from the concept of fixed intelligence based on mental tests.

A landmark legislative action took place in the waning months of the decade. The Congress included under the Elementary and Secondary Amendments of 1969, Public Law 91-230 which mandated a study by the U.S. Commissioner of Education to determine the extent to which the needs of the gifted and talented were being met. The final report, released in 1972, prefaced the third Flowering Period in gifted education.

The law also provided that the gifted and talented be included under funding sources for Title III (Innovative Programs), and Title V (State Administration Improvements).

The 1970s: The Full Flowering Period

The focus on curriculum for the gifted in the seventies is best exemplified with the term, "Federal involvement"; for it was the intervention of federal public laws, mandates for studies and research, and funding at the federal level that initiated renewed interest in education for the gifted.

At the onset of the decade a congressional mandate that added Section 806, "Provisions Related to Gifted and Talented Children," to the Elementary and Secondary Education Amendments of 1969 led to federal support of program initiatives throughout the country (Tannenbaum, 1981).

Public law 91-230, passed as part of the Elementary and Secondary Education Amendment of 1969, mandated a study by the U.S. Commissioner of Education to determine whether the needs of the gifted and talented were being met. The report, under the direction of then U.S. Commissioner of Education, Sidney Marland, was published in 1971 and became known as the Marland Report. Among other components, the report provided the first official differentiated definition of giftedness based on criteria beyond that of fixed intelligence:

Gifted and talented children are those identified by qualified persons who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program.

Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination--

1. General intellectual ability.
2. Specific academic aptitude.
3. Creative and production thinking.
4. Leadership ability.
5. Visual and performing arts.
6. Psychomotor ability. (Marland, 1972, Executive Summary, p. 9)

The report culminated with the following conclusions:

1. A relatively small percentage of the nation's 2.5 million gifted and talented children were actually benefiting from existing educational services.
2. Services for the gifted had a low priority at virtually all levels of government and school administration.
3. Little was being accomplished in education of the gifted because

of other funding priorities and lack of trained personnel (Marland, 1972).

As a result of the Marland report, the Office of Gifted and Talented was established within the Bureau for the Handicapped in the Office of Education. The Office received its first funding in 1976 under Public Law 93-380, Section 404, and the federal leadership began to grow and expand (Sisk, 1980).

One of the most successful efforts during the period of funding in the 1970s was the establishment of institutes and centers devoted to the development of curriculum, advocacy for the gifted, and state planning programs. Notable among these centers were the National State Leadership Training Institute, the Leadership Training Institute in Ventura, California, and the Michigan State Project for Gifted and Talented (Trezise, 1976).

Public Law 95-561, passed in 1978, directed that 75 percent of all federal funds be given directly to the states upon their submission of a state plan delineating how they planned to channel funds to local school programs. The intent of Congress was clearly to maintain funding but to shift the burden of implementation to the states in order to stimulate the development of local programs. As a result, numerous local school boards expanded their programs for the gifted with the aid of matching state and local district funds.

Tannenbaum (1981) points out that a major shift in school district policy during this period moved from merely providing "provisions" for gifted and talented to the implementation of actual programs.

The passage of the Education for All Handicapped Children Act of 1975 (PL 94-142) promised new hope for advocates of mandatory educational programs for the gifted. The law extended the basic right to all handicapped children for a "free and appropriate education within the least restrictive environment." The law also mandated the use of individualized educational programs (IEP) designed and maintained for each handicapped child (reported by Cole and Dunn, 1977).

Strategies defined in Public Law 94-142 were adapted by designers of gifted programs, and expectations were high that a federal act would be initiated to require similar provisions for the gifted. In Oregon, guidelines for gifted IEPs were presented in the Oregon Series on Talented and Gifted Education, a project supported by a grant from the U.S. Office of Education to the Oregon Office for Talented and Gifted Education.

In preparing gifted IEPs, the Oregon State Plan for Gifted and Talented (1976) states that

Differentiated educational programs for able and gifted children should provide opportunities to:

1. acquire basic skills and explore more advanced ideas and issues earlier than their age mates
2. study subject matter in greater depth, or perform at a higher level or skill
3. satisfy their unusually high desire for self-fulfillment and the benefit of society
4. find productive ways of expressing their unusual talents and capacity for versatility
5. receive special guidance in making choices and plans appropriate to their different rates of personal growth and development

6. be exposed to a wide variety of demanding learning experiences in and out of a formal school setting

IEP guidelines include the following elements:

1. A statement of the present level of the student's educational performance.
2. A statement of the annual goals including short term objectives.
3. A statement of the specific educational services to be provided and the extent to which the student will be able to participate in regular programs.
4. The projected dates for initiation of such services and their anticipated duration.
5. Appropriate objective criteria, evaluative procedures and schedules for determining whether instructional objectives have been met. (Haisley and Wilhelmi, 1978)

By the fall of 1978, all states except Arkansas, Massachusetts, Minnesota, New Hampshire, and Wisconsin had established state programs for gifted and talented (Mitchell, 1980); and federal funding had increased from 2.56 million to 3.78 million (Sisk, 1980).

Bolstered by funding from federal, state and foundation funds, research concentrated on characteristics of giftedness (Mary Meeker, 1979; Barbara Clark, 1976; Joseph Renzulli, 1978; May Seagoe, 1974), creativity (Torrance, 1979); problems of gifted minorities (Mercer and Lewis, 1978; Colangelo and Exum, 1979), and gifted underachievers (Gallagher, 1975; French, 1981).

The Present Decade: Decline, Status Quo, or

Comprehensive Integration of Gifted Education?

The onset of the present decade predicted a bright future for edu-

cation for the gifted and talented in the United States. Federal and state funding was at an all-time high, and a special task force created by U.S. Commissioner of Education Ernest Boyer (1976-79) identified the focus of federal support for gifted education in the 1980s.

In addition, a new cabinet-level Department of Education was established by then President Jimmy Carter in 1980, with an expanded Office for Gifted and Talented Education.

Events in the political arena, however, once again caused a change in the direction of gifted education. A new administration assumed power in January 1981, and the specter of the "New Federalism" foretold an end to large-scale federal support for gifted education. Within a year the new Department of Education had been reorganized with an emphasis on a reduced level of federal involvement (and funding) for public education; the Office for Gifted and Talented Education had been reduced to that of an advisory agency; and funds for gifted and talented education had been compacted into "block grants" along with a host of other educational priorities to be distributed at the discretion of the states. George Kaplan writes, "The Reagan mission in education is, of course, the dismantling of the past fifty years and not a diminution and rearrangement of the existing order" (Kaplan, 1982, p. 592).

In addition, administration officials spoke of open competition between private and public schools to provide quality education.

What does this new direction at the federal level mean for gifted education at the school district level? Do we foresee another ebb in the development of programs for the gifted and talented? Prominent

spokespersons offer their assessment of new directions in education for the gifted and talented:

Many people in our field look at the federal situation with great dismay and become discouraged. However, we must keep in mind that it is local and state support for gifted education that have provided the leadership for the growth we have experienced. . . . We are reaping many of the fruits planted by federal monies. . . . I believe we can see a bright future ahead for gifted children if we continue to be staunch, vocal advocates of an appropriate education for these children. (Ken Seeley, Editorial, *Journal for the Education of the Gifted*, 1982)

X For long-term success, gifted programming must be woven into the fabric of education, not stitched on like a patch on an old pair of jeans. It must be seen as an integral part of the school's effort to provide the most appropriate possible programming for all students. Thus, gifted education and regular education must seek opportunities for synthesis and collaboration, not isolation and competition. (Donald J. Treffinger, Editorial, *The Gifted Child Quarterly*, 1981)

The future of education of gifted and talented children in the United States will depend upon several factors: the ability of educators to conceptualize special needs and programs for these children; the ability to demonstrate and evaluate progress in special programs; what else is happening in the educational system; and the public attitudes toward the desirability and importance of special programs for the gifted. What individual communities and the collective American society decide to do about special experiences for gifted children in the future probably depends more on societal attitudes and values than on educational evaluation. (Gallagher, Weiss, 1979, p. 31)

Characteristics of the Gifted

It seems appropriate to state that contemporary gifted education represents the sum total of its history: that research and projects

completed throughout the 20th century formed the foundation for both the curriculum and the organizational format currently in use. Particularly in the area of characteristics of the gifted, previous work contributed to the development of a multi-dimensional focus used to identify both gifted and talented students.

Research in characteristics of the gifted emerged from an earlier definition of "fixed intelligence" as identified by Binet's Intelligence Scales (1906-1916), to a broader base of characteristics that includes the areas of creativity, social adaptability, cultural influences, task commitment, and self-concept.

As mentioned in the section on early history of gifted education, the studies of Yoder (1894), Dolbear (1894), Terman (1906), and later Terman and Oden (1918) played an important role in initiating an understanding of the gifted and their values. Since these studies indicated that gifted individuals were found to be better adjusted and more popular with the general population, they refuted earlier beliefs that giftedness is often linked to severe maladjustment, and even insanity.

One of the best early summaries of the traits of the gifted was based upon studies by Catherine Cox (Miles) (1926) on the characteristics revealed in the childhood biographies of 100 geniuses; and the biographies and papers of 301 eminent men and women. She listed the following persistent traits as differentiating these individuals from the general population: independence of thought, perceptiveness, understanding, strength of memory, originality, creativeness, depth of understanding, trustworthiness, conscientiousness, strength of influence on others,

persistence, devotion to distant goals, and desire to excel.

The major portion of work on characteristics of the gifted is concentrated on specific traits, and specific categories of gifted populations. For purposes of clarity, significant studies will be reviewed under the following sub-headings: Personality Characteristics; Creativity; Self-Concept; Task Commitment; Differences between Gifted Men and Women; Characteristics of Very High Ability Children; Learning Styles of the Gifted; The Nature of Talent as Opposed to Intellectual Giftedness; Characteristics of the Gifted Underachiever; and Strengths and Concomitant Problems Inherent in Giftedness.

Personality Characteristics Among the Gifted

James Gallagher (1975) sums up the results of research on personality characteristics of the gifted: "Whenever one finds a group of children who receive high social acceptance, it is very likely that he will also find good personal adjustment. By and large, this seems to be the case in investigations of the gifted so far" (p. 41).

Not only did Terman's group (1954) seem well adjusted in childhood, they also showed a slightly below-average incidence of suicide and institutionalization for mental illness in later life. In addition, studies by Gair (1944), Gallagher and Crowder (1957), Hildreth (1938), Lightfoot (1951), Mensh (1950), and Ramaseshan (1957) indicated that gifted children had fewer personality problems than the general population.

These studies, however, despite their consistent findings, have not

completely settled the issue of giftedness and personality maladjustment probably because instability can be found in the highly creative and the unusually gifted.

One personality factor that appears to be closely related with high ability is that of independence. Lucito (1964) compared fifty-five bright and fifty-one dull sixth grade children on a task that measured conformity to group judgment. Results indicated that the bright children were significantly less conforming to peer opinions than were the dull children. In point of fact, none of the dull children qualified for the "independent category," as defined by Lucito.

R. M. Smith, in 1962, compared forty-two intellectually gifted adolescents of average intelligence on six different criteria of personal and social adjustment. The groups were equated on variables of sex, social class, religion, nationality, and age.

Results of Smith's study indicate that gifted students were significantly different in one major area--a tendency to display more dominant forceful, independent, and competitive types of behavior (Smith, 1965).

Creativity

The transformation of old information to solve new problems is the definition most often used for creativity. As Barron (1969) states: "Creativity may be defined quite simply as the ability to bring something new into existence. . . . The 'something new' is a form made by the reconstitution of, or regeneration from, something old" (Barron, 1969, p. 10).

As stated in the section on History of Gifted Education, J. P. Guilford's work, particularly in the construction of his three-dimensional conceptual cube, Structure of the Intellect (Guilford, 1968), undergirds much of the effort to measure and educate for creativity. His operation defined as divergent thinking represents a free and open style of intellectual operation in which the distinguishing characteristic is a large number of possible associations and possible solutions.

The most effective reviews of the correlates of creativity have been done by Dewing (1970), Wallach (1970), and Dellas and Gaier (1970). These studies based their definitions of creativity on Wallas's four main stages of the creative process.

1. Preparation. This is the stage in which the problem is investigated from all directions and is primarily a problem-identification and fact-gathering period.
2. Incubation. In this stage the person is not consciously thinking about the problem. Some kind of internal mental process associates new information with past information. Some type of reorganization of the information seems to be going on without the individual being directly aware of it.
3. Illumination. This is the stage during which the "happy idea" occurs. It has been referred to as the "Aha Phenomenon!" In this stage, the creator suddenly sees the idea, concept or solution to the problem.
4. Verification. This is the stage in which the idea which has been obtained through the first three stages is put to the test to see if it has validity or not. (Wallas, 1926, as reported by Gallagher, 1975, pp. 249-250)

E. Paul Torrance points out that creative traits in gifted children are often not valued by teachers. In 1965, Torrance determined the ten

most highly valued characteristics of students (as indicated by over a thousand teachers) to be the following:

1. Consideration of others
2. Independence in thinking
3. Determination
4. Industriousness
5. Sense of humor
6. Curiosity
7. Sincerity
8. Courteousness
9. Doing work on time
10. Healthy

Torrance notes the absence of such traits as the courage of one's convictions, independence of judgment, and ability to find alternative solutions--qualities characteristic of the creative child (Torrance, 1965, p. 228).

Donald W. MacKinnon, in his study of the relationship between creativity and intelligence in American architects, failed to prove that creativity was linked significantly to intelligence, or that the more intelligent person is necessarily the more creative one. Evidence in his study does show that the more creative a person is the more he/she reveals an openness to feelings and emotions, a sensitive intellect and understanding of self-awareness, and interests that include many defined as "femine interests" by American culture (MacKinnon, 1962).

Finally, Sandra Howell, Oregon gifted specialist, cites the import-

ance of humor in the creatively gifted student: "The tendency to see familiar things and situations in unusual ways, the attraction to the unconventional, and highly developed verbal skills blend together to produce a keen sense of humour" (Howell, 1979, p. 8).

Self-Concept

Terman and Oden's longitudinal study of over 1,500 gifted subjects first identified the relationship between self-concept and realization of gifted potential (1947). One of the major findings of the study concluded that achievement and "life satisfaction" depended upon--among other personality traits--a sense of freedom from inferiority.

This relationship has been confirmed by numerous other studies, most significantly those by Roe (1952), MacKinnon (1962), and Maslow (1970). Maslow found that the "self-actualizing person"--one who appears to be using all his or her gifts and talents--generally feels safe and unanxious, accepted and loved.

Two recent studies point to a high correlation between self-concept and giftedness. Romeria Tidwell (1980) and Nicholas Karamessinis (1980) conclude that the gifted appear to have higher esteem than the general population, and view themselves as being largely in control of their own lives.

James Alvino in his plea for guidance for the gifted summarizes the importance of self-concept in the development of gifted potential:

Gifted students have often been described as the "other minority" and as such, they are perhaps the most neglected of all student populations. Like members of

other minority groups, they may experience problems related to poor self-concepts, social isolation, alienation, and uncertainty concerning their roles in society. Caught in the middle of conflicting societal values--between democratic respect for differences and the tendency to view giftedness as elitist and therefore undesirable--gifted children absorb great psychological and sometimes even physical abuse. Low self-esteem and a general sense of personal deficiency can develop when these children internalize society's schizophrenia. (Alvino, 1981, p. 65)

Task Commitment

Most authorities define task commitment as "the ability to persevere in the completion of a task." Once again we begin with Terman's conclusion that achievement and life satisfaction depended (among others) on the trait of persistence in the accomplishment of ends (Terman, reported by Oden, 1968).

Joseph Renzulli, one of the current gifted specialists who adds a note of practicality to the concept of giftedness, insists that the trait of task commitment must bear equal weight with intellectual intelligence and creativity in the identification of gifted children. Renzulli states that children with well-developed test-taking skills and lesson-learning abilities are not always equally well developed in the ability to pursue the completion of a task (Renzulli, 1981).

Renzulli's focus on task commitment is supported by a recent study of 200 men historically recognized as highly eminent by Walberg et al. The study concluded that concentration and perseverance in tasks were outstanding childhood traits that foreshadowed the degree and kind of eminence achieved by the subjects (Walberg et al., 1981).

Finally, studies by Haensly (1980) and Ryan (1981) revealed a significant correlation between motivation and task commitment among young gifted children and later success.

Differences between Gifted Men and Gifted Women

Throughout the present century, researchers and theorists have maintained an active interest in the academic, social, and cultural differences between boys and girls, men and women. As in other areas, studies in the differences between gifted boys and girls have reported similar findings. Walberg (1969), in reviewing the performance of gifted girl students in physics programs, concluded that the subjects tended to be conforming, docile, dependent, and liable to hold back intellectually in favor of their feminine roles and group approval.

Gallagher, Ascher and Jenne (1967) reported a similar finding in a study of students in twelve gifted junior high classes. The boys in the classes were significantly more apt to challenge the opinions of their teachers and peers than the girls in the classes. In addition, the girls did not express themselves as often, although their written expression compared favorably.

Three significant studies in the literature attempt to answer the question, "Are differences between men and women due to innate sex-linked characteristics, or to differential cultural stimulation?"

Astin (1972), in a study of girls and boys participating in math and science contests, concludes that parents tended to encourage boys in these endeavors more than they did girls, and that such encouragement

seems reflected in girls' choosing of more artistic and social types of occupations.

Sears, Maccoby and Levin (1957) in their longitudinal studies stressed the marked differences in cultural patterns and categories of expectations among boys and girls.

Gowan and Groth (1972) explored the vocational choices of young girls in a summer school program for the gifted. He reports that when asked about their vocational choices, the majority of the girls responded with choices that reflected their perceived expectations of society rather than their personal choices.

Carolyn M. Callahan, in her responses to the work of Gallagher, Maccoby, Gowan and Roth, states that current studies offer little evidence that innate intellectual abilities account for the overwhelming dominance of males among those identified as productively gifted individuals. Rather, she suggests that it is the result of values and expectations ingrained in our culture; and she suggests that it is the responsibility of the schools to develop a curriculum that develops the abilities, the behaviors and the goals of gifted girls (Callahan, 1981).

Characteristics of Very High Ability Children

It is in the study of unusually high ability children that one encounters problems of social and behavioral adjustments. One of the earliest investigations of the difficulties of extremely high ability children was conducted by Leta Stetter Hollingworth (1942). In her intensive analysis of twelve children who scored above 180 on the Binet scale,

Hollingworth identified five general conduct problems with which these children must learn to deal:

1. To find enough hard and interesting work at school.
2. To "suffer fools gladly."
3. To keep from becoming negativists toward authority.
4. To keep from becoming hermits.
5. To avoid the habits of extreme chicanery (Hollingworth, 1942, p. 299).

Hollingworth's observations are supported by Terman and Oden (1947) who found that for such a youngster social adjustment was his most difficult task.

Ruth Lundy (1978), in her study of the dimensions of learning for the highly gifted student, found three common characteristics among 100 highly gifted students: (1) the students wanted to choose the peer context in which they learn; (2) the students described their needs for some part of their learning to be self-directed; and (3) variety in learning experiences was valued by the students.

Kirk (1972), drawing on the work of Catherine Cox (1926) in analyzing the biographies of eminent men, discovered that many of the extraordinarily intelligent men of the past did not receive formal education and instead were privately tutored. Kirk raises three serious questions about the education of the highly gifted:

1. Is it necessary to segregate very superior children from their childhood peers in order to educate them for a scholarly career?
2. Can such an education be accomplished in a school situation?

3. Is such exemplary achievement the result of a tutorial system which can begin at an early age, uncontaminated by a school curriculum and grade placement? (p. 116)

Learning Styles of Gifted Students

The majority of work on the learning styles of gifted students has been conducted by Rita and Kenneth Dunn, and by their associate, Gary E. Price. Drawing on the 18 learning style elements included in the Dunn's 1978 learning style inventory, Rita Dunn and Gary Price identified the following learning characteristics of gifted children:

1. Gifted subjects preferred a more formal design of curriculum.
2. Gifted students did not need as much structure in the learning situation, were less responsible but more persistent than the nongifted group.
3. The gifted group preferred to learn through their tactile and kinesthetic senses, and indicated less preference than their classmates for using the auditory sense for learning.
4. Design structure and responsibility were the elements that discriminated most between those subjects identified as gifted and those identified as nongifted. (Dunn and Price, 1980, p. 34)

Investigations of gifted learning styles are assuredly in preliminary stages of development. It is assumed that replications of the work of Dunn and Price will challenge, or support, their conclusions.

Characteristics of Gifted Underachievers

The term "gifted underachiever" is a relatively new term in the

literature of gifted education. The term represents those children whose achievement is far below what we would predict on the basis of high IQ results. Most of the studies on these children reveal disturbances in the family relationship; however, these disturbances lie within the realm of the psychological, rather than the physical environment of the home (McGilvray, 1964).

A number of investigators have suspected that the negative attitudes of underachieving students are closely related to family attitudes and values. A study by Pierce and Bowman (1960) found that high-achieving high school students felt that their fathers were a more important influence in their lives than did the low-achieving students. When asked who was the most important influence in their lives, the underachieving boys would often name a male figure outside the family in contrast to the high achievers who would more often name their fathers. The study also indicated that girls who are poor achievers seem to have mothers of low authoritarianism, whereas high-achieving girls seem to have mothers of high dominance (Pierce & Bowman, 1960).

Drews and Teahan (1957) concluded that "Parental intervention is necessary for the development of proper ego controls within the child so that he can adjust to the reality demands of the school room" (p. 13).

O'Shea (1970) compared bright junior high boys who were low achievers with those who were high achievers. The low achievers had significantly poorer family relations, and were less aggressive, less conforming, and less persistent. These conclusions clearly support Terman's conclusions (1968) with regard to underachievers.

Joseph French (1981) in his study of high ability school "drop-outs" in Pennsylvania, concluded that the drop-outs differed from the general population in such areas as personality, interests, educational skills, and in particular, family orientation to school processes.

One of the most extensive studies of underachievers was conducted by M. C. Shaw in 1961. Shaw identified over 628 underachievers in thirteen school districts in California. His results indicated that the underachievers exhibited a greater negative self-concept and a generally more negative outlook on life than the high achievers in the study.

The Nature of Talent as Opposed to Intellectual Giftedness

Within the last decade, the question of talent in performance and aesthetic skills has become a moot subject in the identification of giftedness. Authors such as David Feldman (1979) contend that "all children are gifted or talented, and it is up to the educational system to discover each child's gifts, and then to provide an environment in which these gifts can be expressed" (p. 663).

Sandra Howell in her description of the characteristics of talented and gifted children contends that talented children may not necessarily be intellectually gifted; however, they are capable of high performance in the areas of art, music, dance, drama, mime, athletics and fine coordination (Howell, 1979).

Studies by Ellison, James and Fox (1970), and Taylor and Ellison (1967) focused on the identification of talent using biographical data

in conjunction with participation in artistic activities and the judgment of "raters."

A significant study by Ellison et al. (1971) indicated the feasibility of using the relationship of teacher ratings, motivation, expression, and separate criterion measures specifically designed for each artistic area to identify talented children.

How can we provide quality educational experiences for the total spectrum of all intellectually gifted and all creatively talented children? Perhaps the most practical answer comes from Joseph Renzulli who suggests in his Open Door Model of Identification that all schools identify a "talent pool" of twenty-five percent of the total school population. Members of the talent pool would include talented children as well as those who are intellectually gifted. Rotating projects are then designed to offer experiences and activities in the areas of interest and abilities inherent in the school's talent pool (Renzulli, 1981).

Strengths and Concomitant Problems of Giftedness

In concluding the section devoted to characteristics of gifted children, it is appropriate to cite the work of May Seagoe and Barbara Clark. Both of those authors focus on the relationship between strengths of the gifted, and concomitant problems that emerge when schools attempt to provide an appropriate educational setting for gifted students.

May Seagoe cites generally accepted strengths of gifted students, and concomitant problems that may affect their school/classroom adjustment.

Characteristics

1. Keen power of observation; naive receptivity; sense of the significant; willingness to examine the unusual
2. Power of abstraction, conceptualization, synthesis; interest in inductive learning and problem solving; pleasure in intellectual activity
3. Interest in cause-effect relations, ability to see relationships; interest in applying concepts; love of truth
4. Liking for structure and order; liking for consistency, as in value systems, number systems, clocks, calendars
5. Retentiveness
6. Verbal proficiency; large vocabulary; facility in expression; interest in reading; breadth of information in advanced areas
7. Questioning attitude, intellectual curiosity, inquisitive mind; intrinsic motivation
8. Power of critical thinking, skepticism, evaluative testing; self-criticism and self-checking
9. Creativeness or inventiveness; liking for new ways of doing things; interest in creating, brainstorming, free-wheeling

Concomitant Problems

1. Possible gullibility
2. Occasional resistance to direction; rejection of remission of detail
3. Difficulty in accepting the illogical; asks questions that require specialized knowledge
4. Invention of own systems, sometimes conflicting
5. Dislike for routine and drill; need for early mastery of foundation skills
6. Need for specialized reading vocabulary early; parent resistance to reading; escape into verbalism
7. Lack of early home or school stimulation
8. Critical attitude toward others; discouragement from self-criticism
9. Rejection of the known; need to invent for oneself

CharacteristicsConcomitant Problems

- | | |
|--|---|
| 10. Power of concentration; intense attention that excludes all else; long attention span | 10. Resistance to interruption |
| 11. Persistent, goal-directed behavior | 11. Stubbornness |
| 12. Sensitivity, intuitiveness, empathy for others; need for emotional support and sympathetic attitude | 12. Need for success and recognition; sensitivity to criticism; vulnerability to peer group rejection |
| 13. High energy, alertness, eagerness; periods of intense voluntary effort preceding invention | 13. Frustration with inactivity and absence of progress; interrupts discussions rather than waiting for a turn |
| 14. Independence in work and study; preference for individualized work; self-reliance; need for freedom of movement and action | 14. Parent and peer group pressures and non-conformity; problems of rejection and rebellion |
| 15. Versatility and virtuosity; diversity of interests and abilities; many hobbies; proficiency in art forms such as music and drawing | 15. Lack of homogeneity in group work; need for flexibility and individualization; need for help in exploring 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 (Seagoe, 1978) |

Barbara Clark (1979) expands the idea of strengths and related adjustment to three areas that affect classroom planning for the gifted: (1) differentiating characteristics; (2) examples of related needs; and (3) possible concomitant problems (p. 23).

In her 1979 work, Growing Up Gifted, she displays examples of the planning process necessary in caring for the differential cognitive characteristics of the gifted:

<u>Differentiating Characteristics</u>	<u>Examples of Related Needs</u>	<u>Possible Concomitant Problems</u>
extraordinary quantity of information, unusual retentiveness	to be exposed to new and challenging information of the environment and the culture, including aesthetic, economic, political, educational, and social aspects; to acquire early mastery of foundation skills	boredom with regular curriculum; impatience with "waiting for the group"
unusually varied interests and curiosity	to be exposed to varied subjects and concerns; to be allowed to pursue individual ideas as far as interest takes them	difficulty in conforming to group tasks; overextending energy levels, taking on too many projects at one time
high level of language development	to encounter uses for increasingly difficult vocabulary and concepts	perceived as a "show off" by children of the same age
high level of verbal ability	to share ideas verbally in depth	dominate discussions with information and questions deemed negative by teachers and fellow students; use of verbalism to avoid difficult thinking tasks
unusual capacity for processing information	to be exposed to ideas at many levels and in large variety	resents being interrupted; perceived as too serious; dislike for routine and drill

<u>Differentiating Characteristics</u>	<u>Examples of Related Needs</u>	<u>Possible Concomitant Problems</u>
comprehensive synthesis	to be allowed a longer incubation time for ideas	frustration with demands for deadlines, and for completion of each level prior to starting new inquiry
early ability to delay closure	to be allowed to pursue ideas and integrate new ideas without forced closure or products demanded	if products are demanded as proof of learning, will refuse to pursue an otherwise interesting subject or line of inquiry (pp. 23-24)

Problems Inherent in Attempts to Identify Gifted
and Talented Children for Accelerative Public School Programs

In spite of an abundance of research on characteristics completed during the previous two decades, the process of identifying gifted children with a significant level of accuracy remains the "Achilles' heel" of gifted education.

Since early methods of identifying the intellectually gifted by means of Binet's Scales of Intelligence, the process of identification has expanded to include a wide range of both formal and informal assessment techniques. Controversy still exists, however, particularly with regard to the use of standardized achievement tests, teacher identification, measurement of creativity, identification of the gifted cultural minority, and use of informal assessment instruments.

The Debate Over the Use of Standardized Achievement Tests

Gallagher (1975) reminds us:

The means of identification of gifted children in the first two decades of this century was by teacher nomination. In many rural areas of the country it remains the only means of identification. In this situation, the actual definition of gifted children becomes "those children who are doing well in school, much better than their companions." . . . Teacher judgment has been gradually replaced as the prime identifying technique by standard tests of mental ability and achievement. The operational definition becomes "those children who score well on tests." This definition is only as good as the tests, no better. (pp. 17-18)

In their report on a national survey of identification practices used throughout the United States, Alvino, McDonnell and Richert (1981) found that standard measures of intelligence and achievement were being used interchangeably. This situation suggested the following possibilities to the authors:

- a. uncertainty in the field as to the difference between intellectual and academic abilities.
- b. vacillation in the practices of identifying and measuring intellectual and academic abilities.
- c. a lack of clarity and precision in the federal definition of giftedness, its categories, and their relationship to each other (p. 129).

The problem in the use of standardized achievement tests as a primary factor in determining giftedness is not so much what they identify; but rather, what they fail to identify. Achievement tests are not designed to measure originality, creativity, task commitment, leadership, or self-

concept. Their ability to measure problem solving and critical thinking is limited since answers require, for the most part, a single convergent answer.

Renzulli and Reis (1982) in discussing a broadened concept of giftedness, state that

Programs that rely on traditional identification procedures may not be serving the wrong children, but they are certainly excluding large numbers of pupils who, given the opportunity, are capable of producing equally good products. High levels of productivity can occur only when above-average ability interacts with task commitment and creativity. (p. 620)

Treffinger, Renzulli and Feldhusen (1981) remind us that many educators have tended to view creativity entirely from a cognitive view, ignoring the possibility that there may be an affective component to creativity. We cannot make inferences from measures that are distinctly cognitive.

Alvino et al. in a national survey (1981) found that standardized achievement tests were being used for purposes and populations completely antithetical to those for which they were intended.

In addition to the advantages for children who are intuitively "test wise," gifted specialists point to the unusually heavy weight given to chronological age in standardized achievement tests. Children who are younger in a specific grade level may obtain scores in the 90th percentile with a lower raw score than those who are older.

Teacher Identification

In their 1981 survey of gifted identification practices, Alvino

et al. found that second only to intelligence tests was the use of teacher nominations. Traditionally, teachers have felt that they were the best judges of gifted/talented potential and their subjective, non-criterion assessments often play a major role in the selection of students for gifted programs.

Recent studies of the efficacy of teacher identification reveal some significant patterns of teacher behavior.

Peggy House (1979) surveyed twenty-four teachers of the gifted enrolled in a Master's degree in gifted education. When asked to describe a "typical gifted child," the majority of teachers selected a high achieving, compliant student with strengths in language arts, reading, and math.

Reschly and Lamprecht (1979) used a videotaped performance of a child labeled either as gifted, normal, or educable mentally retarded in asking teachers to make predictions regarding academic success. Researchers found a significantly high correlation between labels and teacher predictions.

A review of the literature devoted to accuracy of teacher judgment (Gear, 1976) indicated that teachers are relatively poor at this task. Estimates of effectiveness ranged from 10 percent to 48 percent with a median at 45 percent.

In a study to determine if appropriate instruction would improve the accuracy of teacher judgment in identifying giftedness (24 teachers were subjects), results indicated that effects of the training had a minimal effect in general identification of the gifted, and no measur-

able effects on teachers' attitudes toward gifted minorities and disadvantaged children (Gear, 1978).

The purpose of a study by Sanders (1977) was to obtain information about variables which affect the initial screening by classroom teachers for pupils enrolled in gifted programs. Results of a questionnaire administered to 188 teachers indicated (1) a positive relationship between the number of pupils teachers classified as gifted, and the percent of the population they believed to be gifted; (2) criteria emphasized by teachers in their selection were standardized achievement and aptitude scores, classroom academic performance, intellectual characteristics, and motivation. Little emphasis was placed on creativity, leadership, psychomotor ability, or talent in the arts.

A ray of hope for training teachers to make accurate assessment was described by James Borland (1978). A study at Teachers College, Columbia University, asked teachers to use checklists to indicate the presence or absence of certain behaviors rather than making a global assessment. Significant, moderate correlations between teacher ratings and IQ were obtained, although teacher ratings were more accurate with girls than with boys. Borland suggests that when presented with a directive checklist of behavioral correlates of giftedness, teacher ratings can be a valuable (if not always completely valid) source of information.

Measurement of Creativity

James Gallagher (1975) articulates the importance of creativity in

the identification of giftedness:

In the late 1960's, a genuine societal change began, marked by our increasing concern about the nature of artistic excellence, moral behavior, and that unpredictable, but highly prized, dimension of creativity. We wished to add these dimensions to the definition of giftedness, and the result is a broader statement of a gifted child. (p. 26)

In concert with the inclusion of creativity within the definition of giftedness came attempts to measure creativity. The task is a formidable one--with few standard criteria--and the results have been uneven, at best.

Treffinger, Renzulli, and Feldhusen, in their paper on Problems in the Assessment of Creativity, cite the following:

Given the existing array of ideas about creativity, and the absence of "theoretical unity," it is not in the least surprising that there exists a number of tests, all purporting to be measures of "creativity," but differing in a number of ways. Each instrument mirrors the particular set of beliefs and preconceptions of its developer concerning the nature of creativity. Sadly, the theoretical rationale for such tests is often not even sufficient to allow systematic tests of differential predictions. (p. 144)

In spite of the problems involved in establishing a standard set of criteria for assessment of creativity, numerous attempts have been made to develop effective methods of assessment and measurement. Described below are representative examples of such attempts.

Ellison et al. (1971) propose the use of the biographical approach in identifying students in the area of creative talents in art, music, and academic areas. Through the isolation of common characteristics

found in the biographies, persons who are more likely to achieve in creative endeavors can be identified.

Wilson, Guilford and Christensen proposed in 1953 that tests of originality be constructed to measure the following traits:

- a. uncommonness of responses as measured by weighting the responses of an individual according to statistical infrequency of those responses in the group as a whole.
- b. the production of remote, unusual, or unconventional associations in specially prepared association tests.
- c. cleverness of responses, as evaluated by ratings of degrees of cleverness exhibited by the general population (reported in Barbe & Renzulli, 1981, p. 182).

Sections of Mary Meeker's Structure of Intellect (SOI, 1978) creativity assessment are based on the postulates articulated in the 1953 paper.

C. K. Rekdal (1977) looks at the potential of bio-inventory tests as creativity screening tests for gifted students. The author summarizes four bio-inventory instruments and concludes that "What Kind of Person Are You?" (Torrance, 1976) displays the most consistent levels of validity in identifying children with creative potential.

However, in a study completed in 1978, eighty elementary-level creativity tests were assessed on 36 criteria of educational and psychometric quality. Results showed that most were lacking sound supporting evidence (Petrosko, 1978).

Identification of the Gifted Cultural Minority

Once again we turn to James Gallagher (1975) for an accurate summation of the problem of identifying the cultural minority gifted population:

There are two general statements that can be made regarding ethnic differences in ability at the highest level of performance. First, ability at the highest level can be found in every ethnic and racial group. Second, there is a suspicious correlation between the number identified and the groups which have been members of the dominant culture for the longest period of time. (pp. 52-53)

Clearly, children of minority groups who are not part of the cultural mainstream suffer disadvantages in language, cultural perception, and ability to express their creativity within the standard norm of acceptance.

One of the first attempts to analyze and summarize alternative methods in identifying gifted minority children was completed by Asa Hilliard in 1976. The final report addresses the problems involved in identifying gifted minority children, and assesses the interaction of cultural behavioral styles with standard gifted and creative identification tools. A final section stresses the implications of cultural behavioral style for gifted education.

A significant study by Paul Davis (1978) reports on community-based efforts to identify gifted and talented Black middle school students in an effort to augment ineffectual school district efforts. Known leaders in the Black community were asked to recommend students

who displayed cognitive superiority, psychosocial superiority or talent-specific superiority.

Mercer and Lewis (1978) originally developed a schema entitled System of Multicultural Pluralistic Assessment (SOMPA) to prevent the mislabeling of minority children as mentally retarded. However, the approach has proved to be, according to the authors, equally successful in identifying gifted minority children whose abilities may be masked by cultural differences between the home and the school.

SOMPA utilizes three assessment models: the medical, social system, and pluralistic model. Each model incorporates scales to measure socio-cultural characteristics; and scores on each scale are inserted into multiple regression equations developed for each ethnic group.

Finally, a study designed to provide a relatively simple method of identifying gifted Mexican-American elementary school children was initiated by Chambers and Barron (1978).

Subjects were given the Culture Fair Intelligence Test, The Wallack-Kagan Tests of Creativity, the Barron-Welsh Art Scale, the Barron Symbol Equivalence Test, and the Personal Adjectives Check List. Results indicate that all tests except the Personal Adjectives Check List were found to be fairly consistent to teacher ratings.

Informal Assessment Models

In an effort to identify traits and characteristics overlooked on formal assessment tools, a range of informal models ranging from anecdotal

total records, biographies, questionnaires, case studies to interviews and verbal perception checks have been developed, field tested, re-searched, and assessed with inconsistent and inconclusive results.

Alvino, McDonnell and Rickert's reaction to these informal measures is stated in their 1981 survey of identification practices currently in use: "Rampant use of informal and subjective measures is taking place with little monitoring for accuracy, common criteria or evidence of validation" (p. 131).

Gallagher, however, praises recent attempts to broaden the range of identification tools. He reminds us that identification processes must keep pace with an elaborate, all-encompassing definition of giftedness (Gallagher, 1975).

Current Uses of Multidimensional Approaches in the Identification Process

In an attempt to reach as many potentially gifted and talented children as possible, the current pattern among school districts is not to rely exclusively on any one approach, but to use combinations of identification methods and instruments.

As cited in an earlier section, Joseph Renzulli's "Revolving Door" Identification Model has gained wide acceptance as an effective multidimensional approach. The model was conceived as an approach to providing special education for academically gifted pupils in response to the problems and criticisms associated with traditional identification designs.

In Renzulli's model, twenty-five percent of the school population is identified in a school "talent pool" to be serviced with rotating projects designed to their interests and abilities.

Students are identified with regard to above-average intellectual abilities, creativity, and task commitment. The Revolving Door Model uses multiple criteria including standardized tests and evaluations of pupil performance and potential through teacher, peer, parent and self-nominations. Renzulli feels that his model allows for both topical and temporal modes of giftedness (Renzulli, 1981).

Methods for identification and selection of gifted and talented children in the state of Oregon require the use of multiple identification processes as delineated in state guideline No. OAR 581-15-830. A minimum of three of the following categories must be used in the identification and selection process:

- (a) Objective test information including one or more of the following:
 - (A) Intelligence tests
 - (B) Achievement tests
 - (C) Creativity tests
 - (D) Other tests as approved by the Department of Education
- (b) Subjective measures and indicators including one or more of the following:
 - (A) Teacher
 - (B) Self
 - (C) Critical others
- (c) Documentation by other qualified professionals in the given field or fields in which the pupil may receive special instruction or services
- (d) Other measures as approved by the Oregon Department of Education prior to their use (Bagley et al., 1979, p. 8)

The multiple criteria identification process used in District 4J, Eugene, Oregon, is typical of the multidimensional approach used throughout the state of Oregon. Criteria includes an individual intelligence test, composite scores on all standardized achievement tests, individual scores in math and reading standardized tests, a characteristics checklist completed by a faculty selection committee, and teacher recommendations. Each assessment item is weighted according to the strength of performance in the area, and minimum composite scores are required for selection into the district program for the gifted (District 4J PACE Manual, 1981-82).

Analysis of each student's scores is the responsibility of a selection team comprised of the gifted specialist, the principal, representative faculty members, and, occasionally, parents.

District 4J's identification process is an admirable approach to a balanced identification program. The process, however, is time consuming, and school district personnel yearn for a less complicated method that is at the same time even more effective than the current system.

CHAPTER III

PROCEDURES

The Development of the Gifted Behavior Inventory

The design of the inventory that serves as the focus of this study was completed in the spring of 1981.

The inventory was designed to include sixteen overt behaviors identified by Dr. May Seago of UCLA (1974) and Dr. Barbara Clark of California State University, Los Angeles (1979), as concomitant problem behaviors common to gifted children. The behaviors selected among those identified by Seago and Clark are often cited as reasons for negative attitudes toward gifted children both at school and at home.

1. Does not wait for a turn to speak; interrupts.
2. Involvement in class activity is dependent on level of personal interest in the topic.
3. Is impatient with the lesser ability of others.
4. Dislikes routine and drill; seeks early mastery of skills.
5. May challenge the value of activities.
6. Resists interruptions when engrossed in an activity.
7. Seeks independence; may resist situations that require conformity.
8. Needs success and recognition; is sensitive to criticism.
9. Uses verbose explanations and descriptions.

10. Begins many projects that are often not completed.
11. Displays stubbornness when trying to get his/her own way.
12. Often invents his/her own system of doing something that may conflict with the required method.
13. Tends to be brutally frank in appraising people and activities.
14. Has a great desire to excel, even to the point of cheating.
15. Loses interest in discussions if unable to dominate.
16. Intimidates the teacher with questions that require specialized knowledge.

The inventory was developed on the basis of (1) a study of the literature, especially the Seago (1974) and Clark (1979) work on gifted child characteristics; (2) consultation with University faculty and Eugene, Oregon, District 4J staff members; (3) a field study in June, 1980, using a preliminary form of the inventory (See Appendix B) with forty-five resident intern training teachers assigned to eight school districts in Oregon; and (4) the final refinement of the inventory.

The field study produced means that indicated no significant differences between gifted and nongifted students in frequency of the sixteen behaviors, and in teachers' levels of annoyance when behaviors were exhibited. All means were relatively low on a seven point scale used in the inventory.

Following the field study in 1980, the final inventory was developed. The sixteen behaviors remained the same, as well as the dependent variables of frequency of the behaviors (gifted versus nongifted) and teachers' levels of annoyance when behaviors are displayed (gifted and

nongifted). School District 4J, Eugene, Oregon, was selected as the site of the final study. In District 4J, students selected for the gifted program are termed PACE students; therefore, the final inventory used the terms "PACE student" and "nongifted student."

Additional refinements were included in the final inventory. Directions were clarified; and four areas of demographic data were added to provide a crosstabulation of responses on the inventory to the following areas: sex of the subject, number of years of teaching experience, number of gifted students the subject had worked with, and number of courses or workshops completed in gifted education (see Appendix C).

The Addition of the Second Component of the Study

After consultation with Dr. Charles Stephens of the Eugene District Department of Research, Development and Evaluation; with gifted specialists in the district PACE Program; and with general elementary classroom teachers, an additional area of investigation appeared to be germane to the design of this study and to the needs of the school district.

The student selection process for the district PACE Program is a comprehensive process that includes a wide range of criteria considered in the selection of students for the program. Students must achieve a minimum score of twenty-four points on the weighted criteria district summary sheets to be considered for the program. (Summary sheets of district criteria are included in Appendix A.) In spite of this well-planned process, gifted specialists and elementary classroom teach-

ers feel that some students are selected for the program who do not find success and satisfaction in the activities, and that other capable students who would benefit from program activities fail to qualify. During consultations it became apparent that some criteria items may be more critical than others to the success and adjustment of students in the PACE Program, and that these criteria should be given primary consideration in the selection process. Therefore, an addition to the final research study was an inventory of selection criteria currently used by the district. Subjects in the study were asked to examine the twenty-nine criteria currently used by the district and select the fifteen that they considered to be most critical (or highest priority) in the selection of students in the PACE Program.

The Study Group

Subjects in the study were elementary teachers assigned in grades 3, 4, 5, and 6 in District 4J, Eugene, Oregon, since students selected for the PACE Program are drawn from these grade levels. In experience, subjects ranged from first year teachers to those with twenty-five years of public school experience.

Fourteen elementary schools located in the Eugene Public School District were selected for the study. The fourteen schools, listed in alphabetical order below, represent a complete range of student demographic distribution in the district.

Adams Elementary School
Awbrey Park Elementary School
Condon Elementary School

Edgewood Elementary School
Edison Elementary School
Ellis Parker Elementary School
Harris Elementary School
McCornack Elementary School
Meadow Lark Elementary School
Patterson Elementary School
Silver Lea Elementary School
Spring Creek Elementary School
Washington Elementary School
Willagillespie Elementary School

In addition, many of these schools included comparatively larger populations of PACE students.

Crest Drive School, an elementary school with a large number of PACE students, was not included in the study group. Teachers assigned to Crest Drive School have received comparatively more training and in-service in gifted education as the result of the work of the PACE specialist assigned to the school; and in the opinion of the researcher, Crest Drive teacher responses to the inventories may not reflect the attitudes of the general population of elementary school teachers.

The sample population in the study included 155 elementary teachers in grades 3, 4, 5, and 6.

Methodology (Data Gathering)

The District 4J Research Review Committee granted permission to conduct the study in the Eugene District in May, 1981 (See appendix D). Principals of the elementary schools selected for the study were personally contacted during the same month, and again at the beginning of the following school year (September, 1981). During the personal interview, principals were apprised of the purpose and intent of the study,

and details of the data gathering process in each school were finalized.

During September, 1981, final inventory packets were completed for the study. Each teacher packet consisted of the following:

1. An introductory page designed to engender participation.
2. A page devoted to the purpose of the study.
3. A page of detailed directions.
4. Form A, which included the four items of demographic data, and the response section for a PACE student with the sixteen behaviors in relation to frequency and levels of annoyance. A seven point scale for the dependent variable of frequency of the behavior ranged from "rarely" to "consistently"; and a seven point scale for the dependent variable of teachers' annoyance levels when the behavior is displayed ranged from "not annoying" to "very annoying." In addition, Column I indicated that the behavior is not exhibited by the PACE student, and therefore is not an annoyance factor.
5. Form B, the response section for a nongifted student with the sixteen behaviors in relation to frequency and levels of annoyance. The same seven point scale is used as well as Column I when the behavior is not exhibited.
6. An Inventory of Gifted Criteria page listing all twenty-nine criteria used in the selection of PACE students. Subjects were asked to select fifteen of the twenty-nine items that they considered to be of highest priority in the selection of PACE students. A section at the bottom of the page invited subjects to write additional criteria not included in the district's list that they considered important in the identification of gifted students.

(See Appendix C.)

The packet also included a statement of permission from the subject to the researchers to utilize the inventory data for purposes of evaluation and program development. The signed statement of permission was added to the page detailing the purpose of the study.

A letter to principals of the schools selected for the study was

sent during the second week of November, 1981. Each letter reviewed the operation and timeline of the study, and a sample inventory packet was included. Principals shared the information related to the study with teachers of grades 3, 4, 5, and 6 during a staff meeting.

I did not attend the staff meetings since I knew most of the teachers in the schools. My presence might affect participation (which was to be voluntary), and the objectivity of the responses.

Inventory packets were placed in the school mail boxes of third, fourth, fifth, and sixth grade teachers in schools selected for the study on November 23, 24, and 25 (1981). Collection boxes that included an envelope for statements of permission were placed in each school office. Teachers were asked to place completed inventory packets in the collection box.

On December 1 and 2, a follow-up "reminder" was placed in the boxes of teachers selected for the study (see Appendix F).

Collection of all completed inventories took place on December 15, 16, and 17 (1981).

The Final Study Group

Of the 155 inventories distributed, 130 were completed and returned. This figure represents an 84% response of the available population.

In thirteen of the fourteen schools selected for the study, the percentage of completed inventories ranged from 86% to 100% of the available population of third, fourth, fifth, and sixth grade teachers. In one school the percentage of completed inventories was 30%.

The final study group included 96 women and 34 men who had from 1 - 25 years of teaching experience; who had worked with from 1 - 45 gifted students; and who had professional preparation in gifted education ranging from no work to three University courses and five workshops.

Treatment of the Data

The computer system used for treatment of all raw data was the Statistical Package for the Social Sciences (SPSS). The development of SPSS began in 1965 at Stanford University, and is currently located at the National Opinion Research Center at the University of Chicago.

The SPSS program is an integrated system of computer programs designed for the analysis of social science data. The system provides a comprehensive package that enables the user to perform an unusually wide range of data analysis within a flexible format. The program provides the user with a well-defined set of procedures for data transformation and file manipulation, and offers the researcher a large number of statistical routines commonly used in the social sciences.

Following is a list of SPSS data analyses performed on the raw statistics drawn from the completed inventories:

- A. Demographic distribution:
 - 1. Frequency of men and women.
 - 2. Categories of years of experience.
 - 3. Categories of numbers of gifted students placed in subjects' classrooms.
 - 4. Categories of gifted education courses and workshops completed by subjects.
- B. The distribution of frequencies of each behavior as displayed by PACE and nongifted students, and means for each behavior.

- C. The distribution of frequencies of annoyance levels for each behavior for PACE and nongifted students, and means of annoyance for each behavior.
- D. A t test of means for the frequency of each behavior to test the significance of differences in means between PACE and nongifted students.
- E. A t test of means for levels of annoyance for each behavior to test the significance of difference in means between PACE and nongifted students.
- F. A crosstabulation of each area of demographic data (sex, years of experience, number of gifted students, and amount of gifted education) by frequencies of each behavior to display the relationship of each demographic variable to the dependent variable of classroom behaviors.
- G. A crosstabulation of each area of demographic data (sex, years of experience, number of gifted students, and amount of gifted education) by frequencies of levels of annoyance to display the relationship of each demographic variable to the dependent variable of levels of annoyance.
- H. A crosstabulation of two independent variables (the amount of gifted students and the number of gifted education courses)--controlled for sex--to show the relationship of one variable to the other.
- I. A crosstabulation of two independent variables (the number of years of experience and the number of gifted education courses)--controlled for sex--to show the relationship of one variable to the other.
- J. The application of a two-way analysis of variance using the independent variables of sex and gifted education courses and workshops by (1) frequencies of the behaviors by PACE students; (2) levels of teacher annoyance with PACE students; (3) frequencies of the behaviors by nongifted students; and (4) levels of teacher annoyance with nongifted students. This application displays differences between males and females, differences between levels of gifted education, and the interaction between the two variables working together.
- K. The application of Pearson's Product Moment Correlation Coefficient to the means of frequency of each behavior and the means of annoyance for each behavior to describe the linear relationship between the frequency of the be-

havior and the levels of annoyance for teachers.

- L. A distribution of frequencies for each of the twenty-nine PACE selection criteria.
- M. A crosstabulation of the independent variables of sex, number of gifted students, and gifted education to the dependent variable, gifted criteria, to show the relationship of each independent variable to the selection of criteria.

The study also found that teachers who were more experienced and who had a higher level of education were more likely to select criteria that were more difficult to meet than those who were less experienced and had a lower level of education.

The study also found that teachers who were more experienced and who had a higher level of education were more likely to select criteria that were more difficult to meet than those who were less experienced and had a lower level of education.

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CONCLUSIONS AND RECOMMENDATIONS

1. Summary of Findings

- a. A summary of findings is as follows:

1. The

- a. The relationship of the variables is as follows:

- i. The relationship of the variables is as follows:

The relationship of the variables is as follows:

The relationship of the variables is as follows:

CHAPTER IV

RESULTS

This chapter reports the data gathered in this study--a comparison of gifted and nongifted elementary students on the presence and annoyance level of sixteen concomitant behaviors identified by Seagoe (1974) and Clark (1979) as being common in gifted children.

The study also identified criteria the study group felt were most suitable for the selection of gifted students.

The data analyzed in this chapter were obtained from an inventory completed by 130 elementary teachers in grades 3-6 in School District 4J, Eugene, Oregon. Data were analyzed both in terms of the entire study group, and in terms of four areas of demographic data: sex, years of teaching experience, experience with gifted students, and the extent of professional preparation in gifted education.

Categories of Data That Were Assessed

1. Demographic Data

- A. A frequency distribution of each category of demographic data.
- B. The relationship of demographic variables to each other.
 - (1) The number of gifted students, and the number of gifted education courses and gifted workshops completed, controlled for sex, to determine the follow-

ing: Are teachers with more background in gifted education assigned gifted students more often than other teachers?

- (2) The number of years of experience, and the number of gifted education courses and workshops completed, controlled for sex, to determine the following: Do more experienced teachers also have more background in gifted education?

2. Testing Hypothesis I

- A. H_1 : The study group's response pattern will show that teachers see no significant differences between gifted and nongifted students in their display of the sixteen selected behaviors.
- B. An assessment of the relationship of the four areas of demographic data to H_1 .

3. Testing Hypothesis II

- A. H_2 : The study group's response pattern will show that teachers see no significant differences in their tolerance of the sixteen behaviors when they are displayed by gifted as compared to nongifted students.
- B. An assessment of the relationship of the four areas of demographic data to H_2 .

4. Relationship between Behavior Frequency and Annoyance

The presence or absence of a linear relationship between the

frequency of each behavior and the corresponding levels of teacher annoyance.

5. The Selection of Gifted Criteria

- A. The identification of criteria considered to be the most important by the total study group.
- B. The relationship of demographic data to the selection of criteria.

Demographic Data

The 130 classroom teachers in grades three, four, five, and six included 96 females (73.8%) and 34 males (26.1%).

Table 1 presents the demographic breakdown of the study group into groups by percentage.

The typical respondent was a female with eleven years of teaching experience. She had the equivalent of two workshops in gifted education, and had worked with about eight gifted students during her professional career. Her male counterpart had a similar professional background. The study group appears to be reasonably representative of elementary school staffs.

Table 2 compares preparation and experience in gifted education. Two-thirds of the study group were in the lowest of four preparation/experience quadrants, suggesting that the typical classroom teacher's background and experience in gifted education is limited. Further, a careful examination of the other three quadrants suggests that an increase in preparation in gifted education did not necessarily signal the assignment of more gifted students.

TABLE 1
DEMOGRAPHIC PROFILE OF STUDY GROUP OF
96 FEMALES AND 34 MALES

Areas	%	%	%	%	Median
Sex	Female	Male			
	73.8	26.1			
Years of Teaching Experience	1-5	6-10	11-15	16-25	11.3
Total	21.5	20.0	26.9	31.5	
F	25.0	17.7	26.0	31.3	
M	11.7	26.4	29.4	32.3	
Professional Preparation in Gifted Education	0-.66* units	1-1.66 units	2-2.66 units	3+ units	2 workshops or .66 units
Total	52.3	26.2	10.8	10.8	
F	52.1	25.0	10.4	12.5	
M	52.9	29.4	11.7	5.8	
Number of Gifted Students in Career	1-10	11-20	21-30	30-45	8.5
Total	57.7	28.5	6.9	6.9	
F	59.4	27.1	5.2	8.3	
M	52.9	32.3	11.7	2.9	

*Professional education units were determined as follows: a one- or two-day workshop = 1/3 unit; a college course = 1 unit. Respondents were grouped as follows: (1) less than one unit; (2) 1-1.66 units; (3) 2-2.66 units; (4) 3 or more units.

TABLE 2

CROSSTABULATION OF CATEGORIES OF (1) EXPERIENCE WITH
GIFTED STUDENTS AND (2) GIFTED EDUCATION,
CONTROLLED FOR SEX

Professional Preparation

		Number of Gifted Students			
		1-10	11-20	21-30	31-45
Units		%	%	%	%
0-.66	F	*27.1	17.7	3.1	4.2
	M	30.3	21.2	. . .	3.0
1-1.66	F	17.7	4.2	1.0	2.1
	M	15.2	6.1	9.1	. . .
2-2.66	F	7.3	2.1	. . .	1.0
	M	6.1	6.1	. . .	. . .
3+	F	7.3	3.1	1.0	1.0
	M	. . .	. . .	3.0	. . .

*% in upper left quadrant

F - 66.7

M - 72.8

Table 3 shows the relationship between teaching experience and professional preparation in gifted education. Eighty-two percent of the men and 77.2% of the women had less than two units of professional preparation in gifted education. Further, an increase in teaching experience in the study group did not result in an increase in professional preparation in gifted education.

TABLE 3

CROSTABULATION OF CATEGORIES OF (1) YEARS OF EXPERIENCE
AND (2) PREPARATION IN GIFTED EDUCATION,
CONTROLLED FOR SEX

		Years of Teaching Experience			
		1-5	6-10	11-15	16-25
		%	%	%	%
0-.66	F	*11.5	9.4	17.7	13.5
	M	. . .	18.2	18.2	18.2
1-1.66	F	9.4	4.2	4.2	7.3
	M	9.1	6.1	12.1	3.0
2-2.66	F	1.0	3.1	3.1	3.1
	M	3.0	3.0	. . .	6.1
3+	F	3.1	1.0	1.0	7.3
	M	. . .	. . .	. . .	3.0

*% in the lower half of the Professional Preparation
distribution:

F = 77.2

M = 82.0

Hypothesis I

H_1 : The study group's response pattern will show that teachers see no significant differences between gifted and nongifted students in their display of the sixteen selected behaviors.

To test H_1 , teachers in the study group were asked to review each of the sixteen behaviors in relation to a recent PACE student with whom they had worked. For each behavior they marked either (a) the behavior

was not exhibited; or (b) the behavior was exhibited at a point on a seven point scale ranging from 1 (rarely) to 7 (consistently). The same process was completed in relation to a current non-PACE student in their classroom.

Means for the PACE, non-PACE frequency of each behavior were computed, as well as a t test between PACE/non-PACE means to determine possible significant differences.

The results can be categorized into three areas of analysis:

1. Behaviors that are not generally exhibited by either the PACE or non-PACE student (as indicated by more than one-third of the teachers; and/or that have frequency means at 2.5 or below on a seven point scale).
2. Behaviors that non-PACE students exhibit significantly more frequently than PACE students.
3. Behaviors that PACE students exhibit significantly more frequently than non-PACE students.

Findings

Table 4 shows that teachers indicated that many PACE and non-PACE students rarely or never exhibit half of the sixteen behaviors (see #1 above).

Teachers report means at or above the midpoint (4.0) on only one of the behaviors for both PACE and non-PACE students. PACE students sometimes display a dislike of routine and drill and seek early mastery of skills (4.5); and non-PACE students sometimes exhibit sensitivity to criticism, needing teacher approval (4.0).

Although means tended to be low, teachers report that PACE students exhibit seven of the sixteen behaviors significantly more often than

TABLE 4
RANK ORDER OF THE COMPARISON OF MEANS OF FREQUENCY OF SIXTEEN BEHAVIORS
AS EXHIBITED BY PACE AND NON-PACE STUDENTS

Behavior Descriptor	PACE Students		Non-PACE Students		t value	Significance two-tailed probability
	Behavior not exhibited %	Frequency of behavior $\bar{x}$	Behavior not exhibited %	Frequency of behavior $\bar{x}$		
Uses verbose explanations and descriptions	26.6	3.0	49.6	1.2	8.69	0.000* PACE
Dislikes routine and drill; seeks early mastery of skills	12.5	4.5	31.5	2.4	8.55	0.000* PACE
Invents own system that may conflict with required method	21.9	3.2	37.0**	1.6	7.75	0.000* PACE
Intimidates teacher with questions that require specialized knowledge	45.3**	1.3	66.1**	0.6	5.32	0.000* PACE
Seeks independence; may resist conformity	26.6	2.8	37.0**	1.9	4.15	0.000* PACE
Resists interruptions when engrossed	18.0	3.7	20.5	2.9	4.08	0.000* PACE
Level of involvement depends upon interest	30.5	2.4	10.2	3.0	-2.99	0.003* PACE non-
May challenge value of activity	28.9	2.6	32.3	1.9	2.93	0.004* PACE non-
Great desire to excel; even to the point of cheating	51.6**	1.6	36.2**	2.2	-2.76	0.007* PACE non-
Does not wait for a turn; interrupts	39.8**	2.1	24.4	2.8	-2.61	0.010* PACE non-
Begins many projects that are often not completed	37.5**	2.0	28.3	2.6	-2.49	0.014* PACE non-
Needs success and recognition; sensitive to criticism	16.4	3.7	10.2	4.3	-1.39	0.166
Tends to be brutally frank in appraising people and activities	39.1**	2.1	40.9**	1.9	0.81	0.418
Loses interest in discussions if unable to dominate	49.2**	1.7	50.4**	1.6	0.71	0.477
Impatient with lesser ability of others	42.2**	1.8	15.4**	2.0	-0.68	0.495
Displays stubbornness when trying to get own way	35.9**	2.2	29.1	2.3	-0.22	0.748

* $p < .05$

**More than 1/3 of the students do not exhibit the behavior

— Means at or above midpoint on a 7 point scale

non-PACE students. These behaviors characterize gifted students as having a need for independence and autonomy; a somewhat inflexible attitude toward structure; and a desire to verbalize feelings and perceptions.

Although means tended to be low, teachers report that non-PACE students exhibit four of the sixteen behaviors significantly more often than PACE students. These behaviors involve a need to be recognized and accepted; and a lack of maturity in the area of task commitment. Non-gifted students are characterized by teachers in this study as children who seek their place in the classroom community, yet need to develop a consistent, mature approach to educational endeavors.

In summary, teachers report significant differences between PACE and non-PACE students on eleven of the sixteen behaviors. The low means reported on the majority of behaviors, however, indicate that these sixteen behaviors are not consistently exhibited by either group.

Hypothesis I suggested that no significant differences would be found between behavior frequencies of PACE/non-PACE students. Table 4 shows that (1) significant differences favoring PACE students were found in about half (7 of 16) of the behaviors; (2) significant differences favoring non-PACE students were found in a fourth (4 of 16) of the behaviors; and (3) no significant differences were found in a little over a fourth (5 of 16) of the behaviors. Overall, the findings do not support the null hypothesis.

The Relationship of the Four Areas of Demographic Data to H_1

When means for individual subgroups (sex, teaching experience,

gifted education preparation, and experience with gifted students) for each of the sixteen behaviors (PACE/non-PACE) were compared with the study group means (thirty-two crosstabulations; thirty-two ANOVAs), no significant differences were found. The study group appeared to be cohesive in its assessment of the frequency of behaviors.

Hypothesis II

- H₂: The study group's response pattern will show that teachers see no significant differences in their tolerance of the sixteen behaviors when they are displayed by gifted compared to nongifted students.

To test H₂, teachers were asked to review each behavior they had marked as exhibited in a recent PACE student on a range of 1-7 (rarely to consistently). For each behavior marked, a corresponding level of annoyance was indicated on a range of 1-7 (not annoying to very annoying). The same process was completed in relation to a recent non-PACE student in their classroom.

Means for the level of annoyance for each behavior were computed as well as a t test between PACE/non-PACE means to determine possible significant differences.

Table 5 displays the rank order of the comparison of means of annoyance (PACE/non-PACE) and the corresponding t value for each behavior. No significant differences were found. Thus, the null hypothesis is not rejected.

It is probably important to note that comparisons were made only on those behaviors that were exhibited by both PACE and non-PACE students.

TABLE 5

RANK ORDER OF THE COMPARISON OF ANNOYANCE LEVEL MEANS OF THE
SIXTEEN BEHAVIORS IN PACE AND NON-PACE STUDENTS

Behavior Descriptor	N	Annoyance Level X	Difference in Means	t Value	Level of Significance Two-Tailed Probability
Displays stubbornness when trying to get own way	59	PACE 3.5 non-PACE 3.7	-0.29	-1.17	0.247
Seeks independence; may resist situations that require conformity	62	PACE 3.0 non-PACE 2.7	0.31	1.14	0.257
Tends to be brutally frank in appraising people and activities	51	PACE 2.0 non-PACE 2.1	-0.33	-1.01	0.317
Loses interest in discussions if unable to dominate	42	PACE 3.3 non-PACE 3.1	0.24	0.83	0.411
Often invents own system that may conflict with required method	74	PACE 3.3 non-PACE 3.1	0.19	0.79	0.433
Needs success and recognition; sensitive to criticism	96	PACE 2.2 non-PACE 2.1	0.12	0.78	0.436
Intimidates the teacher with questions that require specialized knowledge	37	PACE 2.1 non-PACE 2.3	-0.16	-0.69	0.493
Uses verbose explanations and descriptions	55	PACE 2.2 non-PACE 2.1	0.09	0.43	0.666
May challenge the value of activities	63	PACE 2.9 non-PACE 2.8	0.08	0.34	0.735
Dislikes routine and drill; seeks early mastery of skills	79	PACE 2.4 non-PACE 2.5	-0.06	-0.33	0.741
Has a great desire to excel, even to the point of cheating	43	PACE 4.1 non-PACE 4.3	-0.12	-0.31	0.757
Begins many projects that are often not completed	60	PACE 3.5 non-PACE 3.6	-0.03	-0.11	0.914
Is impatient with the lesser ability of others	51	PACE 3.7 non-PACE 3.7	-0.02	-0.07	0.945
Does not wait for a turn; interrupts	62	PACE 3.5 non-PACE 3.5	-0.01	-0.05	0.958
Involvement in class activity is dependent on level of interest	82	PACE 3.2 non-PACE 3.2	-0.01	-0.05	0.958
Resists interruptions when engrossed in an activity	98	PACE 2.6 non-PACE 2.6	0.00	0.00	1.000

Total group N = 130

An examination of the N column reveals that in eleven of the sixteen behaviors, fewer than half of the 130 teachers reported that both their PACE and non-PACE students exhibited the behaviors. The behavior that the most teachers reported both students exhibited was "needs success and recognition; is sensitive to criticism" (75% of the teachers). The behavior that the fewest teachers reported was "intimidates the teacher with questions that require specialized knowledge" (20% of the teachers).

Only one behavior displayed by both PACE/non-PACE students elicited an annoyance level at the midpoint of the seven point scale (a desire to excel, even to the point of cheating). Other behaviors that elicited comparatively more teacher annoyance are stubbornness, impatience with others' lesser abilities, and incompleted projects and activities.

To summarize, teachers report that the sixteen behaviors do not occur very often in either student group, and they are not highly annoying when they do occur.

The Relationship of the Four Areas of Demographic Data to H₂

When means for individual subgroups (sex, teaching experience, gifted education preparation, and experience with gifted students) for each of the levels of annoyance (PACE/non-PACE) were compared with the study group's means (thirty-two crosstabulations; thirty-two ANOVAs), only one significant difference was displayed.

About sixty percent of the teachers had reported that they were

annoyed when their non-PACE student exhibited a dislike of routine and drill. An interaction that involved the sex and amount of gifted education preparation of the respondent was significant at the .05 level. This finding, though statistically significant, was not pursued further to identify the specific demographic relationship. The behavior in question had a low overall annoyance mean and was not exhibited at all by about forty percent of the PACE/non-PACE group.

Relationship between Behavior Frequency and Annoyance

To determine the presence or absence of a linear relationship between the frequency of each behavior and the corresponding level of annoyance, a Pearson Product-Moment Correlation Coefficient was computed on the variables of frequency and annoyance of PACE student behaviors, and frequency and annoyance of non-PACE student behaviors.

Table 6 displays the results of the correlation coefficient on the PACE variables. Eleven of the sixteen behaviors show a significant relationship ($P < .05$) between the two variables. The study group's annoyance level increases as the frequency of the behavior increases with these eleven behaviors.

Teachers report that their annoyance level does not increase significantly as the frequency of the behavior increases on four behaviors. Two of these behaviors challenge the teacher's authority (intimidates with questions that require specialized knowledge, and tends to be brutally frank in appraising people and ideas). Two behaviors reflect inflexibility among PACE students (resists interruptions; dislikes

TABLE 6

RESULTS OF PEARSON'S PRODUCT-MOMENT CORRELATION COEFFICIENT TO
DETERMINE PRESENCE/ABSENCE OF A LINEAR RELATIONSHIP BETWEEN
FREQUENCY AND ANNOYANCE OF SIXTEEN BEHAVIORS FOR PACE STUDENTS

	N	Pearson's r Variables: Behavior and Annoyance	Significance Two-Tailed Probability
Displays stubbornness when trying to get own way	81	.50	.000*
Does not wait for turn; interrupts	76	.50	.000*
Uses verbose explanations and descriptions	3	.45	.000*
Involvement in class activity depends upon level of interest	88	.44	.000*
Loses interest in discussion if unable to dominate	64	.43	.000*
Has a great desire to excel, even to the point of cheating	59	.40	.001*
Begins many projects that are often not completed	79	.35	.001*
Seeks independence; resists situa- tions that require conformity	93	.35	.000*
Needs success and recognition; is sensitive to criticism	106	.32	.000*
Is impatient with the lesser ability of others	72	.32	.003*
Often invents own system that may conflict with the required method	99	.29	.002*
Intimidates the teacher with questions that require specialized knowledge	68	.12	.146
Tends to be brutally frank in ap- praising people and activities	77	.12	.147
Resists interruptions when engrossed in an activity	104	.11	1.225
Dislikes routine & drill; seeks early mastery of skill	109	.07	.243
May challenge the value of an activity	90	-.04	.365

* $p < .05$

routine and drill).

Teachers report a negative relationship on one behavior (may challenge the value of activities). As the frequency of the behavior increases, their annoyance decreases, indicating that they may become more secure in responding to the behavior.

Table 7 displays the results of the correlation coefficient on the non-PACE students. Teachers indicate that when working with non-PACE students, a significant relationship exists between frequency and annoyance on all sixteen behaviors ($P < .05$). Their levels of annoyance increase as the frequency of the behavior increases.

A comparison of Tables 6 and 7 suggests that the study group was slightly more tolerant of the behavior of gifted students than with nongifted students.

Selection of Gifted Criteria

School District 4J, Eugene, Oregon, uses twenty-nine criteria to select students for the district's PACE Program. Criteria range from scores on individual intelligence tests and standardized achievement tests to performance in the classroom, and behavioral characteristics. Students selected for the PACE Program must achieve a score of twenty-four points on weighted criteria included on the summary sheet (see Appendix A).

PACE specialists, administrators, and classroom teachers complain that, in spite of this extensive approach, some students in the program fail to benefit from it, and others who could benefit are not selected.

The final page of the gifted inventory asked teachers in the study

TABLE 7

RESULTS OF PEARSON'S PRODUCT-MOMENT CORRELATION COEFFICIENT TO
DETERMINE PRESENCE/ABSENCE OF A LINEAR RELATIONSHIP BETWEEN
FREQUENCY AND ANNOYANCE OF SIXTEEN BEHAVIORS OF NON-PACE STUDENTS

Behavior Descriptors	N	Pearson's r Variables: Behavior and Annoyance	Significance Two-Tailed Probability
Does not wait for a turn to speak; interrupts	95	.628	.000*
Uses verbose explanations and descriptions	63	.625	.000*
Begins many projects that are often not completed	89	.516	.000*
Dislikes routine and drill; seeks early mastery of skills	87	.502	.000*
Involvement in class activities de- pends upon level of interest	113	.497	.000*
May challenge the value of activities	85	.491	.000*
Tends to be brutally frank in ap- praising people and ideas	74	.463	.000*
Seeks independence; may resist situa- tions that require conformity	78	.440	.000*
Loses interest in discussion if unable to dominate	62	.421	.000*
Displays stubbornness when trying to get own way	89	.411	.000*
Is impatient with others of lesser ability	81	.328	.001*
Intimidates the teacher with questions that require specialized knowledge	41	.323	.020*
Needs success and recognition; is sensitive to criticism	113	.300	.001*
Often invents own system that may conflict with the required method	79	.274	.007*
Has a great desire to excel, even to the point of cheating	79	.242	.016*
Resists interruptions when engrossed in an activity	98	.169	.048*

*P < .05

group to review all twenty-nine criteria and select the fifteen they considered most appropriate in selecting gifted students (see Appendix C).

In addition, the teachers were asked to list additional criteria that they considered important in the selection of students for the PACE Program.

All teachers selected fifteen criteria. Table 8 ranks the criteria selected by the study group, and provides the frequency/percent of response for each criterion.

Three sets of tie scores occurred in the selection process. Tied scores were ranked in the table on the basis of the higher response of the tied items from teachers with the most professional background in gifted education.

As indicated in Table 8, the first fifteen criteria also represent those selected by more than fifty percent of the respondents. The two criteria school districts use most commonly in selecting gifted students, scores on IQ and standardized achievement tests, are not included in the study group's top ten items, and the group also rated some criteria that related to achievement quite low.

Respondents tended to rank criteria high that related to evidence of interest, intuitive comprehension, inquisitiveness, critical thinking skills, and teacher recommendations.

Three criteria representing academic and behavioral maturity appear in the top fifteen selections: (9) is self-disciplined; (13) has a long attention span; and (14) exhibits leadership qualities.

TABLE 3

THE STUDY GROUP RANK ORDER OF CRITERIA
FOR THE SELECTION OF PACE STUDENTS

Rank	Descriptors	N = 130 Frequency	Percent
Selected by more than 50% of all 130 respondents			
1	Comprehension skills exceed peers	115	88.5
2	Is inquisitive, very curious	111	85.4
3	Can show relationships among apparently unrelated ideas	108	83.1
4	Has been recommended by his/her classroom teacher	105	80.8
5	Is eager to do new things	103	79.2
6	Has a wide range of interests	93	71.5
7	Makes predictions from current information and ideas	87	66.9
8	Is an avid reader	87	66.9
9	Is self-disciplined	86	66.2
10	Shows exceptional vocabulary	83	63.8
11	Achieves a score above 130 on an individual intelligence test	81	62.3
12	Ranks in the top five percent on composite achievement test scores	81	62.3
13	Has a long attention span	77	59.2
14	Exhibits leadership qualities	70	53.8
15	Reads near the top of the class	67	51.5
Selected by less than 50% of all 130 respondents			
16	Is self-confident	64	49.2
17	Follows directions exceedingly well	63	48.5
18	Is very alert--gives rapid answers	55	42.3
19	Is a risk taker	54	41.5
20	Ranks in the top five percent in reading achievement scores	52	40.0
21	Has a mature sense of humour	44	33.8
22	Is eager to tell others about discoveries and ideas	44	33.8
23	Ranks in the top five percent in math achievement scores	40	30.8
24	Enjoys working alone	38	29.2
25	Shows interest in science or literature	37	28.5
26	Is outstanding in math	33	25.4
27	Shows exceptional use of grammar	31	23.8
28	Tells imaginative stories	28	21.5
29	Shows use of expressive body or facial gestures	12	9.2

TABLE 8--continued

Open-Ended Response Categories (N = 85)		
Descriptors	Frequency	Percent of Cases
Task Commitment	32	37.7
Social Skills	12	14.1
Creativity	11	12.9
Attitude	7	8.2
Interest in PACE	5	5.8
Self-Concept	4	4.7
Talent	3	3.5
Maturity	3	3.5
Motivation	3	3.5
Responsibility	3	3.5
Exceptional Abilities	2	2.3
Flexibility	2	2.3

Thus, Table 8 shows that the study group's criteria selection fails to support the weighted criteria system currently used in the Eugene district's PACE selection process, where all behavioral and intuitive strengths are grouped together into one "characteristics checklist" including twenty-four items. The characteristics checklist is counted as one unit and given the same weight as IQ scores, and teacher recommendations (see Appendix A). Teachers in this study indicate that the characteristics of comprehension, inquisitiveness, ability to see

relationships, eagerness to do new things, a wide range of interests, ability to make predictions from current information, an interest in reading, and the characteristics of self-discipline should be counted as independent criteria and given equal weight to teacher recommendations and scores on IQ and achievement tests.

When controlled by the four demographic areas, the top fifteen rankings remained fairly consistent. Table 9 compares the rankings by the total group with the top fifteen rankings by demographic areas of sex, years of teaching experience, experience with gifted students, and preparation in gifted education. In the latter three areas, the total study group rankings are compared to the demographic group rankings that include (1) the highest and lowest levels of experience, (2) the highest and lowest levels of gifted education preparation, and (3) the highest and lowest levels of experience with gifted students. By comparing the two extreme subgroups, the effects of little/much teaching experience, little/much gifted education, and little/much experience with gifted students can be assessed.

A careful analysis of the rankings between the high/low groups leads to the following observations. The least subgroup difference in ranking was between male/female respondents. The most difference was between the two subgroups that had the most/least preparation in gifted education.

Several wide variations in ranking are worth noting. Teachers with the most gifted student experience ranked 'prediction ability' first, while teachers with the least experience didn't include it in

TABLE 9
COMPARISON OF RANK ORDER BY THE TOTAL STUDY GROUP
TO EACH DEMOGRAPHIC SUB-GROUP

Rank Order of Total Group		Rank Order of Top Fifteen Criteria by Sub-Groups								
Rank	Criteria	Percent	Female	Male	Teaching Experience		Gifted Education Preparation		Number of Gifted Students	
					High N=41	Low N=28	High N=14	Low N=68	High N=35	Low N=17
1	Comprehensive skills exceed peers	88.5	1	1	2	2	4	2	4	1
2	Is inquisitive, very curious	85.4	2	4	1	5	4	1	6.5	3.5
3	Can show relationships among un-related ideas	83.1	3	2.5	4	1	1	5	2	2
4	Recommended by classroom teacher	80.8	5	2.5	6	3	4	4	4	3.5
5	Eager to do new things	79.2	4	5	4	4	7	3	6.5	5
6	Has a wide range of interests	71.5	6	11.5	4	12.5	6	6	4	12
7	Makes predictions from current information and ideas	66.9	8	9	10	9	13	8	1	...
8	An avid reader	66.9	8	10	10	6	2	11	15.5	6.5
9	Is self-disciplined	66.2	10	7	8	12.5	13	7	9	10.5
10	Shows exceptional vocabulary	63.8	8	13.5	10	7	9	9	9	8.5
11	Score above 130 on an individual intelligence test	62.3	12.5	7	12	9	9	10	9	8.5
12	Ranks in top 5% on composite achievement scores	62.3	12.5	7	...	9	9	12.5	13	6.5
13	Has a long attention span	59.2	11	15	7	14.5	11	12.5	11.5	13
14	Exhibits leadership qualities	53.8	14	...	...	11	13	...	...	10.5
15	Reads near the top of the class	51.5	...	11.5	14.5	...	...	15	...	14.5
16	Is self confident	49.2	15	...	...	14.5	...	...	...	14.5
17	Follows directions exceedingly well	48.5	...	13.5	14.5	...	...	14	14	...
18	Is very alert: gives rapid answers	42.3								
19	Is a risk taker	41.5	...	...	13	...	15	...	11.5	...
20	Ranks in top 5% in reading scores	40.0	...	...	...	...	...	...	15.5	...
21	Has a mature sense of humor	33.8								
22	Is eager to tell of new discoveries and ideas	33.8								
23	Ranks in top 5% in math scores	30.8								
24	Enjoys working alone	29.2								
25	Shows interest in science or literature	28.5								
26	Is outstanding in math	25.4								
27	Shows exceptional use of grammar	23.8								
28	Tells imaginative stories	21.5								
29	Shows expressive body or facial gestures	9.2								

the top fifteen criteria. High/low teaching experience and gifted education preparation subgroups ranked 'inquisitiveness' and 'relationship-finding' criteria quite differently. Finally, females ranked 'a wide range of interests' number six, while males ranked it number eleven (tied).

Tables 8 and 9 reveal a noteworthy characteristic in the study group. None of the twenty-nine criteria was selected by all 130 teachers (high - 88%). In addition, the group's selection range included all twenty-nine criteria. Chapter II in this study discusses problems inherent in attempts to identify and select appropriate children for gifted programs. Teachers in Eugene, Oregon, appear to reflect disagreements among educators nationally in determining criteria for identification and selection of gifted students.

Open-Ended Responses

Fifty-seven teachers suggested (1) criteria not included on the district's list that they considered important in the selection of PACE students; and (2) statements emphasizing the importance of specific criteria already included on the district's list.

The total open-ended criteria generated by the fifty-seven teachers included 113 separate statements. These statements fell into the following fourteen categories:

1. The importance of task commitment (the ability to complete tasks and projects). (32)
2. The importance of social skills with peers and adults. (12)

3. Creativity and divergent thinking. (11)
4. A positive attitude toward all endeavors. (7)
5. An interest in the PACE Program. (5)
6. A positive self-concept. (4)
7. Talent in one or more areas. (3)
8. Maturity--both social and academic. (3)
9. Motivation. (3)
10. A sense of responsibility to learning and to acceptable behavior. (3)
11. Exceptional academic abilities. (2)
12. Flexibility in adjusting to new activities and schedules. (2)
13. A restatement of criteria on the district's list. (10)
14. Miscellaneous: single statements that did not fall into a category. (16)

(A display of all open-ended responses can be found in Appendix G).

Of the twelve additional categories of criteria (above) not included on the district's list, the importance of task commitment predominated. It was mentioned by thirty-two of the fifty-seven teachers, almost three times as many as the second most mentioned criteria. No other category commanded as much response as the area of task commitment.

Three criteria mentioned by the study group appear to have more support than low items on the total group ranking of the district's lists: task commitment (37.6%), social skills (14.1%), and creativity (12.9%).

In summary, teachers in the study group did not completely agree

on appropriate criteria for selection of gifted students, although the majority supported characteristics that related to thinking skills, and their own recommendations. Many teachers suggested the characteristic of task commitment as an appropriate addition to the district's list of criteria.

Chapter V will include a summary and discussion of the study, conclusions, recommendations, and suggestions for further research.

Intellectually gifted students

- A. In elementary classrooms teachers agree that students who have been identified as gifted are more likely to be identified as gifted than those who have not been identified as gifted.
- B. In elementary classrooms, teachers agree that students who have been identified as gifted are more likely to be identified as gifted than those who have not been identified as gifted.
- C. What criteria do elementary teachers suggest for the selection of students for gifted programs?

The first two study questions relate to the identification of gifted students. The first question was suggested by Miller (1971) and Corbett (1972). Miller (1971) was one of the first to suggest that teachers should be involved in the identification of gifted students. Miller (1971) suggested that teachers should be involved in the identification of gifted students. Miller (1971) suggested that teachers should be involved in the identification of gifted students.

The second question of the study was suggested by Miller (1971).

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study investigated three questions related to education for intellectually gifted elementary school children:

- A. Do elementary classroom teachers agree that sixteen overt behaviors identified by Dr. May Seagoe (1972) and Dr. Barbara Clark (1979) are more common to intellectually gifted children than to their nongifted peers?
- B. Do elementary teachers agree that these sixteen overt behaviors are more annoying when they are displayed by gifted children than by their nongifted peers?
- C. What criteria do elementary teachers consider the most important in the selection of students for gifted programs?

The first two study questions relate to a controversy in gifted education. One side of the controversy, supported by Guilford (1976), Torrance (1970), Seagoe (1974), and Clark (1979), supports the premise that gifted students do display characteristics that are unique to their needs, intellectual processes, and natures; and that these characteristics can be irritating to classroom teachers.

The other side of the controversy, supported by Renzulli (1975),

Barbe (1976), and Gallagher (1975) concludes that gifted and non-gifted student characteristics do not differ significantly; and that, in fact, gifted students are usually better adjusted than non-gifted students in academic and social relationships.

The third study question relates to the criteria used to select students for gifted programs, especially for the program in District 4J, Eugene, Oregon, where this study took place. School District 4J uses an extensive process to identify and select students for the gifted program (PACE: "Program for Advanced Curriculum and Enrichment"). The process includes twenty-nine criteria that include scores on IQ and achievement tests, teacher recommendations, and various behavioral characteristics. In spite of this well-planned process, district personnel note that some selected students do not find success and satisfaction in the PACE Program, and that other capable students who would benefit from program activities fail to qualify. Elementary classroom teachers in the district do not generally agree on the relative importance of specific selection criteria, and many feel that the district's selection process should be modified.

Review of the Literature

The literature in gifted education is extensive. It's split between empirical research, and the experience and opinion of the author. Gifted education encompasses three developmental periods. Each period evolved from a force outside the educational arena, and each period is well-represented in the literature.

The first developmental period occurred during the years following World War I, and came as a result of the development of instruments to measure the intellectual abilities of young children. Lewis Terman's classic longitudinal study of gifted children served as a landmark in identification and characteristics of the gifted (Terman and Oden, 1918).

The second period was the result of the Soviet launch of Sputnik in 1957. National leaders decried the neglect of mentally superior students, and public and private money became available to develop a 'new curricula' based on the principles of Jerome Bruner (1966).

The most recent period was launched in 1970 by Public Law 91-230 mandating a study to determine whether the needs of the gifted were being met. As a result of the negative findings of the study, the U.S. Office of Talented and Gifted was established, and funding for state and local programs began.

The literature on the characteristics of the gifted suggests a contemporary focus that features not only fixed intelligence, but also creativity, cultural influences, self-concept, and task commitment.

In spite of an abundance of research on characteristics of the gifted, the literature confirms that the process of identifying and selecting children for gifted programs remains a difficult one. Controversy exists over the use of IQ scores, standardized achievement tests, and teacher recommendations as primary factors in determining giftedness. Current spokespeople in gifted education suggest a multi-dimensional approach using both formal and informal assessment measures.

The Design of the Study

The inventory that serves as the data base of this study (Appendix C) was developed through (1) a study of the literature; (2) consultation with University of Oregon faculty, and Eugene, Oregon, District 4J faculty members; (3) a pilot study using a preliminary form of a gifted behavior inventory (Appendix B).

The inventory focused on sixteen overt behaviors identified by Dr. May Seagoe of UCLA (1974) and Dr. Barbara Clark of California State University, Los Angeles (1979), as behaviors thought to be common to gifted children. The inventory behaviors were selected from among these identified by Seagoe and Clark--behaviors teachers often cite as the reason why teachers have negative feelings toward gifted children.

1. Does not wait for a turn to speak; interrupts.
2. Involvement in class activity is dependent on the level of personal interest in the topic.
3. Is impatient with the lesser ability of others.
4. Dislikes routine and drill; seeks early mastery of skills.
5. May challenge the value of activities.
6. Resists interruptions when engrossed in an activity.
7. Seeks independence; may resist situations that require conformity.
8. Needs success and recognition; is sensitive to criticism.
9. Uses verbose explanations and descriptions.

10. Begins many projects that are often not completed.
11. Displays stubbornness when trying to get his/her own way.
12. Often invents his/her own system of doing something that may conflict with the required method.
13. Tends to be brutally frank in appraising people and activities.
14. Has a great desire to excel, even to the point of cheating.
15. Loses interest in discussions if unable to dominate.
16. Intimidates the teacher with questions that require specialized knowledge.

During September, 1981, the final inventory for the study was completed. It included the following:

1. Preliminary material designed to (1) engender participation, (2) explain the purpose of the study, and (3) provide directions for responding to Forms A and B.
2. Form A included the following: (1) four items that sought demographic data, and (2) sixteen items that sought information on the behavior of a recent PACE student. Respondents indicated if and how frequently the student exhibited the behavior, and how annoying the behavior was to the respondent.
3. Form B was similar to the second part of Form A, except that it sought frequency/annoyance level information on the behavior of a recent non-PACE student.
4. An Inventory of Gifted Criteria asked respondents to select the fifteen of twenty-nine listed criteria that they con-

sidered most important in the selection of PACE students. In addition, respondents were invited to add additional criteria they considered important.

The study group was composed of elementary teachers in grades 3-6 in fourteen District 4J Eugene, Oregon, elementary schools selected for the study. Only teachers in grades 3-6 were involved since students selected for the district's PACE Program are drawn from these grade levels.

Eighty-four percent of the 155 teachers available completed the inventory. This included ninety-six women and thirty-four men who had from 1-25 years of teaching experience; who had worked with from 1-45 gifted students; and who had professional preparation in gifted education ranging from no work to three University courses and five workshops.

Data were analyzed via the Statistical Package for the Social Sciences (SPSS) computer system as follows:

- A. Demographic distribution
 - 1. Frequency of men and women
 - 2. Categories of years of teaching experience
 - 3. Categories of experience with gifted students.
 - 4. Categories of gifted education preparation.
- B. Frequencies and means for each behavior displayed by PACE and nongifted students.
- C. Frequencies and means of annoyance levels for each behavior for PACE and nongifted students.
- D. A t test of means of each behavior to test the significance of differences in means between PACE and nongifted students.
- E. A t test of means for levels of annoyance for each behavior

to test the significance of difference in means between PACE and nongifted students.

- F. A crosstabulation of each area of demographic data (sex, years of experience, experience with gifted students, and amount of gifted education preparation) by frequencies of each behavior to display the relationship of each demographic variable to the dependent variable of classroom behaviors.
- G. A crosstabulation of each area of demographic data (sex, years of experience, experience with gifted students, and amount of gifted education) by frequencies of levels of annoyance to display the relationship of each demographic variable to the dependent variable of levels of annoyance.
- H. A crosstabulation of two independent variables (experience with gifted students and gifted education preparation)--controlled for sex--to show the relationship of one variable to the other.
- I. A crosstabulation of two independent variables (teaching experience and gifted education preparation)--controlled for sex--to show the relationship of one variable to the other.
- J. The application of a two-way analysis of variance using the independent variables of sex and gifted education courses and workshops by (1) frequencies of the behaviors by PACE students; (2) levels of teacher annoyance with PACE students; (3) frequencies of the behaviors by nongifted students; and (4) levels of teacher annoyance with nongifted students. This application displays differences between males and females, differences between levels of gifted education, and the interaction between the two variables working together.
- K. The application of Pearson's Product Moment Correlation Coefficient to the means of frequency of each behavior and the means of annoyance for each behavior to describe the linear relationship between the frequency of the behavior and the levels of annoyance for teachers.
- L. A distribution of frequencies for each of the twenty-nine PACE selection criteria.
- M. A crosstabulation of the independent variables of sex, experience with gifted students, and gifted education preparation to the dependent variable, gifted criteria, to show the relationship of each independent variable to the selection of criteria.

Findings

1. The study group of 130 grade 3-6 classroom teachers had limited experience with gifted students, and limited preparation in gifted education. Teachers with more gifted education were not necessarily assigned more gifted students; and the most experienced teachers did not necessarily have the most gifted education preparation.
2. The study group reported that their gifted students exhibited seven of the sixteen behaviors significantly more often than their nongifted students, and the reverse for four of the behaviors. All frequency means were low, indicating that teachers do not see the behaviors displayed often in either group. The respondents' sex, teaching experience, experience with gifted students, and gifted education preparation did not significantly affect the response pattern.
3. The study group's sixteen annoyance level means were all low, and no significant differences were found when their levels of annoyance with gifted/nongifted students were compared. The study group seemed slightly more tolerant of gifted than nongifted students. The respondents' sex, teaching experience, experience with gifted students, and the amount of gifted education preparation rarely influenced the response pattern.
4. As the frequency of the behavior increased, the study group reported an increase in their annoyance level on eleven of the sixteen behaviors for gifted students. The five behaviors

that did not register an increase in annoyance with frequency for gifted students are infrequent behaviors that might be more annoying if they occurred quite often.

5. Although the study group did not completely agree on the importance of any single criterion of the twenty-nine used by Eugene District 4J to identify gifted students, over fifty percent agreed on the importance of fifteen of the criteria. The highest level of agreement occurred with comprehension skills followed by inquisitiveness, ability to see relationships among unrelated ideas, teacher recommendations, and a spirit of eagerness in trying new things. Scores on intelligence tests did not appear in the top ten rankings, but did appear in the top fifteen rankings. Composite scores on achievement tests appeared in the top fifteen rankings; however, individual scores on reading and math tests were ranked quite low. The study group's selection does not appear to support the current weight given criteria by School District 4J in its selection process.

Conclusions and Implications

The origin of the issues that led to this study and its findings evolved from events that began in 1975 with the passage of The Education for All Handicapped Children Act (PL 94-142). The law mandated that handicapped children be placed in the least restrictive environment, and with their peers whenever possible. Classroom teachers began

to work directly with a range of exceptional children, and engage in related inservice training. Within a few years teachers began to discard many myths about handicapped children--myths surrounding their behaviors and their capabilities. They began to view exceptional children as individuals with a range of behaviors and talents similar to that found in the general population.

An additional link between this study's focus on gifted education and education for the handicapped can be found in the design of the behavior inventory used in this study. Hill Walker of the University of Oregon designed an inventory to measure teacher expectations, social behavior standards, and tolerance levels that teachers hold for children in general. The information gained from Walker's behavioral inventory can be used to select potential placements for mainstreaming handicapped students, and to determine the minimum behavioral requirements a handicapped child must meet in order to gain entry into the classroom community (Herish, Walker, 1981).

By adapting Walker's concepts of teachers' behavior standards and tolerance levels, this study was able to assess teacher responses to behaviors identified in the literature as being common in gifted children.

The results of this study were surprising in light of Seagoe (1974) and Clark's (1979) identification of a set of behaviors characteristic of gifted students. The study group reported that while seven of the sixteen behaviors were exhibited significantly more often by gifted than nongifted students, four behaviors occurred more frequently in

nongifted students. More important, frequency means for both groups were generally in the lower third of a seven point scale; and for each behavior, from 20% to 60% of the teachers reported that the behavior was not exhibited at all by either the gifted or nongifted student they had identified.

Teachers reported no significant differences in levels of annoyance for either group, and their overall response pattern tended toward slightly more tolerance with gifted rather than nongifted students. Again, means were generally in the lower third of a seven point scale, signaling that teachers do not see the behaviors as very annoying in either group.

It would appear that the study group disagrees with the Seagoe and Clark belief that the sixteen behaviors are typical in gifted children, or in nongifted children for that matter; and it may be that the response pattern reflects a more flexible current view of children's behaviors in general. As a result of their direct experience with the complete range of the student population (from handicapped to gifted), teachers may now be signaling that it is no longer germane to attempt to isolate a separate set of classroom behaviors to describe any given student population. (Many teachers may now see classroom behaviors as an interaction between teacher and student, or among students, the student's response to the present environment. Teachers may believe that many behaviors are individualistic, reflecting the individual's ability to cope with a given situation. Therefore, they are not necessarily representative of talent or ability or disability or

handicap--but rather of children's responses to the structure, the expectations, and the interaction in a particular classroom.

When asked to select the fifteen most important criteria from the district's list of twenty-nine criteria used for selection of students for gifted programs, the study group reflected a national disagreement among researchers and authorities in gifted education. Like their counterparts, teachers in Eugene, Oregon, could not all agree on the best criteria to use in identifying giftedness. In fact, they were unable to reach even 90% agreement on any one criterion.

The study group did indicate a preferred direction in gifted student identification, however. Most agreement was reached on intuitive criteria--characteristics that represent a concept of giftedness that is broader than cognitive achievement. Teachers appear to believe that giftedness is a complex concept--one that requires both formal and informal assessment; and that teacher perceptions should be an important part of the identification process. This suggests that teachers must be knowledgeable in the area of gifted education.

The teachers included in the study group work in a district that has the highest levels of experience and advanced training in the state of Oregon. Over sixty percent of the teaching staff in District 4J hold Master's Degrees, or higher, and over fifty percent are at the top of the experience scale in the district (Eugene Education Association, 1981). In addition, preservice and inservice training offered by the school district, the nearby University of Oregon, and the county Educational Services District, is of the highest caliber.

The study group, drawn from that pool and affected by it, reported that potentially challenging behaviors are not frequently exhibited in their rooms, and are not particularly annoying when they are exhibited. In addition, these teachers display a broadened concept of giftedness based on more than cognitive achievement. The implications for gifted education are heartening.

X If experienced, well trained teachers are secure in working with children who differ from the norm, then it may be possible to accommodate the special needs of gifted children within the general classroom, with the aid of graduate training in gifted education, and the help of gifted specialists acting as consultants. In the event that funds for gifted "pull-out" activities (where gifted students leave their classrooms to work in cluster groups) are eliminated, classroom teachers who pursue training in the components of effective curriculum for the gifted can work with specialists to design enrichment activities that are an extension of their general classroom program.

Teachers in the study appear to believe that a broadened concept of giftedness prioritizes intuitive strengths. Enrichment curricula for the gifted, therefore, must prioritize activities that focus on critical and divergent thinking.

Finally, teachers appear to believe that their perceptions should be an integral part of the process of selecting students for gifted programs. The literature points to problems of teacher bias, and the use of inappropriate criteria in teacher selection. Graduate training in gifted education can provide teachers with the appropriate base of

understanding needed to participate effectively in the selection process.

Recommendations

1. School districts should assess the gifted education backgrounds of teachers, and assign gifted students to classrooms where teachers have adequate preparation. Further, districts should increase inservice activities that focus on enrichment activities (Haisley, 1973). Preservice programs at the University level should include coursework devoted to the characteristics of giftedness, and the components of effective accelerative curriculum.
2. Selection and identification guidelines used by school districts should provide a balance between criteria that represent cognitive achievement, and criteria that represent intuitive characteristics that signal an ability to use information in creative, productive ways.
3. Since teachers support their own recommendations, in spite of evidence that points to teacher bias and to ineffectual results (Gear, 1976), inservice programs for teachers should include training in characteristics for the appropriate selection of students for gifted programs.
4. Since the study group indicated a high percentage of agreement on characteristics related to intuitive abilities, and to task commitment, gifted "pull out" activities (where students

work outside of their classrooms in cluster groups for periods during the week), and classroom accelerative curriculum, should be monitored to determine that activities are included that strengthen intuitive skills and task commitment.

Future Research

This study might be replicated with teachers in different geographic/demographic settings to determine whether the response patterns of teachers in Eugene, Oregon, represent the general teacher population.

Limitations of This Study

This study involved elementary classroom teachers only. The inclusion of gifted specialists and secondary teachers might have produced a different response pattern to the behavior inventory, and to the criteria selection. In addition, teachers were asked to select only one recent gifted and nongifted student. Some teachers indicated that their responses would vary according to the sex and the personality of the student.

Finally, the delineation between "gifted" and "nongifted" on the behavior inventory related to students selected for District 4J, Eugene, Oregon's PACE Program, and those not selected. Teachers were not given an opportunity to base their responses on students that they considered gifted irrespective of the district PACE selection process.

APPENDICES

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APPENDIX A

PACE STUDENT SELECTION PROCESS AND CRITERIA:

SCHOOL DISTRICT 4J

Appendix A

PACE Program

Student Summary Sheet

Name _____ School _____ Date _____
 Age _____ Grade _____ Sex _____ Birthdate _____

A. Assessment Items	5	4	3	2	1
1. Intelligence Test (I.Q.)	135+	130-134			
2. Achievement Test: COMPOSITE	98%	97-95%	94-90%	89-83%	82-75%
3. Achievement Test: MATH	98%	97-95%	94-90%	89-83%	82-75%
4. Achievement Test: READING	98%	97-95%	94-90%	89-83%	82-75%
5. Characteristics Checklist*	120-110	109-96	95-84	83-72	71-60
6. Teacher Recommendation	5	4	3	2	1
COLUMN TALLY OF CHECKS					
WEIGHT	x5	x4	x3	x2	x1
ADD ACROSS	+	+	+	+	
TOTAL SCORE					

B. Other tests or evaluation results of record.

Instrument	Results (grade/percentile score)	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

C. Selection Decision.

*Total checklist score

Selection team chairman

Appendix B

Screening/Record Review

PACE Program

Student _____ Birthdate _____ Age _____ Sex _____ Grade _____

Teacher _____ School _____ Date _____

Teachers or other personnel are requested to mark this CHECKLIST for each child who is screened for the PACE Program.
Please check the statements which you think apply to this child. If the statement does not apply, do not mark it.

RATING SCALE	
1	Never
2	Seldom
3	Occasionally
4	Often
5	Almost Always

COMMUNICATION SKILLS

Expressive Language Use

- Shows exceptional use of grammar. 1 2 3 4 5
Shows exceptional vocabulary. 1 2 3 4 5
Shows use of expressive body or facial gestures. 1 2 3 4 5

COMMENTS: _____

Receptive Language

- Comprehension skills exceed peers. 1 2 3 4 5
Follows directions exceedingly well. 1 2 3 4 5

COMMENTS: _____

CONCEPT DEVELOPMENT

- Can show relationships among apparently unrelated ideas. 1 2 3 4 5
Is eager to tell others about discoveries and ideas. 1 2 3 4 5
Tells imaginative stories. 1 2 3 4 5
Makes predictions from current information and ideas. 1 2 3 4 5

COMMENTS: _____

BEHAVIORAL CHARACTERISTICS

- Is very alert - gives rapid answers. 1 2 3 4 5
Is eager to do new things. 1 2 3 4 5
Exhibits leadership qualities. 1 2 3 4 5
Enjoys working alone. 1 2 3 4 5
Is self-confident. 1 2 3 4 5
Is inquisitive, very curious. 1 2 3 4 5
Has a long attention span. 1 2 3 4 5
Is a risk taker. 1 2 3 4 5

COMMENTS: _____

ACADEMIC CHARACTERISTICS

- Is an avid reader. 1 2 3 4 5
Reads near the top of the class. 1 2 3 4 5
Shows interest in science or literature. 1 2 3 4 5
Is outstanding in math. 1 2 3 4 5
Is self-disciplined. 1 2 3 4 5
Has a wide range of interests. 1 2 3 4 5
Has a mature sense of humor. 1 2 3 4 5

COMMENTS: _____

Signature of person completing the portion above _____

RECOMMENDATION: To be completed by the student's teacher.

Do you think this student should be a candidate for the PACE Program?

COMMENTS

Without Reservation 5 _____

Yes 4 _____

Perhaps 3 _____

Questionable 2 _____

No 1 _____

STANDARDIZED TEST INFORMATION

Review all existing school records. To be completed by designated procedures.

TITLE	DATE GIVEN	GRADE/AGE WHEN TESTED	STANDARD SCORE	C.E.	PERCENTILE
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

OTHER INFORMATION

1. Is the child currently receiving other educational services? YES NO (If YES, describe)
2. Collateral Scholastic Information.
 - a. Record of skipping a grade: grade(s) placed _____ year(s) _____
 - b. Record of retention: grade(s) retained _____ year(s) _____
3. Relevant medical/physical problems:
4. Previous enrollment in a gifted program? YES NO (If YES, describe).

APPENDIX B

A PRELIMINARY FORM OF THE BEHAVIOR INVENTORY
 USED IN A FIELD STUDY IN 1980

INVENTORY OF GIFTED/TALENTED STUDENT BEHAVIORS
ASSESSMENT OF TEACHER TOLERANCE LEVELS
Form A

Think of the most recent gifted/talented student you have worked with in responding to the behavior descriptions below.

In column 1, on the scale provided, rate how well each statement describes - or represents - the school behavior of the student.

1. = not descriptive of the student
2. > intermediate values
3. > intermediate values
4. = moderately descriptive of the student
5. > intermediate values
6. > intermediate values
7. = very descriptive of the student

In column 2, rate how annoying the behavior was when it occurred.

1. = not annoying
2. > intermediate values
3. > intermediate values
4. = moderately annoying
5. > intermediate values
6. > intermediate values
7. = very annoying

Behavior Descriptors

1. Does not wait for a turn to speak; interrupts.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Involvement in class activity is dependent on level of personal interest in the topic.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Is impatient with the lesser ability of others.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Dislikes routine and drill; seeks early mastery of skills.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. May challenge the value of activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Resists interruptions when engrossed in an activity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Seeks independence; may resist situations that require conformity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Needs success and recognition; is sensitive to criticism.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Uses verbose explanations and descriptions.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Begins many projects that are often not completed.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
11. Displays stubbornness when trying to get his/her own way.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
12. Often invents his/her own system of doing something that may conflict with the required method.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
13. Tends to be brutally frank in appraising people and activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
14. Has a great desire to excel, even to the point of cheating.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
15. Loses interest in discussions if unable to dominate.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
16. Intimidates the teacher with questions that require specialized knowledge.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

INVENTORY OF GIFTED/TALENTED STUDENT BEHAVIORS
ASSESSMENT OF TEACHER TOLERANCE LEVELS

Form B

Select a non-gifted/talented student of the same sex from the same class in responding to the descriptions below.

In column 1, on the scale provided, rate how well each statement describes - or represents - the school behavior of the student.

1. = not descriptive of the student
 2. > intermediate values
 3. > intermediate values
 4. = moderately descriptive of the student
 5. > intermediate values
 6. > intermediate values
 7. = very descriptive of the student

In column 2, rate how annoying the behavior was when it occurred.

1. = not annoying
 2. > intermediate values
 3. > intermediate values
 4. = moderately annoying
 5. > intermediate values
 6. > intermediate values
 7. = very annoying

Behavior Descriptors

1. Does not wait for a turn to speak; interrupts.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Involvement in class activity is dependent on level of personal interest in the topic.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Is impatient with the lesser ability of others.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Dislikes routine and drill; seeks early mastery of skills.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. May challenge the value of activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Resists interruptions when engrossed in an activity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Seeks independence; may resist situations that require conformity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Needs success and recognition; is sensitive to criticism.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Uses verbose explanations and descriptions.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Begins many projects that are often not completed.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
11. Displays stubbornness when trying to get his/her own way.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
12. Often invents his/her own system of doing something that may conflict with the required method.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
13. Tends to be brutally frank in appraising people and activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
14. Has a great desire to excel, even to the point of cheating.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
15. Loses interest in discussions if unable to dominate.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
16. Intimidates the teacher with questions that require specialized knowledge.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

APPENDIX C

THE GIFTED INVENTORY PACKET

USED IN THE STUDY

THE HOLIDAYS ARE COMING!!!



WHEREIN — A District 4-J Teacher Contemplates
the extra time that can be used for
extra study & class preparation...



...but reserves actual concern of the
further performance to be un-acted...



now with the End Clock dispatched,
the good feelings of the past returned,
we invite you...

To see this Case of the Routine
to call 345-8911 with RNY compliance

SCHOOL DISTRICT



EUGENE PUBLIC SCHOOLS

200 North Monroe Eugene, Oregon 97402

The following survey is designed to assess three areas of investigation related to education for the intellectually gifted student:

- A. Do gifted students exhibit behaviors that are different from those of their nongifted peers?
- B. Are behaviors more annoying to teachers when they are exhibited by gifted students as compared to their nongifted peers?
- C. District 4J uses a total of twenty-nine criteria items when selecting a student for the district PACE Program. Of the twenty-nine items, which are considered most important by classroom teachers?

Your feedback will help us assess some important factors involving the behavior of students identified as intellectually gifted, and the appropriate criteria to use in the process of selecting students for the district PACE Program.

The enclosed packet of three inventories will involve approximately twenty minutes for completion. When you have completed the packet, return it to the collection box located in your school office.

We value your feedback, and we hope that you will take time to complete the inventory packet. All responses are to be completed anonymously, and returned in the accompanying unmarked envelopes. The permission statement at the bottom of the page can be inserted into the collection envelope also located in your school office.

Our sincere thanks for your help.

Virginia Schwartzrock
Resident Teacher Program

Robert Sylwester
College of Education
University of Oregon

I give permission to the gifted survey directors to utilize and disseminate this survey data for the purpose of program evaluation and development. I confirm that my participation is voluntary.

Signature _____ Date _____

THE GIFTED INVENTORY PACKET

Your feedback will help us assess (1) some important factors related to the behavior of intellectually gifted students, and (2) the appropriate criteria to use in selecting gifted students for the District 4J PACE Program.

The three inventories will require about 20 minutes to complete. When you have completed the inventories, return this form to your school office.

Thanks so much for your time and your important feedback!

Directions for Completion of the Gifted Inventory Packet

Proceed as follows:

Demographic Data. Respond to the 4 items.

Inventories A and B.

1. If the student does not exhibit the behavior, place an X in Column 1, and go on to the next item.
2. If the student exhibits the behavior:
 - A. Circle the number in the 7 point scale in Column 2 that best describes how frequently the behavior is exhibited (1 = rarely exhibits the behavior → 7 = consistently exhibits the behavior), and
 - B. Circle the number in the 7 point scale in Column 3 that best describes your level of annoyance to the behavior (1 = not annoying → 7 = very annoying).

Inventory C.

1. Use an X to identify the 15 criteria you consider most important in identifying gifted students.
2. Add additional criteria not included in the list of 29 criteria.

DEMOGRAPHIC DATA

1. _____ Male, _____ Female.
2. _____ Approximately how many gifted students do you think you have worked with during your teaching career?
3. _____ Number of years of teaching experience.
4. Number of _____ college courses, _____ workshops (one day or more) you have taken that focused on education for gifted/talented students.

INVENTORY OF GIFTED STUDENT BEHAVIORS
ASSESSMENT OF TEACHER TOLERANCE LEVELS

Form A

Think of a recent PACE student with whom you have worked. Use Column 1, or Columns 2 and 3 to respond to the 16 behavior descriptions listed below.

Column 1	Behavior Descriptors	Column 2	Column 3
Behavior is not exhibited by the PACE student.		Behavior is exhibited:	Behavior is:
(X)			
Go on to next item.			
	1. Does not wait for a turn to speak; interrupts.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	2. Involvement in class activity is dependent on level of personal interest in the topic.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	3. Is impatient with the lesser ability of others.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	4. Dislikes routine and drill; seeks early mastery of skills.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	5. May challenge the value of activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	6. Resists interruptions when engrossed in an activity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	7. Seeks independence; may resist situations that require conformity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	8. Needs success and recognition; is sensitive to criticism.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	9. Uses verbose explanations and descriptions.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	10. Begins many projects that are often not completed.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	11. Displays stubbornness when trying to get his/her own way.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	12. Often invents his/her own system of doing something that may conflict with the required method.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	13. Tends to be brutally frank in appraising people and activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	14. Has a great desire to excel, even to the point of cheating.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	15. Loses interest in discussions if unable to dominate.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	16. Intimidates the teacher with questions that require specialized knowledge.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

Form 3

Select a recognized student of the same sex as the FACT student in Form 1. Use Column 1, or Columns 2 and 3 to respond to the 16 behaviors listed below.

Column 1	Behavior Descriptors	Column 2	Column 3
Behavior is not exhibited by the student.		Behavior is exhibited:	Behavior is:
(X)			
Go on to next item.			
	1. Does not wait for a turn to speak; interrupts.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	2. Involvement in class activity is dependent on level of personal interest in the topic.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	3. Is impatient with the lesser ability of others.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	4. Dislikes routine and drill; seeks early mastery of skills.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	5. May challenge the value of activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	6. Resists interruptions when engrossed in an activity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	7. Seeks independence; may resist situations that require conformity.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	8. Needs success and recognition; is sensitive to criticism.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	9. Uses verbose explanations and descriptions.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	10. Begins many projects that are often not completed.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	11. Displays stubbornness when trying to get his/her own way.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	12. Often invents his/her own system of doing something that may conflict with the required method.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	13. Tends to be brutally frank in appraising people and activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	14. Has a great desire to excel, even to the point of cheating.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	15. Loses interest in discussions if unable to dominate.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	16. Intimidates the teacher with questions that require specialized knowledge.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

INVENTORY OF GIFTED CRITERIA

Listed below are the 29 criteria District 4J uses to identify gifted students for the PACE Program.
Use an X to identify the 13 items that you consider the most important in identifying gifted students.

(X)

1. _____ Achieves a score above 130 on an individual intelligence test.
2. _____ Ranks in the top five percent on composite achievement test scores.
3. _____ Ranks in the top five percent in math achievement test scores.
4. _____ Ranks in the top five percent in reading achievement test scores.
5. _____ Has been recommended by his/her classroom teacher.
6. _____ Shows exceptional use of grammar.
7. _____ Shows exceptional vocabulary.
8. _____ Shows use of expressive body or facial gestures.
9. _____ Comprehension skills exceed peers.
10. _____ Follows directions exceedingly well.
11. _____ Can show relationships among apparently unrelated ideas.
12. _____ Is eager to tell others about discoveries and ideas.
13. _____ Tells imaginative stories.
14. _____ Makes predictions from current information and ideas.
15. _____ Is very alert - gives rapid answers.
16. _____ Is eager to do new things.
17. _____ Exhibits leadership qualities.
18. _____ Enjoys working alone.
19. _____ Is self-confident.
20. _____ Is inquisitive, very curious.
21. _____ Has a long attention span.
22. _____ Is a risk taker.
23. _____ Is an avid reader.
24. _____ Reads near the top of the class.
25. _____ Shows interest in science or literature.
26. _____ Is outstanding in math.
27. _____ Is self-disciplined.
28. _____ Has a wide range of interests.
29. _____ Has a mature sense of humour.

On the lines below list any factors that you cannot find on the list of district criteria above that you consider to be important in the identification of gifted students.

APPENDIX D

LETTER FROM THE DISTRICT 4J RESEARCH REVIEW COMMITTEE
GRANTING PERMISSION FOR THE STUDY



June 25, 1981

Virginia Schwartzrock
4715 Manzanita
Eugene, OR 97405

Dear Virginia,

Your research request entitled, "A Proposal For A Descriptive Study Of Comparative Behaviors of Gifted and Non-Gifted Students and Related Teacher Tolerance Levels to Behaviors Displayed By Both Groups" has been received and reviewed by this district's Research Review Committee. The committee's recommendation was that the study be approved for inclusion in the 1980-81 or 1981-82 research cycle of the district. I will be happy to assist in the implementation of this study in whatever way may be feasible.

Sincerely,

Charles E. Stephens
Research Specialist

lah

APPENDIX E

A LETTER TO PRINCIPALS DESCRIBING THE OPERATION
AND TIMELINE OF THE STUDY

November 16, 1981

Cliff Lind, Principal
Adams Elementary School
Eugene District 4J

Dear Cliff:

Enclosed you will find the complete packet of gifted behavior inventories, and directions, included in the field study that we discussed when I contacted you for permission to distribute the gifted behavior inventories to classroom teachers in your school.

The packet is designed to involve only a few minutes of each teacher's time; and the entire project is designed to avoid interference with school business.

Listed below is a summary of the operation of the project:

- A. If possible, will you inform classroom teachers that I will distribute the packets in their boxes the week of November 23rd.
- B. Teachers who do complete the packet will find a box in the office where completed inventories can be collected.
- C. I will distribute one reminder to teachers concerning the inventory packet during the week of November 30th. I will also distribute a copy of my reminder to you.
- D. During the week of December 7th I will pick up the collection box in your office.

If you have questions or concerns, please leave a message for me at 680-3530. I will call you immediately.

Asking friends for help in a field study endeavor is very difficult for me! Thank you for your warmth and your support.

Sincerely,

Virginia Schwartzrock

VS:s1

HOW DO I ASK YOU? LET ME ASK YOU THE SAME . . .

By Elizabeth Barrett Schwartz

1. First, I placed in your hands a questionnaire/characteristic survey just as your thoughts were turning to Thanksgiving turkey and afternoon also perhaps.

2. Now I increase the survey. APPENDIX F "gentle reminder" that there is a follow-up reminder to teachers included survey.

IN THE AVAILABLE STUDY POPULATION

3. Finally, I will rush into your room and persuade you with Christmas carols sung by the three chipmunks if you are able to complete the survey and turn it in to the collection box by December 19th.
- Or..... I will persuade you if you complete the survey!
4. At any rate, I'll stop by after December 19th, and pick up the collection box and make my appearance.

Loveably,

Virginia Schwartz

HOW DO I ANNOY THEE? LET ME COUNT THE WAYS.....

by Elizabeth Barrett Schwartzrock

1. First, I placed in your box a gifted behavior/characteristics survey just as your thoughts were turning to Thanksgiving turkey and after-dinner alka seltzers.
2. Now I increase the annoyance with a "gentle reminder" that there is a collection box in the office for your completed survey.
3. Finally, I will rush into your room and serenade you with Christmas carols sung by the three chipmunks if you are able to complete the survey and turn it in to the collection box by December 10th.
Or..... I won't serenade you if you complete the survey?
4. At any rate, I'll stop by after December 10th, and pick up the collection box and cease my annoyance.

Lovingly,

Virginia Schwartzrock

1. Will complete student assignments.
2. Has a sense of humor in classroom.
3. Can keep up his own studies.
4. Will complete assignments.
5. Will finish a term.
6. Will complete projects.

APPENDIX G

7. Can do
8. Responses from fifty-seven teachers describing
9. Important criteria not included on the
10. Criteria list used by School District 4J

11. Will be able to understand and follow directions.
12. Have to do some of these assignments and will be able to do them.
13. Have assignments.
14. If the student has been given assignments and they are not done, they will be able to do them.
15. Complete assignments.
16. Assignments done in class.
17. Have to do assignments and will be able to do them.
18. Complete assignments.
19. Have to do assignments and will be able to do them.
20. Have to do assignments and will be able to do them.
21. Have to do assignments and will be able to do them.

TASK COMMITMENT

1. Able to complete (follow through) on regular class work.
2. Has a sense of pride in accomplishment.
3. Can keep up in his regular assignments.
4. Will complete projects organized for PACE students.
5. Will finish a task.
6. Able to complete projects.
7. Enjoys and completes PACE activities.
8. Can finish a task, once begun.
9. Has a sense of task commitment.
10. Keeps up with class assignments.
11. Works hard to understand and complete classroom curriculum.
12. Wants to do extra or "over and above" work--not just a "goody-goody" over-achiever.
13. Task commitment.
14. If the child has been given general directions for the completion of a task, he/she will be able to figure out a procedure to get the task finished correctly.
15. Completes assignments on time.
16. Brings closure to projects.
17. Knows that assignments are to be finished.
18. Finishes assignments and projects.
19. Does not have to be urged to finish a task.
20. Has pride in completed tasks that are well done.
21. Enjoys the ending as well as the beginning of a project.

22. Finishes work.
23. Has a spirit of task commitment.
24. Completes assignments.
25. Beyond the "messaging around stage"--wants to finish a project.
26. Understands the importance of completing a job.
27. Has task commitment.
28. Able to complete an assigned task.
29. Finishes projects undertaken.
30. Children released for PACE activities must complete regular class assignments.
31. Finishes his/her work.
32. Is responsible about completing assignments.

SOCIAL SKILLS

1. Social awareness is also a gift.
2. Socially mature so as to be able to function in a more open setting, i.e., a PACE classroom.
3. Mature social skills.
4. Peer group interaction is good.
5. Is sensitive to others' needs and abilities.
6. Respect for adults and classmates.
7. Gets along with peers
8. Good communication skills.
9. Has good peer relationships.
10. Social skills, interaction with teachers and classmates.
11. Awareness of self in relation to others.

12. Is socially aware.

CREATIVITY AND DIVERGENT THINKING

1. Student should be able to see another way to reach the same goal.
2. Given a set of materials, can construct a model living environment to meet human needs on another planet.
3. Given a set of materials, can design and create an art form using space/color, contrast/movement.
4. Given a problem in human relationship, can devise various resolutions at his/her level.
5. I feel original thinking is highly important and should be considered essential to the contributing capacity of a gifted child.
6. Shows exceptional creativity/divergent thinking.
7. Creativity.
8. Exhibits creativity and critical thinking skills. Has the ability to reason through ideas and problems.
9. Demonstrates creativity in everyday activities--classroom and home.
10. Creativity in the arts and language arts.
11. Can find many solutions to a problem.

POSITIVE ATTITUDE

1. Has a positive attitude toward learning.
2. Positive attitude toward learning.
3. Has positive feelings about school.
4. Enjoys learning.
5. Greets each new challenge with joy.
6. Retains a positive attitude throughout a range of activities.

7. Looks forward to a challenge.

INTEREST IN PACE

1. The student should want to be involved in PACE.
2. Really wants to be involved in PACE.
3. An interest in PACE activities.
4. Expresses an interest in PACE.
5. Should not be forced to continue in PACE if not interested.

POSITIVE SELF CONCEPT

1. Strong self-concept.
2. A strong self-concept is important.
3. Feels secure about his capabilities.
4. Feels good about himself/herself.

TALENT

1. Excels in one or more talents.
2. Consideration should be given to talents above and beyond strictly academic areas
3. Most of the criteria above deal with exceptional abilities in math, reading or leadership. I have a student that is gifted in art. What about her?

MATURITY--SOCIAL/ACADEMIC

1. Maturity level above peers.
2. Can make decisions with maturity.
3. Uses maturity both socially and academically.

MATURATION

1. Enjoys new learning experiences.
2. Has a desire to be challenged.
3. Works for quality in all endeavors.

RESPONSIBILITY TO LEARNING/ACCEPTABLE BEHAVIOR

1. Responsible, reliable.
2. I think that a PACE student--most of all--should have a sense of responsibility toward doing a good job at all times.
3. Responsible for the consequences of his/her behavior.

EXCEPTIONAL ACADEMIC ABILITIES

1. Able to demonstrate basic skills at a very high level.
2. Performance in class is exceptional.

FLEXIBILITY

1. Has a flexible attitude when changes occur.
2. Tolerance of a new idea.

RESTATEMENT OF DISTRICT'S CRITERIA

1. The district's test is on instruments which rate vocabulary knowledge as the criteria for a high score.
2. Able to work independently.
3. Quite often I have a student, I feel, that is gifted, but because of attitude he does not do well on IQ or achievement tests. A teacher's request should be given more weight, at least for a trial period for the student.

4. The criteria for selecting gifted students should be achievement test scores and intelligence tests, and only the top 3% considered. Many are now in the program who are very average in ability and performance.
5. Exhibits self-control.
6. Ability to think independently.
7. Does well in all subject areas.
8. Can use discrepant thinking.
9. Is strong in reading and math.
10. Is a self-disciplined student.

MISCELLANEOUS

1. Regular evaluation needs to take place on each PACE student to see if child should continue in PACE the following year. Often a child is identified in the primary grades and is "locked into" the PACE Program and is "locked in" through grade six when participation is no longer warranted.
2. Appears to have a great "storehouse" of knowledge about things other than academic--trivia nut, so to speak. I have found that most PACE students are able to answer a multitude of general information. In many ways this is "alert--gives rapid answers," or "has a wide range of interests."
3. Giftedness can be shown in any area. Students gifted in one area are not necessarily gifted in another area--or all areas.
4. Can walk on water!
5. Asks thoughtful questions.
6. Has the support of parents.
7. Too many already!
8. Has parent support for involvement in PACE.
9. Intelligence tests are usually not a good identification tool.
10. A child may be gifted and not possess any of the skills or qualities on the list.

11. Tries hard--gives his/her best effort.
12. Displays some humility, modesty.
13. The student can relate--and use--information acquired in PACE activities.
14. Shows skills in decision making.
15. Uses time well.
16. Has ability to involve others in his own ideas.

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Typed by
Virginia M. Berg