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The National Research Center
on the Gifted and Talented

NRC/GT Instrument Bank

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Introduction

University of Connecticut

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Stanford University

The National Research Center on the Gifted and Talented (NRC/GT) is funded by the Jacob K. Javits Gifted and Talented Students Education Act. Since 1990, we have implemented a comprehensive research agenda that is responsive to practitioners, policy makers, researchers, and other persons and groups that have a stake in developing the performance and potential of young people. During the 15 years, the core research universities included the University of Connecticut, University of Virginia, and Yale University. Collaborating universities were University of Georgia (1990-1995), Stanford University (1995-2000), City University of New York, City College (1995-2000), and Teachers College, Columbia University (2000-2005).

Our research agenda is guided by a broadened conception of human potential and the need to develop high-end learning opportunities for students, especially those who may not be identified as gifted and talented through traditional assessment techniques. These young people may live in challenging learning environments and need access to programs and services that will promote high expectations and greater engagement with subject matter.

(continued)

Introduction

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City University of New York City College

Stanford University

We designed and implemented numerous quantitative and qualitative research studies to respond to the research questions based on two national needs assessments and the priorities set by the United States Department of Education. As we implemented studies, it was evident that many appropriate instruments could be selected; however, there was also a need to design, field test, and develop instruments that were unique to specific research questions.

All NRC/GT research monographs provide detailed information about all phases of our studies and the appendices include instruments that we developed. As the research monographs were disseminated, we periodically received requests from other researchers and educators for permission to use the instruments for their own research studies. We always granted the requests and realized that our instruments may be appropriate for many people as they design, develop, implement, and evaluate programs and services for gifted and talented students.

The National Research Center on the Gifted and Talented Instrument Bank is a CD-Rom that contains 3 sections:

Section A: Identification
Section B: Special Populations
Section C: Classroom Practices

(continued)

Introduction

University of Connecticut

University of Virginia

Yale University

University of Georgia

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Stanford University

Each section includes the study's title, abstract, and the resulting implications, guidelines, or conclusions. This is followed by a description of how the instruments were used and suggestions for possible uses. You will find this icon on each instrument page that is a direct link to the specific instrument.

We hope that you find the NRC/GT Instrument Bank useful for your own research, programming, or evaluation agendas. Please let us know how you used the instruments. You may contact us at www.gifted.uconn.edu or the following address:

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Siamak Vahidi

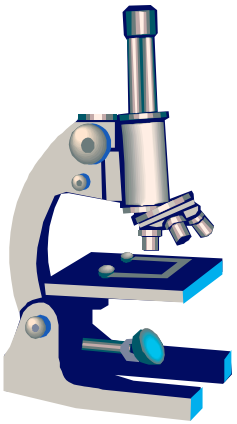
Use of Instrument Bank

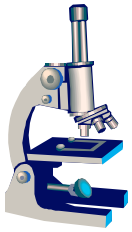
To get to a particular section of this Instrument Bank quickly, click on the section title below:

- Section A: Identification
- Section B: Special Populations
- Section C: Classroom Practices

Section A

Identification





Identification

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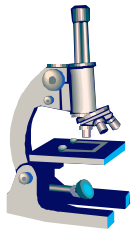


Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

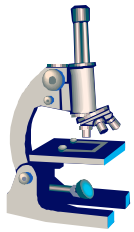
Instrument:

- Traits, Behaviors and Aptitude Descriptors

Abstract

This paper reviews literature characterizing gifted students from minority and/or economically disadvantaged families and areas and presents a proposal for focusing on the core attributes that underlie the giftedness construct as a more viable way to facilitate their identification and education. A qualitative content analysis method was used to analyze phrases and sentences in literature on the gifted to determine common features that characterize gifted children from the target population and the gifted population in general.

The results of this analysis became the basis for the proposal to use core attributes of giftedness to design more viable procedures of identifying giftedness in target population student groups. Ten core attributes of the giftedness construct were identified: communication skills, creativity/imagination, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. The paper concludes with implications for using these core attributes to facilitate teachers' recognition of gifted target population students and to guide the selection and development of assessment measures in identification.



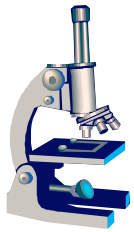
Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Implications

1. A variety of test and nontest measures would assess potential across a wide range of traits, behaviors, and aptitudes associated with the giftedness construct more effectively for students from minority and economically disadvantaged families.
2. Using a variety of tests and nontest measures make it less likely that students who are underrepresented in gifted programs will be handicapped by identification systems that rely on one or two measures to determine eligibility for gifted program services.
3. Effective interpretation of performances on a variety of measures requires standards that accommodate the differences in the expression of gifted student characteristics as exhibited by students who come from diverse cultural, ethnic, economic, and environmental background.
4. The core attributes provides an important way to assist educators working with minority or economically disadvantaged students in the establishment of links between specific gifted characteristics and the manner in which they may be displayed in classrooms.

Frasier, M. M., Hunsaker, S. L., Lee, J., Mitchell, S., Cramond, B., Krisel, S., García, J. H., Martin, D., Frank, E., & Finley, V. S. (1995). *Core attributes of giftedness: A foundation for recognizing the gifted potential of economically disadvantaged students* (RM95210). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.



Identification

Traits, Aptitudes, and Behaviors Descriptors

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

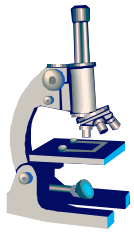
How this instrument was used:
These traits, aptitudes, and behaviors were identified by the researchers as common or general attributes of giftedness that are often included in lists of attributes ascribed to the gifted.

These traits, aptitudes, and behaviors may be displayed differently in a variety of cultures. For that reason, a general definition of each is given, with a description of how each may be manifested in various cultural, contextual, and environmental settings.

This list of traits, aptitudes, and behaviors were used in conjunction with the *Student Referral Form, Panning for Gold Observation Sheet,* and *Frasier Talent Assessment Profile* to train teachers, and help teachers to identify students from disadvantaged background for gifted programs.

Possible uses:
This list of traits, aptitudes, and behaviors can be used by teachers to orient themselves to recognizing gifted behaviors in students from economically disadvantaged and linguistically and culturally diverse backgrounds.

This list of traits, aptitudes, and behaviors can be used in conjunction with the *Student Referral Form, Panning for Gold Observation Sheet,* and *Frasier Talent Assessment Profile* to train teachers, and help teachers to identify students from disadvantaged and diverse backgrounds for gifted programs.

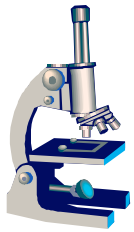


Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Traits, Aptitudes, and Behaviors Descriptors

Trait, Aptitude or Behavior	General Description	How It May Look
Motivation Evidence of desire to learn	Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attain a goal	Demonstrates persistence in pursuing or completing self-selected tasks (may be culturally influenced); evident in school or non-school activities. Enthusiastic learner; has aspirations to be somebody, to do something
Interests Intense, sometimes unusual, interest	Activities, avocations, objects, etc. that have special worth or significance and are given special attention	Unusual or advanced interests in a topic or activity; self-starter; pursues an activity unceasingly beyond the group
Communication Skills Highly expressive with words, numbers, or symbols	Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers).	Unusual ability to communicate (verbally, nonverbally, physically, artistically, symbolically); uses particularly apt examples, illustrations, or elaborations.

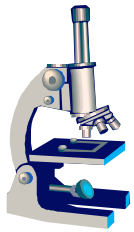


Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Traits, Aptitudes, and Behaviors Descriptors

Trait, Aptitude or Behavior	General Description	How It May Look
Problem-Solving Ability Effective, often inventive, strategies for recognizing and solving problems	Process of determining a correct sequence of alternatives leading to a desired goal or to successful completion or performance task.	Unusual ability to devise or adopt a systematic strategy to solve problems and to change the strategy if it is not working; creates new design; inventor.
Memory Large storehouse of information on school or non-school topics.	Exceptional ability to retain and retrieve information.	Already knows; 1-2 repetitions for mastery; has a wealth of information about school and non-school topics; pays attention to details; manipulates information.
Inquiry Questions, experiments, explores	Method or process of seeking knowledge, understanding, or information.	Asks unusual questions for age: plays around with ideas; extensive exploratory behaviors directed toward eliciting information about materials, devices, or situation.

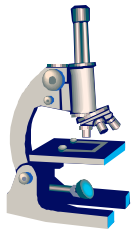


Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Traits, Aptitudes, and Behaviors Descriptors

Trait, Aptitude or Behavior	General Description	How It May Look
Insight Quickly grasps new concepts, connections; senses deeper meanings	Sudden discovery of correct solution following incorrect attempts based primarily on trial and error.	Exceptional ability to draw inferences; appears to be a good guesser; is keenly observant; heightened capacity for seeing unusual and diverse relationships, integration of ideas and disciplines.
Reasoning Logical approaches to figuring out solutions	Highly conscious, directed, controlled, active, intentional, forward-looking, and goal-oriented thought.	Ability to make generalizations and use metaphors and analogies; can think things through in a logical manner; critical thinker; ability to think things through and come up with a plausible answer.

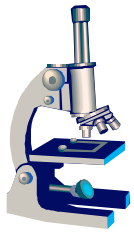


Identification

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Traits, Aptitudes, and Behaviors Descriptors

Trait, Aptitude or Behavior	General Description	How It May Look
Imagination/Creativity	Process of forming mental images of objects; qualities, situations, or relationships which aren't immediately apparent to the senses; problem solving through nontraditional patterns of thinking.	Shows exceptional ingenuity in using everyday materials; is keenly observant; has wild, seemingly silly ideas; fluent, flexible producer of ideas; highly curious.
Humor Conveys and picks up on humor well	Ability to synthesize key ideas or problems in complex situations in a humorous way; exceptional sense of timing in words and gestures.	Keen sense of humor that may be gentle or hostile; large accumulation of information about emotions; capacity for seeing unusual; uncommon emotional depth; openness to experiences; sensory awareness.



Identification

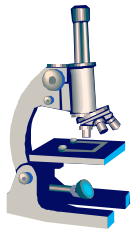
Abstract

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

Instruments:

- Panning for Gold—
  - Student Observation Sheet
  - Student Selection Sheet
  - Student Referral Form
- Frasier Talent Assessment Profile (F-TAP)
- Children's Language Usage Evaluation Scale (CLUES)

A Staff Development Model (SDM) and a Research-Based Assessment Plan (RAP) developed by researchers at The University of Georgia were investigated for their potential to improve the identification and education of gifted students from economically disadvantaged families, some of whom may have limited proficiency in the English language. The concept of giftedness as a psychological construct defined by a basic set of traits, aptitudes, and behaviors (TABs) formed the basis of the two models. Overall, the models were perceived as an effective way to (a) improve teachers' ability in observing giftedness in target population student groups, and (b) facilitate the collection and use of information derived from multiple sources when making decisions for program placement and services. A basic implication of this study is that the TABs associated with the giftedness construct appeared to provide a feasible way to train teachers to recognize exceptional ability in target population student groups. Secondly, the SDM and the RAP process appeared to affirm the importance of involving teachers and other staff in the entire process of identifying gifted target students. Finally, feedback on the RAP suggests that the RAP is a viable way to systematically consider the interrelationships of information from multiple sources when making gifted program placement decisions.



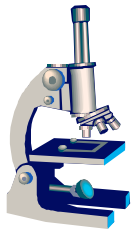
Identification

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

Guidelines

1. Economically disadvantaged gifted students are often not recommended for gifted programs by their teachers because their gifts and talents are difficult to recognize.
2. Educators should not rely exclusively on traditional assessment procedures (IQ tests, achievement tests) to identify economically disadvantaged gifted students. A variety of information (student products, checklists, portfolios) needs to be considered.
3. Teacher training in the identification of economically disadvantaged gifted students improves the teacher's ability to recognize unique talents and gifts.
4. Once classroom teachers have been adequately trained in assessment procedures, they should play a key role in the identification process. Referral, identification, and programming need to be approached from the classroom teacher's perspective.

Frasier, M. M., Hunsaker, S. L., Lee, J., Finley, V. S., García, J. H., Martin, D., & Frank, E. (1995). *An exploratory study of the effectiveness of the staff development model and the research-based assessment plan in improving the identification of gifted economically disadvantaged students* (RM95224). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.



Identification

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

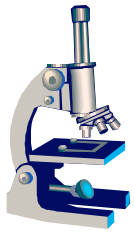
PDF of Student Observation Sheet

Click Here

Panning for Gold Student Observation Sheet

How this instrument was used:
This observation sheet was used by teachers to rate individual students on the traits, aptitudes, and behaviors to identify students from disadvantaged backgrounds for gifted programs.

Possible uses:
Use this observation sheet to rate individual students on the traits, aptitudes, and behaviors to identify students from disadvantaged backgrounds for gifted programs in conjunction with the *TAB's Descriptors, Student Selection Sheet, Student Referral Form* and *Frasier Talent Assessment Profile.*



Identification

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

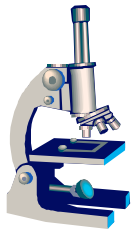
PDF of Student Selection Sheet

Click Here

Panning for Gold Student Selection Sheet

How this instrument was used:
This student selection sheet was used by teachers to initially classify individual students as part of the target group for identification for gifted programs.

Possible uses:
Use this student selection sheet to classify individual students as part of the target group for identification for gifted programs in conjunction with the *TAB's Descriptors, Student Observation sheet*, *Student Referral Form* and *Frasier Talent Assessment Profile.*



Identification

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

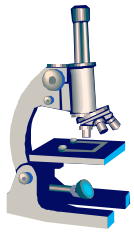
PDF of Student Referral Form

Click Here

Panning for Gold Student Referral Form

How this instrument was used:
This student referral form was used by teachers to document their observations of individual students when referring them for identification for gifted programs.

Possible uses:
Use this student referral form to document observations of individual students for possible inclusion in gifted programs in conjunction with the *TAB's Descriptors, Student Observation sheet*, *Student Selection Sheet* and *Frasier Talent Assessment Profile.*



Identification

Frasier Talent Assessment Profile (F-TAP)

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

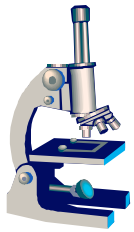
How this instrument was used:
This talent assessment profile was used by the selection committee to document their decisions concerning individual students for inclusion in gifted programs.

It combines information from all possible information sources.

Possible uses:
Use this profile to record documentation of information for individual students that support the selection committee decision regarding inclusion of the student in the gifted program.

PDF of F-TAP

Click Here



Identification

Children's Language Usage Evaluation Scale (CLUES)

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

PDF of CLUES

Click Here

How this instrument was used:
A writing sample of a student was evaluated with this scale to assess the student's ability to organize and communicate written responses that demonstrated an understanding of relationships among people, objects, and events.

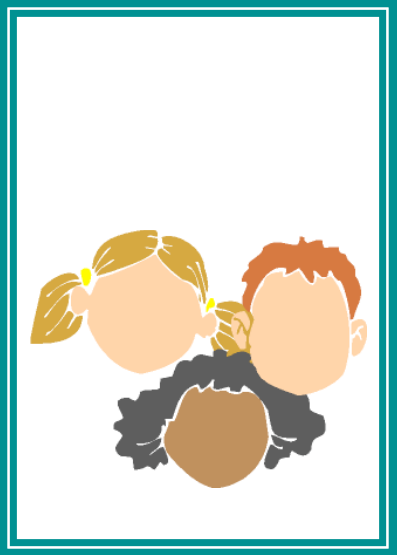
Students generated writing samples on a topic of their choice. Possible story starters or topics were suggested as follows: (a) the tricky cat; (b) unwelcome visitor; (c) golden dragon; (d) most embarrassing moment; (e) an event I'll never forget; (f) my most frightening experience; and (g) one of the funniest (saddest, strangest, etc.) things I've ever seen.

Abilities of interest included expressions of feelings, judgments and causality, comprehension of complex situations, and uncommon descriptions of behaviors, attributes, and actions. Mechanics and grammar were not evaluated. Specific writing elements measured by CLUES are fluency of writing, language usage, story structure, novelty, and personal interpretations.

Points are given based on whether or not an element is present in the writing sample. Additional points are given if the writing sample contains any of five optional features: novelty of idea, novelty of theme, novelty of form, facility in beautiful writing, and vivid presentation of personal experience.

Possible uses:
Use this evaluation scale in conjunction with tests that give an indication of students' performance on one or more of the core attributes of giftedness. This instrument can give indications of Creativity/Imagination, Communication skills, and Humor.

Section B



Special Populations

Special Populations

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Special Populations

Abstract

The Recruitment and Retention of African American Students in Gifted Education Programs: Implications and Recommendations

Instrument:

- Initial Checklist for Identifying Potential "Underachievers" From Gifted Programs

The identification and placement of African American students in gifted programs has received increased attention in recent years, primarily due to Javits legislation and the stellar efforts of Torrance, Passow, Frasier, Renzulli, Baldwin, and others. One shortcoming has been an almost exclusive attention to the identification and placement process. This aspect, referred to herein as "recruitment," represents only one crucial element in increasing the representation of African American students in gifted programs. Equally important, but often overlooked, is the "retention" of these students in gifted education once placed. What mechanisms exist to ensure that, once identified and placed, gifted African American students remain in the program? Do they feel a sense of belonging and inclusion? Are academic as well as social and emotional needs met?

The poor representation of African American students in gifted programs may occur for numerous reasons. These students may complain of: (1) being a minority within a minority because they are often the only or one of the few African American students in the gifted program; (2) feeling isolated from White classmates; (3) experiencing intense and frequent peer pressures from African American youth not in the gifted programs; (4) feeling misunderstood by teachers who do not understand the nature of giftedness, especially among culturally and racially diverse students; and/or (6) feeling misunderstood by family members who do not understand the nature of giftedness.

Special Populations

The Recruitment and Retention of African American Students in Gifted Education Programs: Implications and Recommendations

Guidelines

1. A culture of assessment rather than a culture of testing promises to capture the strengths of gifted African American students.
2. There is no "one size fits all" intelligence or achievement test. Multidimensional identification and assessment practices offer the greatest promise for recruiting African American students into gifted programs.
3. Identification instruments must be valid, reliable, and culturally sensitive. If any of these variables are low or missing, the instrument should not be adopted for use with African American and other minority students.
4. To increase the representation of African American students in gifted programs, educators must adopt contemporary definitions and theories of giftedness.
5. Comprehensive services must be provided if the recruitment and retention of African American students in gifted education is to be successful.
6. Teachers who are trained in both gifted education and multicultural education increase their effectiveness in identifying and serving gifted African American students.
7. To prevent underachievement, gifted students must be identified and served early.
8. Qualitative definitions of underachievement offer more promise than quantitative definitions in describing poor achievement among gifted African American students.
9. The representation of African American students in gifted programs must be examined relative to both recruitment and retention issues.
10. Family involvement is critical to the recruitment and retention of African American students in gifted education. Parents and extended family members must be involved early, consistently, and substantively in the recruitment and retention process.

Ford, D.Y. (1994). *The recruitment and retention of African American students in gifted education programs: Implications and recommendations* (RBDM 9406). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

The Recruitment and Retention of African American Students in Gifted Education Programs: Implications and Recommendations

PDF of Potential Underachievers

Click Here

Initial Checklist for Identifying Potential "Underachievers" From Gifted Programs

How the instrument was used:
Since research has shown that underachievement is not just an academic matter, but also has social, psychological, and cultural roots, educators must use both quantitative and qualitative indices to more effectively identify and better understand underachievement. When considering recruitment and retention of African-American students in gifted programs, this instrument was developed to help teachers and counselors become aware of the possibility of underachievement before it could be gleaned from test scores.

Possible uses:
This checklist can be used for any student from a minority group, not just African-Americans. It is not a foolproof indicator of underachievement, but can help teachers and counselors be aware of the possibility.

Special Populations

Abstract

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

Instruments:

- Attitudes Toward School and Achievement Survey
- Learning Environment Scale
- Racial Identity Scale for Black Students
- Follow-up Personal Interview Protocol
- Self-Perceptions of Factors Affecting Black Student Achievement Scale

This report presents results of a cross-sectional study consisting of interviews with 152 middle and high school (grades 6 to 9) African American students in five mid-Atlantic school districts in 1995. In every school district that participated in the study, African American students were underrepresented in the gifted education programs. Forty-four students (29%) in the study were identified as gifted by their respective school districts.

Academically diverse (gifted, potentially gifted, and average) African American students were surveyed regarding their perceptions of factors that negatively or positively affect their achievement. Nine variables were investigated, namely, racial/ethnic identity, test anxiety, attitudes toward school subjects, support for the achievement ideology, perceptions of the learning environment, and the influence of psychological, social (peer issues and societal injustices), and cultural/familial factors.

Comparative results are based on three academic groups (gifted, potentially gifted, and average students) and two achievement levels (achievers and underachievers). There were 17 gifted underachievers (11% of the sample), 27 gifted achievers (18%), 27 potentially gifted underachievers (18%), 40 potentially gifted achievers (27%), 18 average achievers (12%), and 20 average underachievers (13%). Almost 40 % of gifted and potentially gifted students were underachievers, and about 50% of average students were underachieving.

Results indicate that the variables most effective in discriminating among gifted and average achievers and underachievers were (1) students' attitudes toward reading, math, and science; (2) students' perceptions of parental achievement orientation; and (3) students' own achievement ideology.

Special Populations

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

Recommendations

1. In this study, 45% of the students were identified as potentially gifted.
2. Identifying African-American students as gifted may be difficult due to low achievement test scores and underachievement.
3. There was a discrepancy between students' achievement ideology (which is high) and achievement behaviors (which are low).
4. Students report high and positive family values regarding achievement and success.
5. School personnel must explore those aspects of the learning environment that inhibit students' achievement.
6. Self-perceptions (self-concept, self-esteem, and racial identity) play a significant role in student achievement.

Ford, D.Y. (1994). *A study of achievement and underachievement among gifted, potentially gifted, and average African American students* (Research Monograph 95128). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

Attitudes Toward School and Achievement Survey

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

How this instrument was used:
This survey was one of four scales used in conjunction with a socio-demographic questionnaire to provide information on what factors cause African American students to achieve or underachieve.

This particular questionnaire covers sections that ask about how the student feels about (a) school, (b) school subjects, (c) taking tests, and (d) friends and classmates. It was designed to help school personnel understand students and their perceptions.

Possible uses:
You may use this questionnaire to discover how students feel about these issues.

PDF of School & Achievement Survey

Click Here

Special Populations

Learning Environment Scale

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

How this instrument was used:
This scale was one of four used in conjunction with a socio-demographic questionnaire to provide information on what factors cause African American students to achieve or underachieve.

This scale contained 36 4-point Likert-type items. An alpha coefficient of .93 was generated for this instrument for the current sample. Five subscales assess students' perceptions of: Student-teacher relationships; opportunity to understand the material; teacher attitude about teaching; the extent to which they find school engaging; and the socio-emotional or affective climate of schools and classrooms.

Possible uses:
This scale may be used to ask African American students about their attitudes.

Questions 17, 26, and 33 mention Black students specifically. You might want to change these questions to reflect the targeted group description (e.g. Korean, Spanish).

Alternatively these questions might be changed to incorporate a more generic term, such as "gifted," "linguistically diverse," or "minority."

PDF of Learning Environment Scale

Click Here

Special Populations

Racial Identity Scale for Black Students

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

How this instrument was used:
This scale was one of four used in conjunction with a socio-demographic questionnaire to provide information on what factors cause African American students to achieve or underachieve.

This particular scale explores how Black students feel about themselves in their racial identity.

Possible Uses:
Explore the racial identity of Black students. Since most of the questions specifically address African American students, you would have to rewrite the questions to address any other ethnic group. This scale may be used as an example for constructing similar scales for other cultural groups.

Special Populations

Racial Identity Scale for Black Students - Results

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

Racial Identity Scale

A mean of 3.1 was generated for the Racial Identity Scale, which indicated the students have a positive regard for their racial status. No significant differences were found among the six groups (gifted achievers, gifted underachievers, potentially gifted achievers, potentially gifted underachievers, average achievers, and average underachievers). Mean scores ranged from 3.0 (average underachievers) to 3.2 (gifted underachievers, potentially gifted achievers, and average achievers).

Analyses of individual items indicate that students report high racial salience, a desire to learn more about their racial heritage, and pride in being a person of color. More specifically, 91% agreed or strongly agreed that “Being Black is an important part of the way I see myself,” 78% supported the statement “Black people should see themselves as Black first and foremost,” 99% supported the statement that “Black is Beautiful,” 95% agreed or strongly agreed that “I have a lot of pride in my racial group and our accomplishments,” and 82% supported the statement “Because I am black, I have many strengths.”

PDF of Racial Identity Scale

Click Here

Special Populations

Self-Perceptions of Factors Affecting Black Student Achievement Scale

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

How the instrument was used:
This was one of four scales used in conjunction with a socio-demographic questionnaire to provide information on what factors cause African American students to achieve or underachieve.

This particular scale was used to probe the factors that influence how well African American students do in school. It comprises two parts: Part 1 has 88 Likert-type questions that cover social factors (peer influences and social injustices), psychological, cultural (specifically, family achievement orientation), and school influences on their achievement. All the items are scored in the same direction: The higher the mean, the higher the agreement with the items.

Part 2 of the scale requires students to explain some of their responses.

Possible uses:
Use this scale as is to explore why African American students may underachieve.

For other ethnic groups, you may have to rewrite many of the questions that address Black or African American students and characteristics specifically.

Special Populations

Self-Perceptions of Factors Affecting Black Student Achievement Scale - Results

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

Self-Perceptions of factors affecting Black student achievement
The survey is divided in to 2 parts. Part 1 contains 88 4-point Likert-type items with a response scale that ranges from strongly disagree (1) to strongly agree (4). All items are scored in the same direction. Therefore, the higher the mean, the higher the level of agreement with the items or statements. In part 2, students provided additional information to explain their responses to selected Likert-type items.

Five subscales were identified with the following reliability coefficients (Cronbach's alpha):

Achievement ideology – 12 items, mean = 3.4, α = .86
Social subscale – Injustices – 7 items, mean = 2.5, α = .75
Social Subscale– Peer relationships and pressures – 22 items, mean = 2.1, α = .76
Psychological Subscale – 9 items, mean = 2.5, α = .66
Cultural Subscale – Family Achievement Orientation – 10 items, mean = 3.5, α = .82

PDF of Self-Perceptions Scale

Click Here

Special Populations

Follow-up Personal Interview Protocol

A Study of Achievement and Underachievement Among Gifted, Potentially Gifted, and Average African American Students

How this instrument was used:
This was a follow-up interview used in conjunction with a set of four surveys and the socio-demographic questionnaire to further explore what factors cause African-American students to achieve or underachieve.

Possible uses:
Use this interview with the other surveys to gain the same information

Use this interview as an example of the type of questions to ask when probing the attitudes of students towards their ethnicity, school and special programs.

PDF of Follow-up Personal Interview

Click Here

Special Populations

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Instruments:

- Characteristics of Giftedness and Cultural Values of Hispanics and the Behavioral Differences Resulting From Their Interactive Influence
- Characteristics of Giftedness and Cultural Values of American Indians and the Behavioral Differences Resulting From Their Interactive Influence

Abstract

This paper reviews literature characterizing gifted students from minority and/or economically disadvantaged families and areas and presents a proposal for focusing on the core attributes that underlie the giftedness construct as a more viable way to facilitate their identification and education. A qualitative content analysis method was used to analyze phrases and sentences in literature on the gifted to determine common features that characterize gifted children from the target population and the gifted population in general.

The results of this analysis became the basis for the proposal to use core attributes of giftedness to design more viable procedures of identifying giftedness in target population student groups. Ten core attributes of the giftedness construct were identified: communication skills, creativity/imagination, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. The paper concludes with implications for using these core attributes to facilitate teachers' recognition of gifted target population students and to guide the selection and development of assessment measures in identification.

Special Populations

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Implications

1. A variety of test and nontest measures would assess potential across a wide range of traits, behaviors, and aptitudes associated with the giftedness construct more effectively for students from minority and economically disadvantaged families.
2. Using a variety of tests and nontest measures make it less likely that students who are underrepresented in gifted programs will be handicapped by identification systems that rely on one or two measures to determine eligibility for gifted program services.
3. Effective interpretation of performances on a variety of measures requires standards that accommodate the differences in the expression of gifted student characteristics as exhibited by students who come from diverse cultural, ethnic, economic, and environmental background.
4. The core attributes provides an important way to assist educators working with minority or economically disadvantaged students in the establishment of links between specific gifted characteristics and the manner in which they may be displayed in classrooms.

Frasier, M. M., Hunsaker, S. L., Lee, J., Mitchell, S., Cramond, B., Krisel, S., García, J. H., Martin, D., Frank, E., & Finley, V. S. (1995). *Core attributes of giftedness: A foundation for recognizing the gifted potential of economically disadvantaged students* (RM 95210). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Characteristics of Giftedness and Cultural Values of Hispanics and the Behavioral Differences Resulting From Their Interactive Influence

"Absolute Aspects" of Giftedness	**Characteristic Cultural Values**	**Behavioral Differences**
High levels of verbal activity	Traditional language of family	Communicates fluently with peers and within community, even if using nonstandard English
Emotional depth and intensity	*Abrazo*, a physical or spiritual index of personal support	Requires touching, eye contact, feeling of support to achieve maximum academic productivity
Unusual sensitivity to feelings	Family structure and dynamic male dominance	Personal initiative, independent thought, verbal aggressiveness often inhibited in females
Conceptualize solutions to social capacity for processing information	Nuclear and extended family closeness valued	Often assumes responsibility for family and/or younger siblings
Unusual retentiveness; unusual capacity for processing information	Traditional culture	Adapts to successful functioning in two cultures
Leadership	Collaborative rather than competitive dynamic	Accomplishes more, works better in small groups than individually

Special Populations

Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

Characteristics of Giftedness and Cultural Values of American-Indians and the Behavioral Differences Resulting From Their Interactive Influence

"Absolute Aspects" of Giftedness	**Characteristic Cultural Values**	**Behavioral Differences**
Unusual sensitivity to expectations and feelings of others	Collective self – the tribe	Is a good mediator
Ability to generate original ideas and solutions		Figures out strategies to help group or team project
High level of language development		Communicates effectively collective idea of tribe
Idealism, a sense of justice, and advanced levels of moral judgment		Has personal and religious integrity
Leadership; strongly motivated by self-actualization needs		Accepts responsibility and discipline of leadership
High expectations of self and others		Encourages others to explore and develop abilities while developing own abilities
Creativity in endeavors	Traditions, heritage, beliefs	Makes up stories or poems
Extraordinary quantity of information, unusual retention		Recalls old legends about landmarks, etc.
Creativity in various areas of endeavor		Reproduces traditional designs or symbols in a variety of media

Special Populations

Abstract

Educators' Perceptions of Barriers to the Identification of Gifted Children from Economically Disadvantaged and Limited English Proficient Backgrounds

Instrument:

- Why Do We Identify So Few Gifted Children From Economically Disadvantaged and Limited English Proficiency Backgrounds?

This paper presents results from a 10-item survey designed to gain insights into the perceptions educators hold regarding the problems of identifying gifted children from economically disadvantaged and limited English proficient backgrounds. The survey was one component of a larger national field test study conducted to investigate the effectiveness of a staff development model and an assessment plan addressing identification and programming problems. There were 750 educators from 14 school sites who participated in the national field test study and responded to the survey.

They identified two issues as major barriers to identification:(a) test bias, and (b) teachers' inability to recognize indicators of potential in certain groups. Five other issues were identified as moderate barriers: (a) students' use of nonstandard English and/or limited proficiency in the English language, (b) differences in language experiences, (c) parents not providing a stimulating home environment, (d) use of narrow screening/selection processes, and (e) teachers' prejudicial attitudes. Three issues were identified as minor barriers: (a) beliefs that intellectual giftedness is not valued by certain groups, (b) teachers' fears about program quality diminishing when minority and economically disadvantaged students participated, and (c) beliefs about the limited number of gifted children who come from economically disadvantaged and limited English proficient backgrounds. These perceptions of barriers identified from the perspectives of educators provided several important implications for designing staff development programs to address the problems of identifying gifted children from economically disadvantaged and limited English proficient backgrounds.

Special Populations

Educators' Perceptions of Barriers to the Identification of Gifted Children from Economically Disadvantaged and Limited English Proficient Backgrounds

Implications

1. Issues of test bias cannot be resolved through staff development. Researchers and test developers must work to alleviate concerns in this area. Classroom teachers, however, can be better educated about tests and their proper use.
2. Staff development programs should include opportunities for teachers to understand the wealth of information they can provide about children that is not accessible through tests.
3. Staff development programs should include a variety of strategies to help teachers develop a common frame of reference about the core attributes of giftedness as they are expressed in different cultural and environmental contexts. Vignettes are a very useful strategy to help teachers develop story-pictures of children's gifts that match what happens in the classrooms.
4. Staff development should include information about the family processes operative within the homes of children from economically disadvantaged and limited English proficient backgrounds who are achieving, regardless of their circumstances or status.
5. Staff development programs should include opportunities for teachers to learn how to reinterpret checklist items for the parents of the children from economically disadvantaged and limited English proficient backgrounds in the communities they serve.
6. Staff development programs should be designed to provide teachers with opportunities to understand their role in identification as extending far beyond the task of generating names of students for testing.

Frasier, M. M., Hunsaker, S. L., Lee, J., Finley, V. S., Frank, E., García, J. H., & Martin, D. (1995). *Educators' perceptions of barriers to the identification of gifted children from economically disadvantaged and limited English proficient backgrounds* (RM95216). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?

Educators' Perceptions of Barriers to the Identification of Gifted Children from Economically Disadvantaged and Limited English Proficient Backgrounds

How this instrument was used:
The instrument was used to examine educators' perceptions of the critical barriers affecting the identification of gifted target population students. The 10 items on the survey were included based on current research literature and the personal and professional experiences of the researchers, and were believed to reflect the most frequently cited barriers to the identification of gifted target population. It was administered prior to the first staff development training session. The responses were then used to adjust the training materials used in the staff development model to train teachers to better identify gifted students from economically disadvantaged and limited English proficient backgrounds.

Possible uses:
Administrators and gifted program coordinators can use this survey to examine the attitude of teachers towards the identification of gifted students from ED and LEP backgrounds. The responses can then be used to develop training for teachers to aid in better identifying such students.

The process and format can be used to develop surveys to examine teachers' attitudes about a variety of issues.

PDF of Why Do We Identify So Few…

Click Here

Special Populations

Abstract

Square Pegs in Round Holes—These Kids Don't Fit: High Ability Students With Behavioral Problems

Instrument:

- Comparison Table of Characteristics Among Creative, Gifted, EBD, and ADHD

The legacy of Terman may be the creation of a new myth about gifted students. Terman reported that the students identified as gifted for his study (IQ>140) were superior in most areas of functioning to those who did not qualify. Terman claimed that gifted students were appreciably superior to unselected children in physique, health, social adjustment, and moral attitudes; a perspective that has become the predominant thinking in the field.

This widely held view may be one of the major, underpinning reasons that students with disabilities are routinely overlooked for gifted services. The present paper proposes that students with attention and/or behavioral problems, in particular, are not considered for gifted services due to overt negative behaviors and conduct problems that conflict with the "Terman perspective." Emphasis is placed on an examination of the similarities among characteristics of high ability/creative children and students identified with emotional or behavioral disorders and/or attention-deficit/hyperactivity disorder. Credence can be given to the idea that many of the manifestations of these disorders are similar to, and perhaps are, indicators of creative and/or learning potential. A major premise is that students who appear to have behavioral problems may be, in fact, gifted. Further, it is proposed that students identified with emotional or behavioral disorders and/or attention-deficit/hyperactivity disorder may be dually qualified for services (i.e., also eligible to be served in programs for the gifted.)

Important implications for understanding the rationale to include students with behavioral challenges in gifted programs, as well as recommendations for inservice and preservice teacher education, and considerations regarding interventions, curricula, and adaptations in the general school environment are provided.

Special Populations

Square Pegs in Round Holes—These Kids Don't Fit: High Ability Students With Behavioral Problems

Recommendations

1. Schools and universities need to devise inservice and preservice programs to provide information for educators that will broaden their views about the nature and needs of high ability students and students with behavioral difficulties to recognize the potential of students to concurrently possess both exceptionalities.
2. School systems need to revise identification procedures to locate bright students with behavioral problems.
3. The student evaluation should be comprehensive in nature; assessment must examine the full range of student strengths and weaknesses rather than merely "testing" for the predetermined, a priori category.
4. School systems need to implement practices that support educators in their efforts to serve bright students with behavioral problems.
5. Curricula for high ability students with emotional or behavioral disorders or attention-deficit/hyperactivity disorder need to be appropriate for each individual child and, thereby, designed to be challenging, creative, and motivating.
6. Instructional practices for high ability students with emotional or behavioral disorders or attention-deficit/hyperactivity disorder need to be diverse and determined for each child on an individual basis.
7. The learning environment designed for high ability students with emotional or behavioral disorders or attention-deficit/hyperactivity disorder needs to be conducive to creative pursuits and risk-taking, and to invite learning challenges.
8. Methods to develop autonomy, intrinsic motivation, and self-regulation for high ability students with emotional or behavioral disorders or attention-deficit/hyperactivity disorder in place of extrinsic contingencies need to be explored and employed.

Reid, B. D., & McGuire, M. D. (1995). *Square pegs in round holes—these kids don't fit: High ability students with behavioral problems* (RBDM 9512). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

Square Pegs in Round Holes—These Kids Don't Fit: High Ability Students With Behavioral Problems

PDF of Comparison Table

Click Here

Comparison Table of Characteristics Among Creative, Gifted, Emotional and Behavioral Disorders, and Attention Deficit Hyperactivity Disorder

How this instrument was used:
This table was used to demonstrate how students with emotional and behavioral disorders and/or attention deficit/hyperactivity disorder may present their giftedness and creativity in alternative ways.

Column one summarizes skills teachers considered critical for success in the regular classroom. The other columns summarize characteristics and behaviors that might be exhibited by such students. The potential for dissonance between the gifted individual and the school environment and/or teacher expectations becomes clearer.

Possible uses:
This table may be used to check the behavior of individual students when there is the possibility that the students might be gifted, creative, and suffering from a disorder.

Special Populations

Abstract

Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

Instruments:

- Interview Protocol
- Subject Questionnaire
- Parent Interview Questions

During the last decade, increasing attention has been given to the perplexing problem of high ability students who also have learning disabilities, but problems still exist regarding the identification and provision of support services and programs for this population. This study, at The University of Connecticut followed 12 young adults with disabilities who were successful at the college level. Extensive interviews with these young adults and their parents, as well as a thorough review of available school records, provided a fascinating portrait of the challenges and problems faced by high ability students with learning disabilities.

The participants reported both positive and negative academic experiences that centered around school personnel's understanding of their needs. The positive school experiences primarily centered around individual teacher support. Students also reported negative school experiences and difficulties that are typically associated with learning disabilities such as social problems, difficulty with teachers, and frustration with certain academic areas. These students generally stated that their talents were not addressed by the school system they attended. Parents often reported that school systems simply "did not know what to do" with their children. Positive personal characteristics exhibited by this group included high levels of motivation. Students displayed sheer determination in accomplishing goals. A major finding that emerged from the interviews was the positive impact of the services provided by The University of Connecticut Program for Students with Learning Disabilities. Advocacy, whether by parents or outside agencies, gave the necessary support needed by these students in realizing their true potential. This research provides a fascinating portrait of the issues that must be addressed if the educational and emotional needs of high ability students with learning disabilities are to be met.

Special Populations

Conclusions

Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

1. Many high ability students who have learning disabilities are not recognized for their gifts and may have negative school experiences.
2. Traditional remediation techniques like special education classification, tutoring, and/or retention offer little challenges to high ability students with learning disabilities and may perpetuate a cycle of underachievement.
3. High ability students with learning disabilities need support to understand and effectively use their strengths.
4. Lack of understanding by school personnel, peers, and self may cause emotional and academic problems for students struggling to cope with learning disabilities and giftedness.
5. Parents are often the only ones to offer support to their high ability children who also have learning disabilities. They can increase their effectiveness by exploring all available options and advocating for their children from an early age.

Reis, S. M., Neu, T. W., & McGuire, J. M. (1995). *Talents in two places: Case studies of high ability students with learning disabilities who have achieved* (RM95114). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Special Populations

Interview Protocol

Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

How this instrument was used:
This protocol guided individual interviews with student participants in the study.

Possible uses:
This protocol may be adapted for personal interviews with students when studying a variety of issues concerning their school experiences.

PDF of Interview Protocol

Click Here

Special Populations

Subject Questionnaire

Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

How this instrument was used:
This questionnaire was used to ask specific questions of potential interviewees and served as a preliminary source of issues to be investigated further during interviews, as well as an additional source of information for triangulation.

Possible uses:
This questionnaire may be adapted for initial investigation when studying a variety of issues concerning students' school experiences.

PDF of Subject Questionnaire

Click Here

Special Populations

Parent Interview Questions

Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

How this instrument was used:
This questionnaire was used to acquire parental perceptions of the student participant's experiences related to his/her learning disability and academic success in school.

Possible uses:
This questionnaire may be adapted to investigate parental perceptions of their children's school experiences.

PDF of Parent Interview Questions

Click Here

Section C

Classroom Practices

Classroom Practices

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Classroom Practices

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Classroom Practices

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

Instruments:

- Self-report Data Sheet
- English Passage Used to Select Students for Translation Workshop and Sample Translations
- Sample Script and Scoring Guide for the Simulated Interpretation Task

Abstract

This monograph contains general suggestions for implementing a curriculum in interpretation and translation at the high school level for bilingual youngsters who are experienced interpreters for their families. It includes a brief introductory discussion of the importance of nurturing the abilities of linguistically talented students and presents a brief introduction to the field of interpretation and translation. It includes general suggestions for implementing a curriculum in interpretation and translation as well as basic lesson suggestions that can be followed in teaching beginning courses in interpretation and translation.

Classroom Practices

Recommendations

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

1. Identification procedures should be aligned with more current definitions of giftedness. They should be broadened to better identify gifted culturally and linguistically diverse students.
2. Students with a unique type of linguistic giftedness, which is needed for translating and interpreting, should be identified among immigrant children.
3. The implementation of a Translation/Interpretation Program is beneficial in several ways: encourages collaboration among teachers of existing classes (e.g., Foreign Language, Spanish for Native Speakers, and English Language Development); motivates students because they see the long-term relevance of their learning; holds students accountable for their learning in many other language-oriented classes.
4. The identification of students with linguistic talent is not simple. Standardized tests are of little use. The most reliable predictor of students' ability to interpret seems to be their self-identification as experienced interpreters.

Angelelli, C., Enright, K., & Valdés, G. (2002). *Developing the talents and abilities of linguistically gifted bilingual students: Guidelines for developing curriculum at the high school level* (RM02156). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

Implementing a Translation and Interpretation Program

The implementation of a Translation and Interpretation Program at the high school level designed to nurture the talents of linguistically able students will require:

- a commitment by the administration and/or the teaching staff to developing a bilingual abilities and unique linguistic talents of its immigrant and mainstream students
- a sufficiently large number of students who have previously interpreted or translated
- a sufficiently large number of students interested in developing their abilities in Translation and Interpretation
- teachers (possible ESL and foreign language teachers) interested in developing their expertise in the area of translation and interpretation or immigrant-background teachers who were themselves young interpreters.

Classroom Practices

Self-report Data Sheet

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

How this instrument was used:
Students were asked to fill out this questionnaire to ascertain their degree of experience with translating and interpreting, and their suitability for the course in translating and interpreting

Possible uses:
The instrument may be used as is for the same purpose, or it may be adapted for use with other types of special curriculum by changing the questions to reflect the skills to be developed.

PDF of Self-report Data Sheet

Click Here

Classroom Practices

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

PDF of English Passage Text

Click Here

English Passage Used to Select Students for Translation Workshop and Sample Translations

How this instrument was used:
This passage was used to assess students' ability to translate from English to a home language. The passage presents challenges in the sense that it uses school language that may not have exact equivalents in many ethnic languages, and is written in a tone and style appropriate for communicating with students in American schools that may not find exact parallels in other languages.

The purpose of the passage is to determine whether students are able to render the essential elements of the message and not whether they are able to spell correctly or use impeccable language structure.

Sample translations A and B reflect strengths that samples C and D do not. However, they all contain transfer from English, misspellings and other disfluencies. They merely represent two different levels of fluency.

Possible uses:
The instrument may be used as is for the same purpose.

Classroom Practices

Sample Script and Scoring Guide for the Simulated Interpretation Task

Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level

How this instrument was used:
This script was used to assess the abilities of young interpreters to mediate tense interactions between two individuals.

Possible uses:
The instrument may be used as is for the same purpose.

PDF of Sample Script & Scoring Guide

Click Here

Classroom Practices

Teaching Thinking to Culturally Diverse, High Ability, High School Students: A Triarchic Approach

Instruments:

- Teaching Thinking Project Language Survey
- Language Usage Phone Interview
- Teaching Thinking Project Parent Survey

Abstract

This research monograph describes intervention research to improve thinking skills in high ability, high school students attending an urban magnet school for primarily low-income ethnic minority students who come from families that have historically experienced social inequality and various forms of discrimination in the United States. The intervention approach used is based on the Sternberg triarchic theory of intelligence. The triarchic approach to giftedness or high ability suggests that intelligence has three components: (a) an analytical ability, (b) creative ability, and (c) practical ability.

We discuss some of the details of offering such an intervention and provide some evidence that it is possible to identify and involve highly capable under-represented ethnic minority high school students in such an effort, based on Sternberg's model of giftedness and a triarchic view of intelligence. We also describe the assessment of triarchic ability skills for 57 participants in the intervention and 69 non-participants all of whom were pretested using the *Sternberg Triarchic Abilities Test* and the impact of the Teaching Thinking intervention on triarchic components. We describe a survey of parents focused on their aspirations for their children and how they support achievement in these high ability adolescents, the assessment of thinking styles in thinking skills intervention participants and in diverse sample of ethnic minority college students, and a way to understanding how high school and college students understand the nature of giftedness and what it takes to be academically successful, respectively.

Classroom Practices

Teaching Thinking to Culturally Diverse, High Ability, High School Students: A Triarchic Approach

Conclusions

1. College-based intensive and supportive intervention activities improved analytical and creative thinking skills, but not did improve practical skills.
2. Despite language background and usage differences between different ethnic groups, there was no difference in student writing performance.
3. Confidence in using English was related to writing performance measures rather than a preference for using English.
4. Students with higher grade point averages tended to be more hierarchical thinkers (i.e., they tend to prefer tasks that allow the creation of a hierarchy of goals to fulfill).

Coates, D. L., Perkins, T., Vietze, P., Reyes Cruz, M., & Park, S. (2003). *Teaching thinking to culturally diverse, high ability, high school students: A triarchic approach* (RM03174). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Teaching Thinking to Culturally Diverse, High Ability, High School Students: A Triarchic Approach

Teaching Thinking Project Language Survey

How this instrument was used:
This survey was used to find out students' spoken language background. Bilingual students can be categorized as "incipient," those who are in the process of learning a second language and tend to have limited English proficiency, and "fluent or functional." This survey helps to find out to which category a student belongs.

Possible uses:
The instrument may be used as is for the same purpose.

PDF of Teaching Thinking Project Language Survey

Click Here

Classroom Practices

Language Usage Phone Interview

Teaching Thinking to Culturally Diverse, High Ability, High School Students: A Triarchic Approach

How this instrument was used:
The phone survey was used to verify information on the language use survey. It was also used to find out whether students were more confident using English, their own language, or slang in speaking and writing and in what particular settings. To examine daily use of language, students were asked to report the language they used in social interactions on the particular day they were interviewed.

Possible uses:
The instrument may be used as is for the same purpose.

PDF of Phone Interview

Click Here

Classroom Practices

Teaching Thinking to Culturally Diverse, High Ability, High School Students: A Triarchic Approach

Teaching Thinking Project Parent Survey

How this instrument was used:
This survey assesses parents' view on their adolescents' academic and professional future. The researchers were interested in seeing if there was a relationship between length of time parents had spent in the United States and their aspirations for their son or daughter. In addition, they wanted to see if parents would refer, without probing by the researchers, to barriers to learning they or their children experienced. They were asked about their son or daughter's learning characteristics and level of interest in learning.

Possible uses:
The instrument may be used as is for the same purpose.

PDF of Teaching Thinking Project Parent Survey

Click Here

Classroom Practices

Qualitative Extension of the Learning Outcomes Study

Instruments:

- Program Profile Form
- Teacher Interview Questions
- Student Interview Questions
- Parent Interview Questions
- Teacher Satisfaction Survey
- Student Satisfaction Survey
- Parent Satisfaction Survey
- Administrator Satisfaction Survey
- Coordinator Satisfaction Survey

Abstract

The Learning Outcomes Study was a nationwide longitudinal investigation of 1,010 elementary school children who had just entered programs for gifted learners in grades 2 and 3 when the study began. The primary purpose of the project was to assess student changes during their first two years across four types of program arrangements: Within-Class programs, Pull-Out programs, Separate Classes, and Special Schools. These types of programs were selected because they are the most frequently used classroom arrangements nationwide.

The Learning Outcomes Study was extended by adding a qualitative dimension focusing on an "exemplary" model from each of the four program types. Through the program selection process, two evaluation tools were created, the Program Profile Form and a set of Program Satisfaction Surveys. The forms are useful for documenting the key components of a program. They can be used to design a model or to compare several programs. Four versions of the Program Satisfaction Survey were created for students, parents, teachers, and administrators. They contain parallel items which enable an evaluator to compare responses across similar concepts.

All selected programs addressed the needs of diverse populations of students in three different ways. They focused on the identification of underrepresented populations of students in their written policies, by focusing on the individual needs of all students, teachers took into consideration specific characteristics related to children from traditionally underserved populations, and teachers and administrators stressed parental and community partnerships with schools, thus encouraging families to become involved with the education of their children.

Classroom Practices

Qualitative Extension of the Learning Outcomes Study

Recommendations

1. A strong program begins with an administrator who is an advocate of gifted education. The administrator must be able to describe the needs and characteristics of gifted children and elicit support from the district and community.
2. Staff development on the special needs of gifted and talented children is essential for all faculty members. Program planning should involve staff members from many disciplines.
3. The entire school environment should emanate a positive attitude regarding the program. The program is an integral part of the school and can add to the learning atmosphere within the building.
4. Gifted and talented children have special characteristics that require different strategies. Teachers need to be aware both of the needs and of the various options available for meeting these needs.
5. Flexibility is a key ingredient for the success of any program. Students' needs and interests vary and both the teacher and program should be able to accommodate individual differences.
6. Identification and program activities should be sensitive to the needs of diverse populations of gifted and talented children. Culturally diverse and economically disadvantaged students should be actively recruited.

Delcourt, M. A. B., & Evans, K. (1994). *Qualitative extensions of the learning outcomes study* (Research Monograph 94110). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Program Profile Form

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
In this study, exemplary gifted program models were studied. The first step was investigating the written documentation for intended program features. The form was developed in order to efficiently review data from each program's written documentation. Categories on the form include: philosophy, goals, objectives, definition of giftedness, curricular plans, evaluation strategies, and provisions for students from culturally diverse and economically disadvantaged backgrounds.

Possible uses:
The instrument can be used as a first step in evaluating gifted programs. It can be modified to include programming features for other models, such as bilingual programs, and used to gain knowledge about the stated goals and features of such programs.

PDF of Program Profile Form

Click Here

Classroom Practices

Qualitative Extension of the Learning Outcomes Study

Teacher Interview Questions

How this instrument was used:
These questions were used to explore teacher perspectives of their actual beliefs and practices in their classrooms.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Teacher Interview Questions

Click Here

Classroom Practices

Student Interview Questions

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
These questions were used to explore student perspectives of their school experiences.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Student interview Questions

Click Here

Classroom Practices

Parent Interview Questions

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
These questions were used to explore parent perspectives of the gifted program serving their child.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Parent Interview Questions

Click Here

Classroom Practices

Teacher Satisfaction Survey

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
This brief survey was used to explore teacher perspectives of the efficacy of their gifted program.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Teacher Satisfaction Survey

Click Here

Classroom Practices

Student Satisfaction Survey

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
This brief survey was used to assess students' satisfaction with their gifted program.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Student Satisfaction Survey

Click Here

Classroom Practices

Parent Satisfaction Survey

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
This brief survey was used to assess parents' satisfaction with the gifted program serving their child.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Parent Satisfaction Survey

Click Here

Classroom Practices

Administrator Satisfaction Survey

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
This brief survey was used to assess administrators' satisfaction with the gifted program in their school/district.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Admin Satisfaction Survey

Click Here

Classroom Practices

Coordinator Satisfaction Survey

Qualitative Extension of the Learning Outcomes Study

How this instrument was used:
This brief survey was used to assess program coordinators' satisfaction with the gifted program in their school/district.

Possible uses:
The instrument can be used as is for the same purpose.

PDF of Coordinator Satisfaction Survey

Click Here

Classroom Practices

Evaluation of the Effects of Programming Arrangements on Student Learning Outcomes

Instrument:

- Student Activities Survey

Abstract

This study represents the first major attempt at the national level to assess the effects of programs for the gifted and talented on learning outcomes for elementary school students.

In terms of achievement, gifted children attending special programs (specifically special schools, separate classes and pull out programs) performed better than their gifted peers not in programs. As far as measures of affect were concerned, there were no differences by program type or ethnic status with respect to Social Acceptance. Likewise, no significant differences appeared either across groups or according to racial/ethnic status regarding internal vs. external criteria for success/failure. Students from Within-Class and Special School programs felt more capable than nongifted students in making judgments about what to do in school. Students from Separate Class programs were the most reliant on teacher guidance for completing assignments and solving problems. The programs with the lowest scores on the Preference for Challenge scale were the ones with the highest levels of achievement in a traditionally more academic environment, the Separate Class and Special School programs.

Regarding attitudes toward learning, students in Special Schools had the highest scores. This means that they were the most likely to perceive the classroom as a student-centered environment. The most striking pattern among the data from the teacher ratings was the significantly lower scores for students in Special Schools as compared to students in all other types of programs. These results lead to a conclusion that no single program fully addresses all the psychological and emotional needs of students.

Classroom Practices

Evaluation of the Effects of Programming Arrangements on Student Learning Outcomes

Conclusions

1. There were significant differences in achievement and affect for students in different types of programs for the gifted (Special Schools, Separate Classes, Pull-Out Programs, Within-Class Programs). No single program fully addressed all the psychological and emotional needs of gifted students.
2. Gifted children in Pull-Out, Separate Class, and Special School programs showed higher achievement than gifted students who were not in programs and, in most cases, than those from Within-Class programs and nongifted students. Although a limited amount of time was spent in the resource room (approximately 2 hours/week), the emphasis on academics within the Pull-Out model appears to have contributed to the achievement level of these students.
3. Students from the Separate Class programs scored at the highest levels of achievement and at the lowest levels of perception of academic competence, preference for challenging tasks, sense of acceptance by peers, internal orientation, and attitudes toward learning.
4. Students from Within-Class and Special School programs felt that their learning environments gave them the opportunity to make judgments independently. They felt more capable than nongifted students to make judgments about what to do in school. Students in Special Schools were more likely to view their classrooms as student-centered than their peers in all other settings.
5. The achievement levels of African American students in gifted programs remained above the national average throughout the two years of the study. Given a list of standard behavior problems, gifted students were found to have similar problems in kind and degree as nongifted students.
6. Teachers in Special Schools consistently rated their students lower in creativity, learning, and motivation. Therefore, it is recommended that members of selection committees for gifted programs should observe the relative ratings of students nominated for their programs instead of selecting a priori cut-off scores.

Delcourt, M. A. B., Loyd, B. H., Cornell, D. G., & Goldberg, M. D. (1994). *Evaluation of the effects of programming arrangements on student learning outcomes* (Research Monograph 94108). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Student Activities Survey

Evaluation of the Effects of Programming Arrangements on Student Learning Outcomes

How this instrument was used:
This survey was sent home to parents to be completed with their child. Items pertained to student involvement in both curricular and extracurricular special projects in areas such as science, mathematics, humanities, art, and other areas. Data included tallies of the number of types of projects in which students participated over a 2-week period.

Possible uses:
This survey may be used to gain insight into the types of challenging/creative productive activities students are taking part. It may be used to find out what teaching activities a teacher may have to utilize, or what type of enrichment activities a program needs to plan.

PDF of Student Activities Survey

Click Here

Classroom Practices

Evaluate Yourself

Instrument:

- Evaluation Guidelines

Abstract

The health of a gifted and talented program requires both self-examination and external evaluation. Routine self-examination allows early detection of educational problems and confirmation of a sound programmatic approach. This discussion is intended to highlight some of the common sense ways of reflecting upon one's programmatic achievements and shortcomings, and discuss briefly the value of an external evaluation component in that reflective process. Self-evaluations help maintain an educational program's health on a daily basis; expert external evaluation is essential to an in-depth and objective understanding.

External evaluators offer training and experience and an "objective eye" rarely found inside a program. They can help identify goals and objectives at the onset of a program and can help participants take stock of an ongoing program. They can help establish standards, benchmarks, and milestones with which to measure student, teacher, administrator, and program performance against multiple goals. External evaluators can also provide feedback about progress toward those goals and inform policy decision makers about the impact of a program in a credible fashion. External evaluation plays an invaluable role in refining healthy programs and has a significant impact on future funding and programmatic concerns.

Evaluation is essential to learn how a gifted program works, how effective programs are, and how to raise their standards of quality. Self-evaluations should be a routine part of daily program activity.

Classroom Practices

Evaluation Guidelines

Evaluate Yourself

General Evaluation Guidelines

- Make sure the evaluation serves the practical information needed by targeted audiences.
- Make sure the evaluation is realistic (politically and pragmatically) and cost effective.
- Make sure that the evaluation is conducted in an ethical manner.
- Make sure the evaluation is as accurate as possible.

Specific Guidelines for Evaluating Gifted and Talented Education Programs

- Make sure program documentation exists.
- Make sure you review as many relevant data sources as possible.
- Make sure you compare the program's stated goals with their actual performance.
- Make sure you describe and assess the climate.
- Make sure you talk to students.
- Make sure the program finances are reviewed.
- Make sure community and school board components are included in the evaluation.

Fetterman, D. M. (1993). *Evaluate yourself* (RBDM 9304). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Evaluation Questions

Evaluate Yourself

1. Is there any program documentation about the philosophy, curriculum, finances, and staffing about the program?
2. Is there any documentation about the identification, screening, and selection criteria?
3. Are the identification, screening, and selection criteria appropriate for the program in operation? (Typical programs have an academic focus – for example. humanities, mathematics, or science; some programs focus on visual and performing arts.)
4. Has the program conducted either internal or external evaluations? Have these records been maintained? What were the findings and recommendations? Were the recommendations followed, and why or why not?
5. Does the program operate in accordance with its own philosophy?
6. Does the curriculum reflect the philosophy and goals of the school program?
7. Do staff members understand and implement the stated program philosophy?
8. Do staff members work well together?
9. Do they think they are provided with adequate and appropriate support, ranging from supplies to compensation packages? What preparation time and professional development funds are available for teachers? Do teachers find them adequate or appropriate?
10. Are students engaged? Is there any observation, product, interview, or other documentation of critical and creative thinking in the program?
11. What do students think about the program? Do they like one topic or teacher more than another? Why?
12. What does the budget look like? How was it developed? Is it adequate?
13. What are the level and quality of community support or interaction? Are there obstacles to community or board support?

Classroom Practices

Sample Questions

Evaluate Yourself

Sample questions for evaluating a classroom

1. Does the teacher provide multiple resources?
2. Is the curriculum driven by a collaborative effort?
3. Does the teacher provide varied, interactive learning experiences?
4. Does the teacher provide cooperative learning experiences?
5. Does the teacher facilitate student self-evaluation?
6. Does the teacher identify student learning styles?
7. Does the teacher communicate with multiple groups?
8. Does the teacher encourage student decision-making?
9. Does the teacher expect critical-creative thinking?

Sample questions for evaluating students

1. Is the student involved or engaged in classroom activity without continuous supervision?
2. Does the student have curricular options?
3. Does the student continue to study in the middle of other student activity?
4. Does the student interact constructively with other students?
5. Do students assess themselves and maintain records of their progress?
6. Does the student have the appropriate materials and support services to function effectively?
7. Does the student communicate effectively with the teacher?
8. Does the student work with other students?
9. Does the student exhibit critical-creative thinking?

Classroom Practices

Abstract

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Instruments:

- Professional Development Practices in Gifted Education
- Liaison Questionnaire
- Assumptions Survey for Liaisons
- Classroom Practices Questionnaire for Teachers
- Teachers' Assumptions and Stages of Involvement Survey
- Implementation Strategies Questionnaire for Teachers
- Samples of Successful Strategies Used by Teachers
- Tiered Activities for Differentiation

Professional development is sometimes viewed as an event or a moment in time. What are the best practices in professional development? What are the best methods of gaining access to professional development? What is an appropriate working definition?

What are appropriate techniques of monitoring professional development? These questions and others were important to the design and development of our 5-year research study that included multiple phases:

- creating and disseminating a national survey of professional development practices in gifted education,
- developing a series of modules (background information, transparencies, presenters' notes, articles, instruments, and videos) on conceptions of giftedness, curriculum modification, curriculum differentiation, and enrichment learning and teaching,
- piloting the professional development modules, collecting data from pilot study; conducting, interviews, and analyzing the effectiveness of the training materials,
- revising professional development modules,
- developing a series of instruments to assess the process and outcomes of the study,
- training half of the local liaisons who would be working with a small group of classroom teachers on how to use the pedagogy of gifted education with their students,
- collecting data from instruments, logs, portfolios, and artifacts documenting the progress of students and teachers, and analyzing multiple forms of data using quantitative and qualitative techniques.

Detailed results of each phase are outlined in each chapter.

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Conclusions

1. The use of gifted education methods in the general education classroom provides students with more choices in materials, resources, and products related to their interests and abilities.
2. Gifted education strategies help teachers recognize students' differences in learning styles, expression styles, and abilities.
3. Gifted education trainers help teachers grow both personally and professionally by changing their routines and looking at their instructional methods with a renewed set of eyes.
4. Despite concerns about daily school schedules, testing pressures, and lack of collaboration time to participate in gifted education training, teachers are often able to implement significant changes in their classrooms.
5. Gifted education pedagogy encourages teachers to raise their level of expectations for student work, and students respond positively to changes in classroom activities.

Gubbins, E. J., Westberg, K. L., Reis, S. M., Dinnocenti, S., Tieso, C. L., Muller, L. M., Park, S., Emerick, L. J., Maxfield, L. R., Burns, D. E. (2002). *Implementing a professional development model using gifted education strategies with all students.* (RM20172). Storrs, CT: *The National Research Center on the Gifted and Talented, University of Connecticut.*

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Professional Development Practices in Gifted Education – District Level Survey

How this instrument was used:
This questionnaire was used to elicit information from district level officials about their district's policies regarding professional development.

1. Who plans the professional development experiences in gifted education for a school district – an administrator or committee that surveys teachers' interests, etc?
2. What is the nature of a district's professional development follow-up procedures?
3. What is the extent to which school districts encourage collaboration between and among teachers, between researchers and teachers, or between administrators and teachers?
4. What is the school district's perceived impact of the professional development experiences?

Possible uses:
This instrument may be used as is, or adapted to elicit information about other aspects of district education policy.

PDF of District Level Survey

Click Here

Classroom Practices

Liaison Questionnaire

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

How this instrument was used:
This instrument was used to elicit demographic information about the liaison between the researchers and the teachers in the study, as well as information about the school and district.

Possible uses:
This instrument may be used as is, or adapted to elicit information about other aspects of district education policy.

PDF of Liaison Questionnaire

Click Here

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Assumptions Survey for Liaisons

How this instrument was used:
This instrument was used to determine liaisons' assumptions about gifted students.

Possible uses:
This instrument may be used as is.

PDF of Assumption Survey Liaisons

Click Here

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Classroom Practices Questionnaire for Teachers

How this instrument was used:
This instrument was used to ask teachers about their classroom practices, how they adjusted their instructional and curricular strategies, and also demographic information.

Reliability Information:
The original instrument yielded six factors that accounted for 38% of the variability in the original sample. Alpha reliabilities for the factors were:
Questioning and Thinking: α = .83
Providing Challenges and Choices: α = .79
Reading and Written Assignments: α = .77
Curriculum Modifications: α = .72
Enrichment Centers: α = .72
Seatwork: α = .53

Possible uses:
This instrument may be used as is, or adapted to elicit information about other aspects of district education policy.

PDF of Teachers Questionnaire—CP

Click Here

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Teachers' Assumptions and Stages of Involvement Survey

How this instrument was used:
This instrument was used to ask teachers about their assumptions about gifted students and education, as well as to probe their level in the change process going on in their school. This helped researchers monitor the potential levels of implementing one or more of the strategies to modify, differentiate, and enrich curriculum.

Possible uses:
This instrument may be used as is, or adapted to elicit information level about other aspects of interest to a researcher.

PDF of Teachers' Assumptions Survey

Click Here

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Implementation Strategies Questionnaire for Teachers

How this instrument was used:
This instrument was used to probe the extent to which the modification, differentiation, and enrichment strategies were implemented throughout the study.

Possible uses:
This instrument may be used as is, or adapted to elicit information about other aspects of interest to a researcher.

PDF of Teachers Questionnaire—IS

Click Here

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

PDF of Successful Strategies

Click Here

Samples of Successful Strategies Used by Teachers

Sixth Grade – Electricity Unit

How this instrument was used:
This framework was used to plan high quality curriculum across disciplines.

Possible uses:
Use this as an example to develop curriculum.

Classroom Practices

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

Tiered Activities for Differentiation

- Grade 1: Fish/sea Animals
- "Treasure in the Snow" Activities
- Grade 3: Native-American Study
- World War II
- Grade 4: Social Studies
- Short Stories
- Expedition - yearlong enrichment
- Archeologists-R-Us
- Grade 6: Development of Cultures
- Grade 6: Poetry project
- Endangered Creature: The Frizard

Classroom Practices

Tiered Activities for Differentiation

Implementing a Professional Development Model Using Gifted Education Strategies With All Students

How this instrument was used:
This framework was used to plan high quality curriculum tiered for different ability levels.

Possible uses:
Use this as an example to develop curriculum.

PDF of Tiered Activities

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Instruments:

- Cluster Invitation Letter
- Parental Attitudes About Enrichment Opportunities Survey
- Content Area Preferences Scale
- Student Product Assessment Form
- Enrichment Cluster Student Evaluation
- Enrichment Cluster Facilitator Evaluation Form
- Sample Enrichment Cluster Offerings
- Enrichment Cluster Interview Protocol

Abstract

This study addressed the questions and the challenges presented in the report by the United States Department of Education, Office of Educational Research and Improvement, entitled *National Excellence: A Case for Developing America's Talent.* Consistent with the priorities of the Jacob Javits Act, this study was designed to assess the impact of providing gifted education pedagogy, specifically, a series of enrichment clusters, to the entire population of two schools in economically disadvantaged urban settings with a high percentage of minority students. Enrichment clusters provide a regularly scheduled time for students and adults, who share a common interest and purpose, to come together. These clusters are based on the acquisition of advanced content through inductive opportunities for multi-age, cross-grade student participation in open-ended investigations of student interests.

Elementary schools in two urban districts were selected to participate in the study. Students in all schools were assessed regarding their attitudes toward school and their content area preferences, and students from the treatment schools responded to questions regarding the enrichment clusters. Data were also collected from parents and teachers. Qualitative data were collected from teachers, administrators, students, and parents. Teacher practices were affected both in the enrichment clusters and in the teachers' regular classrooms. Advanced content was integrated into 95% of the clusters and included areas such as introduction of new concepts and content, teaching specific investigative methodologies, use of advanced vocabulary and authentic "tools," and use of advanced thinking and problem solving strategies. Approximately 60% of the teachers who facilitated clusters indicated that they transferred strategies and content from the clusters into their classrooms, although this had not been requested of these teachers.

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Recommendations

1. Enrichment clusters were implemented successfully in low socioeconomic, culturally diverse urban schools in which these clusters can be adapted and tailored to fit individual school schedules and needs.
2. It was possible to provide a block of time during the school week for enrichment clusters focusing on student and teacher interests, where students have choices, and when there was challenge and enjoyment in learning.
3. Total schoolwide enrichment could be provided and gifted education pedagogy was successfully extended to students of all achievement levels using enrichment clusters.
4. Approximately 90% of the students completed group or individual products in clusters, and there were no differences in the number of products produced when examined by achievement, gender, special program placement, or ethnicity.
5. The quality of products was examined and no differences were found among various achievement levels of students with respect to the quality of their products.
6. Teachers who facilitated or assisted with clusters began to use strategies from enrichment clusters in their regular classrooms. These strategies included using both content and methods.
7. Teachers used advanced content and methodologies in the enrichment clusters and provided challenges and choices to the students.

Reis, S. M., Gentry, M., & Park, S. (1995). *Extending the pedagogy of gifted education to all students* (Research Monograph 95118). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Cluster Invitation Letter

How this instrument was used:
This letter was sent to teachers, parents and other interested parties to announce the enrichment clusters at the intervention schools.

Possible uses:
Use this letter as an example when informing interested parties of a similar project.

PDF of Cluster Invitation Letter

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Parental Attitudes About Enrichment Opportunities Survey

How this instrument was used:
This survey was used to explore the effects of the implementation of enrichment clusters on parental attitudes about school satisfaction.

Reliability Information:
Factor analysis yielded two factors, accounting for 62.5% of total variance.
Perception of Enrichment: α = .87
Satisfaction with Enrichment: α = .77

Possible uses:
Use this survey as is to answer the same questions.

PDF of Enrichment Opportunities Survey

Click Here

Classroom Practices

Content Area Preference Scale (CAPS)

Extending the Pedagogy of Gifted Education to All Students

How this instrument was used:
This instrument was developed to measure students preference toward school subjects (i.e., reading, mathematics, science, and social studies) before and after an intervention of curriculum compacting.

Reliability Information:
Factor analysis of 20 items yielded 4 subscales, all with reliabilities greater than .80.

Possible uses:
Use this survey as is to answer the same question.

PDF of CAPS

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Student Product Assessment Form (SPAF)

How this instrument was used:
This instrument was used to assess the quality of student products as a measure of achievement. It includes questions about the process of product development and the overall quality of the product.

Reliability Information:
Interrater reliability of .961 was established for the total of all the items.

Possible uses:
Use this survey as is to answer the same questions.

PDF of SPAF

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Enrichment Cluster Student Evaluation

How this instrument was used:
This evaluation form was used in one of two versions: one with K-2 students, and one with grade 3 – 6 students. The forms were used to elicit information from students about their experiences in enrichment clusters and their suggestions for improving future clusters.

Possible uses:
These evaluation forms can be used to gather feedback from students about enrichment clusters, or may be modified to gather feedback about other program offerings.

PDF of EC Student Evaluation

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Enrichment Cluster Facilitator Evaluation

How this instrument was used:
This evaluation form was used to gather feedback from cluster facilitators about the quality of their clusters, and the cluster program in general.

Possible uses:
These evaluation forms can be used to gather feedback from facilitators about enrichment clusters, or may be modified to gather feedback about other program offerings.

PDF of EC Facilitator Evaluation

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Sample Enrichment Cluster Offerings

How this instrument was used:
These descriptions were used to provide examples of the type of clusters that could be offered, as well as the way clusters could be advertised to students to create excitement and interest.

Possible uses:
These descriptions can be used as examples for facilitators and as training tools for those interested in facilitating clusters.

PDF of Sample EC Offerings

Click Here

Classroom Practices

Extending the Pedagogy of Gifted Education to All Students

Enrichment Cluster Interview Protocol

How this instrument was used:
These questions were used to guide interviews with facilitators after completion of their enrichment clusters. The questions elicit information about the students, specific methodologies as well as their impressions of the value of the clusters.

Possible uses:
The questions can be used in the same way or adapted to gather feedback about other program offerings.

PDF of EC Interview Protocol

Click Here

Classroom Practices

Why Not Let High Ability Students Start School in January? The Curriculum Compacting Study

Instruments:

- Teacher Data Form
- Stages of Concern Questionnaire

Abstract

During the 1990-1991 academic year, The National Research Center on the Gifted and Talented at the University of Connecticut conducted a study to examine the effects of a curriculum modification technique entitled curriculum compacting that is designed to modify the regular curriculum to meet the needs of gifted and talented students in the regular classroom. The study investigated the types and amount of curriculum content that could be eliminated for high ability students by teachers who received various levels of staff development. It also examined what would happen to students' achievement, content area preferences, and attitudes toward learning if curriculum compacting was implemented. Districts who participated had to meet and accept the following criteria: (1) no previous training in curriculum compacting, and (2) random assignment to treatment groups, with elementary student populations that included economically disadvantaged and limited English proficient students. Teachers in 27 school districts were randomly assigned by district to four groups, three treatment groups that received increasing levels of staff development or a control group. After receiving staff development services, teachers in the treatment groups implemented curriculum compacting for one or two high ability students in their classrooms. The control group teachers identified one or two high ability students and continued normal teaching practices without curriculum compacting. Pre and post achievement tests, *Content Area Preference Scales*, and a questionnaire regarding attitude toward learning were administered to identified students. The results indicate that the compacting process can be implemented in a wide variety of settings with positive effects for both students and teachers. In addition, the results expand knowledge about effective and efficient methods for training teachers to make appropriate and challenging curricular modifications for gifted and talented students in regular classrooms.

Classroom Practices

Why Not Let High Ability Students Start School in January? The Curriculum Compacting Study

Conclusions

1. Ninety-five percent of the teachers were able to identify high ability students in their classes and document students' strengths.
2. Eighty percent of the teachers were able to document the curriculum that high ability students had yet to master, list appropriate instructional strategies for students to demonstrate mastery, and document an appropriate mastery standard.
3. Approximately 40-50% of traditional classroom material could be eliminated for targeted students in one or more of the following content areas: mathematics, language arts, science, and social studies.
4. The most frequently compacted subject was mathematics, followed by language arts. Science and social studies were compacted when students demonstrated very high ability in those areas.
5. Replacement strategies did not often reflect the types of advanced content that would be appropriate for high ability students, indicating that additional staff development, as well as help from a specialist in the district, would be beneficial.
6. When teachers eliminated as much as 50% of the regular curriculum for gifted students, no differences in the out-of-level post achievement test results between treatment and control groups were found in reading, math computation, social studies, and spelling.

Reis, S. M., Westberg, K. L., Kulikowich, J., Caillard, F., Hébert, T., Plucker, J., Purcell, J. H., Rogers, J. B., & Smist, J. M. (1993). *Why not let high ability students start school in January? The curriculum compacting study* (Research Monograph 93106). Storrs, CT: The National Research Center on the Gifted and Talented,University of Connecticut.

Classroom Practices

Teacher Data Form

Why Not Let High Ability Students Start School in January? The Curriculum Compacting Study

How this instrument was used:
This instrument was used to gather information from teachers in the treatment and control groups on the following variables: staff development hours in gifted education, availability of enrichment resources, hours of planning time, classroom grouping practices, availability of pretests and curriculum guides, years of teaching experience, and graduate hours in gifted education.

Possible uses:
The instrument can be used as is to gather teacher information concerning their participation in gifted education. The instrument can also be adapted by substituting questions about other specialty areas, such as special education, or bilingual education.

PDF of Teacher Data Form

Click Here

Classroom Practices

Stages of Concern Questionnaire

Why Not Let High Ability Students Start School in January? The Curriculum Compacting Study

How this instrument was used:
This is a 35-item survey measuring seven stages of concern with regard to the adoption of an innovation:

- awareness (awareness and concerns about the innovation),
- information (concerns about what the innovation is and what use of the innovation entails),
- personal (personal concerns and uncertainties about the innovation),
- management (concerns about management, time, and logistical aspects of the innovation),
- consequence (concerns about the impact of the innovation upon students),
- collaboration (concerns about working with others), and
- refocusing (concerns about new ideas to replace or alter the innovation).

The instrument yields an individual profile and was used for diagnostic purposes only. It was used to examine changes that may have resulted after teachers received different levels of staff development and provided curriculum compacting for students.

Reliability Information:
Factor analysis yielded six factors with alpha reliabilities of .64, .78, .83, .75, .82, and .71.

Possible uses:
The instrument can be used as is before, during, and after implementing training on Curriculum Compacting. The instrument can also be adapted for use with other new strategies for which teachers will receive training.

PDF of Stages of Concern

Click Here

Classroom Practices

Voices of Perfectionism: Perfectionistic Gifted Adolescents in a Rural Middle School

Instruments:

- Goals and Work Habits Survey
- Empowering Gifted Behavior Scale

Abstract

This study investigated the characteristics of perfectionistic gifted male and female adolescents in a rural middle school, how they perceived their perfectionism, the influences on their perfectionism, and the consequences of their perfectionistic behaviors in the context of their rural middle school experiences. Qualitative and quantitative methods were used to identify factors that may influence the perceptions and behaviors of this population.

Findings from this study confirm the theoretical proposition that perfectionism is a characteristic of many gifted adolescents. In this study, 87.5% of gifted adolescents in accelerated courses in a rural middle school were identified as having perfectionistic tendencies. Several differences exist between the healthy perfectionists and the dysfunctional perfectionists. Healthy perfectionists possessed an intense need for order and organization; displayed self-acceptance of mistakes; enjoyed high parental expectations; demonstrated positive ways of coping with their perfectionistic tendencies; had role models who emphasize doing one's "best"; and viewed personal effort as an important part of their perfectionism. The dysfunctional perfectionists lived in state of anxiety about making errors; had extremely high standards; perceived excessive expectations and negative criticisms from others; questioned their own judgments; lacked effective coping strategies; and exhibited a constant need for approval.

Family, teacher, and peer influences on perfectionism were perceived as mostly positive for the healthy perfectionists, but negative for the dysfunctional perfectionists. The impact of gender roles was not found as an influence. Based on the findings of this study, suggestions for parents, teachers, counselors, and school systems were delineated to assist them in recognizing and helping gifted adolescents deal with their perfectionistic tendencies.

Classroom Practices

Voices of Perfectionism: Perfectionistic Gifted Adolescents in a Rural Middle School

Conclusions

1. Perfectionism is a combination of thoughts and behaviors associated with excessively high standards or expectations for one's own performance and is recognized as a common emotional trait of giftedness.
2. Healthy perfectionists believed their perfectionism was a positive force in their relationships with parents and families, while the dysfunctional perfectionists viewed perfectionism as creating a strain in these relationships (i.e., parental expectations and criticism).
3. Healthy perfectionism was associated with two positive school results. Since perfectionists were organized and conscientious, they excelled at leadership in a group setting. Due to their high expectations, they were challenged to complete more advanced coursework than their peers.
4. Healthy perfectionism also aided students in their future plans. By setting lofty goals for coursework and grades, they were more prepared for rigorous college and career goals they set for themselves.
5. Many perfectionistic gifted adolescents were distressed by their own and others' expectations, set very high standards for themselves, and experienced intense guilt and frustration when they made mistakes or failed.

Schuler, P. A. (1999). *Voices of perfectionism: Perfectionistic gifted adolescents in a rural middle school* (RM99140). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut

Classroom Practices

Goals and Work Habits Survey

Voices of Perfectionism: Perfectionistic Gifted Adolescents in a Rural Middle School

How this instrument was used:
This instrument was used to identify gifted students with perfectionistic tendencies. Six factors related to perfectionism are measured: Concern over mistakes, personal standards, parental expectations, parental criticism, doubts over one's actions, and order and organization. Three cluster groups of perfectionistic types derived from this instrument include: nonperfectionistic type, healthy or normal perfectionistic type, and the dysfunctional or neurotic type.

Possible uses:
The instrument can be used as is.

PDF of Goals & Work Habits Survey

Click Here

Classroom Practices

Empowering Gifted Behavior Scale

Voices of Perfectionism: Perfectionistic Gifted Adolescents in a Rural Middle School

How this instrument was used:
This instrument was used to gather additional information about the participants of the study on perfectionism in gifted adolescents, specifically to identify patterns of enabling and disabling perfectionistic behaviors in gifted students. The mathematics, social studies, and science teachers of the 20 participants rated them using the Empowering Gifted Behavior Scale.

Possible uses:
The instrument can be used as is.

PDF of Empowering Gifted Behavior Scale

Click Here

Classroom Practices

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

Instruments:

- Survey of Practices With Students of Varying Needs
- Classroom Practices Record
- Interview Protocols
- Classroom Practices Observation of Preservice Teachers Data Collection Form

Abstract

The National Research Center on the Gifted and Talented (NRC/GT) at the University of Virginia conducted a 3-year project to study how preservice teachers develop an awareness of the needs of academically diverse learners and implement and/or modify instruction to meet those needs. The participants were surveyed, interviewed, observed to investigate their attitudes and beliefs towards academically diverse learners; (b) the teaching practices they utilized in response to the academic diversity in their classrooms; and (c) the impact of the study's interventions on their attitudes, beliefs, and practice. The study was divided into three phases. Phase 1 preservice teachers received no treatment (n = 41). This phase provided baseline data. The preservice teachers in Phase 2 were randomly assigned to one of two treatment groups: those who participated in an interactive, full-day *workshop* on differentiation (n = 22), and those who participated in the *workshop* and had a *curriculum coach* who worked with them throughout their student teacher placement (n = 23). Phase 3 followed a subsample of the participants from phases 1 and 2 through their first year assignments as regular classroom teachers (Phase 1: n = 6 and Phase 2: n = 4). The qualitative study of a sub-sample of these teachers yielded a number of themes. (1) preservice teachers used ambiguous criteria for identifying student differences and needs. (2) preservice teachers expressed limited knowledge concerning differentiating instruction and demonstrated limited strategies for differentiation. (3) preservice teachers were influenced by factors which complicated and discouraged understanding and addressing of student differences and needs. (4) the study suggested that intervention measures provided a starting point for changing practice. In order to develop teachers who are able to meet the varied needs of academically diverse learners, changes are required in all levels of teacher preparation and enculturation.

Classroom Practices

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

Recommendations

1. Changes are required in all levels of teacher preparation in order to meet the varied needs of academically diverse learners.
2. The role of a novice teacher is a confounding one at best. Attempts to understand and meet needs of diverse learners complicate issues of planning and management and require subtle understandings and applications of both content and pedagogy.
3. Preservice teachers must learn how to translate beliefs into classroom practices so the role of the cooperating teacher is critical.
4. Preservice teachers use ambiguous criteria for identifying student differences and needs and express a limited knowledge of strategies for differentiation.
5. Preservice preparation that focuses attention on academic diversity, student-centered views of instruction, and strategies to address student differences may be necessary to break the "one-size-fits all" conception of teaching.
6. Workshop intervention raised preservice teachers' awareness of academically diverse learners and sustained their commitment to implement practices to address student's needs.

Tomlinson, C. A., Callahan, C. M., Moon, T., Tomchin, E. M., Landrum, M., Imbeau, M., Hunsaker, S. L., & Eiss, N. (1995). *Preservice teacher preparation in meeting the needs of gifted and other academically diverse students* (Research Monograph 95134). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

Survey of Practices With Students of Varying Needs

How this instrument was used:
This instrument was used to assess attitudes and beliefs about academically diverse learners and differentiated instruction appropriate for meeting their needs. Participants for each phase of the study completed the SOP at the start of the observation semester and at the end of the observation semester, thus making pre- and post-comparisons possible.

Possible uses:
The instrument can be used as is.

PDF of Survey of Practices

Click Here

Classroom Practices

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

PDF of Classroom Practices Record

Click Here

Classroom Practices Record (CPR)

How this instrument was used:

This instrument is a modified version of the *Classroom Practices Record* by Westberg, Dobyns, and Archambault. It was used to systematically collect information about student composition of classrooms and the types of instructional activities taking place during the observation period. The CPR contains three sections:

(a) Identification Information which provides a record of the observation itself, and asks for information regarding identification of target students and their ethnicity;

(b) Physical Environment Inventory which allows recording of availability of learning centers and small working group arrangements under the direction of the preservice teacher which might facilitate individualizing or differentiating assignments;

(c) Curricular Activities, which solicits information about the types of curricular

(d) activities that occurs during a specified 20 minute period of each hour and a half observation as well as the numbers of students in various groupings and the composition of groups (homogeneous or heterogeneous).

Possible uses:

The instrument can be used as is.

Classroom Practices

Interview Protocols

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

How this instrument was used:
These semi-structured interview protocols were used with all preservice and first year teachers to explore attitudes and practices related to academically advanced and struggling learners as they evolved over the course of the observation semester. Preservice and first-year teachers were asked questions about specific students and observed teaching behaviors to focus discussion on real students and teaching activities.

Possible uses:
The instrument can be used as is.

PDF of Interview Protocols

Click Here

Classroom Practices

Preservice Teacher Preparation in Meeting the Needs of Gifted and Other Academically Diverse Students

Classroom Practices Observation of Preservice Teachers—Data Collection Form

How this instrument was used:
This semi-structured observation protocol was used to record classroom activities. The protocols are semi-structured in that they provide a focus for observations, but also allow flexibility in observations as setting and circumstances vary. Observers indicate and describe the kind of activity the teacher is conducting (e.g., differing content, process, product; differing assignments or tasks; teacher awareness of differing needs). In addition, space is provided for observers to indicate the type of student for whom an activity was intended (i.e., gifted, special education, or remedial learners). This form complements the data provided by the Classroom Practices Record. Space is also provided for the observers to record key phrases. quotes, or notations that could be elaborated upon later in expanded field notes.

Possible uses:
The instrument can be used as is to collect data from classroom observations.

PDF of Data Collection Form—CPO

Click Here

Classroom Practices

School Characteristics Inventory: Investigation of a Quantitative Instrument for Measuring the Modifiability of School Contexts for Implementation of Educational Innovations

Instrument:

- School Characteristics Inventory

Abstract

In response to the numerous reform initiatives being implemented, Sternberg proposed a theory of contextual modifiability stating that successful change in a school requires that the school be modifiable. Sternberg developed the *School Characteristics Inventory (SCI)*, a 116 item Likert scale questionnaire, to assess schools' modifiability.

The purpose of this study was to conduct a reliability and validity study on the instrument using data from a larger study on the effectiveness of innovations addressing academic diversity. Specifically, the SCI factor structure, item analysis, and validity evidence of the SCI were examined. Six factors (59 items) were extracted and rotated to simple structure, accounting for 42% of the variance across the factor solution. Internal consistency estimates were obtained to assess the reliability of these factors, with coefficient alphas ranging from a low of .76 to a high of .94. The present data give credence to the reliability and validity of the SCI and tentatively support the organizational modifiability construct theorized by Sternberg.

Classroom Practices

School Characteristics Inventory: Investigation of a Quantitative Instrument for Measuring the Modifiability of School Contexts for Implementation of Educational Innovations

Conclusions

1. Since different schools and organizations have different reform needs, an examination of school context may be necessary before implementing an educational innovation.
2. Important factors that affect a school's modifiability include school climate, group trust, group openness, instructional leadership, parent involvement, and high expectations for student achievement.
3. The School Characteristics Inventory seems promising as an instrument for measuring the modifiability of a school in regards to adopting and sustaining an educational innovation.
4. The School Characteristics Inventory assessment could key administrators into particular areas of a school culture that are fragmented or that need to be emphasized prior to undergoing school reform.

Moon, T. R., Brighton, C. M., Hertberg, H., Callahan, C. M., Tomlinson, C. A., Esperat, A. M., & Miller, E. M. (2003). *School characteristics inventory: Investigation of a quantitative instrument for measuring the modifiability of school contexts for implementation of educational innovations.* (RM03182). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

School Characteristics Inventory: Investigation of a Quantitative Instrument for Measuring the Modifiability of School Contexts for Implementation of Educational Innovations

Highlights of Sternberg's School Modifiability Theory

Sternberg describes 8 different types of schools using a mineralogy metaphor based on the various possible combinations of three main factors: actual change, appearance of change, and self-efficacy.

Characteristic	Desire for Actual Change	Desire for Appearance of change	Perceived Self-efficacy
Diamond in the rough	High	High	High
Lead	High	High	Low
Slightly imperfect diamond	High	Low	High
Cubic Zirconium	High	Low	Low
Opal	Low	High	High
Amber (with internal insects)	Low	High	Low
Granite	Low	Low	High
Rusted Iron	Low	Low	Low

Classroom Practices

School Characteristics Inventory

School Characteristics Inventory: Investigation of a Quantitative Instrument for Measuring the Modifiability of School Contexts for Implementation of Educational Innovations

How this instrument was used:
This inventory was used to measure the modifiability of schools in a reform effort. It measures six factors:

(a) School reputation: α = .94
(b) General school state: α = .83
(c) Staff attitudes/state of mind: α = .88
(d) Responsiveness to change: α = .76
(e) General perceptions of school: α = .78
(f) Administration responsiveness: α = .84

Possible uses:
The instrument can be used as is to collect data prior to an intervention.

PDF of School Characteristics Inventory

Click Here

Classroom Practices

Teachers Nurturing Math-Talented Young Children

Instruments:

- Math Trek Parent Questionnaire
- Math Job Cards and Other Activities

Abstract

Talent in mathematical reasoning is highly valued in this society and yet very little is known about its early course. This monograph describes a 2-year study of children discovered during preschool or kindergarten to be advanced in their thinking about math. Psychometric and cognitive testing were conducted at the beginning, middle, and end of the study, and half of the children were randomly assigned to biweekly intervention (Saturday Club) for a total of 28 weeks over the 2 years. The children remained advanced in math over the 2-year period, their spatial reasoning related more closely to their math reasoning than did their verbal reasoning (although they were ahead in all three domains), and the math scores of the boys started and remained somewhat higher than those of the girls.

The Saturday Club intervention was effective in enhancing mathematical reasoning. We discuss ways of identifying very young math-advanced children as well as educational strategies to meet their needs-creating an open-ended approach to teaching mathematics that provides an opportunity for children at different levels of advancement and different personal styles to engage with mathematical challenges in a playful way, to conceptualize math broadly, to pose problems, and to make sense of the mathematical system. The importance of representing and communicating mathematical ideas in multiple ways to deepen children's understanding are emphasized.

A variety of engaging activities are described. Most of these activities emanate from "big ideas." Job cards for various mathematical tasks are included, as well as ways to integrate mathematics into other aspects of the curriculum. The approach to mathematics portrayed is one that creative teachers can flexibly adapt to meet the needs of math-advanced children in a regular or specialized classroom.

Classroom Practices

Teachers Nurturing Math-Talented Young Children

Guidelines

1. Mathematically advanced children should be given an appropriate and a challenging math curriculum.
2. Teachers should explore options for meeting the needs of mathematically talented children in their classrooms including: compacting the curriculum, using advanced curriculum, organizing mentoring opportunities, and creating math enrichment activities
3. Options to meet the needs of mathematically talented children between classes include: cross-grade grouping, cluster grouping, ability grouping within the classroom, multi-age classrooms, early entry to kindergarten or first grade, grade-skipping, pull-out programs and resource rooms, and special classrooms.
4. For many mathematically talented children, out-of-level assessment measures are needed, along with teacher observations of a child's true conceptual mastery, to determine if acceleration is an appropriate option.
5. Teachers should serve as facilitators, guides, designers of challenging problems, and probing questioners.
6. Manipulatives should be viewed as tools for problem-solving and as a way to represent mathematical thinking.
7. Mathematically talented children should be exposed early on to the "big ideas" and themes in mathematics: infinity, zero, number systems, reversibility, equivalence, measurement, negative numbers and fractions, estimating, data, and probability.

Waxman, B., Robinson, N. M., & Mukhopadhyay, S. (1996). *Teachers nurturing math-talented young children* (RM96228). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

Some Common Characteristics of Math-Advanced Students

Teachers Nurturing Math-Talented Young Children

No single child is likely to show them all. A math-advanced child may show some of these characteristics.

1. Advanced computational skills – not necessarily problem-solving skills.
2. Advanced problem-solving skills – not necessarily computational skills.
3. Rapidity of mastering typical math curriculum at an earlier age than classmates.
4. Exceptional mathematical reasoning ability and memory.
5. Interest in mathematical symbols and written representations.
6. Ability to hold problems in mind that aren't yet figured out, to ponder them from time to time until the answer emerges.
7. "Number sense" – a ballpark "feel" for whether an answer is reasonable or whether a procedure might be appropriate.
8. Frequent step-skipping in problem-solving and unexpected ways of solving problems; the ability to invent strategies.
9. Rapid and intuitive understanding, thinking faster than they can write their answers or describe their procedures.
10. A tendency to choose mathematics when presented with a choice of activities.

Classroom Practices

Some Common Characteristics of Math-Advanced Students

Teachers Nurturing Math-Talented Young Children

11. Awareness of numbers in their surroundings and a tendency to frame questions numerically ("How many minutes to recess?")
12. Interest in looking for patterns and relationships and explaining them.
13. Willingness and capability for doing problems abstractly; often preferring not to use concrete aids or manipulatives that are the hallmark of current approaches to math education.
14. Conversely, fluency in representing mathematical ideas in different media: drawings, manipulatives, equations, graphs, stories.
15. From these translated representations, gaining new insights that other children don't see.
16. Long periods of absorption with problems in which they are truly engaged; reluctance to give up on an unsolved problem.
17. Treating road-blocks as challenges; detouring rather than retreating in the face of obstacles; "courageousness" in trying new pathways of thinking.
18. Propensity for seeing connections between a new problem and problems previously solved or ideas from an entirely different domain.
19. Pleasure in posing original, difficult problems.
20. Joy in working with "big" numbers.
21. Capacity for independent, self-directed activities.
22. Enjoyment of challenging mathematical puzzles and games.

Classroom Practices

Ideas for Expanding Math Curriculum

Teachers Nurturing Math-Talented Young Children

Class is learning	Advanced enrichment activity
Combinations to make 10	* Using the 4 operations, find how many ways one can make 10 from combinations using the number 2. * Write equations for these. * Extend the above to make other numbers (5, 12, 41, 64, 0, -2) * Using Cuisinaire materials with the orange rod=1 rather than 10, what is each of the others worth? * Combine dice to equal 10. For each number, 2-12, find how many combinations one can make with 2 dice to equal that number. What is the probability of getting each combination? Each number?
Adding single digits	* Plan a trip to the state capitol using highway maps. Freeway versus state routes? Other trips? * Use missing addends: If traveled this far, how much is left? * Rate: How many hours by freeway? State routes? Stop for lunch?

Classroom Practices

Ideas for Expanding Math Curriculum

Teachers Nurturing Math-Talented Young Children

Class is learning	Advanced enrichment activity
Subtracting single digits	* Reframe subtraction as adding negative numbers. Think of as many examples as you can of subtraction and/or negative numbers in real life and make up story problems. * What is the difference in age between the oldest and youngest child in the classroom?
Estimating	* Make estimating jars for class, filling with manipulatives, or any available objects. Have students bring objects from home. Figure out strategies to increase accuracy (e.g., weight, volume, length). * Ask: What makes estimating easier or harder?
Rounding numbers for place value	* Adapt a board game (e.g. Parcheesi) by requiring that a problem card be answered before each turn. * Individualize pack for each child or group. Try 999 or 9,972 to nearest 10 or 100; 4 x 3 x 2 to nearest 10; -8 to nearest 10. Use fractions, decimals, rounding down.

Classroom Practices

Ideas for Expanding Math Curriculum

Teachers Nurturing Math-Talented Young Children

Class is learning	Advanced enrichment activity
Exploring ½ and ¼	* What is a "quarter?" How much is a quarter of: an hour, a mile, a kilometer, a quart, a cup, a liter, a moon, a year, a dollar, a roll of quarters? * Cut an apple in quarters. Does each weigh exactly the same? * Explore thirds, fifths, and sixths. * Find real-life contexts for fractions (e.g. music, cooking, making change). * Explore multiplying fractions using pattern blocks (e.g. ½ of 1/4). * Make patterns with halves and quarters of shapes. * Use geoboards and tangrams to explore fractional parts of shapes (e.g. ½ of a triangle = a triangle).
Dividing by single digits	* Bring in family's utility bills. Average per month? Season? Per person? * Collect small foreign coins, is available. Look for value in newspaper and monetary system in World Almanac.Coin's worth in cents? Dollar's worth in coins? * Play store with foreign coins.

Classroom Practices

Ideas for Expanding Math Curriculum

Teachers Nurturing Math-Talented Young Children

Class is learning	Advanced enrichment activity
Mosaic patterns	* Tessellating or quilting patterns. * Analyze tiles in floors and elsewhere in school. * Use computer software to generate tessellations.
Computation worksheets	* Have children figure out why they made the mistakes they did (bugs) or look over class papers (names removed) to find the most frequent bugs and report to class (use frequencies and histograms to present data). * Have children write ways to check answers (complementary procedures). * Have children write story problems from these computation problems or make up more complex problems and write those in story form. * For multi-digit addition problems provide the answer and leave blanks in the two addends.

Classroom Practices

Teachers Nurturing Math-Talented Young Children

Math Trek Parent Questionnaire

How this instrument was used:
The Parent Questionnaire was used in a sub-study of this research study to find out how accurate parents were in providing information about their childrens' math kills. The results indicated that parents were not only good at picking the children with advanced math skills, but accurate in describing them.

Possible uses:
The Parent Questionnaire could be used to gain information about the math skills of young children.

PDF of Math Trek Parent Questionnaire

Click Here

Classroom Practices

Math Job Cards and Other Activities

Teachers Nurturing Math-Talented Young Children

How this instrument was used:
These job cards and games were used at Saturday Math Clubs. One type of card was set out per table along with an array of material that might be useful tools for solving the problems detailed on the cards. At times, extension activities and questions were included that helped prolong the math exploration.

Possible uses:
These cards could be used for math enrichment and extension activities in a classroom.

PDF of Math Job Cards

Click Here

Classroom Practices

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

Instruments:

- Student Attitudes Questionnaire
- Mathematics Curriculum Worksheets
- Science Curriculum Worksheets

Abstract

A controlled field experiment assessed the effects of both heterogeneous and homogeneous grouping in cooperative learning settings on the performance of gifted and non-gifted students, including their achievement, self-concept, and attitude toward school subjects, as well as the feelings that they have toward one another. It also determined whether different types of cooperative learning arrangements implemented in different content areas yield comparable results. The study involved 786 fourth grade students drawn from 42 classrooms located in 8 school districts.

In sum, heterogeneous grouping has positive socioemotional outcomes for gifted children and negative ones for non-gifted children. Gifted fourth grade students experienced no adverse effects as a result of interacting with non-gifted students in cooperative learning groups. The gifted student does not learn less, experience a decline in self-concept, or become less popular in his or her group.

In fact, students are seen as more friendly and better leaders in these groups, and they experience a relative increase in social self-esteem in heterogeneous groups. However, gifted students worked at a quicker pace and produced more in a homogeneous gifted group. The productivity of the group is directly tied to the number of gifted students in the group.

At the same time, the non-gifted student does not experience an increase in achievement due to the presence of a gifted student. Thus, the view of the gifted child as a teaching resource was not supported. However, the non-gifted student in heterogeneous groups suffers from a decline in self-esteem and a decline in the perception by non-gifted peers on task-relevant activities.

Classroom Practices

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

Findings

Achievement as Outcome Measure

1. The achievement of gifted students exceeded that of non-gifted students in both mathematics and science regardless of the type of group in which they were involved, but this difference can be entirely explained by gifted students' higher prior achievement.
2. Gifted students worked at a quicker pace and produced more when grouped with other gifted students. Said in another way, the productivity level of the group is directly tied to the number of gifted students in the group.
3. However, gifted students learned about the same (i.e., had the same levels of posttest achievement) in homogeneous gifted groups as they did in heterogeneous groups.
4. Non-gifted students learned the same in homogeneous and heterogeneous groups.
5. Having a gifted student in a group does not significantly improve the performance of others in the group.

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (RM95116). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Classroom Practices

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

Findings

Self-concept as Outcome Measure

6. Gifted students saw themselves as smarter than their non-gifted peers prior to the treatment (i.e., their academic self-esteem is higher).
7. Gifted students had a higher perception of their worth as a person (global self-esteem) than non-gifted students prior to the treatment.
8. Gifted and non-gifted students' social self-esteem did not differ prior to the treatment.
9. Both the gifted and non-gifted students' social self-esteem declined when they were in a group with another gifted student.
10. Academic self-esteem improved for both gifted and non-gifted students, but more for non-gifted students.
11. Neither gifted nor non-gifted students' global self-esteem was affected by the cooperative learning arrangement.
12. There were no differences in the three self-esteem measures (i.e., global, social, and academic) for heterogeneously grouped gifted students versus homogeneously grouped students.

Attitude Towards School Subjects as Outcome Measure

13. The different grouping strategies have no significant effect on the attitudes toward mathematics an science of either gifted or non-gifted students.

Classroom Practices

Findings

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

Perception of Peers as Outcome Measure

14. Gifted students are perceived by their peers as more intelligent, better teammates, and as more likely to be leaders than non-gifted students. The relatively favorable impressions of the gifted students remained after the grouping experience.
15. At the end of the study, gifted and non-gifted students had more negative impressions of each other than they had before the treatment began.
16. Gifted students were perceived by their peers as providing more help than non-gifted students to other members of the cooperative learning groups.
17. Non-gifted students had more negative perceptions of each other when they were in heterogeneous groups than when they were in homogeneous groups.

Classroom Practices

Student Attitudes Questionnaire (SAQ)

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

How the instrument was used:
Peer relations was assessed through this instrument, which was designed expressly for this study. This instrument asked each person in each three-person group to rate the other two group members with regard to 8 characteristics on the pretest and 10 characteristics on the posttest using a 4-point scale.

The difference between the pretreatment questionnaire and the posttreatment questionnaire is that the question on how well group members knew each other was not included. Three new questions were added: How much help the student provided, how much they helped the other students, and how much they would like to be in another group with the student.

Possible uses:
Teachers and administrators could use this instrument to assess the efficacy of grouping practices used in the school and classroom. Teachers could use the information gained with this instrument to group students for specific tasks.

PDF of Student Attitudes Questionnaire

Click Here

Classroom Practices

Mathematics Curriculum Worksheets

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

How the instrument was used:
The mathematics curriculum worksheets were designed to provide basic-skills group tasks, with limited instructor input, to maximize group participation. The worksheets become progressively more difficult and are designed for grading by the group upon completion of each sheet before continuing on to the next. Groups had no time limit to complete the sheets.

Possible uses:
These worksheets can be used by teachers in similar situations as in the study, to examine the efficacy of group activities, to teach these mathematical concepts, and as models for creating similar problems.

PDF of Math Curriculum Worksheets

Click Here

Classroom Practices

Science Curriculum Worksheets

The Effects of Group Composition on Gifted and Non-Gifted Elementary Students in Cooperative Learning Groups

How the instrument was used:
The science curriculum worksheets are a creative, idea-generating task, focusing on electricity. These materials were used with brief 5 minute instruction on each topic.

Possible uses:
These worksheets can be used by teachers in similar situations as in the study, to examine the efficacy of group activities, to teach these mathematical concepts, to train students in cooperative group activities, and as a model for developing similar activities on a different topic or subject.

PDF of Science Curriculum Worksheets

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NRC G/T

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