Curriculum Development for the Gifted

Bureau of Exceptional Education and Student Services
Division of Public Schools
Florida Department of Public Schools
2005
Endorsement Courses for the Gifted
Implementation Guidelines

Introduction

This manual provides a guide for a gifted endorsement course. Included you will find suggested resources, a list of pre-requisite skills, objectives, components, activities and assignments.

It is understood that there will be flexibility in course formats (number of meetings, duration of each meeting) depending on the participants and nature of the instructional setting. The mastery must be equivalent to a 3-semester hour course in a university setting (16 weeks/3 hrs.). Each participant must show evidence of mastery which could be held as a portfolio for each course.

The courses have been updated with two central concepts, Infusion and Modeling.

Infusion includes the following principles:
- Required skills as excellent general practitioners
- Diversity Issues
- Adult Education Principles
- Technology and Information Skills
- Differentiated Curriculum
- Appropriate Assessment
- Independent Learning and Research Skills

Modeling includes the following principles:
- Facilitative Practitioner
- Reflective Ongoing Self-Assessment
- Intake Interview: pre-assessment including knowledge base, skills, learning styles, interests, socio-cultural preferences
- Formative Evaluation
- Gifted Instructional Strategies: compacting, contracting, creative productivity

The facilitative Practitioner should use the following effective strategies:
- Process built into content
- Examination of current issues and key concepts
- Overview of multiple models
- Networking with other instructors
- Infusion of lower level thinking, focus on higher level thinking skills
- Interactive and open-ended
- Freedom of Choice: constructivism
- Flexible Structure: complexity, pacing
• Model effective strategies

Built into each of the courses are levels. The use of the pre-assessment is critical to the delivery of these modules. The levels are:

1. Pre-assessment
2. Base level: compacting and built in assessment in every module to facilitate acceleration
3. Curriculum extension/skill development for those who evidence mastery of some of the basic concepts at pre-assessment
4. Creative productivity for those evidencing a higher level of mastery

The outcomes of the modules are:

• Base level: content expertise for all participants
• Higher level: alternative outcomes for participants with some degree of mastery of the topics
• Professional development as an educator of gifted students
• Documentation of skill development (portfolio)
• Open-ended yet accountable evidence of mastery
• Continuity across the five courses

Instructors/facilitators

Recommended qualifications for instructors/facilitators of the add-on endorsement classes are:

• a current Florida teaching certificate (or the equivalent) with gifted endorsement (or documented expertise in gifted education)
• a Master’s Degree or higher
• a background of successful staff development and/or adult training expertise
• a minimum three years successful teaching experience in gifted education

Additional materials

There are three additional documents included with these guidelines. The first is recommended resources and supplementary texts for the five endorsement courses. When an instructor is selected, the person should review these recommended resources for the courses and check web site addresses for accuracy. Also, included is a list of pre-requisites that prospective teachers enrolled in the endorsement courses should possess. The instructor may need to direct participants to other staff development offerings in lieu of trying to teach pre-requisites as part of the endorsement course. The third document outlines specific delivery strategies that should be used for gifted endorsement courses. The instructor should model these strategies throughout the implementation of the courses.
This is one of five Gifted Endorsement Modules available through the Bureau of Exceptional Education and Student Services, Florida Department of Education, designed to assist school districts and state agencies which support education programs in the provision of special programs for exceptional students. For additional information on this publication contact the Clearinghouse Information Center, Bureau of Exceptional Education and Student Services, Division of Public Schools, Florida Department of Education, Room 638 Turlington Building, Tallahassee, Florida 32399-0400.

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2005

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Curriculum Development for the Gifted

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Module Evaluation Form
INTRODUCTION

This course is one of the five required for endorsement in gifted education. The course instructor is expected to be knowledgeable and skilled in curriculum development and design. A variety of learning activities are included. Course instructors may determine which activities are appropriate based on the needs and experiences of the participants.

*Curriculum Development for the Gifted* provides an analysis of curriculum modifications for gifted learners based on the National Association for Gifted Children (NAGC) Standards for Graduate Programs in Gifted Education.

Participants will be able to demonstrate modifications in the content, process, product, affect, and learning environment of classroom and curricula as they relate to gifted learners. Ultimately, course participants will design units of instruction that are powerful, aligned, engaging, authentic, and challenging.

The topics developed in *Curriculum Development for the Gifted* address various objectives. It is anticipated that, upon successful completion of this module the participant will be able to:

1. Demonstrate understanding of the terminology used in the development of curriculum for the gifted, including such terms as acceleration, enrichment, and differentiation.
2. Demonstrate knowledge of the role of current state standards of the general education curriculum and the implications for the education of gifted students.
3. Demonstrate knowledge of the principles of differentiation for gifted learners.
4. Demonstrate the ability to evaluate models for teaching gifted curriculum.
5. Demonstrate the ability to evaluate gifted curriculum and instructional strategies.
6. Demonstrate knowledge of appropriate resources, including technology, for teaching students who are gifted.
7. Demonstrate the ability to match instructional strategies and materials, such as curriculum compacting and grouping, to individual needs of learners.
8. Demonstrate the ability to develop units of instruction aligning curricular components, including objectives, introduction, teaching strategies, learning activities, products, resources, and assessments, to meet the cognitive and affective needs of the gifted.
9. Demonstrate the ability to communicate and work in partnerships with students, families, and school personnel.
10. Demonstrate the ability to identify student outcomes, evaluate student progress, and develop an appropriate educational plan.
11. Demonstrate knowledge of a continuum of services that supports the needs and interests of gifted students.
ORGANIZATION AND STRUCTURE OF COURSE MATERIALS

The module is divided into a course introduction, pre-post test and eleven topics. Each of the eleven topics is built upon a key question and included the following components:

**Topic Title:** Offers a focal point for the session.

**Key Question:** Provides a guide for inquiry within each topic.

**Objectives:** Lists measurable outcomes that should result from the learning, with activities and readings for each topic.

**Key Concepts:** Identifies key concepts of the topic.

**Recommended Reading Assignment**
Provides a variety of reading materials for the topic, Based upon availability and the needs of the participants.

**Learning Options - Activities:** Outlines multiple options from which the instructor may select to help participants accomplish topic outcomes.

**Evidence of Mastery:** Provides multiple options used to assess participants mastery of topic outcomes.

**Resources:** Lists additional resources that may be used to extend or augment the topic and may be of particular value to participants who desire to explore the topic in greater depth.

COURSE MANAGEMENT

The course is designed to accommodate a variety of formats, with flexibility in the number and length of class meetings to meet the needs of participants.
## Key Questions

### Why differentiate instruction?
- Justify the need to differentiate or adapt instruction to respond to the needs of the gifted learner.
- Demonstrate understanding of the terminology used in the development of curriculum for the gifted.

### What key concepts help guide our understanding of curriculum for the gifted?
- Match the appropriate terms with their definitions.
- In small groups match terms and definitions and present clarification to class.
- Review and discuss the key concepts from the state of Florida’s Brief paper on Acceleration and Completion of worksheet (HO 1)
- Small group presentations of terms (HO 2)

## Guiding Objectives Topic 1

<table>
<thead>
<tr>
<th>Evidence of Mastery</th>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>Topic</td>
<td>The Templeton Report. Chart the key points of acceleration and when and why it may be appropriate.</td>
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<tr>
<td>Key Questions</td>
<td>Guiding Objectives Topic 2</td>
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<tr>
<td>Sunshine State Standards as they pertain to gifted education.</td>
<td>Oral/written explanation</td>
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<tr>
<td>Read “Providing Curriculum Alternatives to Motivate Gifted Students” HO 1 and explain how the alternatives described could be used with the Sunshine State Standards.</td>
<td>Discussion</td>
</tr>
<tr>
<td>In class, discuss how you might develop one additional strand of the K-12 Program Standards.</td>
<td>Discussion</td>
</tr>
<tr>
<td>Predict what the future holds for the standards. What might they look like in ten years? Twenty?</td>
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</tr>
<tr>
<td>Key Question</td>
<td>Guiding Objectives Topic 3</td>
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</tbody>
</table>
| Curriculum Matrix Topic 3 | environment on a worksheet  
Using a variety of case studies (HO 4), identify strategies used for the modification of differentiated curriculum for gifted learners.  
Design a case study that emphasizes the modifications of differentiated curriculum for gifted learners. Exchange with a colleague and identify the modification strategies present on a worksheet.  
Compare and contrast in a Venn Diagram the following principles of differentiation. Suggested models include:  
1. Tomlinson’s Differentiated Instruction | Scenarios worksheet (HO 5)  
Self-designed case study  
Worksheet (HO 6)  
Venn diagram (HO 8) | 0760, 800-933-2723, http://shop.ascd.org  
### Curriculum Development for the Gifted

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<tr>
<td>3. Maker’s Modification of Differentiated Curriculum (HO 3)</td>
<td>T chart (HO 10)</td>
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</table>

Identify the characteristics of gifted children and their curricular implication in the classroom on a flowchart.

Using a T chart, summarize what a differentiated classroom might look and sound like.
## Curriculum Development for the Gifted

### Key Questions

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<th>Key Questions</th>
<th>Guiding Objectives Topic 4</th>
<th>Learning Options – Activities</th>
<th>Evidence of Mastery</th>
<th>Resources</th>
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<td></td>
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<td>After reading, as individuals or in small groups, research one or two curriculum models and share the information in a class presentation.</td>
<td>Class presentation</td>
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<td></td>
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<td>Compare and contrast the strengths and weaknesses of various models of curriculum development for the gifted according to Maker’s Principles of Differentiated Curriculum on a matrix. Explain the role pre-</td>
<td>Matrix HO 2</td>
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<td></td>
<td></td>
<td></td>
<td>Class discussion Summary</td>
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Curriculum Matrix Topic 4
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<tr>
<th>Key Questions</th>
<th>Guiding Objectives Topic 4</th>
<th>Learning Options – Activities</th>
<th>Evidence of Mastery</th>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>testing plays in each Model.</td>
<td>Chart/PMI</td>
<td>Systems and models for developing programs for the gifted and talented. Mansfield Center, CT: Creative Learning Press.</td>
</tr>
</tbody>
</table>
### Curriculum Matrix Topic 5

<table>
<thead>
<tr>
<th>Key Questions</th>
<th>Guiding Objectives Topic 5</th>
<th>Learning Options – Activities</th>
<th>Evidence of Mastery</th>
<th>Resources</th>
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<tbody>
<tr>
<td>What strategies do exemplary teachers of the gifted use to facilitate growth and academic achievement in their students?</td>
<td>Develop an understanding of the issues of equity and excellence as they relate to gifted.</td>
<td>Read and discuss Barbara Clarks’ “A Declaration of the Educational Rights of the Gifted Child.” Within the field of gifted education address the topics of equity vs. excellence. Develop a statement paper or letter to legislator advocating for continued or stronger support for gifted services. Analyze identified learning strategies as directed for worksheet (HO 1) with explanation and clarification of the role of the instructor for each. Generate a list of barriers and benefits to specially designed curriculum. Discuss/ Debate “Do you have to be gifted to teach gifted students?” Justify the principles and standards of the NAGC paper.</td>
<td>Discussion Statement paper Worksheet List Discussion/Debate Oral/written justification</td>
<td>Karnes, F., Bean, S. (2001). <em>Methods and materials for teaching the gifted.</em> Waco, TX: Prufrock Press, Inc. Van Tassel-Baska, J. (2003). <em>Curriculum planning and instructional design for gifted learners.</em> Denver, CO: Love Publishing Company. <a href="http://www.nagc.org">www.nagc.org</a> link to NAGC Standards</td>
</tr>
<tr>
<td>Key Question</td>
<td>Guiding Objectives Topic 6</td>
<td>Learning Options – Activities</td>
<td>Evidence of Mastery</td>
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<td>What curricular components are essential in order to develop a unit of instruction that meets the cognitive and affective needs of gifted learners?</td>
<td>Demonstrate the ability to develop a unit of instruction aligning curricular components, including objectives, introduction, teaching strategies, learning activities, products, resources, and assessments, to meet the cognitive and affective needs of the gifted.</td>
<td>Read <em>Bridging the Gap</em> and then evaluate a text with the rubric.</td>
<td>Thorough evaluation of text using rubric, including documented evidence.</td>
<td>Purcell, J.H., Burns, D.E., Tomlinson, C., Imbeau, M., &amp; Martin, J.L. (2002). <em>Bridging the gap: A tool to analyze and evaluate gifted education curricular units</em>. Gifted Child Quarterly, 46(2), 306-321. (HO 1)</td>
</tr>
<tr>
<td>Key Questions</td>
<td>Guiding Objectives</td>
<td>Learning Options - Activities</td>
<td>Evidence of Mastery</td>
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<tr>
<td>How can teachers of the gifted assure that the classroom instruction best meets the needs of each learner?</td>
<td>Demonstrate the ability to match instructional strategies and materials to individual needs of learners.</td>
<td>Compile a list of proven instructional strategies for working with gifted students. Possible sources include Coleman, Van Tassel, and <em>The Parallel Curriculum</em>, pages 53-56, “Teaching Methods”. Discuss those used frequently and those to use more often. Select four strategies and provide examples of when they would be effective tools. Gather an assortment of Interact or other simulations and learning games. In small groups, identify the goals or outcomes for the game(s) and discuss which learning activities effectively address those goals. Refer to Karnes. Discuss why these may or may not be effective instructional tools. Read Handout 1 and identify which myths or</td>
<td>Compiled list of proven strategies and examples of appropriate usage</td>
<td>Berger, S. (2000). Common myths about gifted students. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education. Retrieved March 29, 2003, from the World Wide Web: <a href="http://eric.cdf.org/fact/myths.html">http://eric.cdf.org/fact/myths.html</a> [HO 1]) Coleman, L., Cross, T., (2001). <em>Being Gifted in School</em>. Chapter 8: “Curriculum Theory and Practice” and Chapter 9: “Instructional Theory.” Waco, TX: Prufrock Press, Inc.</td>
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Curriculum Topic 7
Curriculum Topic 7

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<tr>
<th>Truths are addressed through a selected simulation or learning game.</th>
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<tr>
<td>Select a desired learning outcome or goal for a gifted learner. Design a simulation or learning game to meet the needs of the learner. You may choose to have the simulation geared to the specific learning needs of the student you are studying.</td>
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<tr>
<td>Create a set of flash cards identifying different individual needs. Choose a partner. How many instructional strategies can you name to appropriately accommodate the given need?</td>
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<td>Consider strategies that best work for you as a learner. Which are not effective for you? What factors determine which are and which are not successful for you? Compare on a chart and</td>
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<td>Participation in discussion or written opinion paper</td>
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<td>Simulation or game geared to learner needs and presentation to the class</td>
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<td>Comparison of personal strategies chart and summarization of why you feel some strategies may be preferable based on learning styles and</td>
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<td>Sample <em>Interact</em> or other simulations</td>
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<td>Topic</td>
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<tr>
<th>Curriculum Topic 7</th>
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<tbody>
<tr>
<td><strong>Complete a KWLH chart for instructional strategies for gifted learners.</strong></td>
</tr>
<tr>
<td><strong>KWLH chart [HO 2])</strong></td>
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</tbody>
</table>
### Key Questions

How do exemplary teachers of the gifted select and use appropriate instructional materials, resources, and technology to facilitate academic growth and achievement for students?

### Guiding Objectives Topic 8

Demonstrate awareness and knowledge of appropriate resources and materials for developing curriculum and facilitating learning for students who are gifted.

### Learning Options – Activities

- Review Taba’s Knowledge Categories and The Parallel Curriculum. Using a current text identify the knowledge categories addressed in the text.
- Review rubric for evidence of mastery and develop a flow chart.
- Remodel a study unit.
- Discuss the role basal textbooks might play in a gifted curriculum.
- Identify considerations for selection of instructional materials.
- After reviewing *The*

### Evidence of Mastery

- Completion of paper showing alignment.
- Completion of flow chart and class presentation.
- Remodeled unit.
- Class discussion
- Class discussion

### Resources

<table>
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<tr>
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</table>
| Parallel Curriculum on the parallel topic of Practice, discuss the role of professionals in the disciplines and how they may be human resources.  
Create an evaluation tool for selecting appropriate print-based instructional materials.  
Understand the Core Curriculum Parallel and what is meant by “Big Ideas”.  
Discuss key considerations for selecting appropriate and challenging multi-media instructional materials and on-line sources. Identify six major types of Internet applications. | **Parallel Curriculum** on the parallel topic of Practice, discuss the role of professionals in the disciplines and how they may be human resources.  
Create an evaluation tool for selecting appropriate print-based instructional materials.  
Understand the Core Curriculum Parallel and what is meant by “Big Ideas”.  
Discuss key considerations for selecting appropriate and challenging multi-media instructional materials and on-line sources. Identify six major types of Internet applications. | identifying a suitable match of a professional with the student under study for this course.  
Creation of an evaluation tool for selecting print-based instructional materials.  
Clarification and discussion of “Big Ideas”  
<table>
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<tr>
<th>Key Questions</th>
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<tr>
<td></td>
<td></td>
<td>Choose a World Wide Web site and apply the criteria. Share this evaluation with a colleague.</td>
<td>Construct a checklist for integrating technology into the gifted classroom.</td>
<td>from the Clearinghouse Information Center, Division of Public School and Community Education, Department of Education.</td>
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<td></td>
<td>Discuss how we can ensure that technology is used appropriately for gifted learners. Discuss the question, &quot;How has the use of technology changed instructional options for gifted students?&quot;</td>
<td>Discussion or written support.</td>
<td>[Handout 5]</td>
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<td>Establish criteria for determining when to use &quot;outside&quot; resources vs. teacher-developed</td>
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<td>Learning Links document [Handout 2]</td>
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<td>Key Questions</td>
<td>Guiding Objectives Topic 8</td>
<td>Learning Options – Activities</td>
<td>Evidence of Mastery</td>
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<td>Resources for Implementing</td>
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<td>Technology [Handout 4]</td>
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<td>Key Questions</td>
<td>Guiding Objectives Topic 9</td>
<td>Learning Options – Activities</td>
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<td>What continuum of services would be appropriate to meet the needs of gifted learners?</td>
<td>Demonstrate knowledge of a continuum of services to support the needs and interests of gifted students.</td>
<td>Review resources and describe how service would be provided in each of the service delivery models listed and the variables that could hinder or facilitate learning for gifted students: ▪ Regular class placement (inclusion) ▪ Grouping provisions ▪ Independent study ▪ Subject/grade acceleration ▪ Facilitative support ▪ Consultation ▪ Supplemental tutoring ▪ Resource room (enrichment) ▪ Part time (pull-out) ▪ Full time class ▪ Separate school ▪ Mentorship</td>
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<td>Accurate and clearly stated descriptions of service delivery models and variables for impacting learning</td>
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<td>Resources</td>
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<td>Key Questions</td>
<td>Guiding Objectives Topic 9</td>
<td>Learning Options – Activities</td>
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<td>Discuss whether one service model would be appropriate for all gifted students and how decisions are made regarding service. Determine criteria for consideration when decisions about placement are made.</td>
<td>Flowchart of ideal program options for each of the three students, running from current placement through graduation. Share, compare, and contrast flowcharts.</td>
<td>Florida Department of Education. (2003). Acceleration of gifted students. (Publication No. ESE 311781). Tallahassee, FL: Bureau of Instructional Support and Community Services, Florida Department of Education. [Available at no cost from the Clearinghouse Information Center, Division of Public School and Community Education, Department of Education (850) 245-0475]. (HO 3)</td>
</tr>
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<td>Make a chart identifying typical services offered at each level – primary, intermediate, middle and high school. Prepare a flow chart depicting the ideal continuum of services for three students as described in the lesson.</td>
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<tr>
<td>Key Questions</td>
<td>Guiding Objectives Topic 9</td>
<td>Learning Options – Activities</td>
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<td>Acceleration is frequently a controversial topic. Consider ramifications of acceleration (both subject and grade). Conduct a debate on the merits of the issue with your colleagues.</td>
<td>Compiled pros and cons of acceleration based on research and readings and participation in debate.</td>
<td>National Association for Gifted Children (1998, October). <em>Position Papers of the National Association for Gifted Children.</em> Washington DC: Author. (HO 2)</td>
</tr>
</tbody>
</table>
## Key Questions

<table>
<thead>
<tr>
<th>Key Questions</th>
<th>Guiding Objectives Topic 9</th>
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</table>
**Key Questions**

How can a meaningful Educational Plan (EP) for a gifted student be developed?

**Guiding Objectives Topic 10**

Demonstrate the ability to identify student outcomes, evaluate student progress, and develop an appropriate educational plan (EP).

**Learning Options - Activities**

Review State Rule 6A-6.0331, FAC, Identification and Assignment of Exceptional Students to Special Programs; and Rule 6A.6.030191, FAC, Development of Educational Plans for Exceptional Students Who Are Gifted (http://www.firm.edu/doe/rules/rules.htm). List factors related to an Educational Plan in terms of the impact on the education of students determined eligible for Special Programs for Students Who Are Gifted. List required participants and what information each would be able to provide.

Discuss the participation of a regular education teacher at the EP meeting. How might the situation be handled if the gifted students are served at a school other than the general education setting and what might be the best procedure at the middle or high school when a student has more than one regular teacher.

Discuss why you believe the current rule states an EP must be developed for students who are gifted only, with related services that do not require special services (for example, occupational therapy (OT), physical therapy (PT), counseling, or a 504 plan for medical conditions that do not

**Evidence of Mastery**

Compiled list of factors from reading and review of state rules. Discuss and chart in class.

Summary of the purpose of an EP and roles of the required participants and identify the required components of an EP.

**Resources**

Assessment links document (HO 1)


Genius Denied web site: www.geniusdenied.com

Links to Carol Tomlinson and Differentiated Instruction: http://www.justmyweb.com/2002/tomlinson.html

Rubric development guidelines: http://webquest.sdsu.edu/rubrics/weblessons.htm

State rules link: http://www.firm.edu/doe/rules/rules.htm

**Curriculum Development for the Gifted Matrix**

<table>
<thead>
<tr>
<th>Topic 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>designate a disability, such as diabetes or ADD.</td>
</tr>
<tr>
<td>The focus of the development of the EP is on the strengths of the child. How is this student gifted? Since an EP is a plan for this child only, what evidence is there of how the student evidences gifted characteristics? What does this student need beyond what is offered in a general education classroom in terms of specially designed instruction?</td>
</tr>
<tr>
<td>Discuss whether appropriate expectation levels can be set for gifted learners. Does the nature of the gifted</td>
</tr>
<tr>
<td>Paper about appropriately addressing the needs of the gifted learner.</td>
</tr>
<tr>
<td>Discussion.</td>
</tr>
</tbody>
</table>
The need to document present levels of performance requires appropriate measures. Discuss what could be used to provide this information.

Research and provide a summary of each of the following instructional and management strategies for differentiated, mixed-ability classrooms:
- Curriculum compacting
- Independent projects
- Interest centers or groups
- Tiered assignments
- Learning centers
- Varying questions
- Mentorships/apprenticeships
- Contracts

Discuss how the affective concerns of the student may be considered in establishing goals. How is this impacting the student’s performance levels? Tools some teachers use to evaluate progress include:
- Rating scales
- Conferences
- Self evaluation
- Peer evaluation
- Teacher evaluation
- Performance assessments
- Portfolios
- Product assessments
- Pre-post assessments
- Journals
- Evaluation by appropriate audience

Summary of instructional and management strategies

Statement justifying a case when each evaluative tool would be effective.
<table>
<thead>
<tr>
<th>CURRICULUM DEVELOPMENT FOR THE GIFTED MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Develop a brief statement justifying a case when each would be effective.</strong></td>
</tr>
</tbody>
</table>
| **What approaches to measuring outcomes are most convincing?**  
(VanTassel-Baska, 2003). Document your findings. **Types of instruments:**  
Formal vs. informal  
Standardized vs. non-standardized |
<p>| <strong>Using an existing curriculum unit, create a rubric or rating scale to assess student performance in one or more areas. Consider the prior discussions of moving a student from Novice to Expert.</strong> |
| <strong>Review Assessment Links (HO1) and summarize findings.</strong> |
| <strong>Gifted students often learn they can “get by” with minimum effort unless appropriate expectations are put in place. Learning outcomes set expectations, so it is important to establish rigorous expectations for the student based on present levels of performance. Given data on an eligible gifted student, create an appropriate educational plan; ensuring the plan meets all district compliance requirements and appropriately addresses the specific needs of the student.</strong> |
| <strong>The student’s needs change over time with increased achievement. Development of a new EP or an EP review (which may be requested at any</strong> |
| <strong>Active participation in discussion</strong> |
| <strong>Documentation of findings regarding approaches to measuring outcomes.</strong> |
| <strong>Creation of rubric and/or rating scale to assess student performance.</strong> |
| <strong>Summary of assessment links.</strong> |
| <strong>Development of an appropriate and justifiable EP.</strong> |</p>
<table>
<thead>
<tr>
<th>CURRICULUM DEVELOPMENT FOR THE GIFTED MATRIX</th>
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</thead>
<tbody>
<tr>
<td>time by the parent, teacher, or school</td>
</tr>
<tr>
<td>staff member) should assess how the</td>
</tr>
<tr>
<td>child’s needs have changed, what new</td>
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<tr>
<td>goals should be set, whether the</td>
</tr>
<tr>
<td>services currently provided are still</td>
</tr>
<tr>
<td>appropriate. A change in services or</td>
</tr>
<tr>
<td>placement can only take place at an EP</td>
</tr>
<tr>
<td>meeting. The parent does not need to</td>
</tr>
<tr>
<td>be present, but should be notified of any</td>
</tr>
<tr>
<td>change. Also, whenever an EP is</td>
</tr>
<tr>
<td>written for longer than a two year period,</td>
</tr>
<tr>
<td>there should be a review of the EP.</td>
</tr>
<tr>
<td>Discuss why or when it might be necessary</td>
</tr>
<tr>
<td>to review the EP.</td>
</tr>
<tr>
<td>Key Questions</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Activity</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Group about the gifted curriculum, program goals and objectives.</td>
</tr>
<tr>
<td>Create a role-play with colleagues and present to the class featuring examples and non-examples for conducting a parent conference or meeting with a school board member or legislator.</td>
</tr>
<tr>
<td>Shrinking budgets make the gifted program a target for cut backs. Prepare a presentation for, or write a letter to the school board defending the costs of the program.</td>
</tr>
</tbody>
</table>

- Role play with colleagues
- Quality/effectiveness of school board presentation
PRE/POST TEST

Topic 1. Define the following terms associated with curriculum for the gifted:

- acceleration
- enrichment
- curriculum compacting
- flexible grouping
- differentiation
- scaffolding
- pace
- depth
- complexity
- novelty
- tiered assignments
- content
- processes
- products
- learning environment

Topic 2. Define the role of state standards and how they apply to gifted students.

Topic 3. Identify the components of Maker’s Principles of Differentiated Curriculum. Provide specific examples for each area of modification.

Topic 4. Identify three to five curriculum models and their strengths and weaknesses according to Maker’s Principles of Differentiated Curriculum.

Topic 5. Identify three to five criteria, with rationale, to evaluate gifted curricula and instructional strategies.

Topic 6. Identify six key considerations when selecting resources and materials for use with gifted students.

Topic 7. List several specific instructional strategies appropriate for use with gifted learners. Specify how such strategies would meet the needs of individual students.

Topic 8. List the curricular components of a differentiated unit of instruction designed to meet the cognitive and affective needs of gifted learners.

Topic 9. Define the most critical components of effective communication between students, families, and school personnel.

Topic 10. Identify five to seven key tools for evaluating student progress.

Topic 11. Describe a continuum of services for use with gifted students. Why is such a range of programming options necessary?
TOPIC 1 – KEY TERMS

KEY QUESTIONS: Why differentiate instruction and what key terms and concepts help guide our understanding of curriculum for the gifted learner?

OBJECTIVES:
• Justify the need to differentiate or adapt instruction to respond to the needs of the gifted learner.
• Demonstrate understanding of the terminology used in the development of curriculum for the gifted.

KEY CONCEPTS:
• Differentiated Curriculum
• Teaching Models for Instruction and Curriculum Design
• Specially Designed Instruction

KEY TERMS FOR UNDERSTANDING THE CONCEPTS:
• Acceleration
• Enrichment
• Curriculum compacting
• Flexible Grouping
• Differentiation
• Scaffolding
• Pace
• Depth
• Complexity
• Novelty
• Tiered assignments
• Content
• Processes
• Products
• Learning environment

RECOMMENDED READING ASSIGNMENT:
• Florida Brief on Acceleration

LEARNING OPTIONS - ACTIVITIES:
• With the characteristics of a gifted learner in mind, review the state of Florida rules related to providing service for a gifted learner and the rule for developing an Educational Plan for the gifted. Develop a
Curriculum Development for the Gifted

justification for providing a specially designed instruction for this population.

- Match the appropriate terms with their definitions on worksheet. (HO 1). This activity can act as a pre-test)
- Cut apart the terms and definitions on H0 2 and match correctly.
- In small groups, compare matches and be prepared to present one or more terms to the class as a whole as to how the assigned term(s) fit in a curriculum adaptation.
- After review of Florida State Rule 6A-6.030191, FAC, the Florida Acceleration Brief, and the Templeton National Report on Acceleration, be prepared to identify the key concepts and to assess the role acceleration might play in providing appropriate service for a gifted student.

EVIDENCE OF MASTERY:

- Justification paper defending differentiated curriculum
- Worksheet (pre-test) (HO 1)
- Small group presentation on terminology
- Participation in discussion of acceleration and state rule guidelines

RESOURCES:

- www.fldoe.org to access State Rules
Key terms

Match the key terms with the appropriate definition:

- 1. enrichment
- 2. flexible grouping
- 3. scaffolding
- 4. depth
- 5. acceleration
- 6. curriculum compacting
- 7. learning environment
- 8. products
- 9. content
- 10. processes
- 11. complexity
- 12. tiered assignments
- 13. pace
- 14. differentiation
- 15. novelty

A. setting in which learning occurs includes both the physical setting and psychological climate of the school and classroom
B. technique specifically designed to make appropriate curricular adjustments for students
C. speed at which new material is presented to match student capability
D. technique whereby teacher models new learning before shifting it to students
E. pursuing a topic in greater detail
F. moving students more rapidly through a curricular sequence
G. extending normal curriculum with examples and associations that build complex ideas on the curriculum
H. students work together on a particular assignment based on interests and abilities
I. extending content to study issues, problems and themes; making relationships and connections between and among ideas
J. introducing unique ideas not normally found in standard curriculum; guiding students toward personalized learning
K. parallel tasks at varied levels of complexity
L. ideas, concepts, presented to students
M. presentation of material, teaching methods, learning activities
N. results of student interaction with content resembling those of professionals in the field
O. adapting the pace, level, or kind of instructional curriculum to meet each student’s individual learning needs, styles, or interests
Curriculum Development for the Gifted

acceleration

enrichment

curriculum compacting

processes

content

tiered assignments

flexible grouping

novelty

differentiation

learning environment

products
<table>
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<tr>
<th>complexity</th>
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<tr>
<td>depth</td>
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<tr>
<td>scaffolding</td>
</tr>
<tr>
<td>pace</td>
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<tr>
<td>contracts</td>
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</tbody>
</table>

- **contracts**: adapting the pace, level, or kind of instructional curriculum to meet each student’s individual learning needs, styles, or interests.

- **pace**: how rapidly new material is presented to students so that it matches their capacity for mastery at each step.

- **scaffolding**: moving students more rapidly through a particular curricular sequence.
<table>
<thead>
<tr>
<th>extending normal curriculum with differing examples and associations that build complex ideas on the regular curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>pursuing a topic or task in greater detail and to a greater level of understanding (concrete to abstract, familiar to unfamiliar, known to unknown)</td>
</tr>
<tr>
<td>the setting in which learning occurs and includes both the physical setting and psychological climate of the school and classroom</td>
</tr>
<tr>
<td>extending the content to the study of issues, problems, and themes; making relationships between and among ideas; connecting other concepts</td>
</tr>
<tr>
<td>introducing into the curriculum unique ideas not normally found in standard programs; helping students approach areas of study in their own personalized, nontraditional way</td>
</tr>
<tr>
<td>the results of student interaction with content resembling those developed by professionals in the discipline being studied</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>parallel tasks at varied levels of complexity, depth and abstractness with various degrees of support or direction</td>
</tr>
<tr>
<td>an arrangement between the teacher and student about how learning tasks will be accomplished</td>
</tr>
<tr>
<td>ideas, concepts, descriptive information, and facts presented to the students in a variety of forms</td>
</tr>
<tr>
<td>grouping students based on interests and abilities on an assignment by assignment basis</td>
</tr>
<tr>
<td>the presentation of material, the teaching of methods, the learning activities, the questions asked, and the thinking processes</td>
</tr>
<tr>
<td><strong>Curriculum Development for the Gifted</strong></td>
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<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>Topic 1 HO 2</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td>an instructional technique whereby the teacher models the desired learning strategy or task, then gradually shifts responsibility to the students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>an instructional technique that is specifically designed to make appropriate curricular adjustments for students in any curricular area and at any grade level</td>
</tr>
</tbody>
</table>
TOPIC 2 – PROGRAM AND STATE STANDARDS

KEY QUESTION: What are the program and state standards, what is the rationale for establishing them and what do they offer to gifted education?

OBJECTIVES:
- Demonstrate knowledge of the role of current state standards of the general education curriculum and the implications for the education of gifted students.

KEY CONCEPTS:
- What are the state standards?
- What is the role of the standards in gifted education?
- Understanding the K-12 Gifted Program Standards

RECOMMENDED READING ASSIGNMENT:
- Sunshine State Standards (SSS) www.firn.edu/doe
- www.statestandards.com

LEARNING OPTIONS - ACTIVITIES:
- Debate the positive and negative influence of standards, building on terms from Topic 1.
- Develop a summary of Chapter Three from Van Tassel-Baska’s work and add a summative paragraph aligning the relevance of the content to the SSS.
- Compare the SSS and the Standards established by NAGC.
- Create a statement--pro or con--for the Sunshine State Standards as they pertain to gifted education.
- Read “Providing Curriculum Alternatives to Motivate Gifted Students“ HO1 and explain how the strategies may be used with the SSS.
- In class, develop one additional strand of the K-12 Program Standards.
- Predict what the future holds for the standards. What might they look like in ten years? Twenty?
EVIDENCE OF MASTERY:

- Class Discussion
- Quality / completion of assignments

RESOURCES:

Providing Curriculum Alternatives to Motivate Gifted Students


How to get the best performance from every student is a challenging task, especially in classrooms where there are many different levels of ability. Often, students who are gifted are not challenged to perform to their full capacity because they seem to be doing just fine. Unfortunately, these students may never achieve their potential because they have not had complex tasks and have never learned to really work. This digest presents two strategies to help highly able students get more out of school. Teachers may find that the following strategies enable them to challenge and motivate not only gifted students, but also other students who have talents and abilities in specific areas.

Strategies for Motivating Students to Work and Learn

Gifted students benefit from participating in activities that are different from those designed for other students. Such alternative activities should extend basic concepts and allow students to connect their personal interests to the course curriculum. Extra credit activities should be avoided as they send a message that more work is required. Two strategies that are helpful to teachers in managing alternative activities are compacting and contracts.

- **Compacting.** Students who demonstrate previous mastery spend less time with the regular curriculum and more time with extension and enrichment opportunities.

- **Contracts.** Written agreements between teachers and students that outline what students will learn, how they will learn it, in what period of time, and how they will be evaluated. Contracts allow students to engage actively in the decision-making process, directing their course of study (Parke, 1989, pp.70-71).

Guidelines for Compacting

The following guidelines are useful for pretestable subject areas where students move between an instructional group and extension activities.

1. At the beginning of a unit, provide opportunities for interested students to demonstrate mastery in some way. The same activity may be used for postassessment.
2. Students who achieve a specified criterion or grade attend class only on the days when instruction includes concepts they have not mastered. On those
occasions, they become part of the regular class and participate in assigned activities.

3. For each student who achieves a specified criterion level on the preassessment activity, prepare a contract listing required concepts, enrichment options, and specified working conditions. Check only the topics students have not mastered so they know when to join the larger group.

The following guidelines are useful when material may not be pretestable because it is unfamiliar to students. Compacting is still required because gifted students need less time than their age peers to learn new material.

1. Prepare a study guide that includes the same concepts for which all students will be responsible.
2. Offer the study guide opportunity to all students who have exhibited easy mastery of previous topics. Eligible students will be expected to learn the study guide material, but it is understood that they will spend the majority of their school time working on their extension tasks. Students should not be required to write out the answers for the content of the study guide. They may use any means they choose to learn the material, but must be able to demonstrate mastery.
3. Include dates when students must meet with the rest of the class to demonstrate their competence with the required concepts. Students who do not demonstrate competence must return to work with the class for the rest of the unit.

Thus, during a specific unit of time, students are moving back and forth between the teacher directed group and independent work on extension activities.

**Guidelines for Contracts**

The following guidelines are useful for pretestable subject areas where students are moving between instructional group and extension activities.

1. In one section of the contract, list the concepts or outcomes that the whole class will learn. In another section of the contract, list a variety of alternative or extension activities from which students may choose. These activities may be developed by the teacher, the student, or both. If extension activities are developed solely by the teacher, options should include "Your original idea" so that students can link their personal interests with the required curriculum. Ideas designed by the student must have teacher approval.
2. Students work on alternative activities on the days when the class is learning concepts they have previously mastered.
3. Students should be responsible for documenting their time. One option is to ask students to keep a log of their activities on the days they are not working with the rest of the class. Set guidelines for those activities.
4. Student outcomes or grades result from a combination of work completed with the class and a posttest or postassessment activity. The section on Guidelines for Evaluation of Alternative Work provides details.
The following guidelines are useful for subject areas that may not be pretestable because material is unfamiliar to students. In this case, teachers use a study guide with an independent study agreement, illustrated on the reverse.

1. Provide students with a study guide that contains a list of expected outcomes for a unit, which they may choose to achieve independently. Instead of working with the regular class, these students will research and present information about an alternative topic related to the general theme or unit.
2. Students work on the extended activity in school during the time the class is working with the regular content. Thus, the activity becomes their real work for the class period.
3. Students sign an agreement similar to the following illustration.

**Independent Study Agreement**

The following terms are agreed to by teacher and student:

- The student may learn the key concepts or the information described on the study guide independently.
- The student must demonstrate mastery at appropriate checkpoints to continue this arrangement for the rest of the unit.
- The student must participate in selected group activities when one day's notice is given by the teacher.
- The student agrees to complete an independent project by (date) to share with the class.

Project description: ____________________

The student agrees to work on the selected project according to the following guidelines while the remainder of the class is involved with the teacher. (List guidelines.)

Teacher's signature  
Student's signature

================================================================

A similar agreement may be used with all independent study activities. The prototype may be used for ideas on what to include, or teachers may use their own ideas. Students rejoin the large group for special experiences in which all students should participate.

4. Students who do not work on their alternative activity or do not honor the working conditions of the agreement are required to rejoin the class for the duration of the unit.
5. Students present their project to the class at an appropriate time. Written work is not required. Students are expected to present a talk of 7-10 minutes, accompanied by at least one visual aid. Or, students may negotiate a suitable means of demonstrating to the class what has been learned.
6. Evaluation or grading alternatives are described in the section that follows on Guidelines for Evaluation of Alternative Work.

**Guidelines for Evaluation of Alternative Work**

The following guidelines are useful for pretestable subject areas where students are moving between instructional group and extension activities.

1. Alternative student work is more easily managed when student activities require more than one class period to complete. In mathematics, for example, students might research the real world applications of the course content, work with various number bases, or investigate the lives of famous mathematicians. In writing or English classes, students might work on more complex or open-ended writing assignments, or investigate the writing style of several authors.

2. When eligible students work on alternative activities, the goal should be to provide them with opportunities to master challenging tasks. They would earn the same credit as if they had completed the regular tasks as long as they adhere to the agreed-upon working conditions.

The following guidelines are useful for subjects that may not be pretestable because material is unfamiliar to students.

---

1. Alternative work extends the regular curriculum. Therefore, extension projects should earn at least a grade of B or the equivalent because the students are going beyond what is required.

2. All criteria for evaluation should be presented and understood before students begin an extended activity. Teacher expectations should be clearly stated.

3. Students earn a grade of B if the completed work represents typical research that merely reports secondary sources and if the presentation is properly made to an appropriate audience.

4. Students earn a grade of A if the completed work represents unique or creative research, provides evidence of primary sources, represents an interesting or unusual synthesis of available data, or the material is presented in an original manner.

5. It is important for students to understand that they need to be working productively during school time. If they do not follow the expected working conditions, they need to rejoin the regular instructional group and may be required to make up some of the regular work. If students become immersed in the topic and wish to continue beyond the expected date, they must provide a progress report at regular intervals.

6. If point systems, rubrics, or holistic assessment methods are used for other activities, these methods may also be used to evaluate students’ extended projects. Students may become engaged in the creation of the scoring rubrics and evaluate their own work as the project progresses by measuring their project against the rubric criteria. Responsibility for evaluating student work is then shared between teacher and students.
Summary

Effective teachers at all grade levels have found that students differ in the ways they learn best and therefore learn better when teachers vary approaches to learning. Compacting and contracts make it possible for teachers to present alternative activities to highly capable learners that are challenging, promote cognitive growth, and are based on student interests. Regular use of compacting and contracts will benefit not only gifted students, but also provide interesting educational opportunities for the entire class.

Resources


Note: This digest was developed from Teaching Gifted Kids in the Regular Classroom by Susan Winebrenner.

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ERIC Clearinghouse on Disabilities and Gifted Education
http://ericec.org
TOPIC 3 – PRINCIPLES OF DIFFERENTIATION

KEY QUESTION: What are the principles of differentiation curriculum for gifted learners?

OBJECTIVES:
• Demonstrate knowledge of the principles of differentiation for gifted learners.

KEY CONCEPTS:
• Understanding content, process, product, and learning environment based on varied models of differentiated curriculum
• What are the principles of differentiated curriculum?
• What are the characteristics of differentiated instruction?
• Alignment of the characteristics of gifted children with curricular implications

RECOMMENDED READING ASSIGNMENT:
• The Maker Model of Differentiated Curriculum and Content Modifications (originally part of the first Florida endorsement module for curriculum development) (HO 3)
• Tomlinson’s Case studies (HO 4)
• Kaplan and Sato’s 13 Principles (HO 7)
  or
• Any materials related to Tomlinson’s differentiated instruction model.

LEARNING OPTIONS - ACTIVITIES:
• Discuss the NAGC Position Paper (HO 1) and chart and compare what is and is not differentiation.
• After reading “Differentiating Curriculum for Gifted Students” (HO 2) chart the strategies noted for developing an effective curriculum. Write a statement paper comparing HO 1 and HO 2.
• Review June Maker’s Model for Content Modifications (HO 3) and match the components of Maker’s modification of differentiated curriculum to the specific areas including content, process, product, and the learning environment in a hands-on activity/worksheet.
Curriculum Development for the Gifted

- Using a variety of case studies/scenarios (HO 4), identify the strategies used for modification of differentiated curriculum for gifted learners.
- Design a case study that emphasizes modifications of differentiated curriculum for gifted learners. Exchange with a colleague and identify the modification strategies present on a worksheet. (HO 6)
- Compare and contrast in a Venn diagram (HO 8) the principles of differentiation. Suggested models include:
  - Tomlinson’s Differentiated Instruction
  - Kaplan and Sato’s 13 Principles of Differentiated Curriculum (HO 7)
- Identify the characteristics of gifted and talented children (see Rimm’s Resource -Chapter Two from Topic 1 for characteristics) and their curricular implication in the classroom on a flowchart (HO 9)
- Using a T chart, summarize what a differentiated classroom might look and sound like (HO 10).
- Discuss “What is the prevalence of differentiation activities (strategies) in your school? In your classroom? In another classroom for the gifted? “

EVIDENCE OF MASTERY:
- Completion and quality of written assignments and worksheets
- Case studies worksheet
- Self designed case study
- Completion with accuracy - Venn diagram
- Flowchart
- T chart

RESOURCES:
Curriculum Development for the Gifted

DIFFERENTIATION OF CURRICULUM AND INSTRUCTION

While educators of gifted students often say that the key to their instruction is “differentiation” from the regular curriculum, it is not often clear precisely what differentiation means in any given circumstance. Differentiated curriculum is necessary in order to meet the widely differing academic needs of individual students. In the case of gifted students, differentiation is essential in order to adjust course content for students’ prior knowledge of the standard curriculum and to provide a challenging learning experience. This position statement explains what is meant by differentiated education, and what does not constitute differentiation when adjusting curriculum for gifted students.
DIFFERENTIATION OF CURRICULUM AND INSTRUCTION

POSITION STATEMENT

The National Association for Gifted Children (NAGC) periodically issues policy statements dealing with issues, policies, and practices that have an impact on the education of gifted and talented students. Policy statements represent the official convictions of the organization.

All policy statements approved by the NAGC Board of Directors are consistent with the organization’s belief that education in a democracy must represent the uniqueness of all individuals, the broad range of cultural diversity present in our society, and the similarities and differences in learning characteristics that can be found within any group of students. NAGC is fully committed to national goals that advocate both excellence and equity for all students, and we believe that the best way to achieve these goals is through differentiated educational opportunities, resources, and encouragement for all students.

NAGC supports the provision of appropriate quality educational experiences for all students across the spectrum of ability, background, and achievement. The learning needs of gifted students often differ from those of other students and should be addressed through differentiation, a modification of curriculum and instruction based on the assessed achievement and interests of individual students.

To provide appropriate and challenging educational experiences for gifted students, differentiation may include:

- Acceleration of instruction;
- In-depth study;
- A high degree of complexity;
- Advanced content; and/or
- Variety in content and form

Problems occur when teachers attempt to meet the needs of gifted students by limiting learning experiences to:

- Offering more of the same level of material or the same kind of problem;
- Providing either enrichment or acceleration alone;
- Focusing only on cognitive growth in isolation from affective, physical, or intuitive growth;
- Teaching higher thinking skills (e.g. research or criticism) in isolation form academic content;
- Presenting additional work that is just different from the core curriculum; and/or
• Grouping with intellectual peers without differentiating content and instruction.

Differentiation for gifted students consists of carefully planned, coordinated learning experiences that extend beyond the core curriculum to meet the specific learning needs evidenced by the student. It combines the curricular strategies of enrichment and acceleration and provides flexibility and diversity. Appropriate differentiation allows for increasing levels of advanced, abstract, and complex curriculum that are substantive and that respond to the learner’s needs. NAGC believes that the use of such differentiation is essential to maximize the educational experience for gifted and talented students. NAGC further believes that appropriate educational experiences for these students are more effective when differentiated materials and activities are planned in advance and easily accessible.

Source: National Association for Gifted Children
1707 I Street, NW
Suite 550
Washington, DC 20036
202/785-4268
Differentiating Curriculum for Gifted Students


Students who are gifted and talented are found in full-time self-contained classrooms, magnet schools, pull-out programs, resource rooms, regular classrooms, and every combination of these settings. No matter where they obtain their education, they need an appropriately differentiated curriculum designed to address their individual characteristics, needs, abilities, and interests.

DEVELOPING AN EFFECTIVE CURRICULUM

An effective curriculum for students who are gifted is essentially a basic curriculum that has been modified to meet their needs. The unique characteristics of the students must serve as the basis for decisions on how the curriculum should be modified (Feldhusen, Hansen, & Kennedy, 1989; Maker 1982; TAG, 1989; VanTassel-Baska et al., 1988).

It is difficult to generalize about students who are gifted because their characteristics and needs are so personal and unique. However, as a group they comprehend complex ideas quickly, learn more rapidly and in greater depth than their age peers, and may exhibit interests that differ from those of their peers. They need time for in-depth exploration, they manipulate ideas and draw generalizations about seemingly unconnected concepts, and they ask provocative questions.

A program that builds on these characteristics may be viewed as qualitatively (rather than quantitatively) different from the basic curriculum; it results from appropriate modification of content, process, environment, and product (Maker, 1982).

MODIFYING CONTENT

Content consists of ideas, concepts, descriptive information, and facts. Content, as well as learning experiences, can be modified through acceleration, compacting, variety, reorganization, flexible pacing, and the use of more advanced or complex concepts, abstractions, and materials. When possible, students should be encouraged to move through content areas at their own pace. If they master a particular unit, they need to be provided with more advanced learning activities, not more of the same activity. Their learning characteristics are best served by thematic, broad-based, and integrative content, rather than just single-subject areas. An entire content area arranged and structured around a conceptual framework can be mastered in much less time than is traditionally allotted (VanTassel-Baska, 1989). In addition, such concept-based instruction expands opportunities to generalize and to
integrate and apply ideas. (See Bruner, 1966, MAN: A COURSE OF STUDY [MACOS] for an example of a thematic, integrated curriculum.)

Middle and secondary schools are generally organized to meet student needs within content areas. Providing an interdisciplinary approach is another way of modifying curriculum. Jacobs and Borland (1986) found that gifted students benefit greatly from curriculum experiences that cross or go beyond traditional content areas, particularly when they are encouraged to acquire an integrated understanding of knowledge and the structure of the disciplines.

MODIFYING PROCESS

To modify process, activities must be restructured to be more intellectually demanding. For example, students need to be challenged by questions that require a higher level of response or by open-ended questions that stimulate inquiry, active exploration, and discovery. Although instructional strategies depend on the age of the students and the nature of the disciplines involved, the goal is always to encourage students to think about subjects in more abstract and complex ways. Activity selection should be based on student interests, and activities should be used in ways that encourage self-directed learning. Bloom's TAXONOMY OF EDUCATIONAL OBJECTIVES (1956) offers the most common approach to process modification. His classification system moves from more basic levels of thought, such as memory or recall, to more complex levels of analysis, synthesis, and evaluation. Parnes (1966), Taba (1962), and others have provided additional models for structuring thinking skills. Every teacher should know a variety of ways to stimulate and encourage higher level thinking skills. Group interaction and simulations, flexible pacing, and guided self-management are a few of the methods for managing class activities that support process modification.

MODIFYING ENVIRONMENT

Gifted students learn best in a receptive, nonjudgmental, student-centered environment that encourages inquiry and independence, includes a wide variety of materials, provides some physical movement, is generally complex, and connects the school experience with the greater world. Although all students might appreciate such an environment, for students who are gifted it is essential that the teacher establish a climate that encourages them to question, exercise independence, and use their creativity in order to be all that they can be.

MODIFYING PRODUCT EXPECTATION AND STUDENT RESPONSE

Teachers can encourage students to demonstrate what they have learned in a wide variety of forms that reflect both knowledge and the ability to manipulate ideas. For example, instead of giving a written or oral book report, students might prefer to design a game around the theme and characters of a book. Products can be consistent with each student's preferred learning style. They should address real
problems, concerns, and audiences; synthesize rather than summarize information; and include a self-evaluation process.

ASSESSING CURRICULUM EFFECTIVENESS

In their synthesis of curriculum effectiveness studies and effective practice, VanTassel-Baska et al. (1988) suggested that differentiated curriculum would respond to diverse characteristics of gifted learners in the following three ways:

- By accelerating the mastery of basic skills through testing-out procedures and reorganization of the curriculum according to higher level skills and concepts.
- By engaging students in active problem-finding and problem-solving activities and research.
- By providing students opportunities for making connections within and across systems of knowledge by focusing on issues, themes, and ideas.

Curriculum development is a dynamic, ongoing process. Special attention needs to be paid to articulation, scope, and sequence to avoid gaps and repetition through grade levels; ensure that the understandings and skills we expect children to develop fit together; and assure that children are provided with the knowledge and skills that will prepare them for the future. Periodic evaluations of curriculum effectiveness allow corrections to be made when needed, and they are essential if curriculum is to meet the long-term needs of gifted students for increasingly complex and challenging opportunities.

CONCLUSION

The curriculum committee of the Leadership Training Institute (Passow, 1982) developed seven guiding principles for curriculum differentiation that reflect the considerations described in this Digest.

1. The content of curricula for gifted students should focus on and be organized to include more elaborate, complex, and in-depth study of major ideas, problems, and themes that integrate knowledge within and across systems of thought.

2. Curricula for gifted students should allow for the development and application of productive thinking skills to enable students to reconceptualize existing knowledge and/or generate new knowledge.

3. Curricula for gifted students should enable them to explore constantly changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world.
4. Curricula for gifted students should encourage exposure to, selection, and use of appropriate and specialized resources.

5. Curricula for gifted students should promote self-initiated and self-directed learning and growth.

6. Curricula for gifted students should provide for the development of self-understanding and the understanding of one's relationship to persons, societal institutions, nature, and culture.

7. Evaluations of curricula for gifted students should be conducted in accordance with the previously stated principles, stressing higher level thinking skills, creativity, and excellence in performance and products.

Developing curriculum that is sufficiently rigorous, challenging, and coherent for students who are gifted is a challenging task. The result, however, is well worth the effort. Appropriately differentiated curriculum produces well-educated, knowledgeable students who have had to work very hard, have mastered a substantial body of knowledge, and can think clearly and critically about that knowledge. Achieving such results for one or for a classroom full of students who are gifted will produce high levels of satisfaction, not only for the students who are beneficiaries, but also for every teacher who is willing to undertake the task.

REFERENCES


This publication was developed by Sandra L. Berger with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RI88062007. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or the Department of Education. ERIC Digests are in the public domain and may be freely reproduced and disseminated.
1. **ABSTRACTNESS**
Within every subject taught or every traditional content area, the information can be ordered on a rough continuum from concrete to abstract, based on how far removed it is from objective reality.

   *Example:* In mathematics, \( \begin{array}{ll}
   \text{zero} & \text{infinity} \\
   \text{concrete} & \text{abstract}
   \end{array} \)

2. **COMPLEXITY**
This modification is closely related to abstractness. Although it is difficult to think of a complex idea that is not also abstract, it seems possible that some abstract ideas are quite simple. Generalizations are more complex than concepts.

   *Example:* \(2 + 2 = 4\)  \( 2, 4, 6, 8, 10, 12 \) ______ complex

3. **VARIETY**
This modification is synonymous with the word enrichment.

   *Example:* oceanography, herpetology, geology, robotics, etc.

4. **ORGANIZATION AND ECONOMY**
By organizing the content to be taught around central ideas, educators can provide a setting where the specific facts are chosen carefully to illustrate abstract ideas.

   *Example:* Rather than teaching facts and concepts about the American Revolution, French Revolution, Cuban Revolution, etc., center instruction around revolution.

5. **THE STUDY OF PEOPLE**
This study should include an examination of the following aspects of people’s lives: (a) their personal or internal characteristics, such as their motivations, their family backgrounds, and their personality types; (b) their career characteristics, including the creative processes they use, their leadership styles, the type of products they have developed; and (c) their social characteristics, or the ways in which they interact with others and others with them.
6. **METHODS OF INQUIRY**

Studying content the way an historian, scientist, astronomer, etc., would study gives students who are gifted the opportunity to understand the complexities of an area of study. It provides a setting where they can analyze the methods used by scholars and leaders in various disciplines.

**JUNE MAKER’S MODEL**

**PROCESS MODIFICATIONS**

1. **HIGHER LEVELS OF THINKING**
   Changing the emphasis from memory or recall to higher levels such as analysis, synthesis, and evaluation.

   *Example:*  
   “How is a heart similar to the pump in a fish tank?” vs.  
   “List the parts of the heart.”

2. **OPEN-ENDEDNESS**
   This approach implies a different teacher attitude reflected in: (a) questioning techniques, as well as the content of questions; (b) the design of learning experiences; and (c) evaluation of student responses to questions.

   *Example:*
   CLOSED—Do you think that excessive TV watching has an effect on family interaction?  
   OPEN—What, if any, effect do you feel TV watching has had on family interaction?

3. **THE IMPORTANCE OF DISCOVERY**
   In a discovery approach, students are encouraged to form hypotheses and make informed guesses—inductive vs. deductive reasoning.

   *Example:*
   From our brief discussion of the Civil War, what do you think the reasons for this happening might be?

4. **CITATIONS OF PROOF AND EVIDENCE OF REASONING**
   It is not only important to give students opportunities to discover information or use higher levels of thought. They should also be required to express not only their conclusions, but also the logic or reasoning process they use in arriving at those conclusions.

   *Example:*
   What are your reasons for thinking that TV watching lowers the level of family interaction?
5. **FREEDOM OF CHOICE**
Allowing gifted students the flexibility to choose topics to study, methods to using the process, and the environment in which to pursue them is an important method for facilitating success with other systems as well as a way to build upon the learning and motivational characteristics of these children.

*This choice may be made in the following four areas: (a) deciding what is to be learned; (b) selecting the method and materials; (c) communicating with others about the subject; and (d) evaluating achievement of goals.*

6. **GROUP INTERACTION ACTIVITIES AND SIMULATIONS**
These are tools for enhancing a working group’s effectiveness as well as for unlocking the potential of each individual by developing the ability to relate to others more effectively. Essential elements are: (a) contrived, structured, or simulated group interaction situation; (b) honest feedback from other participants regarding one’s behavior; and (c) honest self-analysis or critique by each participant.

7. **PACING AND VARIETY**
Pacing refers to the speed at which information is presented in the learning situation. Variety is the range and number of types of procedures used. Both are necessary to maintain student interest and avoid boredom.

*Examples of Pacing: GEM (Gifted Education in Mathematics) Program Content*
*Examples of Variety: Discussions, learning centers, logic games, simulations, lectures, films, role-playing, etc.*
JUNE MAKER’S MODEL
PRODUCT MODIFICATIONS

1. REAL PROBLEMS AND REAL AUDIENCE
A student who is learning complex and abstract ideas or thought systems cannot conclude the process with a report taken from the encyclopedia. Carrying the process to its logical conclusion, the student’s product should be evaluated by scholars in the field (or at least by a teacher using a similar assessment).

Example: After researching a pond near the school, students found that the water was contaminated by chemical wastes that were being dumped by a certain company’s trucks.

They went to the company, the county water management district, to local newspapers, and to the city manager, describing their findings.

2. APPROPRIATE EVALUATION
These should include assessment by teacher using pre-established criteria, self-evaluation by the pupil, and evaluation by the real audience or a simulation of one.

3. TRANSFORMATIONS vs. SUMMARIES
Students should report original research transforming information gathered into interpretations and conclusions rather than paraphrasing information gathered in encyclopedias.

JUNE MAKER’S MODEL
LEARNING ENVIRONMENT MODIFICATIONS

1. STUDENT-CENTERED vs. TEACHER-CENTERED
Pupils’ ideas and interests vs. teacher methods and ideas.

One of the toughest aspects to change when moving from teacher-directedness to student-directedness is to convince children that the instructor is not or should be the final authority in answering questions. Gifted students often become frustrated when the teacher won’t tell them whether their answers or hypotheses are right or wrong.

2. INDEPENDENCE vs. DEPENDENCE
Focus should be on classroom climate variables necessary to achieve student independence.

Example: If students are fighting, the first thought is for the teacher to intervene and solve the problem. However, if the teacher’s goal is to develop independence, intervention tactics must be different. Some sort of stop-action is certainly needed, but the next step might be to elicit possible solutions rather than impose one.

3. OPEN vs. CLOSED
This type of environment permits new people, new materials, and new things to enter. The environment is not static, but rather changes when necessary or desirable.

4. ACCEPTING vs. JUDGING
(a) Attempt to understand; (b) deferred judgment, knowing when to evaluate; (c) evaluation, rather than judgment.

5. COMPLEX vs. SIMPLE
Not only is complex content important, but gifted students also need a more complex physical environment. This includes a variety of materials, a balance of hard and soft elements, variety of colors, asymmetric rather than symmetric arrangements and many types of spaces or environments for learning.

6. HIGH MOBILITY vs. LOW MOBILITY
This refers to the amount of movement needed by students who are gifted in and out of the classroom; differing grouping arrangements; access to a variety of learning/investigating environments; and access to a variety of materials, references, and equipment.
## Maker’s Model for Modifying Curriculum for the Gifted

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**Abstractness** – Within every subject or every traditional content area, the information can be ordered on a rough continuum from concrete to abstract, based on how far removed it is from objective reality.

**Complexity** – Closely related to abstractness. Although it is difficult to think of a complex idea that is not also abstract, it seems possible that some abstract ideas are quite simple. Generalizations are more complex than concepts.

**Variety** - This modification is synonymous with the word enrichment.

**Organization and Economy** – By organizing the content to be taught around central ideas, educators can provide a setting where the specific facts are chosen carefully to illustrate abstract ideas.

**The Study of People** – An examination of the following aspects of people’s lives: (a) their personal or internal characteristics; (b) their career characteristics; and (c) their social characteristics.

**Method of Inquiry** – Studying the content the way a historian, scientist, astronomer, etc., would study gives students who are gifted the opportunity to understand the complexities of an area of study. It provides a setting where they can analyze the methods used by scholars and leaders in various disciplines.

**Higher Level of Thinking** – Changing the emphasis from memory or recall to higher levels such as analysis, synthesis, and evaluation.

**Open-Endedness** – Implies a different teacher attitude reflected in (a) questioning techniques, as well as the content of questions: (b) the design of learning experiences; and (c) evaluation of student responses to questions.

**The Importance of Discovery** – In a discovery approach, students are encouraged to form hypotheses and make informed guesses – inductive vs. deductive reasoning.

**Citations of Proof and Evidence of Reasoning** – It is not only important to give students opportunities to discover information or use higher levels of thought. They should also be required to express not only their conclusions, but also the logic of reasoning process they use in arriving at those conclusions.

**Freedom of Choice** – Allowing gifted students the flexibility to choose topics to study, methods to using the process, and the environment in which to pursue them is an important method for facilitating success with other systems as well as a way to build upon the learning and motivational characteristics of these children.

**Group Interaction Activities and Simulations** – Enhances a group’s effectiveness and unlocks the potential of each individual by developing the ability to relate to others more effectively. Essential elements: contrived, structures, or simulated group interaction situation; honest feedback from other participants about one’s behavior; self-analysis/critique by participants.

**Pacing and Variety** – Pacing refers to the speed at which information is presented in the learning situation. Variety is the range and number of types of procedures used. Both are necessary to maintain student interest and avoid boredom.
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**Scenario #1**

For several days in Mrs. Jacobsen’s sixth grade science class, students have been investigating the impact of simple machines on modern technology and our current lifestyles. The study is part of an on-going attempt to help students make connections between science and daily life. Students have been assigned to one of two “task force” groups by Mrs. Jacobsen based on her on-going assessment of their readiness levels, interests and learning profiles. Task Force #1 will work in smaller groups of three or four students (self-selected). They are looking at simple machines at work in more complex ways in the school. They will complete a photo safari (using a Polaroid) of places in which they hypothesize one or more simple machines are “disguised” as part of something more complex, complete photo layouts naming their found objects and stated hypotheses of which simple machines are involved and why they think so, and search out evidence which supports or refutes their hypotheses (including classroom & library reference books and designated school staff). Students must then add a “tested hypothesis” statement in which they note whether their original hypothesis was accurate and why or why not. Students in Task Force #2 must determine a school, personal or societal need which is unsolved, research the need so they understand it in some detail, and develop a device for addressing the problem. The device must contain at least three simple machines working in concert with one another (and other elements). They must make a written or graphic design of their device, carefully delineating its parts and how they work together as a whole. They may then make a working model, non-working but accurate and proportional model, model in which humans take on the roles of the parts of the device and demonstrate how it works, or another student-proposed demonstration.
**Scenario #2**

In Mrs. Walker’s first grade class, students work with center work in language arts for a period of time each morning. There are two “choice boards” in the classroom – one called “Teacher Choice” and one called “Student Choice.” Each student has at least two days a week of student choice selections and at least two of teacher choice selections. On days when Fred is assigned to Teacher Choice, Mrs. Walker will select centers and materials at his level of language readiness and ensure that he works at centers which include those materials. On his student choice days, Fred may select from any of 8-12 “pockets” on the student choice board. Those offer a wide range of choices from listening to computer work to writing/drawing, to model-making. All of the options encourage students to use language in ways which they find pleasurable. If Mrs. Walker elects to do so, she can guide even the student choice work by color coding rows of pockets on the student choice chart, and for example, telling Fred he may pick any choice from the red and yellow rows (but not blue row). Often she also “staggers” center work so that some students work at centers while others work with her in directed reading activities or individual conferences, and others work with desk work on math or language.
Scenario #3

In eighth grade math, Miss Harrington has a wide range of students in her class – even though they are all in Algebra 1. Sometimes, she does board demonstrations for the class on new concepts or topics which students seem to have difficulty grasping. She makes an effort to use no more than about 15-20 minutes for the demonstrations. She then has students work in a variety of groups. Sometimes students select from a list of activities which they feel would benefit them most, find another student who needs the same practice, and pair up to work on a given activity. Sometimes she assigns students to mixed-readiness pairs or quads for peer tutoring. Sometimes she does direct instruction with a number of students, while others work independently on assigned problems or their long-term independent study projects, and still others work in pairs at blackboards with assigned problems (so that she can monitor their work even while she is busy with other students). All students in her class have long-term independent study projects throughout much of the year. They vary in complexity, duration and the amount of structure provided by the teacher, but all of the projects require that students grapple with math at work in the world, and expand their skills of independence. All allow a range of options through which students can study and express their understandings. For students advanced in a particular segment of algebra, independent projects often serve as a sort of compacting, allowing these students to work on their personal investigations in lieu of homework and/or class work on which they have already shown mastery.
Scenario #4

Mr. Greene has a music class in which fifth and sixth graders learn to play the recorder and ultimately play for a variety of school and community events. Some of his students have no experience with music, some played with the recorder group last year but have no other musical experience, and some are quite talented with musical instruments beyond the recorder. He often arranges music so that the score contains some basic parts which allow students to play while they explore key concepts related to rhythm, melody, etc. on a foundational level. He takes care to have other parts which require more complex fingering, reading and rhythm. In addition, he adds brief solo parts which can be taken on by individuals especially talented in music. He says he can begin a class with all students reading a piece together, break up the whole group so that he works first with the more basic groups, the intermediate group, and the advanced groups separately, and finally bring everyone back together again. He likes the fact that everyone plays real music, everyone makes a contribution, and everyone is challenged at an appropriate level of readiness. In addition, he like the fact that often a student who begins at a novice level will demonstrate considerable facility with reading and playing music fairly quickly and can move to more complex music easily and quickly enough to keep them interested.
Scenario #5

Miss Justin works with her English 7 students in a variety of ways to tap into their interests, readiness levels and learning profiles. Based on pretesting, she assigns students to different vocabulary studies, super sentences and spelling lists. In writing, students often select topics of interest to them for particular writing assignments. For each writing form (e.g. essay, letter to the editor, etc.) there are certain “criteria for success” required of all students. In addition, students learn to pinpoint personal goals and base student-generated criteria upon those goals – and Miss Justin generally adds a couple of criteria to each student’s general and personal list for major assignments. In literature, students often select novels, dramas or short stories of interest to them to accompany whole-class pieces – thus enabling common focus with personalized “side explorations.” Further, products can often be produced alone or in student-selected groups of specified size and offer options for expressions of students learning, as well as guidance for how to ensure top quality production. Miss Justin finds Group Investigation appropriate for high level study of student-generated topics, and Teams, Games & Tournaments to be useful for study for vocabulary, basic literature information, grammar constructs and other straightforward data requiring student mastery.
**Scenario #6**

Mr. Phillips has three strategies which he is particularly comfortable using in high school biology to address the academic diversity in his mixed ability classroom. He routinely uses the New American Lecture format (incorporating focused review, discussion, and graphic organizers) to ensure that all students are prompted in regard to the key content of his lectures. He also routinely uses a set of five different graphic organizers to guide students in their analysis of required reading. All require analysis of key information, but some require greater leaps of inference from the students than do others. In product design, he likes offering three options to students – one more analytical in nature, one more practical and one more creative. He finds that students come to understand their own strengths better through the year and find science a more relevant endeavor because they can put to work what they learn in a way which fits their own learning strengths. In labs, he sometimes offers two options based on assessment of student understanding of key concepts – one designed to give students concrete, hands-on experience watching key principles in action, and a second designed to necessitate that students develop labs on their own to demonstrate key principles. Finally, he often uses varying tests based on student readiness and learning profile. In all test situations, students must demonstrate the ability to use key principles, but some students do so at a more basic level and some at a level which adds variables, introduces “fuzzy” problems, or requires considerable abstraction.

These scenarios were prepared by Carol Ann Tomlinson, University of Virginia, and her permission was obtained for their use in these materials.
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<th>Scenario #1</th>
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## Differentiated Curriculum Scenarios

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# Evaluating a Case Study for Differentiated Curriculum

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Principles of a Differentiated Curriculum for the Gifted/Talented

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

Venn Diagram for Differentiated Curriculum and Instruction
Venn Diagram for Differentiated Curriculum and Instruction

Maker

Tomlinson

Kaplan and Sato
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<th>Characteristics of Gifted Children</th>
<th>Curricular Implications in the Classroom</th>
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## The T-Chart

**Topic:** Differentiated Curriculum

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TOPIC 4 – CURRICULUM MODELS

KEY QUESTION: What are the strengths and weaknesses of the various curriculum models?

OBJECTIVES:
- Demonstrate the ability to evaluate models for teaching gifted curriculum.

KEY CONCEPTS:
- With educational standards set toward minimum expectations it is essential that teachers who work with gifted students have a plan for developing significant curriculum.
- Curriculum for the gifted learner starts from content basic to everyone’s education.
- The needs of the gifted are needs for challenge in specific areas of strength by enriching and accelerating to go beyond content areas.
- Using one or two curriculum models provides a road map for effective curriculum development to meet student need.

RECOMMENDED READING ASSIGNMENT:

LEARNING OPTIONS - ACTIVITIES:
- Complete Worksheet on My Lesson Plan Strategy. (HO1)
- Using the worksheet as a basis, discuss commonalities and list them.
- After completing recommended reading assignments explaining how a curriculum model can act as a guide. All students should be mastering basic skills. We recognize that some students may have already achieved mastery. How do we meet the needs of those students? As individuals or in small groups, research a specific curriculum model and share the information in a class presentation. Models to include in this research:
  - Schoolwide Enrichment Model – Renzulli
  - Enrichment Triad Model – Renzulli
  - Parallel Curriculum Model – Tomlinson, et.al.
  - The Grid - Kaplan
  - Understanding By Design – Wiggins and McTighe
  - Autonomous Learner Model – Betts
  - Calvin Taylor – Multiple Talents Model
  - Self-Directed Learning – Don Treffinger
  - Integrative Education Model (IEM) - Clark
  - Bloom’s Taxonomy – Bloom
Curriculum Development for the Gifted

- Structure of Intellect (SOI) Model – Guilford/Meeker
- Compare and contrast the strengths and weaknesses of various models of curriculum development for the gifted according to Maker’s Principles of Differentiated Curriculum on a matrix. (HO 2) Explain the role pre-testing plays in each model to identify special learner needs.
- Summarize on a group chart, and conduct a PMI (pluses, minuses, and interesting) of “differentiation for students.”
- Write a paper explaining which one or two models might work best for you as you differentiate to meet student needs and requirements for your class/school.

EVIDENCE OF MASTERY:
- Model research
- Class presentation
- Matrix completion
- Class discussion
- Summary chart
- Quality of completed written assignment

RESOURCES:
My Lesson Plan Strategy

Answer each question based on your current practice of lesson plan development:

1. How do you develop a plan for a one hour lesson? Explain what references you use and what you include.

2. How much do you focus on the Sunshine State Standards?

3. Who – if anyone – checks your lesson plans?

4. What is typically your goal for a one hour lesson?

5. Have you ever written a unit plan? If so, on what topic(s)?

6. What materials did you use to develop the unit?

7. How often do you check student’s IEP or EP plans in terms of lesson or unit development?

8. How often do you pre-test students in a given subject?

9. What is the purpose of pre-testing?
## Analyzing Curriculum Models

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## Analyzing Curriculum Models

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TOPIC 5 – CURRICULUM AND INSTRUCTIONAL STRATEGIES

KEY QUESTION: What strategies do exemplary teachers of the gifted use to facilitate growth and academic achievement in their students?

OBJECTIVES:
• Develop an understanding of the issues of equity and excellence as they relate to gifted.
• Demonstrate knowledge of effective instructional strategies and the role of the teacher in implementing these strategies.
• Demonstrate the ability to select gifted curriculum and appropriate instructional strategies.

KEY CONCEPTS:
• There are several issues of concern in terms of providing appropriate curriculum for learners who are gifted.
• Exemplary teachers of the gifted recognize the special needs of their students and use effective instructional strategies specifically intended to facilitate accomplishment and achievement of gifted learners.

RECOMMENDED READING ASSIGNMENTS:

LEARNING OPTIONS - ACTIVITIES:
• Read and discuss Barbara Clark’s “A Declaration of the Educational Rights of the Gifted Child”.
• Within the field of gifted education the issues of equity and excellence draw significant attention. One school of thought is that gifted students get the better teachers, more interesting curriculum, more field trips and guest speakers, and are viewed as part of an elitist program. Arguments are made that if what is provided for gifted learners is so good, why can’t every child take part since there are arguments that every child is gifted. There are national movements looking at how students are identified for gifted programs and services. Many states
classify their advanced programs as being for gifted and talented, thus including students with talents in areas other than strictly academics. The rule for the state of Florida states that students are eligible for gifted service if there is evidence of need. What criteria would you consider to evidence that need? How would you address the needs of students who are identified as “highly gifted”, typically with an IQ of 145 or higher? Compare the difference in need of a general education student to a student who qualifies for gifted service and to a student who meets the criteria of being “highly gifted”? Develop a statement paper advocating for special services for gifted students or write a letter to your legislator proposing strong advocacy for continued support or stronger support for gifted services and programs.

- Some of the commonly recognized effective instructional and learning strategies include:
  1. lecture
  2. drill and recite
  3. Socratic questioning and higher level questioning
  4. inquiry-based instruction
  5. simulations
  6. role-play
  7. cooperative learning
  8. modeling
  9. problem-based learning
  10. independent study
  11. problem solving
  12. graphic organizers

Using worksheet (HO 1) and these or other identified strategies, put one strategy per box and include a brief explanation of the strategy. In small groups, compare your explanations with others with a critique of each as it may impact on the gifted learner. Share with the full class. Go back to worksheet (HO 1) and determine the role of the teacher in each strategy. Clarify the difference between teacher vs. facilitator.

- As a class, generate a list of barriers and benefits to developing special curriculum for the gifted learner.
- Discuss /debate “Do you have to be gifted to teach gifted students?”
- Using the worksheet, lists, and charts generated for this topic and the NAGC Gifted Education Programming Criterion: Curriculum and Instruction, identify the principles and standards that reinforce this topic and provide a note of justification for each.

**EVIDENCE OF MASTERY:**
- Advocacy assignment
- Worksheet (HO 1)
- Small group assignments and presentation to large group
- Justification assignment
- Quality/Completion of assignments
RESOURCES:

- NAGC Standards [www.nagc.org](http://www.nagc.org)
Insert one strategy per box and follow directions as cited in Topic 4

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TOPIC 6 – DESIGNING UNITS OF INSTRUCTION

KEY QUESTION: What curricular components are essential in order to develop a unit of instruction that meets the cognitive and affective needs of gifted learners?

OBJECTIVES:
• Demonstrate the ability to develop a unit of instruction aligning curricular components, including objectives, introduction, teaching strategies, learning activities, products, resources, and assessments to meet the cognitive and affective needs of gifted learners.

KEY CONCEPTS:
• Textbooks are problematic in terms of providing effective learning for gifted students.
• The teacher of the gifted must use the principles of differentiated instruction to ensure sufficient rigor, using more in-depth, abstract, complex content.
• Curricular components may be evaluated using a national rubric to determine effectiveness.

RECOMMENDED READING ASSIGNMENT:

LEARNING OPTIONS - ACTIVITIES:
• After reading Bridging the Gap (HO 1), use a text book from your classroom and evaluate any three chapters in sequence using the rubric criteria. Document evidence for each step of your evaluation.
• Select a theme, preferably within a field you teach – either in science, social studies, or language arts – that would be appropriate for gifted students at the grade level you teach. Using the rubric in Bridging the Gap be sure your unit covers each area. Your unit could be for 1 – 3 weeks, cover the pertinent Sunshine State Standards, and should apply principles from one of the curriculum models discussed earlier. If possible, reference the Educational Plans (EPs) for students in your class to determine their learning strengths.
• Using the NAGC’s Rating Rubric for Outstanding Curriculum Material as a guide, evaluate your own unit and then critique a colleague’s curricular unit. Key components will include:
Discuss as a class how your curriculum unit, intended for students who are gifted, would differ from a unit intended for students in a general classroom.

EVIDENCE OF MASTERY:
- Textbook evaluation
- Unit of Instruction
- Critique

RESOURCES:
Bridging the Gap: A Tool and Technique to Analyze and Evaluate Gifted Education Curricular Units


ABSTRACT
Research on the quality of educational standards, our knowledge about the quality of textbooks, and the performance of high-achieving students on international assessments all point to the need for exemplary curricula for gifted and talented young people. The gap between research in these areas and the needs of gifted and talented learners is startlingly clear. This article includes information about the development of a rubric that was originally designed to assess the quality of curricular units that are submitted annually to the National Association for Gifted Children (NAGC) Curriculum Division's Curriculum Competition. The article also includes information about 4 different, but related, uses for the rubric. Ultimately, we hope that the use of this tool and assessment technique by practitioners across the country will begin to close the enormous gap between the learning needs of gifted and talented young people and curricula.

PUTTING THE RESEARCH TO USE
Teachers of the gifted and talented and regular classroom teachers can use the research presented here in a variety of ways. First, the literature review addresses the lack of high quality curricular material for gifted and talented students. This section of the article can be used to justify the need for a gifted and talented teacher who can help classroom teachers increase the challenge level of curricula and instruction. This article also includes information about the evolution of differentiated instruction. Practitioners with a predilection for history may find this chronology of interest.

The rubric that is provided in the article to assess the quality of the Curriculum Division's annual Curriculum Awards Competition can be used by all teachers for four different, but related, purposes. First, the key features and quality indicators of the rubric can be used to support the work of practitioners as they seek to make systematic and cost-effective decisions about purchasing curricular materials. Second, the rubric can be used to evaluate the quality of existing curricular units. Results of the evaluation can be used to improve the quality and alignment among the curricular components in each unit. Third, the rubric can be used by professionals to guide the creation of new curricular units. Finally, the rubric can be used as a precursor to differentiation. When used to ensure the quality of existing curricular units prior to the differentiation process, teachers build a solid foundation for the strategies they design to accommodate the unique learning needs of the diverse students in their classrooms.

The need for exemplary curricula for gifted and talented young people is more critical than ever. Indicators of this need emerge from three lines of research and bodies of knowledge: what we know about the quality of educational standards, our growing knowledge about the quality of textbooks, and the performance of our students on international assessments. With this critical need in mind, the purpose of this article is threefold. First, we will briefly explore the indicators that point to the lack of challenge in our nation's curricula for all students, especially our high-achieving students. When the conclusions of these lines of research are juxtaposed with the learning needs of gifted and talented students, the seriousness of the situation is startlingly clear. The second purpose of this article is to share a curriculum assessment technique that was developed by members of the Curriculum Division of the National Association for Gifted Children. The tools and procedures were originally designed to assess the quality of curricular units that are submitted annually to the Curriculum Division's Curriculum Competition. The third purpose of this article is to share four different, but related, purposes for the rubric. Ultimately, we hope that practitioners across the country can use this tool and assessment technique to begin closing the enormous gap between the learning needs of many gifted and talented young people and the regrettably mediocre curricula that are currently available for advanced learners.
The Current State of Curricular Standards in the United States
On January 24, 1992, the National Council on Education Standards and Testing (NCEST) wrote a letter to Congress, the Secretary of Education, the National Education Goals Panel, and the American people. The purpose of the letter was singular: to alert the nation to the low level of American curricula and to spur the nation into adopting national standards. NCEST's final analysis of the nation's curricula was compelling.

In the absence of well-defined and demanding standards, education in the United States has gravitated toward de facto national minimal expectations, with curricula focusing on low-level reading and arithmetic skills, and on small amounts of factual material in other content areas. Many current assessment methods reinforce the emphasis on these low-level skills and processing bits of information rather than on problem solving and critical thinking. (p. i)

Recent research suggests that, while states' standards have improved dramatically since the early 1990s, we still have a long way to go (Education Week, 2001). A series of analyses by Achieve, a nonprofit group in Cambridge, Massachusetts, created by governors and business leaders to promote standards-based reform, suggests that,

while standards have become more prevalent, clearer and more specific, many are still vague and all-encompassing. They tend to repeat the same topics from grade to grade and omit some of the more challenging academic content stressed in other high-performing countries. (Education Week, p. 33)

Even though there has been improvement in the quality of states' standards, their current quality does not reflect our best knowledge about curricula for all students, let alone our knowledge about the educational needs of advanced learners.

Recent Conclusions About Textbooks
The council's report and recent research findings about the lack of challenge in educational standards are supported by the conclusions of researchers who have examined the quality of textbooks. Experts and researchers continue to examine the characteristics of selected textbooks and related curricular materials that drive as much as 80-90% of classroom and homework assignments (Jones, 2000).

Tyson-Bernstein (1988) and Chall and Conard (1991) spoke out about the decline of reading textbooks. A. Graham Down, writing in the foreword to Tyson-Bernstein's A Conspiracy of Good Intentions: America's Textbook Fiasco, suggested:

The public regards textbooks as authoritative, accurate, and necessary. And teachers rely on them to organize lessons and structure subject matter. But the current system of [reading] textbook adoption has filled our schools with Trojan horses--glossily covered blocks of paper whose words emerge to deaden the minds of our nation's youth, and make them enemies of learning. (p. ii)

Literature textbooks are problematic, too. While many contain noteworthy literary selections, the richness of the selections is subordinated to reading and composition skills, rather than used to understand and appreciate literary elements or genres (Canciolo & VanCamp, 1991). In many cases, the questions at the end of each literary selection evoke only low-level thinking: literal interpretation and factual recall. Little attention is given to the critical literary elements that serve as the foundation for all literature.

Reading and language arts textbooks are not the only curricular materials to have been criticized for over a decade. Steen (1989), Usiskin (1987), and Flanders (1987) have been outspoken about the repetition and decreasing amount of content covered in American mathematics books since the late 1980s. As a result of the continuing lack of quality in American mathematics textbooks, the federal government has stepped into the curriculum debate and has conferred, for the first time ever, its stamp of approval on what it believes to be "exemplary curriculum programs that work": College Preparatory Mathematics Program, a 4-year secondary program; Connected Mathematics, grades 6-8; Core-Plus Mathematics Project, an integrated high school program; Interactive Mathematics Program, an integrated problem -
based high school curriculum; and Pact Algebra, a technology-based program for grades 7-12 (Viadaro, 1999).

Bracey (1993) underscored the earlier work of Sewall (1988) and Gagnon (1988), who spoke clearly about the vast amount of material social studies and history teachers are required to cover in textbooks. Bracey criticized sharply the overemphasis of social studies texts on facts and a practice called "mentioning," which results when textbooks skip or flit from one topic to the next without providing emphasis on critical events or connecting the chronology of historical events in a meaningful way. "Even important topics receive superficial coverage, a practice that blurs the distinction between important and small ideas. The texts provide no context for their facts and few connections between events and activities" (Bracey, p. 654). Most recently, Sewall, now president of the American Textbook Council, observed, "Textbooks [social studies and history] are so badly overstuffed and so diced that they are in places unintelligible" (Manzo, 1999, p. 39).

Researchers and experts increasingly cite the poor quality of science materials (Bradley, 1999). Researchers concluded that middle school science textbooks "covered too many subjects with little depth, didn't develop key ideas well, and included classroom activities that were either irrelevant or failed to help students relate what they were doing to underlying scientific concepts" (Bradley, p. 5).

Similar studies in the area of gifted education underscore the findings of content area experts and researchers (Brandwein, 1981; Kaplan, 1979; Maker, 1982; Passow, 1982; VanTassel-Baska, 1994). VanTassel-Baska (1992) speaks for many curriculum experts in gifted education:

*General school curricula are inappropriate for gifted learners....[S]chool curricula organized around the needs of typical learners, with its spiral effect of incremental learning modules with heavy doses of reinforcement around a given skill or concept, is the pattern for basic text materials as well as the dominant mode for classroom instruction.* (pp. 25-26)

To summarize, researchers and experts in every area of education tell us that many curricular materials can be characterized as irrelevant to the content area, repetitious, overemphasizing basic level facts instead of underlying principles of a field of study, and lacking in alignment among curricular components.

**The Third International Mathematics and Science Study (TIMSS) and TIMSS-R**

With low-level educational standards and poor-quality textbooks, it is little wonder that U.S. students fared poorly on recent international assessments of students in grades 4, 8, and 12 (Office of Educational Research and Improvement, 1999). The achievement of our most advanced students, when compared to their counterparts in 16 other countries, was most disturbing. In the advanced mathematics assessment, U.S. students who had taken or were taking pre-calculus, calculus, or Advanced Placement (AP) calculus were compared to advanced mathematics students in other countries. In the physics assessment, U.S. students who had taken physics or were taking physics or AP physics were compared to advanced science students in other countries. The average scores of U.S. physics and advanced mathematics students were below the international average and among the lowest of the 16 countries that administered the physics and advanced mathematics assessments. The U.S. outperformed no other country on either assessment.

In 1999, the TIMSS' sponsoring agency administered the TIMSS-R. The "R" stands for Repeat. The TIMSSR allowed the U.S. to compare the achievement of its eighth graders in the original TIMSS to the achievement of its eighth graders 4 years later. In 1995, U.S. fourth graders bested the international average in both science and mathematics. By the time this group of students reached eighth grade, its performance was mediocre. "Some people thought that fourth graders [in 1995] reflected a new trend," said William Schmidt, head of a TIMSS project that compared the curricula of all the countries that participated in the 1999 study. "This [new information] says this is not true. We don't have a new cohort of high performing kids" (Hoff, 2000, p. 20).

Can we attribute this lackluster performance to the educational context in which mathematics and science instruction occurs? Researchers who conducted the TIMSS study looked at school curricula, instruction,
lessons, textbooks, policy issues, and the lives of teachers and students to understand the educational context in which science and mathematics learning took place. They concluded that the amount of homework, instructional time, and television watching were not strongly related to the performance of U.S. students. Additionally, they ruled out the effect that after school employment might have. They concluded that, although twelfth-grade students are more likely to have jobs, this factor did not appear to be related to the relatively poor performance of U.S. seniors when compared to their international counterparts.

Evidence continues to grow that the middling performance of students on these international assessments may stem from the curriculum. William H. Schmidt, research coordinator for TIMSS and professor of education at Michigan State University, reported,

*We've begun to establish that there is a relationship between what children study and what they learn. It sounds silly, but that's something that is hard to establish empirically. Often, we tend to find excuses in a host of peripheral issues-kids watch too much TV or there's not enough homework-but the TIMSS data keep driving us back to the basic issues of schooling.* (Viadaro, 1997, p. 6)

Clearly, we must increase the challenge level of curricula for all students, especially students who are advanced learners.

**The Educational Needs of Gifted and Talented Students**

With mediocre educational standards and uninspiring textbook materials as a backdrop, what do we know about the educational needs of our nation's highest achieving students? Much of the current work in curriculum development for gifted students has been built upon the principles of differentiated curricula that were eloquently stated at the National/State Leadership Training Institute on the Gifted and Talented (Passow, 1982). These experts stated that curricula for the gifted and talented need to be differentiated from the basic curriculum. The content needs to be more in-depth, abstract, complex, and include the study and practice of discipline-specific methodologies. Instruction should include open-ended questions and activities, as well as choices related to learning activities and topics. Instruction should also be flexible with respect to pacing and include opportunities for students, individually and in small groups, to discover patterns, ideas, and new avenues for research. Student products should be authentic, varied, and presented to real-world audiences. Additionally, they should be evaluated according to criteria established by professionals in the field.

**Bridging the Gap: A Call for Differentiated Curricula**

The gap between the low quality of curricula, as reported by NCEST, textbook analysts, and TIMSS researchers, and the advanced educational needs of our nation's gifted and talented learners is most charitably described as vast. If giftedness, or the behaviors that indicate potential for giftedness, is measured in the response of individuals to stimuli (i.e., the curriculum; Renzulli & Reis, 1985), then we are providing scant stimuli and, unwittingly, limiting the development of potential in many of our nation's most capable young people.

The National Association for Gifted Children (NAGC) has long recognized the enormity of the gap between curricula and instruction and the educational needs of the nation's gifted and talented children. In 1994, the board of directors of NAGC developed a position paper that described the organization's beliefs regarding curriculum differentiation. The paper, published in the June, 1994 issue of *Gifted Child Quarterly*, clarified the official convictions of the organization, underscored the importance of differentiated curricula and instruction for high-achieving students, and defined what is meant by differentiation.

NAGC supports the provision of appropriate quality educational experiences for all students across the spectrum of ability, background, and achievement. The learning needs of gifted students often differ from those of other students and should be addressed through differentiation, a modification of curricula and instruction based on the assessed achievement and interests of individual students.

To provide appropriate and challenging educational experiences for gifted students, differentiation should include acceleration of instruction, in-depth study, a high degree of complexity, advanced content, and variety in content and form (NAGC, 1994, inside back cover).
The NAGC Annual Curriculum Awards Competition
In 1996, the Curriculum and Instruction Division of NAGC proposed that awards be granted to educators who develop outstanding pre-K-12 curricular units. The awards were designed to highlight the importance of curricula and instruction that were designed to meet the varying needs of learners, honor the work of the developers, and promote the development of additional units.

Content Validity
To illuminate the key features of high-quality curricula, a rubric (see Figure 1) was developed to analyze and evaluate the units. To create the rubric, two researchers, who are authors of this article, derived 12 attributes or key features of exemplary curricula from a review of the literature (see Figure 2). Javits and National Association of Education Progress (NAEP) rubrics were included in the review. While the existing rubrics contained some critical key features of curricula and instruction for gifted and talented learners, the authors deemed that no existing rubric contained (1) a comprehensive set of practitioner-oriented key features and (2) descriptors to benchmark increasing levels of quality within each key feature.

For these reasons, the authors developed a 4-point rubric for each of the 12 key features, which are included in Figure 1. This initial set of key features and descriptors was reviewed subsequently for content validity by the remaining authors of this article, as well as six other gifted and talented researchers with advanced degrees and extensive experience in curriculum development. Revisions to the rubric were made according to their suggestions. Descriptors were further refined in each successive year of the award competition.

Interrater Reliability
To ensure interrater reliability, two authors of this study rated sample curricular units. In the first year of the competition, the researchers discussed their results to improve the reliability of their ratings. In each subsequent year, the same researchers assessed each curricular unit and evaluated their ratings using the following formula (Brophy & Good, 1986): Percent Agreement = 1 - (A - B/A + B). A and B refer to the ratings by the two raters. The A term is always the largest number. The results of the analyses are listed in Table 1.

The Curriculum Competition Rubric
Key Feature I: Clarity of Objectives
The effectiveness of any curricular unit is built upon strong instructional objectives, statements that describe, in specific terms, what students will know, be able to do, or both. Before any other aspect of a curricular unit can be assessed, these objectives must provide clear direction for the teacher. When objectives are explicitly stated, educators should not have to make assumptions regarding the learning or the desired outcomes. Curricular units with clear objectives receive higher scores than those with vague objectives that require interpretation regarding the learning or student outcomes.

Key Feature II: Nature of the Objectives
Many textbook publishers and school districts categorize learning objectives by subject/topic or grade level. Curriculum developers suggest that we can also categorize objectives by the kinds of learning they require from students. Some curriculum developers propose six categories: facts, concepts, principles, methodologies, attitudes or dispositions, and problem solving (Taba, 1962). Specifically, experts in any content area use facts, concepts, principles, the methodology of a field, the prerequisite dispositions and attitudes, and problem-solving skills to create or elaborate upon the theories that direct inquiry in a field of knowledge.

Facts are specific details. A concept is a broader idea that is a category or class for specific facts. For example, the word tools is a concept that includes specific items or details, such as hammers, washing machines, wrenches, and rulers. A principle is a law or rule that explains a relationship between two or more concepts. “Tools have changed over time to make work more efficient” is a principle that connects four concepts: tools, time, work, and efficiency. Methodology refers to the
generic skills associated with content areas (e.g., note taking, comparing and contrasting, formulating a question) or the discipline-specific skills, such as the scientific method in science or conducting oral histories and ethnographies in the social sciences. Using the case mentioned earlier about tools, a related methodology might include how to construct different kinds of building structures: bird houses, dog houses, decks and patios, or home additions. An attitude is an appreciation that is key to the domain. In our case, we would want students to appreciate precision, among other things. In architecture, we would want them to appreciate aesthetics. Finally, **problem solving is the ability to use** knowledge to solve problems that are not immediately understandable. With respect to the tools scenario, students might be asked to design a new tool to address a real-world problem.

Although it is essential that students understand the facts that pertain to a particular content area, we also know that our most advanced learners must be able to demonstrate that they understand the more abstract, related concepts, principles, methodologies, attitudes, and problem-solving skills. Therefore, this is a critical key feature on the rubric. The instructional objectives must include all kinds of learning, ranging from facts through problem-solving opportunities. Curricular units that contain an appropriate balance among the different types of objectives receive higher scores than those that focus solely on lower level, factual objectives.

**Key Feature III: Evaluation Components**

The last decade has witnessed a growing recognition of the need for significant changes in educational assessment practices. Traditional assessments may not measure learning outcomes, especially those that result when students apply or transform knowledge or when they monitor and regulate their progress on learning tasks. To measure students' progress toward mastery on advanced level outcomes, new, more effective and accurate assessment models are required. New models include authentic student tasks, such as real-world products and performances, collections of student work, and product-rating scales. Units that include several appropriate measures to assess sophisticated learner outcomes, prior to, during, and at the conclusion of teaching and learning activities receive higher scores than those that do not.

**Key Feature IV Learning Activities**

Learning activities, which are cognitive experiences that help students perceive, process, rehearse, store, and transfer new knowledge or skills, must provide students with opportunities to become actively involved with the curriculum. Student engagement results when students are learning about topics that hold relevance for them; when they have choices regarding the entry points for learning; and when they are given opportunities to design their own questions, sort through and select appropriate sources, draw their own conclusions, and present their findings in one of several real world products. Learning activities that provide students with these kinds of critical opportunities for learning include small-group discussions, simulations, projects, independent study, and mentorships, among others. Curricular units that embed several of these kinds of learning activities hold high levels of learning power for gifted and talented learners, and these units receive high scores on the rubric.

**Key Feature V Instructional Strategies**

There are a variety of instructional techniques that methods teachers use to introduce, explain, demonstrate, model, or coach new learning including lecture, drill and recitation, demonstration, modeling, discussion, teaching with analogies, direct instruction, mastery learning, smallgroup work, shared inquiry, Socratic questioning, jurisprudential inquiry, constructivism, projects, simulations, problem-based learning, and teacher as mentor. Gifted and talented learners have high analytic abilities that require the use of instructional techniques that allow them to exercise and refine their analytic powers. Accordingly, curricular units that include a variety of instructional strategies that require students to analyze, synthesize, and evaluate knowledge are rated highly. Award-winning units incorporate teaching strategies such as inductive teaching, Socratic questioning, jurisprudential inquiry, shared inquiry, constructivism, projects, simulations, problem-based learning, and teacher as mentor.

**Key Feature VI: Assignments and Student Products**
Open-ended and various are adjectives that characterize the assignments and products that are beneficial for all learners, especially those who are most capable. Many theorists and researchers also advocate for the use of real world products for these students.

Assignments can be considered on a continuum. At one end of the continuum are assignments that ask for little interpretation by students and involve recall, practice, or convergent thinking. Assignments that require students to practice their basic facts, list the causes of the Civil War, or identify the parts of a plant all demand convergent thinking. At the other end of the continuum are open-ended activities that require students to interpret, reshape, or transpose information. When students are provided with a word problem and asked to explain the different ways it can be solved, they are being asked to think divergently. If students are asked to explain the causes of the Civil War from the point of view of a Northerner and then a Southerner, they are being asked to think divergently and transpose information. Assignments that incorporate a variety of opportunities for interpreting and inferring are critical to the needs of our gifted and talented learners. Curricular units that provide these kinds of opportunities for young people are rated higher than those that do not.

Student products must go beyond the traditional written book report to include a variety of other real world forms of communication. Oral products include audiotapes, choral readings, a rap, a gallery talk, and a dramatic dialogue. Visual products include an advertisement, a Web page design, comic strips, a costume design, a greeting card, a set design, and wrapping paper design. Three-dimensional products include an art gallery, a mobile, a model, a museum exhibit, a memorial, a sculpture, stitchery, and a weather instrument. Nontraditional written forms of communication include maps, a picture dictionary, a social action plan, a survey, timelines, and weather logs. Units that incorporate a variety of appropriate real-world products are rated higher than those that include only traditional forms of written reports.

Key Feature VII: Resources
A spectrum of resources, materials that support student learning in the teaching and learning activities, can be tapped for instructional purposes by classroom teachers. The most frequently used resources are textbooks, books, and related articles. Non-print materials are also available and include, for

I. Clarity of Objectives
1. Objectives are not stated.
2. Objectives are discernible, but vague or confusing; assumptions need to be made by the reader.
3. Objectives are reasonably clear; reader is fairly confident he/she understands what students need to know and be able to do.
4. Objectives are clearly stated, specific, and unambiguous.

II. Nature of the Objectives
1. The majority of objectives are concerned with details, basic skills, and factual knowledge.
2. Objectives for learning incorporate major concepts and sophisticated skills within a field of study.
3. Objectives for learning incorporate concepts, principles, cognitive skills, methodologies, and dispositions within a field of study.
4. Objectives for learning incorporate concepts, principles, cognitive skills, methodologies, and dispositions that can be transferred across disciplines.

III. Evaluation Components
1. The student evaluation component is missing or not explicitly stated.
2. The assessment model includes only paper-and-pencil evaluative instruments (i.e., tests, quizzes).
3. The assessment model includes at least two different approaches to evaluation design, including pre-assessment.
4. The assessment model includes at least three different evaluation measures, including pre-assessment. Other assessments may include student portfolios, observational checklists of student behaviors, product evaluation, or self- or peer evaluation.

IV. Learning Activities
1. No student learning activities are described.
2. At least two different types of learning activities are described.
3. At least three different types of student learning activities are described. Many of these involve active engagement or hands-on learning.

4. At least three different types of learning activities are described. The majority of these activities involve constructivist learning, problem solving, cognitive engagement, and/or hands-on learning.

**V. Instructional Strategies**

1. The instructional strategies are not explicitly stated or described.

2. The instructional strategies are described. Strategies involve direct instruction or self-study.

3. At least two different instructional strategies are described. At least one of these strategies involves inductive teaching, teacher as facilitator, high-level questioning, Socratic questioning, or teacher as mentor.

4. At least three different instructional strategies are described. At least one of these strategies involves inductive teaching, teacher as facilitator, high-level questioning, Socratic questioning, or teacher as mentor.

**VI. Assignments and Student Products**

1. Fewer than two kinds of student products or assignments are described.

2. The author describes at least three different kinds of student products or assignments. The majority of these assignments involve convergent thinking, recall, or practice.

3. The author describes at least three different kinds of student products or assignments that are embedded in the lesson plans. The majority of these assignments involve open-ended assignments that are subject to personal interpretation or accommodate varying levels of expertise.

4. The author describes at least three different kinds of student products or assignments. The majority of these assignments involve open-ended assignments, the development of creative products, or the development of products related to real-world applications or problem solving. These products are closely aligned with other curricular components.

**VII. Resources**

The unit contains:

1. One, two, or three resources of one type (i.e., texts, books, articles).

2. Five or more varied resources, including print and nonprint materials (i.e., books, videotapes, audiotapes, hands-on materials, software, Internet sources).

3. Five or more varied resources and realia.

4. Five or more varied resources and realia, including-primary source material.

**VIII. Alignment of Curricular Components**

1. No lesson plans are evident, or fewer than three lesson plans were developed for this curricular unit, or the lesson plans contained fewer than three of the components listed below, or the plans were not explicit enough for other educators to follow.

2. The curricular unit contains more than three lessons. Each lesson describes at least three of the following instructional components: objectives, assessment, introduction, teaching strategies, learning activities, products, and resources.

3. The curricular unit contains more than three lessons. Each lesson describes at least five of the components mentioned above. Most of the components are sequenced and aligned (related to each other).

4. The curricular unit contains more than three lessons. Each lesson describes at least five of the components mentioned above. All the components are sequenced and closely aligned (rely strongly on each other to accomplish the lesson objectives).

**IX. Nature of Differentiation**

1. No opportunities for differentiation are evident.

2. Some open-ended activities are included in the unit.

3. This unit allows for at least two of the following adjustments: pacing, depth, breadth, level of abstraction, level of complexity, degree of generalizability, talent development.

4. Activities and assignments that accommodate the learning needs of high-achieving students are explicitly described. At least three or more of the adjustments (listed above) are included.

**X. Opportunities for Talent Development**

1. The unit includes none of the activities listed below.

2. The unit includes at least below.

3. The unit below.
4. The unit below.
   - Opportunities for "kid watching" and "talent spotting." one of the activities listed includes at least two of the activities listed includes at least three of the activities listed
   - Opportunities for students to engage in some activities aligned with their individual strengths, preferences, or interests.
   - Opportunities to foster the connection between unit activities and potential career fields, leadership opportunities, or real-world applications.
   - Opportunities to interact with role models, community resources, mentors, or professionals in the field. Opportunities to explore advanced content in that field. Opportunities to acquire the skills, methodologies, and dispositions of the practicing professional in that field.
   - Opportunities to investigate real-world problems and to develop authentic products and services in that field.

XI. Evidence of Effectiveness
1. No evidence of effectiveness is provided.
2. The unit has been used at least once with students; anecdotal evidence is included.
3. The unit has been used more than once. Evidence that supports general student growth was gathered and provided.
4. The unit has been taught more than once. Developers describe a systematic effort to assess growth and change in gifted education students.

XII. Ease of Use by Other Educators
1. Vital curricular components are missing.
2. Most curricular components are evident, but some are not described in enough detail to foster ease of use by other educators.
3. Most curricular components are evident.
4. Components are explicit, well-sequenced, and easy to follow. Field-tested suggestions for planning and implementation are included.

Figure 1. National Association for Gifted Children Curriculum Division Rubric for Rating Outstanding Curricular Material.

Example, videotapes, audiotapes, pictures, graphs, and maps. Less frequently used resources are realia, that is, objects used to relate classroom teaching to real life, such as photographs, journals, and clothing and accessories, (including hat pins, shoes, purses, buggy blankets, saddles, and the like). A final category of less-used resources is primary source documents. Primary source documents contain first-hand information about an event or a time in history and include letters, journals, authentic photographs, historic maps, supply lists, ledgers, and ship’s manifests. A wide variety of resources is essential in an exemplary curriculum. Additionally, realia and primary source documents are critical for our gifted and talented learners because they provide high-achieving young people with critical, "ceilingless" opportunities to analyze and interpret information. Award-Winning units incorporate all the kinds of resources mentioned here.

Key Feature VIII: Alignment Among the Curricular Components
Alignment refers to the cohesion among the components of a curricular unit. Specifically, the objectives, introduction, teaching strategies, learning activities, products, resources, and assessments must work together effectively; each lesson component reinforces the others in a way that the unit becomes greater than any of the individual parts. The strength of the cohesion among the components increases the likelihood that students will accomplish the intended lesson objectives. Award-winning curricular units contain more than three lessons. Furthermore, superior units include at least five of the components listed above, and all components build upon each other to accomplish the lesson objective(s).

<table>
<thead>
<tr>
<th>Key Feature</th>
<th>Theorist/Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Clarity of Objectives</td>
<td>Bloom, 1956; Gronlund, 1995; Kendall &amp; Marzano, 1997; Mager, 1997; Perkins, 1995</td>
</tr>
</tbody>
</table>
II. Nature of Objectives
• Objectives are organized around the concepts and principles of a discipline


III. Evaluation

   Ann Arbor Public Schools, 1993; Burke, 1994; Marzano, 2000; (Assessments of Student Work) Wiggins & McTighe, 1998

IV. Learning Activities
• Learning activities involve Gallagher & constructivist learning, problem solving, and hands-on activities

   Brooks & Brooks, 1999; Bruner, 1968; Dewey, 1938; Stepien, 1996; Gardner, 1991; Montessori, 1926; Piaget, 1963; Stepien & Gallagher, 1993; Taba, 1966; VanTassel-Baska, 1992

V. Instructional Strategies
• Inductive teaching, Socratic questioning, teacher as mentor

   Brophy & Good, 1986; Joyce & Weil, 1995; Piaget, 1963; Taba, 1962, 1966; Tyler, 1961

VI. Student Products and Assignments
• Open-ended activities and assignments
• Real-world products

   Bloom, 1956; Hertzog, 1998; Maker, 1982; Maker & Neilson, 1995; Renzulli, 1982; Taba, 1966

VII. Resources

   Ankeney, Del Rio, Nash, & Vigilante, 1996; Deitch, 1996, 1998; National Archives and Records Administration, 1989; Steffey & Hood, 1994

VIII. Alignment

   English, 1992; Hunter, 1964

IX. Nature of Differentiation
• Adjustments in pacing, depth, of abstraction, level of complexity, degree of generalizability


X. Opportunity for Talent Development
• Opportunities for students to engage in activities that are aligned with their individual strengths, learning style preferences, and interests
• Opportunities to explore advanced content

• Opportunities to acquire the skills, methodologies, and dispositions of the practicing professional

XI. Evidence of Effectiveness


XII. Ease of Use

Universal knowledge

Figure 2. Theoretical Foundation for the Curriculum Award Rubric

Key Feature IX: Nature of Differentiation

(Differentiation is composed of techniques and strategies used by the teacher to increase the match between the curriculum and the unique learning needs of students, e.g., interests, motivation, multiculturalism, prior knowledge, cognitive ability)

Often, teachers begin differentiating the curriculum by using open-ended questions, learning activities, or homework. The principle underlying open-endedness is that no single predetermined answer or solution exists. Put another way, open-ended curricular components require that students interpret their answer, assignment, or activity. For example, an art teacher might ask his fifth grade students to compare the French and American Impressionists to uncover the influence that the French Impressionists had on their American counterparts. Open-ended activities are critically important for gifted and talented students because they are "ceilingless"; students are free to take their ideas in any direction and pursue them as far as they would like.

Teachers who are more experienced with differentiation may go beyond open-ended activities and assignments. They make purposeful adjustments in the pacing, depth, breadth, level of abstraction (i.e., ideas that have a wide range of applicability), or level of complexity (i.e., the number of concepts or disciplines that are included in the unit). These adjustments, made to accommodate students' interests, cognitive ability, or prior knowledge are essential considerations for high-achieving young people. Curricular units that include three or more of the adjustments listed above are rated higher than those that include fewer adjustments or just open-ended activities or assignments.

Key Feature X: Opportunities for Talent Development

Talent development consists of two teaching behaviors: identifying students' learning and performance assets and nurturing students' identified assets within the school and community environment. Curricular units can be designed to enhance the likelihood that talents will be spotted and nurtured. Curricular units that address talent development explicitly using three or more of the strategies listed on the rubric receive higher ratings than those that do not.

Table 1

Interrater Percent Agreement From Ratings of Curricular Units, 1997-1999

<table>
<thead>
<tr>
<th>Unit</th>
<th>Rater 1</th>
<th>Rater 2</th>
<th>% Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>41</td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

Curriculum Topic 6 HO 1
**Key Feature XI: Evidence of Effectiveness**

The developers of high-caliber curricular units for gifted and talented students have made systematic efforts to measure the effectiveness of their work, that is student growth associated with the use of the curriculum unit. Systematic efforts can be rated on a continuum ranging from "no evidence collected" at one end of the scale to "systematic evidence collected" at the other end. Systematic evidence means that developers have taught the unit more than once, created a research-based procedure to assess student growth or change over time, and documented noteworthy changes in gifted students that can be associated with the curricular unit.
<table>
<thead>
<tr>
<th>Year</th>
<th>Pre K-3</th>
<th>4-8</th>
<th>9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Facilitating Inquiry at University Primary School</em> Marjory Cline &amp; Nancy Hertzog</td>
<td><em>Autobiographies: Personal Odysseys of Change</em> Claire Hughes &amp; Joyce VanTassel-Baska</td>
<td><em>Architectural Visions</em> Fayetteville (Arkansas) Public Schools</td>
</tr>
<tr>
<td>1998</td>
<td><em>Journeys and Destinations</em> Catherine Little &amp; Joyce VanTassel-Baska</td>
<td><em>Think Like a Sociologist</em> Judy Satterwhite &amp; Chris Briggs</td>
<td><em>Young Inventors</em> Jonathan Plucker</td>
</tr>
<tr>
<td></td>
<td><em>Robots Are Coming</em> Chris Nobbe</td>
<td><em>Chemistry Magazine</em> Leslie Mirman &amp; Jonathan Plucker</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td><em>Think and Talk</em> Kaye Kraus, Donna Morrison, Joyce Armstrong &amp; Katheryn Shannon</td>
<td><em>Anne of Green Gables</em> Dana Hyrkas &amp; Anne Robinson</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Riding flit Economic Railway Melody Key &amp; Debbie Bull</em></td>
<td><em>Who Is American?</em> Sally Simon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Across the Generations</em> Chris Briggs &amp; Carol Williams</td>
<td></td>
</tr>
<tr>
<td>1999 cont.</td>
<td><em>In-Depth Inquiries into the Natural Environment</em> Nancy Hertzog, Marjories Klein &amp; Joyln Blank</td>
<td><em>Wallet Wisdom and Free Enterprise</em> Jo Vanderspiken</td>
<td><em>Visions &amp; Voices</em> Kay Brimijoinn &amp; Cynthia Kelly</td>
</tr>
<tr>
<td></td>
<td><em>What a Find</em> Joyce VanTassel-Baska</td>
<td><em>Food for Thought</em> Gloria Jones, Donna Ncsbitt, Betty Bell, Connie Foster &amp; Nancy Kramer</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td><em>Archeology</em> Stephanie Zenker, Carmela Kuper, Carole McKee, Donna Muth,</td>
<td><em>Discovering History</em> Andi Stix &amp; Frank Hrbek</td>
<td><em>Gateways</em> Shelagh Gallagher</td>
</tr>
</tbody>
</table>
| Bonnie Kuncl & George Brauer | Greek Mythology  
Jane Cooke, Patricia Shultz & Barbara O'Neill.  
Keeping the Memory Alive  
Donna Nesbitt, Gloria Jones, Connie Foster & Betty Bell  
Return to the Moon  
Chris Nobbe, Cheryl Spencer & Amy Jones | Discovering the Oregon Trail  
Christine Deitz & Ann Robinson  
Literary Reflections  
Catherine Little & Joyce VanTassel-Baska | Heroes  
Robert Covel |

*Shaded areas contain the names of units that were created for gifted Learners; unshaded areas contain the names of units that were created for all learners.*
Key Feature XII: Ease of Use by Other Educators

Award-winning curricular units for students must be easy for other educators to use. Easy-to-use refers to two attributes: the number of curricular components that are described in the unit and the clarity of the suggestions for implementing the unit in other classroom settings. Curricular components must be explicit, well-sequenced, and easy to follow to receive a high rating. Additionally, highly rated units contain practical, field-tested suggestions for implementation to assist other teachers in using the unit in their classrooms.

Additional Uses for the NAGC Curriculum Rubric

Earlier in this article, we mentioned that the NAGC Curriculum Rating Rubric was originally designed in 1996 to support an annual curriculum competition. In the last 4 years, it has been used to identify more than 30 outstanding curricular units for high-achieving students (see Table 2). In recent years, we have used the rubric for four additional, but related, purposes.

Curriculum Adoption

First, we discovered that, regardless of its merits as a competition tool, the NAGC rubric is an extremely useful device for gifted education specialists who must evaluate, choose, or purchase replacement lessons, enrichment activities, accelerated units, or supplementary materials for use in gifted education programs or general education classrooms. Publishers and clearinghouses inundate teachers with glossy brochures, empty promises, and slick slogans to sway purchasing decisions. Instead of relying solely on advertisements, unwarranted publishers' claims, or colleagues' opinions, the use of the rubric during the curricular review or adoption process ensures the systematic analysis and evaluation of the vital facets and components of any set of commercial materials. Specific categories or criteria from the rubric can be used to support a purchasing, adoption, or implementation decision that otherwise could result in a costly error in judgment.

Curricular Remodeling

Second, many gifted education specialists use the rubric and its criteria to analyze, evaluate, and improve the quality of the lessons and curricular units that are already in use in their classrooms and gifted education programs. Renzulli (1994) dubbed a similar curricular analysis, evaluation, and improvement process "Textbook Triage." As the name implies, textbook triage mirrors the medical triage procedure used by emergency personnel to categorize patients into one of three categories: those individuals who are not likely to survive despite all medical interventions; those patients who require medical treatment from outside the immediate environment or supplementary sources; and those patients who can successfully be treated using available resources.

In the case of curriculum triage, the "patient" is a curricular unit or a lesson, not a human being. Like medical triage, the curriculum triage process requires a methodical and systematic examination of lessons or units. Practitioners complete the examination by analyzing and evaluating the "vital signs" of curriculum units in the same way that medical personnel examine the pulse, respiration, or blood pressure of a human patient. Vital signs for curriculum triage include the learning objectives, the introduction, learning and teaching activities, and the related resources, products, and assessments. A lower rating for a given component indicates a greater need for revision, while a higher rating suggests that the component is satisfactory and does not need to be revised. Used systematically, the NAGC rubric can help educators decide which curricular components are healthy and which are ailing. Those that are judged to be less than satisfactory become the subject of future revision and remodeling.
For example, if the triage process for a given lesson indicates that the learning objective, the introductory activities, the student products, and the assessment methods are satisfactory or exemplary, but that the teaching activities and the learning resources are of poor quality, then revision is recommended for only the latter two components. The NAGC rubric aids this process in two ways. First, the rubric provides the criteria and justification for rating some components as poor and others as exemplary. The rubric also illuminates the proper direction for follow-up revisions and enhancement decisions. Field trials indicate that remodeled lessons have greater alignment among the components, are set in more real-world contexts, and contain more challenging learning opportunities for students.

**Curriculum Development**

Although some educators prefer to remodel existing lessons, others are more interested in creating and developing their own lessons and curricular units. Several gifted education specialists who work as support staff and instructional specialists report the use of the rubric's criteria as benchmarks for helping colleagues create and develop their own high-quality, challenging, and original curricular units for use in gifted or general education classes.

Using curriculum planning templates (available upon request from the authors), educators sequentially build a unit and then a set of related lessons, all of which contain common components (e.g., learning objective, introductory activities, teaching and learning activities, resources, products, and assessments). The templates provide a framework for concisely describing the characteristics of each lesson component, and the rubric provides a self-reflection tool to check the quality of the newly designed components. The use of the rubric quickly reveals trouble spots in some facets of the newly created lessons. For example, crucial, but missing elements of an introduction may become apparent. Teaching activities that initially seemed appropriate may appear didactic. Initial ideas that resulted in the development of passive or rote learning activities might be abandoned in favor of more hands-on, minds-on, or constructivist assignments. Primary resources and raw data may replace traditional secondary sources. Student products may become more authentic and more creative than those in traditional units of instruction. Lastly, assessments become more aligned with the learning goal and more authentic and have greater depth, permitting a broader perspective for evaluating pre- to postinstructional learning gains.

**A Precursor to Curriculum Differentiation**

Some gifted education specialists work collaboratively with practitioners to develop and implement differentiated lessons for classrooms. In these cases, the gifted and talented teacher can use the instrument as a precursor to the development of differentiated lesson plans.

Most differentiated lesson plans develop and extend from the framework of a traditional, whole-class, large-group lesson plan. If the components of the original large-group lesson are poorly aligned, if the grade-level objective is an activity or a resource in disguise, if the grade-level objective is unclear or vague, or if the assessment is faulty or missing, it becomes much harder to create a powerful and effective set of alternatives or differentiated components. Instead, the subsequent differentiated activities, assignments, and resources look more like window dressing than new windows on learning. It is no wonder that, in these situations, educators report little or no growth in student learning as a result of the differentiated lesson plan. If implemented or planned poorly, differentiation can cause negligible or negative results.

To ensure that they are beginning with a high-quality lesson plan, gifted education specialists can use the NAGC rubric to strengthen existing lessons. As such, the NAGC rubric helps to ensure that the differentiation "cart" is not placed before the curriculum remodeling "horse." The rubric helps to strengthen the clarity, alignment, and authenticity of a whole-class lesson or unit before
any intervention or support for the development of differentiated lesson plans. This two-part approach consistently increases the power and effectiveness of the subsequent differentiated lessons or flexible small-group learning activities.

Conclusion
To conclude, the gap between current curricular units and the learning needs of gifted and talented learners is immense. As the gap gets wider, the learning needs of our highest achieving young people become more critical. This gap is a "call to action" for all who are in the field of gifted education. The authors believe the NAGC rubric can be used to bridge the gap between existing curricula and learning units that are powerful, aligned, engaging, authentic, and challenging. Specifically, the rubric can be used to: (1) guide the curriculum adoption process, (2) pinpoint where existing curricular units need remodeling and guide teachers through the remodeling process, (3) scaffold the curriculum development process, and (4) ensure that the differentiation process is built upon high-quality learning units. We anticipate and encourage additional experimentation with and uses for the rubric, and we welcome suggestions for additions or revisions in the original design.

References


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TOPIC 7 – INSTRUCTIONAL NEEDS AND STRATEGIES

KEY QUESTION: How can teachers of the gifted assure that the classroom instruction best meets the needs of each learner?

OBJECTIVES:
• Demonstrate the ability to match instructional strategies to individual needs of learners.

KEY CONCEPTS:
• Understanding effective instructional strategies for working with gifted learners
• How do we identify individual learner needs
• Identify elements of simulation games
• Identify desired outcomes and appropriate group strategies for working with the gifted learner
• Recognize common myths about gifted learners (HO 1)

RECOMMENDED READING ASSIGNMENT:
• Sample Interact or other simulations (see resources)

LEARNING OPTIONS - ACTIVITIES:
• Complete a KWLH chart for instructional strategies for gifted learners. (HO 2)
• Compile a list of proven instructional strategies for working with gifted students. Possible sources include the Coleman work and The Parallel Curriculum, pages 53-56, “Teaching Methods”. Discuss the ones you tend to use frequently and which you feel you could learn to use more often. Select four strategies and provide examples of when they would be effective tools.
Gather an assortment of Interact or other simulations and learning games. In small groups, identify the goals or outcomes for the game and discuss which learning activities would effectively address those goals. Refer to Karnes reading. Discuss why these may or may not be effective instructional tools.

Read Handout 1 and identify which myths or truths are addressed through a selected simulation or learning game.

Select a desired learning outcome or goal for a gifted learner. Design a simulation game that would meet the needs of that learner. You may choose to have the simulation geared to the specific learning needs of the student you are studying.

Create a set of flash cards identifying different individual learning needs. Choose a partner. How many instructional strategies can you name to appropriately accommodate the given need?

Consider strategies that best work for you as a learner. Which are not effective for you? What factors determine which are successful and which are not? Compare on a chart and summarize why you feel some strategies may be preferable to others based on learning styles. Read at least three articles from professional journals on various instructional strategies. What strategies seem best suited for gifted learners? Why? Report your findings in the chart. Finally, identify strategies you feel would be likely to be effective with your study student and explain your reasoning.

Create a myth/reality game about gifted learners. Role play a myth to a group while they hold up true/false response cards to state their opinion. How could you present this to your faculty or at a parent meeting?

Complete a simulation involving curriculum compacting. (See Starko’s book for example).

EVIDENCE OF MASTERY:
• Compiled list of proven instructional strategies and examples of usage
• Participation in class discussion of analysis of simulation/learning games
• Effective creation of a simulation/learning game geared to address learner needs and presentation to the class
• Comparison of personal strategies chart and summarization of why you feel some strategies may be preferable based on learning styles and summary of readings regarding effective strategies for gifted learners.
• Justification for instructional strategies selected for student.
• Participation in role-play presentations and follow-up discussion.
• Completion/quality of simulation game (Starko)

RESOURCES:

Curriculum Topic 7
Curriculum Development for the Gifted

- Interact W, 5527 State Road 106, PO Box 900, Fort Atkinson, WI 53538-0900 Phone (800) 359-0961 Fax: (800) 700-5093 E-mail: interact@highsmith.com
Common Myths About Gifted Students


- Gifted students are a homogeneous group, all high achievers.
- Gifted students do not need help. If they are really gifted, they can manage on their own.
- Gifted students have fewer problems than others because their intelligence and abilities somehow exempt them from the hassles of daily life.
- The future of a gifted student is assured: a world of opportunities lies before the student.
- Gifted students are self-directed; they know where they are heading.
- The social and emotional development of the gifted student is at the same level as his or her intellectual development.
- Gifted students are nerds and social isolates.
- The primary value of the gifted student lies in his or her brain power.
- The gifted student's family always prizes his or her abilities.
- Gifted students need to serve as examples to others and they should always assume extra responsibility.
- Gifted students make everyone else smarter.
- Gifted students can accomplish anything they put their minds to. All they have to do is apply themselves.
- Gifted children are easy to raise and a welcome addition to any classroom.
- Gifted children are perfectionists and idealistic. They may equate achievement and grades with self-esteem and self-worth, which sometimes leads to fear of failure and interferes with achievement.

Truths About Gifted Students

- Gifted students may experience heightened sensitivity to their own expectations and those of others, resulting in guilt over achievements or grades perceived to be low.
- Gifted students are asynchronous. Their chronological age, social, physical, emotional, and intellectual development may all be at different levels. For example, a 5-year-old may be able to read and comprehend a third-grade book but may not be able to write legibly.
- Some gifted children are "mappers" (sequential learners), while others are "leapers" (spatial learners). Leapers may not know how they got a "right answer." Mappers may get lost in the steps leading to the right answer.
- Gifted students may be so far ahead of their chronological age mates that they know more than half the curriculum before the school year begins! Their boredom can result in low achievement and grades.
- Gifted children are problem solvers. They benefit from working on open-ended, interdisciplinary problems; for example, how to solve a shortage of community resources. Gifted students often refuse to work for grades alone.
- Gifted students often think abstractly and with such complexity that they may need help with concrete study- and test-taking skills. They may not be able to select one answer in a multiple choice question because they see how all the answers might be correct.
- Gifted students who do well in school may define success as getting an "A" and failure as any grade less than an "A." By early adolescence they may be unwilling to try anything where they are not certain of guaranteed success.
TOPIC 8 – SELECTING APPROPRIATE MATERIALS, RESOURCES AND TECHNOLOGY

KEY QUESTION: How do exemplary teachers of the gifted select and use appropriate materials, resources, and technology to facilitate academic growth and achievement for students?

OBJECTIVES:
• Demonstrate awareness and knowledge of appropriate resources and materials for developing curriculum and facilitating learning for students who are gifted.

KEY CONCEPTS:
• Clarify a potential role for textbooks in curriculum for the gifted.
• Define human and material resources and their roles in curriculum development for gifted learners.
• Understand the selection criteria for selection of materials to ensure they are sufficiently challenging and aligned with content standards.
• Ensure that concepts are presented with sufficient depth and complexity and focus on “big ideas”.
• Select appropriate materials with a range of reading and developmental levels geared to student needs.
• Recognize the need for group and independent projects appropriate to challenge and facilitate growth.
• Establish criteria for consideration in selecting appropriate media material.
• Identify six major types of Internet applications

RECOMMENDED READING ASSIGNMENT:
• Houston, D. (2002). Selecting media for the diverse classroom: A handbook for teachers (Publication No. ESE 311534). Tallahassee, FL: Bureau of Exceptional Education and Student Services, Florida Department of Education. [Available at no cost from the Clearinghouse Information Center, Division of Public School and Community Education, Department of Education (850) 488-1879].
LEARNING OPTIONS - ACTIVITIES:

- Read pages 49 and 67-80 of *The Parallel Curriculum* to review Hilda Taba’s Knowledge Categories and “Remodeling a Study Unit Using the Comprehensive Curriculum Framework”. Using a current text from your classroom, identify the levels addressed in the text (Refer to page 109 for an example).

- Work with another class participant and, after a review of the rubric (page 71 from *The Parallel Curriculum*) for evidence of mastery from Novice to Expert, establish a flow chart for one of the following:
  - Writing a short story
  - Developing lesson plans
  - Understanding fractions
  - Forces of Nature
  - Development of the Constitution of the United States

- Share with the class

- Discuss the need for group and independent projects as appropriate to challenge and facilitate growth based on where a student might be on the flow chart.

- Using the same text as for Activity One above, remodel a study unit as outlined in pages 67-80 of *The Parallel Curriculum* using the Sunshine State Standards and national standards for the subject as well as any local district curriculum guides. The mini unit should cover at least five days.

- Discuss in class the role basal texts might play in a gifted curriculum.

- Discuss the key considerations for selecting instructional materials and resources to effectively challenge learners based on the Avery and Zuo reading.

- Read/review pages 163 – 178 of *The Parallel Curriculum* to understand the parallel of Practice. Discuss the significance of having students understand how their learning aligns with practices in the real disciplines by professionals. Write a short paper identifying a professional in the field who would be a match for the student you are currently studying. What subject is the student working in where meeting a scholar practicing the subject might guide the student’s learning in this subject.

- Create an evaluation tool for selecting appropriate print-based instructional materials. Consider materials for each level from Novice to Expert.

- Read/Review *The Parallel Curriculum* pages 85-115 and pages 122-123 to understand the Core Curriculum parallel and clarify what is meant by “Big Ideas”. Select three “Big Ideas” from the curriculum for the grade level you are currently teaching. Be prepared to discuss with the class to determine whether these are significant topics for guiding
students to understanding the essential topics. Discuss with the class how you can be sure that your curriculum is addressed to guide students to be challenged.

- Discuss key considerations for selecting appropriate and challenging multi-media instructional materials and on-line sources. (Review Handouts 2,4,5, and 6). Create an evaluation tool for World Wide Web documents. Identify six major types of Internet applications:
  - Tools--includes search engines and e-mail
  - Resources—extras providing information; collections; lesson plans
  - References—includes databases and virtual libraries
  - On-line Lesson or tutorial--Simulations or lessons
  - Activities—includes WebQuests
  - Projects—includes real-world studies

- Choose a World Wide Web site and apply the criteria. Share this evaluation with a colleague or the class.

- Design a checklist for integrating technology into the gifted classroom. (See VanTasel-Baska (2003), page 250-251, Technology, Curriculum Planning and Instructional Design for Gifted Learners.)

- Discuss how you can ensure that the use of technology is appropriate for gifted learners given the common use for all students. Discuss the question: “How has the use of technology changed instructional options for gifted students?”

- Read GT-Curriculum (Handout 1) and Publishers of Gifted Education Materials (Handout 3) and discuss. Establish criteria for determining when to use “outside” resources vs. teacher-developed curriculum.

**EVIDENCE OF MASTERY:**

- Completion of paper showing Taba's Knowledge Categories aligned with text book
- Completion of rubric flow chart and presentation in class
- Remodeling of study unit
- Paper identifying a suggested match of a professional for the student currently under study
- Creation of evaluation tool for selecting appropriate print-based instructional materials
- Clarification of “Big Ideas”
- Creation of evaluation tool for World Wide Web documents and application of the criteria
- Creation of an appropriate Checklist for integration of technology to gifted classroom

**RESOURCES:**

Syracuse, NY. Retrieved February 11, 2003, from the World Wide Web (HO 6)


- Learning Links document (HO 2)]


- Resources for Implementing Technology (HO 4)]
Where can I find appropriate curriculum for gifted students and information on differentiating curriculum?

SOURCES FOR CURRICULA:

The Center for Gifted Education at the College of William and Mary in Williamsburg, VA has developed comprehensive curricula for high ability learners, grade Kindergarten through 8, in science, language arts, and social studies. The Center has seven science curriculum units containing different real-world situations that confront today's society, plus a guide to using the curriculum. The units are geared towards different elementary levels, yet can be adapted for use at all levels of K-8. The goal of each unit is to allow students to analyze several real-world problems, understand the concept of systems, and conduct scientific experiments. These units also allow students to explore various scientific topics and identify meaningful scientific problems for investigation. Through these units students experience the work of real science in applying data-handling skills, analyzing information, evaluating results, and learning to communicate their understanding to others. The language arts units are available in format packs consisting of one Teacher's Book and ten Literature Packets containing all the short literary pieces referenced in each unit. These prototype curricula, developed under the auspices of the U.S. Department of Education, have undergone rigorous evaluation and have been extensively field tested.

Selected materials are available from:

Kendall/Hunt Publishing Company
P.O. Box 1840
Dubuque, IA 52004-1840
1-800-228-0810
http://www.kendallhunt.com

OR

The Center for Gifted Education
http://cfge.wm.edu/publicat.htm

BOOKS ON GIFTED CURRICULUM

Part One is General Issues in the Design and Development of Appropriate Curricula for the Gifted; Part Two is Specific Considerations in Planning Curricula for Special Populations of Gifted Learners. The appendix includes checklists, forms, differentiated activities, and dozens of practical ideas for planning curriculum K-12.

This book examines the development of curriculum for gifted children and presents examples of such a curriculum at the elementary and secondary level.


This text on the education of gifted children is organized into two parts-the first on curriculum principles and the second on application of those principles.

You can search the ERIC database yourself on the Internet through either of the following web sites:

- [The Educator’s Reference Desk](http://www.eduref.org/)
- [ERIC database search website](http://www.eric.ed.gov/searchdb/index.html).

**ERIC Citations**

The full text of citations beginning with an ED number (for example, EDxxxxxx) is available:

- In microfiche collections worldwide; to find your nearest ERIC Resource Collection, point your web browser to: [http://wdcrobcoll2.ed.gov/Programs/EROD/eric_search.cfm](http://wdcrobcoll2.ed.gov/Programs/EROD/eric_search.cfm).
- For a fee through the ERIC Document Reproduction Service (EDRS): [http://edrs.com](http://edrs.com), service@edrs.com, or 1.800.443.ERIC.

The full text of citations beginning with an EJ number (for example, EJxxxxxx) is available for a fee from:

- The originating journal
- Through interlibrary loan services at your local college or public library
- From article reproduction services such as
  - Infotrieve: 800.422.4633; [www4.infotrieve.com](http://www4.infotrieve.com), service@infotrieve.com
  - ingenta: 800.296.2221; [www.ingenta.com](http://www.ingenta.com), ushelp@ingenta.com

**ERIC Search Terms Used**

**Gifted AND curriculum development**

EJ577425 EC620346
Gifted Education Meets Reggio Emilia: Visions for Curriculum in Gifted Education for Young Children.
Barbour, Nancy E.; Shaklee, Beverly D.
Gifted Child Quarterly; v42 n4 p228-37 Fall 1998
Publication Type: JOURNAL ARTICLE (080); PROJECT DESCRIPTION (141)
ISSN-0016-9862
Language: English
ERIC Issue: CIJAUG1999
Reviews and focuses on a comparison of current curriculum models used in gifted-child education and early childhood education. The Reggio Emilia approach to early childhood education, which emphasizes the child’s needs, interests, and abilities as the focus of curriculum development, is described.
Descriptor: *Curriculum Design; *Curriculum Development; Early Childhood Education;
A Problem-Based Curriculum: Parallel Learning Opportunities for Students and Teachers.
Boyce, Linda Neal; VanTassel-Baska, Joyce; Burruss, Jill D.; Sher, Beverly Taylor; Johnson, Dana T.
Journal for the Education of the Gifted; v20 n4 p363-79 Sum 1997
Publication Type: JOURNAL ARTICLE (080); POSITION PAPER (120); PROJECT DESCRIPTION (141)
ISSN-0162-3532
Language: English
Analyzes the use of problem-based learning as a catalyst for developing and implementing curriculum for gifted students that is both challenging and constructivist in approach. It relates metacognition to problem-based learning and describes inservice programs developed for teachers and administrators at the College of William and Mary (Virginia).
Descriptor: Constructivism (Learning); *Curriculum Development; Educational Methods; Elementary Secondary Education; *Gifted; Inservice Teacher Education; *Metacognition; *Problem Solving
Identifiers: College of William and Mary VA; *Problem Based Learning

An Integrated-Thematic Curriculum for Gifted Learners.
Tucker, Brooke; Hafenstien, Norma Lu; Jones, Shannon; Bernick, Rivian; Haines, Kim
Roeper Review; v19 n4 p196-99 Jun 1997
Publication Type: NON-CLASSROOM MATERIAL (055); JOURNAL ARTICLE (080); PROJECT DESCRIPTION (141)
ISSN-0278-3193
Audience: Teachers; Practitioners
Language: English
Describes an integrated-thematic curriculum for gifted students in the context of assumptions about learning and characteristics of gifted learners. Specific strategies and steps in curriculum development are explained and applied to a year-long focus on the theme of "evidence" in a multiaged primary classroom with curriculum units on dinosaurs, mysteries, and Mayan culture.
Descriptor: *Curriculum Development; Educational Methods; *Gifted; *Integrated Curriculum; Primary Education; *Thematic Approach; Units of Study

A Multi-Site Case Study of Successful Classroom Practices for High Ability Students.
Westberg, Karen L.; Archambault, Francis X., Jr.
Gifted Child Quarterly; v41 n1 p42-51 Win 1997
Publication Type: JOURNAL ARTICLE (080); PROJECT DESCRIPTION (141)
ISSN-0016-9862
Audience: Practitioners
Language: English
This study described 10 elementary schools and classrooms known for meeting the needs of high ability students through differentiated practices. Themes emerging across sites include teachers' advanced knowledge and training, teachers' willingness to embrace change, collaboration, teachers' strategies for differentiating curriculum, instructional leadership, and educational cooperation.
Descriptor: Classroom Techniques; *Curriculum Development; Educational Change; Educational Cooperation; Elementary Education; *Gifted; *Individualized Instruction;
*Instructional Leadership; Student Needs; *Teacher Attitudes; *Teacher Characteristics; Teaching Methods

EJ532417 EC614700
A Study of Language Arts Curriculum Effectiveness with Gifted Learners.
VanTassel-Baska, Joyce; And Others
Special issue: Effective Practices.
ISSN: 0162-3532
Document Type: JOURNAL ARTICLE (080); RESEARCH REPORT (143)
This study of language arts curriculum effectiveness presents data supporting utilization of the Integrated Curriculum Model (ICM) with high-ability learners in various grouping contexts. Significant gains were demonstrated in literary analysis, persuasive writing, and linguistic competency for seven elementary classes using the ICM. Implications for heterogeneous classrooms are discussed.
Descriptors: *Curriculum Development; Elementary Education; *Gifted; *Heterogeneous Grouping; Inclusive Schools; Instructional Effectiveness; *Integrated Curriculum; *Language Arts; Literacy Education; Outcomes of Education; *Teaching Models; Writing Improvement

ED398666 EC304958
Gifted Education and Middle Schools Videotape and Book.
Council for Exceptional Children, Reston, VA 1996
59p.; A product of the National Training Program for Gifted Education.
Based on a Council for Exceptional Children Symposium on Gifted Education and Middle Schools, Reston, VA, January 7-9, 1995).
EDRS Price - MF01/PC03 Plus Postage. Language: English
Document Type: NON-CLASSROOM MATERIAL (055); AUDIOVISUAL MATERIAL (100); BOOK (010)
This book and video are based on a symposium of leaders in the fields of gifted education and middle-level education, which was held to identify and explore areas of agreement in often contrasting philosophies. Emphasis is on identifying areas of agreement between the fields, areas of tension, and promising directions that could engage educators in mutual planning of appropriate services for all middle-school students. The book includes the following papers: (1) "The Middle School: Mimicking the Success Routes of the Information Age" (Thomas O. Erb) which reviews the historical issues surrounding gifted education and middle-level education; (2) "Middle Schools and Their Impact on Talent Development" (Mary Ruth Coleman and James J. Gallagher) which describes two studies, one which compared attitudes of middle school and gifted educators and the other which looked at current best practices; (3) "Gifted Learners and the Middle School: Problem or Promise?" (Carol Ann Tomlinson) which outlines areas of tension between the two fields and suggests areas where leaders might collaborate; (4) "Differentiating Instruction for Advanced Learners in the Mixed-Ability Middle School Classroom" (Carol Ann Tomlinson) which provides specific suggestions for differentiating curriculum; and (5) "Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms" (Carol Ann Tomlinson) which provides a matrix of instructional strategies. Appendices include a list of symposium participants and the video script. The video presents views of symposium participants and gifted students on these issues and demonstrates students' needs for both integrated and separate learning experiences.
Descriptors: Cooperative Learning; *Curriculum Development; Educational Environment;
Educational Practices; *Educational Strategies; *Gifted; Heterogeneous Grouping; Instructional Development; Intermediate Grades; Junior High Schools; Learning Strategies; *Middle Schools; Social Integration; *Student Development; Student Needs; Student Placement; Talent; Talent Development; *Teaching Methods

Identifiers: *Differentiated Curriculum (Gifted)

ED398665 EC304957
Nurturing Giftedness in Young Children Videotape and Book.
Maker, C. June; King, Margaret A.
Council for Exceptional Children, Reston, VA 1996
64p.; A product of the National Training Program for Gifted Education.
Based on a Council for Exceptional Children Symposium on Nurturing Giftedness in Young Children (Reston, VA, August 11-13, 1995).
Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington, DC. Contract No: R206A20102
ISBN: 0-86586-282-6
Available From: Council for Exceptional Children, 1920 Association Drive, Reston, VA 20191-1589 (Book Stock No. P5156; $15; $10.50 member; Set: Stock No. M5156, $99; $69.30 member).
EDRS Price - MF01/PC03 Plus Postage.
Document Type: NON-CLASSROOM MATERIAL (055); AUDIOVISUAL MATERIAL(100); CONFERENCE PROCEEDINGS (021)
This book and video are based on a symposium on ways to foster giftedness in children in kindergarten through third grade. Emphasized throughout are DISCOVER projects, federally funded research and development projects to assist Arizona educators in identifying and planning programs for gifted children from diverse cultural, ethnic, and linguistic backgrounds. Chapter 1 profiles model DISCOVER classrooms, young gifted learners, and their teachers. A list of materials for a multiple intelligences learning center is provided. Chapter 2 explains the multiple intelligences model of giftedness and the DISCOVER program. Chapter 3 explains 20 developmentally appropriate practices, including: age-appropriate practices; individually appropriate curriculum; acceptance of diversity; humane, supportive, flexible, and responsive environments; a whole child perspective; active, interactive learning; learner-centered, teacher-facilitated curriculum; integrated curriculum; challenging learning activities and experiences; extensive planning; intrinsic motivation; supportive guidance and discipline; authentic assessment; community-based programs; parent involvement; and collaboration. The S. W. Schiever and C. J. Maker Continuum of Problem Types is presented and applied to the study of cycles in seasons and weather. Appendices provide: a list of symposium participants, a transcript of the symposium video, and abstracts of DISCOVER projects. The video shows symposium participants addressing issues of talent identification, teacher preparation, and curriculum. Ways that young children who are gifted or talented can be nurtured at school and at home are demonstrated.
Descriptors: *Ability Identification; Classroom Techniques; Cultural Awareness; Curriculum Design; *Curriculum Development; Educational Environment; *Educational Practices; Educational Strategies; Elementary Education; *Gifted; Minority Groups; Parent Participation; Program Development; *Student Development; Talent; Talent Identification; *Teaching Models
Identifiers: Developmentally Appropriate Programs; Multiple Intelligences

EJ511789 EC612252
Coleman, Mary Ruth; Gallagher, James J.
ISSN: 1076-2175
Twelve “best practices” guidelines are offered to provide truly differentiated instruction for gifted students. Guidelines are based on theory, research, and experience and, taken together, result in appropriate differentiated service options.

Descriptors: Curriculum Development; Delivery Systems; *Educational Needs; *Educational Practices; Educational Quality; Elementary Secondary Education; *Gifted; *Instructional Improvement

Identifiers: *Differentiated Curriculum (Gifted)

ED388013 EC304368
Building a Bridge between Gifted Education and Total School.
Improvement. Talent Development Research-Based Decision Making Series 9502.
Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington, DC. Contract No: R206R00001
EDRS Price - MF01/PC03 Plus Postage.

ED388013 EC304368
Building a Bridge between Gifted Education and Total School.
Improvement. Talent Development Research-Based Decision Making Series 9502.
Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington, DC. Contract No: R206R00001
EDRS Price - MF01/PC03 Plus Postage.

This monograph addresses the role of gifted education in total school improvement by describing three service delivery components (the Total Talent Portfolio, Curriculum Modification Techniques, and Enrichment Learning and Teaching) and several organizational components of the Schoolwide Enrichment Model (SEM). The report describes how the SEM can serve as a structure for schools trying to develop the talents of all students. It describes each of its three components: (1) the total talent portfolio, a vehicle for systematically gathering and recording information about a student's abilities, interests, and learning style preferences; (2) regular curriculum modification including curriculum differentiation, provision of in-depth learning experiences, and integration of enrichment activities; and (3) enrichment learning through provision of enrichment clusters to multi-age heterogeneous groups of students. The report also addresses schoolwide enrichment and educational reform, key ingredients of school improvement, a gentle and an evolutionary (but realistic) approach to school improvement, and starting the school improvement process. Twelve frequently asked questions about schools for talent development are answered. A glossary is attached.

Descriptors: *Change Strategies; *Curriculum Development; *Curriculum Enrichment; Educational Change; Educational Environment; *Educational Improvement; Elementary Secondary Education; Enrichment Activities; Excellence in Education; *Gifted; Heterogeneous Grouping; Portfolio Assessment; School Restructuring; Student Development; Student Interests; Talent Development; *Teaching Models

Identifiers: Enrichment Triad Model; *Schoolwide Enrichment Model

EJ489447 EC609282
The Impact of Staff Development on Teachers’ Ability to Modify Curriculum for Gifted and Talented Students.
Reis, Sally M.; Westberg, Karen L.
Gifted Child Quarterly, v38 n3 p127-35 Sum 1994
Special Issue: Teachers and Talent Development.
ISSN: 0016-9862
Document Type: JOURNAL ARTICLE (080); RESEARCH REPORT (143)
Journal Announcement: CIJAN95
Three levels of staff development were provided to 300 elementary teachers to train them in curriculum compacting for high ability students. Teachers eliminated about half of the content for targeted students. Teachers receiving the most intensive training

Descriptors: *Change Strategies; *Curriculum Development; *Curriculum Enrichment; Educational Change; Educational Environment; *Educational Improvement; Elementary Secondary Education; Enrichment Activities; Excellence in Education; *Gifted; Heterogeneous Grouping; Portfolio Assessment; School Restructuring; Student Development; Student Interests; Talent Development; *Teaching Models

Identifiers: Enrichment Triad Model; *Schoolwide Enrichment Model
created higher quality compactor forms for students and used more replacement strategies and more diverse options for targeted students.

Descriptors: *Curriculum Development; Elementary Education; *Gifted; *Inservice Teacher Education; Instructional Effectiveness; *Outcomes of Education; Staff Development

Identifiers: *Curriculum Compacting

EDJ481449 EC608367
Gifted Learners: The Boomerang Kids of Middle School?
Tomlinson, Carol Ann
Roeper Review, v16 n3 p177-82 Feb 1994
ISSN: 0278-3193
Language: English
Document Type: JOURNAL ARTICLE (080); POSITION PAPER (120)
Journal Announcement: CIJAUG94

A variety of beliefs and practices central to middle schools may cause special difficulties for gifted learners. Such practices often focus on potentially competing goals of student competencies versus student excellence and include such practices as heterogeneous grouping, cooperative learning, and an absence of clearly defined middle school curricula.

Descriptors: Beliefs; Competency Based Education; Cooperative Learning; Curriculum Development; *Educational Practices; *Educational Principles; Excellence in Education; *Gifted; Grouping (Instructional Purposes); Heterogeneous Grouping; Intermediate Grades; Junior High Schools; *Middle Schools; Student Educational Objectives

ED388027 EC304382
What Educators Need To Know about...Series. Ability Grouping and Curriculum Compacting and Gifted Students and Cooperative Learning and Mentoring and Student Motivation.
Siegle, Del, Ed.; And Others
National Research Center on the Gifted and Talented, Storrs, CT. [1994 22p.; Some pages are very dark and may not copy well.
Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington, DC. Contract No: R206R00001
EDRS Price - MF01/PC01 Plus Postage.
Document Type: NON-CLASSROOM MATERIAL (055)

Five pamphlets (Practitioner's Guides) present guidelines from the National Research Center on the Gifted and Talented at the University of Connecticut. The guidelines are supported by theory-driven quality research that is problem-based, practice-relevant, and consumer-oriented. Each pamphlet has a section summarizing research from the literature or topic notes as well as identifying specific implications for the classroom.

Practitioner's Guides are titled: (1) "What Educators Need To Know about Ability Grouping" (Del Siegle, Editor); (2) "What Educators Need To Know about Curriculum Compacting" (Del Siegle, Editor); (3) "What Educators Need To Know about Gifted Students and Cooperative Learning" (Del Siegle, Editor); "What Educators Need To Know about Mentoring" (Diana Whitton and Del Siegle, Editors); and (5) "What Educators Need To Know about Student Motivation" (Pamela Clinkenbeard and Marcia A. B. Delcourt, Editors). Each pamphlet contains references.

Descriptors: *Ability Grouping; Acceleration (Education); Classroom Techniques; *Cooperative Learning; Curriculum Development; Educational Methods; Elementary Secondary Education; *Gifted; *Mentors; *Student Motivation
Identifiers: *Curriculum Compacting

EJ470633 EC606738
Linking Curriculum Development for the Gifted to School Reform and Restructuring.
Van Tassel-Baska, Joyce
Gifted Child Today (GCT), v16 n4 p34-37 Jul-Aug 1993
ISSN: 0892-9580
Language: English
Document Type: JOURNAL ARTICLE (080); POSITION PAPER (120)
Journal Announcement: CIJFEB94
This paper compares academic performance of American students with that of other countries; addresses responses to poor performance, such as outcome-based approaches to learning and use of national standards; outlines practices being adopted by schools to promote reform; identifies curriculum reform principles; and discusses implications for gifted education at national, state, local, and classroom levels.
Descriptors: Academic Achievement; *Academic Standards; Comparative Education; *Curriculum Development; Educational Change; Educational Objectives; Elementary Secondary Education; *Gifted; *School Restructuring

Keirouz, Kathryn S.
Gifted Child Today (GCT), v16 n1 p36-39 Jan-Feb 1993
ISSN: 0892-9580
Document Type: JOURNAL ARTICLE (080); POSITION PAPER (120)
Areas crucial to the development of "state of the art" curricula for gifted students are discussed, including differentiation, emphasis on both process and content, interdisciplinary and individualized formats, balance between acceleration and enrichment, and comprehensive and articulated curriculum structure.
Descriptors: Acceleration (Education); Articulation (Education); *Curriculum Development; *Educational Practices; Elementary Secondary Education; Enrichment Activities; *Gifted; Individualized Programs; Interdisciplinary Approach; Special Education

Passow, A. Harry; Rudnitski, Rose A.
Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington, DC. Contract No: R206R00001
EDRS Price - MF01/PC05 Plus Postage.
Document Type: EVALUATIVE REPORT (142)
Target Audience: Policymakers
This study analyzed state policies on the identification and education of gifted students as reflected in legislation, regulations, rules, recommendations, and guidelines provided by 49 states. The elements examined include: (1) state mandated services, (2) district plans for the gifted, (3) gifted education as part of special education, (4) philosophy or rationale, (5) definitions of gifted and talented, (6) identification procedures, (7) programs for the gifted, (8) differentiated curriculum and instruction, (9) counseling and other support services, (10) parent involvement, (11) program evaluation, (12) teacher education and certification, and (13) state funding for the gifted. The analysis indicated that all states have formulated policies that support education of the gifted and talented but that considerable variability among states exists with respect to specific components. Major recommendations are made in the following areas: establishing challenging curriculum standards; providing high-level learning opportunities; ensuring access to early childhood education; offering extended opportunities for economically
disadvantaged and minority children; providing teacher training and technical assistance; and matching the high performance of similar students throughout the world.

Descriptors: *Ability Identification; Compliance (Legal); Counseling; *Curriculum Development; Definitions; Educational Legislation; Educational Philosophy; *Educational Policy; Elementary Secondary Education; Eligibility; Financial Support; *Gifted; National Surveys; Needs Assessment; Program Development; Program Evaluation; Pupil Personnel Services; School Districts; State Aid; State Legislation; *State Programs; *State Standards; Teacher Education

Identifiers: *Differentiated Curriculum (Gifted)
LEARNING LINKS

References

http://www.odci.gov/cia/publications/factbook/ (CIA Fact Book)
http://vlib.org/ (WWW Virtual Library)

Resources

http://www.hoagiesgifted.org/investigations.htm (Broad list of Internet investigations)
http://mathforum.org (Math Forum)
http://edsitement.neh.gov/ (National Endowment for the Humanities)
http://www.lhs.berkeley.edu/FOSS/FOSS.html (Full Option Science System)
http://www.si.edu (Smithsonian Institution)
http://www.twinkiesproject.com/ (The T.W.I.N.K.I.E.S. Project)
http://www-itg.lbl.gov/vfrog/ (The Virtual Frog Dissection Kit)
http://sln.fi.edu/tfi/hotlists/hotlists.html (The Franklin Institute Online)
http://www.sciencegems.com/ (Frank Potter's Gems)

Projects

http://www.jasonproject.org/ (Jason Project)

Activities

http://www.kn.pacbell.com/wired/fil/ (Filamentality—Build your own WebQuest)
http://www.kn.pacbell.com/wired/China/sampler.html (My China)
http://webquest.sdsu.edu/ (The WebQuest page)
http://www.kn.pacbell.com/wired/BHM/bh_hunt_quiz.html (Black History treasure hunt)
http://www.kn.pacbell.com/wired/China/ChinaQuest.html (China simulation)
 Publishers of Gifted Education Materials

A
Allyn and Bacon
160 Gould Street
Needham Heights, MA 02494
800.666.9433
http://vig.abacon.com/

ALPS Publishing
PO Box 2264
Greeley, CO 80632
800.345.2577
970.353.0260 (fax)
http://www.alpspublishing.com

Amazon
http://www.amazon.com
(search for "gifted")

American Psychological Association
750 First Street, NE
Washington, DC 20002-4242
202.336.5500
http://www.apa.org

Ann McGee-Cooper & Associates, Inc.
4236 Hockaday Drive
Dallas, TX 75229-2822
800.477.8550
http://www.amca.com/

Avocus Publishing, Inc.
4 White Brook Road
Gilsum, NH 03448
800.345.6665
orders@avocus.com
http://www.avocus.com/

A. W. Peller & Associates Educational Materials
210 Sixth Avenue
PO Box 106
Hawthorne, NJ 07507
800.451.7450
awpeller@worldnet.att.net
http://www.awpeller.com/

C
Center for Creative Learning
PO Box 14100-NE Plaza
Sarasota, FL 34278-4100
941.351.8862

941.351.9061 (fax)
orders@creativelearning.com
http://www.creativelearning.com

The Council for Exceptional Children
1110 N. Glebe Rd.
Arlington, VA 22201-5704
888.CEC.SPED (232.7733)
http://www.cec.sped.org/bk/catalog.html

Creative Education Foundation
1050 Union Road
Buffalo, NY 14224
800.447.2774
716.675.3209 (fax)
cefhq@cef-cpsi.org
http://www.cef-cpsi.org/

Creative Learning Press, Inc.
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Mansfield Center, CT 06250
888.518.8004
860.429.7783 (fax)
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Creative Publications
5623 W. 115th Street
Alsip, IL 60803
800.642.0822
831.393.3277 (fax)
ct@criticalthinking.com
http://www.creativepublications.com

Critical Thinking Books & Software
PO Box 448
Pacific Grove, CA 93950
800.458.4849; 831.383.3288
http://www.criticalthinking.com/

Curriculum Associates
PO Box 2001
N. Billerica, MA 01862-0901
800.225.0248
http://www.curriculumassociates.com/

The Curriculum Project
PMB 141
3300 Bee Cave Road #650
Austin, TX 78746
Resources for Implementing Technology


http://library.thinkquest.org/50123/manage.html?tqskip1=1&tqtime=0211 (Classroom management tips for integrating technology)

http://library.thinkquest.org/50123/tutorials.html (Tutorials on technology for preservice teachers developed by the University of Houston faculty)


http://www.kn.pacbell.com/wired/bluewebn/apptypes.html (Summary of types of applications. Based on article by Tom March).
Journals and Periodicals for Parents and Educators of Gifted Children (Updated September 2003)


- **Creative Kids**, a magazine for students. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com)
- **Gifted and Talented International.** The journal of the World Council for Gifted and Talented children is a peer-reviewed journal published twice a year. The journal publishes manuscripts that are based on research in the field of gifted education, including intervention studies of classroom practice, methods employed in the education of gifted students, and cross-cultural studies on topics of interest to the field. For information, contact Joyce VanTassel-Baska, Editor, c/o Center for Gifted Education, College of William and Mary, PO Box 8705, Williamsburg, VA 23185-8705.
- **Gifted Child Quarterly** is the official publication of the National Association for Gifted Children (NAGC). It contains articles of interest to professionals and those with some reading experience in the field of gifted education. The journal also publishes quantitative or qualitative research studies as well as manuscripts which explore policy and policy implications. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com)
- **Gifted Child Today (G/C/T)** offers educators practical and timely information about motivating and educating talented learners. It avoids jargon and provides useful classroom projects written by educators who work with gifted, creative, and talented children. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com)
- **Gifted Education Communicator**, published quarterly by the California Association for the Gifted (CAG), geared for all parents and educators of the gifted; available with or without CAG membership. CAG, 15141 E. Whittier Blvd., Suite 510, Whittier, CA 90603, 562.789.9933; e-mail: CAGOOffice1@aol.com; [www.CAGifted.org](http://www.CAGifted.org)
- **Gifted Education International**, published three times a year for the international community. For information, contact Belle Wallace, Editor, c/o A B Academic Publishers, PO Box 42, Bicester, Oxon, OX6 7NW, England.
• **Gifted Education Press Quarterly** uses a newsletter format to provide articles on unusual topics in gifted education. For subscription information, contact Maurice Fisher, [www.caais.com/gep/](http://www.caais.com/gep/).

• **Imagine.** A periodical for middle and high school students who want to take control of their learning and get the most out of their precollege years. Published five times a year by Johns Hopkins University's Center for Talented Youth. [www.jhu.edu/gifted/imagine/](http://www.jhu.edu/gifted/imagine/)

• **Journal for the Education of the Gifted** (JEG) is the official publication of The Association for the Gifted (TAG), and is committed to the analysis and communication of knowledge and research in the field of gifted education. It is aimed at the experienced reader of the literature. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com).

• **The Journal of Secondary Gifted Education** (JSGE) offers education professionals a mixture of innovative theory and research focused on adolescents. It is designed especially for professionals interested in secondary and post-secondary programs for gifted and talented children. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com).

• **Parenting for High Potential** is NAGC's quarterly magazine designed for parents. Each issue includes special features, expert advice columns, software and book reviews, ideas from parents, and a pull-out children’s section. Prufrock Press, 800.998.2208; [www.prufrock.com](http://www.prufrock.com).

• **Roeper Review,** published quarterly, focuses on current research and issues that relate to the lives and experiences of gifted children. For educators, counselors, and parents who have had some experience in reading in the field. [www.roeperreview.org/](http://www.roeperreview.org/).

• **Understanding Our Gifted,** published quarterly, addresses the intellectual, social, and emotional needs of gifted youth through regular columns and feature articles. Provides practical information on current issues in a clear, interesting writing style. Open Space Communications, Inc., 800.494.6178; [www.openspacecomm.com](http://www.openspacecomm.com).

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**ERIC Clearinghouse on Disabilities and Gifted Education**

Send updates to: ericec@cec.sped.org
There is clear and widespread agreement among the public and educators that all students need to be proficient computer users or "computer literate." However, while districts are spending a great deal of money on technology, there seems to be only a vague notion of what computer literacy really means. Can the student who operates a computer well enough to play a game, send e-mail or surf the Web be considered computer literate? Will a student who uses computers in school only for running tutorials or an integrated learning system have the skills necessary to survive in our society? Will the ability to do basic word processing be sufficient for students entering the workplace or post-secondary education?

Clearly not. In too many schools, teachers and students still use computers only as the equivalent of expensive flash cards, electronic worksheets, or as little more than a typewriter. The productivity side of computer use in the general content area curriculum is neglected or grossly underdeveloped (Moursund, 1995).

Recent publications by educational associations are advocating for a more meaningful use of technology in schools (ISTE, 2000). Educational technologists are clearly describing what students should know and be able to do with technology. They are advocating integrating computer skills into the content areas, proclaiming that computer skills should not be taught in isolation and that separate "computer classes" do not really help students learn to apply computer skills in meaningful ways. There is increasing recognition that the end result of computer literacy is not knowing how to operate computers, but to use technology as a tool for organization, communication, research, and problem solving. This is an important shift in approach and emphasis.

Moving from teaching isolated technology skills to an integrated approach is an important step that takes a great deal of planning and effort. Fortunately, we have a model for doing so. Over the past 25 years, library media professionals have worked hard to move from teaching isolated "library skills" to teaching integrated "information skills." They found that information skills can be integrated effectively when the skills (1) directly relate to the content area curriculum and to classroom assignments, and (2) are tied together in a logical and systematic information process model.
Schools seeking to move from isolated information technology skills instruction will also need to focus on both of these requirements. Successful integrated information skills programs are designed around collaborative projects jointly planned and taught by teachers and library media professionals. Information technology skills instruction can and should be imbedded in such a curriculum. Library media specialists, computer teachers, and classroom teachers need to work together to develop units and lessons that will include both technology skills, information skills, and content-area curriculum outcomes.

A meaningful, unified information technology literacy curriculum must be more than a "laundry list" of isolated skills, such as knowing the parts of the computer, writing drafts and final products with a word processor, and searching for information using the World Wide Web.

While these specific skills are important for students to learn, the "laundry list" approach does not provide an adequate model for students to transfer and apply skills from situation to situation. These curricula address the "how" of computer use, but rarely the "when" or "why." Students may learn isolated skills and tools, but they would still lack an understanding of how those various skills fit together to solve problems and complete tasks. Students need to be able to use computers and other technologies flexibly, creatively and purposefully. All learners should be able to recognize what they need to accomplish, determine whether a computer will help them to do so, and then be able to use the computer as part of the process of accomplishing their task. Individual computer skills take on a new meaning when they are integrated within this type of information problem-solving process, and students develop true "information technology literacy" because they have genuinely applied various information technology skills as part of the learning process.

The curriculum outlined on pages 2-3 of this ERIC Digest, "Technology Skills for Information Problem Solving," demonstrates how technology literacy skills can fit within an information literacy skills context (American Association of School Librarians, 1998). The baseline information literacy context is the Big6 process (see sidebar and Eisenberg & Berkowitz, 1988, 1992, 1999, 2000). The various technology skills are adapted from the International Society for Technology in Education’s National Educational Technology Standards for Students (2000) and the Mankato Schools Information Literacy Curriculum Guideline. Students might reasonably be expected to authentically demonstrate these basic computer skills before graduation.

Some technology literacy competencies that may be relevant in some situations include: (1) knowing the basic operation, terminology, and maintenance of equipment, (2) knowing how to use computer-assisted instructional programs, (3) having knowledge of the impact of technology on careers, society, and culture (as a direct instructional objective), and (4) computer programming.
Defining and describing technology skills is only a first step in assuring all our children become proficient information and technology users. A teacher-supported scope and sequence of skills, well designed projects, and effective assessments are also critical. Equally essential is collaboration among classroom teachers, teacher librarians, and technology teachers in order to present students with a unified and integrated approach to ensure that all children master the skills they will need to thrive in an information rich future (Eisenberg & Lowe, 1999).

**TECHNOLOGY SKILLS FOR INFORMATION PROBLEM SOLVING**

A Curriculum Based on the Big6 Skills Approach

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1. TASK DEFINITION

The first part in the information problem-solving process involves recognizing that an information need exists, defining the problem, and identifying the types and amount of information needed. In terms of technology, students will be able to:

A. Communicate with teachers regarding assignments, tasks, and information problems using e-mail; online discussions (e.g., listservs, threaded Web-based discussions, newsgroups); real-time communications (e.g., instant messaging services, chat rooms, IP telephony); desktop teleconferencing; and groupware on the Internet, intranets, and local area networks.

B. Generate topics, define problems, and facilitate cooperative activities among groups of students locally and globally using e-mail, online discussions, real-time communications, desktop teleconferencing, and groupware on the Internet and local area networks.

C. Generate topics, define problems, and facilitate cooperative activities with subject area experts locally and globally using e-mail, online discussions, real-time communications, desktop teleconferencing, and groupware on the Internet and local area networks.

D. Define or refine the information problem using computerized graphic organization, brainstorming or idea generating software. This includes developing a research question or perspective on a topic.

2. INFORMATION SEEKING STRATEGIES
Once the information problem has been formulated, the student must consider all possible information sources and develop a plan for searching. Students will be able to:

- **A.** Assess the value of various types of electronic resources for data gathering, including databases, CD-ROM resources, commercial and Internet online resources, electronic reference works, community and government information electronic resources.

- **B.** Assess the need for and value of primary resources including interviews, surveys, experiments, and documents that are accessible through electronic means.

- **C.** Identify and apply specific criteria for evaluating computerized electronic resources.

- **D.** Identify and apply specific criteria for constructing meaningful original data gathering tools such as online surveys, electronic interviews, or scientific data gathering tools such as probes, meters, and timers.

- **E.** Assess the value of e-mail, online discussions, real-time communications, desktop teleconferencing, and groupware on the Internet and local area networks as part of a search of the current literature or in relation to the information task.

- **F.** Use a computer to generate modifiable flow charts, time lines, organizational charts, project plans (such as Gantt charts), and calendars which will help the student plan and organize complex or group information problem-solving tasks.

- **G.** Use handheld devices such as personal digital assistants (PDAs), electronic slates or tablet PCs to track contacts and create to-do lists and schedules.

3. LOCATION AND ACCESS

After students determine their priorities for information seeking, they must locate information from a variety of resources and access specific information found within individual resources. Students will be able to:

- **A.** Locate and use appropriate computer resources and technologies available within the school library media center, including those on the library media center’s local area network (e.g., online catalogs, periodical indexes, full-text sources, multimedia computer stations, CD-ROM stations, online terminals, scanners, digital cameras).

- **B.** Locate and use appropriate computer resources and technologies available throughout the school including those available through intranets or local area networks.
networks (e.g., full-text resources, CD-ROMs, productivity software, scanners, digital cameras).

C. Locate and use appropriate computer resources and technologies available beyond the school through the Internet (e.g., newsgroups, listservs, WWW sites, ftp sites, online public access library catalogs, commercial databases and online services, and other community, academic, and government resources).

D. Know the roles and computer expertise of the people working in the school library media center and elsewhere who might provide information or assistance.

E. Use electronic reference materials (e.g., electronic encyclopedias, dictionaries, biographical reference sources, atlases, geographic databanks, thesauri, almanacs, fact books) available through intranets or local area networks, stand-alone workstations, commercial online vendors, or the Internet.

F. Use the Internet or commercial computer networks to contact experts and help and referral services.

G. Conduct self-initiated electronic surveys through e-mail, listservs, newsgroups and online data collection tools.

H. Use organizational systems and tools specific to electronic information sources that assist in finding specific and general information (e.g., indexes, tables of contents, user's instructions and manuals, legends, boldface and italics, graphic clues and icons, cross-references, Boolean logic strategies, time lines, hypertext links, knowledge trees, URLs, etc.) including the use of:

1. Search tools and commands for stand-alone, CD-ROM, networked or Web-based online databases and services;

2. Search tools and commands for searching the Internet, such as search engines, meta search tools, bots, directories, jump pages, and specialized resources such as those that search the Invisible Web;

3. Specialized sites and search tool commands that limit searches by date, location, format, collection of evaluated sites or other criteria.

4. USE OF INFORMATION

After finding potentially useful resources, students must engage (read, view, listen) the information to determine its relevance and then extract the relevant information. Students will be able to:

A. Connect and operate the computer technology needed to access information, and read the guides and manuals associated with such tasks.
B. Know and be able to use the software and hardware needed to view, download, decompress and open documents, files, and programs from Internet sites and archives.

C. Copy and paste information from an electronic source into a personal document complete with proper citation.

D. Take notes and outline with a word processor, database, presentation or similar productivity program.

E. Record electronic sources of information and locations of those sources in order to properly cite and credit sources in footnotes, endnotes, and bibliographies.

F. Use electronic spreadsheets, databases, and statistical software to process and analyze statistical data.

G. Analyze and filter electronic information in relation to the task, rejecting information that is not relevant.

H. Save and backup data gathered to secure locations (floppy disk, personal hard drive space, RW-CD, online storage, flash memory, etc.)

5. SYNTHESIS

Students must organize and communicate the results of the information problem-solving effort. Students will be able to:

A. Classify and group information using a word processor, database or spreadsheet.

B. Use word processing and desktop publishing software to create printed documents, applying keyboard skills equivalent to at least twice the rate of handwriting speed.

C. Create and use computer-generated graphics and art in various print and electronic presentations.

D. Use electronic spreadsheet software to create original spreadsheets.

E. Generate charts, tables and graphs using electronic spreadsheets and other graphing programs.

F. Use database software to create original databases.
G. Use presentation software to create electronic slide shows and to generate overhead transparencies and slides.

H. Create and use projection devices to show hypermedia and multimedia productions with digital video, audio and links to HTML documents or other programs. Convert presentations for display as Web pages.

I. Create Web pages and sites using hypertext markup language (HTML) in a text document or using Web page creation tools and know the procedure for having these pages loaded to a Web server.

J. Use e-mail, ftp, groupware, and other telecommunications capabilities to publish the results of the information problem-solving activity.

K. Use specialized computer applications as appropriate for specific tasks, e.g., music composition software, computer-assisted drawing and drafting programs, mathematics modeling software, scientific measurement instruments, etc.

L. Properly cite and credit electronic sources (text, graphics, sound and video) of information within the product as well as in footnotes, endnotes, and bibliographies.

6. EVALUATION

Evaluation focuses on how well the final product meets the original task (effectiveness) and the process of how well students carried out the information problem-solving process (efficiency). Students may evaluate their own work and process or be evaluated by others (i.e., classmates, teachers, library media staff, parents). Students will be able to:

A. Evaluate electronic presentations in terms of the content and format and design self-assessment tools to help them evaluate their own work for both content and format.

B. Use spell and grammar checking capabilities of word processing and other software to edit and revise their work.

C. Apply legal principles and ethical conduct related to information technology related to copyright and plagiarism.

D. Understand and abide by telecomputing etiquette when using e-mail, newsgroups, listservs and other Internet functions.

E. Understand and abide by acceptable use policies and other school rules in relation to use of the Internet and other electronic technologies.
F. Use e-mail, real-time communications (e.g., listservs, newsgroups, instant messaging services, chat rooms, IP telephony) desktop teleconferencing, and groupware on the Internet and local area networks to communicate with teachers and others regarding their performance on assignments, tasks, and information problems.

G. Thoughtfully reflect on the use of electronic resources and tools throughout the process.

THE BIG6 SKILLS APPROACH TO INFORMATION PROBLEM SOLVING

(c) Eisenberg and Berkowitz 1987

The Big6 is an information literacy curriculum, an information problem-solving process, and a set of skills which provide a strategy for effectively and efficiently meeting information needs. The Big6 Skills approach can be used whenever students are in a situation, academic or personal, which requires information to solve a problem, make a decision or complete a task. This model is transferable to school, personal, and work applications, as well as all content areas and the full range of grade levels. When taught collaboratively with content area teachers in concert with content-area objectives, it serves to ensure that students are information literate. The Big6

1. Task Definition

1.1 Define the task (the information problem).

1.2 Identify information needed in order to complete the task (to solve the information problem).

2. Information Seeking Strategies

2.1 Brainstorm all possible sources.

2.2 Select the best sources.

3. Location and Access

3.1 Locate sources.

3.2 Find information within the sources.

4. Use of Information

4.1 Engage in the source (read, hear, view, touch).
4.2 Extract relevant information.

5. Synthesis

5.1 Organize information from multiple sources.

5.2 Present the information.

6. Evaluation

6.1 Judge the process (efficiency).

6.2 Judge the product (effectiveness).

REFERENCES AND SUGGESTED READING


THE AUTHORS

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TOPIC 9 – PROVIDING A CONTINUUM OF SERVICES

KEY QUESTION: What continuum of services would be appropriate to meet the needs of gifted learners?

OBJECTIVES:
• Demonstrate knowledge of a continuum of services to support the needs and interests of gifted students.

KEY CONCEPTS:
• Gifted students deserve an appropriate education consistent with their needs and abilities
• A needs assessment serves as an aid to determine further service for the gifted learner.

RECOMMENDED READING ASSIGNMENT:
• Florida Department of Education. (2003). Acceleration of gifted students. (Publication No. ESE 311781). Tallahassee, FL: Bureau of Instructional Support and Community Services, Florida Department of Education. [Available at no cost from the Clearinghouse Information Center, Division of Public School and Community Education, Department of Education (850) 245-0475]. (HO 3)

LEARNING OPTIONS - ACTIVITIES:
• After reviewing or reading pages 252-299 from Clark and/or The Schoolwide Enrichment Model (SEM) in the Colangelo text and/or Rogers or other resources, describe how service would be provided in each of the service delivery models listed below and the organizational variables that might hinder or facilitate learning for gifted students:
  o Regular class placement (inclusion)
  o Grouping provisions
Curriculum Development for the Gifted

- Independent study
- Subject and grade acceleration
- Facilitative support services
- Consultation
- Supplementary tutoring
- Resource room/enrichment
- Part time special class
- Full time special class
- Separate school
- Mentorship
- Internship

- Design a brochure that describes the continuum of services available in the local school district. Clarify whether services are defined by the district or the local school. (Note that Advanced Placement and International Baccalaureate programs are not considered gifted services since they are open to all students. The state of Florida designates that gifted services may not be provided for students who have not been declared eligible and who do not have an Educational Plan (EP)).

- Consider having someone speak to the class regarding how decisions are made about how a student will be provided service. Suggested resources might be the district gifted coordinator or a placement specialist who typically takes part in Education Plan (EP) meetings.

- Discuss whether one service model would be appropriate for all students. What criteria might be considered when the student is placed? What criteria might be used to determine appropriate service?

- Make a chart identifying typical services offered for elementary, middle or secondary gifted students. Prepare a flow chart depicting the ideal continuum of services for a fourth grade student gifted in math, another for a third grade student identified as being highly gifted in all areas and another for a highly creative second grade student who is gifted in language arts – currently reading at the eighth grade level and writing short stories and poetry aligned with her reading. Carry the described services through to graduation.

- Share and discuss your charts with others in the class. How are they similar? Different? What factors may impact the decisions for placement?

- Prepare interview questions for the teacher who provides gifted services for the student you are currently studying. Plan to interview the general education classroom teacher as well if applicable. Determine how the teacher provides service to the student and how the decision was made for this service and whether it seems appropriate for the student’s needs. What recommendations might the teacher(s) make for continued services?

- Conduct the interview and write a summary of your findings as well as the service you feel would be appropriate for the student.
Curriculum Development for the Gifted

- Acceleration is often a controversial topic. Read Clark, pages 264-266, and Handout 3. Write what you see as the Pro’s and Con’s of acceleration – both by subject and grade. Be prepared to debate in class for either side of the issue. Research the Iowa Acceleration Scale to determine what role this instrument may play.

- Clarify your district’s policy regarding acceleration and interview your school’s administration about when they might feel acceleration could be appropriate for a student. Write a summary statement of your own philosophy of Acceleration addressing the debate issues, your discussions with school personnel, and information from the resources cited.

- Refer to Roger's book for additional activities related to grouping and acceleration.

EVIDENCE OF MASTERY:
- Completion of service model delivery option descriptions
- Accurately completed brochure
- Flowchart of ideal program options for students described
- Completion of appropriate interview questions and summary
- Completed chart of Pros and Cons of Acceleration and debate in class.
- Documented paper summarizing a stand for Acceleration as a service model for gifted students.

RESOURCES:
Should Gifted Students Be Grade-Advanced?


Intellectually gifted and academically talented students are able to learn material rapidly and understand concepts deeply. Keeping them challenged and learning to their capacity can require changes in their regular school programs. Education programs for children identified as gifted and talented take many forms pull-out programs offering educational enrichment, honors classes, after school and summer programs featuring special course work, and mentor programs in which children are matched with professionals in the community for special learning experiences.

Sometimes, gifted youngsters may be so advanced in knowledge and so clearly operating at an intellectual level beyond that of their same-age peers that educational acceleration is a realistic and desirable alternative to normal grade-level work. Educational acceleration is often perceived simply as placing a child one or more grades ahead with older children. For instance, a child who has completed the fourth grade may be double-promoted to the sixth, skipping fifth grade entirely. Sometimes, if children are especially talented in one subject area (most often mathematics, science, or English), they may be allowed to take advanced courses with older students in that subject while remaining in their own grade for other subjects. Another alternative is to have gifted children tutored and advanced in given subjects, either individually or in small groups of children with similar talents. For instance, a group of high school students might meet for advanced mathematics classes twice a week with a professor from a local university.

These arrangements are all appropriate for children who are intellectually and academically capable of learning at a faster pace and in greater depth than their same-age peers, and who are motivated to do so. Insisting that gifted and talented students remain with their age-mates at all costs may exact too high a cost from them. It may result in boredom and daydreaming, poor study habits, behavior problems, or school avoidance. But the decision to allow a child to accelerate educationally is one that must be made for each
child, taking into account his or her intellectual and emotional needs and the services the school can provide.

Is Educational Acceleration Harmful to the Child Academically?

The majority of studies have shown that children who have been educationally accelerated do not suffer academically. Their grades are higher than those of their peers who chose not to accelerate, and they compare favorably with those of older students in their classes. Accelerated students also report heightened interest in and enthusiasm for school.

But Won’t There Be Gaps in the Child’s Knowledge?

If children skip one or more grades, they may occasionally encounter unfamiliar material from the skipped grade. Therefore, arrangements should be made to allow the children to cover any such material without penalty as it is encountered. Because there is repetition in normal curricula, gaps occur less often than one might think and are seldom a significant problem for the gifted and talented student, who learns quickly and well.

Is Educational Acceleration Harmful to the Child Emotionally or Socially?

This aspect of educational acceleration seems to worry parents and educators most. In general, children who are well-adjusted and socially at ease before accelerating report having two groups of friends or they belong to a circle of older students, but they also retain friendships with children who are the same age.

Children who are socially withdrawn or who have difficulty making friends may experience similar problems when placed with older children. On the other hand, there are cases in which a gifted child is more comfortable with older children than with age-mates. This may be true more often for girls than boys. The receiving classroom teacher in an accelerated setting can help the younger student find a niche among the older students.

What Do Educators Think of the Educational Acceleration Option?

Research about acceleration consistently documents positive effects, both academic and social, for children who have accelerated, but educators have been slow to embrace the option. Fears about social and emotional development problems for these children are common.
However, people who specialize in working with gifted and talented children and teachers and parents who have had personal experience with educational acceleration tend to be more positive.

**How Do Parents Know If Their Child Should Accelerate?**

If children's standardized test scores, particularly achievement test scores, are many grades above level or off the charts entirely, they are good candidates for acceleration. If a child who was previously an avid student begins to complain of boredom or starts misbehaving in school, it may be an indication that he or she needs additional challenges (but remember that any child may be bored or have behavior problems). Ideally, the decision to accelerate should be mutual, the child, parents, and school officials all agreeing that it would serve the child well. The school psychologist or Individualized Educational Program (IEP) committee should be consulted early in the process.

**When Should One Be Cautious About Acceleration?**

If the child under consideration for acceleration is physically or emotionally immature, is pushed into the process by adults, or receives constant negative feedback at school from peers or educators, problems could occur. If the school accelerates students routinely so that an accelerated youngster does not stand out as peculiar and has a small support group of similar youngsters, then chances for an easy adjustment increase.

A child who has been accelerated may find that he or she is no longer the best in the class. Both parents and the child should be ready for this. Parents should be supportive, but never put undue pressure on the gifted and talented child to perform, certainly not when he or she is adjusting to a new environment. The decision to academically accelerate a child may be reversed at any time if it appears not to be working out for the child academically, socially, or emotionally. Adults should help children in this situation understand that the change is not a failure.

**What About Acceleration in a Single Subject?**

This option tends to meet with less resistance from educators than grade-skipping because children still take most classes with their age-mates, alleviating concerns about social problems. Here, continuity is crucial. Accelerating students one year, only to have them repeat the material the next, is no solution. Teachers or curriculum specialists can be helpful in determining what aspects of a subject are covered in
each grade. Accelerated students may need to make special arrangements to travel to a junior high or high school, or even take a college course before high school graduation. It is important to obtain the cooperation of the school district throughout the child's educational career. Transportation problems may prove more difficult to solve than academic or social ones.

**What Are the Steps in Making the Decision To Accelerate?**

Assuming that parents and student agree to explore this option, parents might begin by discussing it with the school's coordinator for the gifted and talented, guidance counselor, or principal -- whichever person knows the child best. The classroom teachers' opinions also should be sought. Next, the child's academic potential and social and emotional adjustment should be evaluated by a school psychologist. The final decision will probably be made by the school's IEP committee or the principal. It helps to have the enthusiastic support and understanding of the teachers who will be working with the accelerated child, as well as commitments for continuity and coordination from school authorities. Parents considering this option may find it helpful to contact the coordinator for gifted and talented education at their state department of education.

**Sources**

Most of the following references, those identified with an ED or EJ number, have been abstracted and are in the ERIC database. The journal articles should be available at most research libraries.


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URL: /ericec.htm
ACCELERATION


Acceleration, or the rapid advancement of a student through the educational system, has been used in various settings throughout most of the 20th century. After all, if youngsters have learned the material several grades in advance of their age placement, why shouldn’t schools consider placing them with their intellectual peers rather than their age peers? However, such a decision is not so simple. The physical and social development of the gifted child must also be taken into consideration, and such development is rarely as dramatically advanced as is the cognitive development. Still, for many gifted students, acceleration offers the opportunity for appropriately advanced curriculum and a head start onto the potentially long road of continuing education.
ACCELERATION POSITION STATEMENT

The National Association for Gifted Children (NAGC) periodically issues policy statements dealing with issues, policies, and practices that have an impact on the education of gifted and talented students. Policy statements represent the official convictions of the organization.

All policy statements approved by the NAGC Board of Directors are consistent with the organization’s belief that education in a democracy must represent the uniqueness of all individuals, the broad range of cultural diversity present in our society, and the similarities and differences in learning characteristics that can be found within any group of students. NAGC is fully committed to national goals that advocate both excellence and equity for all students, and we believe that the best way to achieve these goals is through differentiated educational opportunities, resources, and encouragement for all students.

The practice of educational acceleration has long been used to match appropriate learning opportunities with student abilities. The goals of acceleration are to adjust the pace of instruction to the student’s capability, to provide an appropriate level of challenge, and to reduce the time period necessary for students to complete traditional schooling. When acceleration has been effective in achieving these goals, highly capable individuals are prepared to begin contributing to society at an earlier age. Although instructional adaptations, such as compacting, telescoping, and curriculum revision, which allow more economic use of time are desirable practices for exceptionally talented students, there are situations in which such modifications are insufficient in fulfilling the academic potential of all highly capable children. Personal acceleration is called for in these cases.

Personal acceleration involves moving a student through the traditional educational organization more quickly and includes such practices as grade skipping, concurrent enrollment in two grades, early entrance into kindergarten or college, credit by examination, combining three years of middle school into two, acceleration in particular content areas, and dual enrollment in high school and college. Students may be accelerated in one discipline or across disciplines.

Research documents the academic benefits and positive outcomes of personal acceleration for carefully selected students. Decisions about the appropriateness of personal acceleration and the extent of acceleration for a given student should include examination of student preferences and disposition relative to the decision, the student’s intellectual and academic profile, and social readiness. Other factors which enhance the success of personal acceleration are positive attitudes of teachers, timeliness of the decision, parent support, and the careful monitoring of new placements with a clearly articulated option to return to the earlier setting without penalty.
Opportunities to learn must be offered to all children. Accordingly, highly able students with capability and motivation to succeed in placements beyond traditional age/grade parameters should be provided the opportunity to enroll in intellectually appropriate classes and educational settings.
Acceleration of Gifted Students

Defining Acceleration

Strategies for differentiating instruction for gifted students generally fall into two categories: *enrichment* and *acceleration*. Enrichment refers to the presentation of curriculum content with more depth, breadth, complexity, or abstractness than the general curriculum. Acceleration refers to the practice of presenting curriculum content earlier or at a faster pace.

There are many different ways to accelerate the curriculum. These options offer the flexibility needed to help meet the individual needs of gifted students:

- acceleration in one or more subject
- grade skipping
- Advanced Placement programs
- college courses offered in high school
- early graduation from high school
- early entrance into college. (Brody and Benbow, 1987)

The choice of how to accelerate the curriculum for a particular student should be based on the individual needs of that student.

Acceleration as a Program Decision

For many gifted students, acceleration is fulfilling both academically and socially. However, to be successful, acceleration must be understood as a *program* decision, not a placement decision. The curriculum must continue to be challenging for the accelerated student. In case studies of successfully accelerated students, subject matter was carefully planned and monitored, and it addressed the students’ social and emotional maturity as well as academic achievement. (Gross, 1992)

Benefits of Acceleration

Research shows the following benefits of acceleration:

- When gifted students were accelerated, there was an increase in their academic achievement. (Kulik and Kulik, 1984B; Vialle, 2001)
- Accelerated students tended to “outperform students of the same age and ability who are not accelerated” (Kulik and Kulik, 1984B, p. 87)
- Accelerated students achieved “as well as equally gifted older students in the higher grades.” (Kulik and Kulik, 1984B, p. 87)
- Accelerated gifted students reported satisfaction emotionally and academically when the curriculum was challenging, provided them with options, and allowed for their input in the design and implementation. (Vialle, 2001)
- When course instruction and content was tailored to the individual gifted student’s ability, acceleration was more fulfilling for the student. (Vialle, 2001)
**Effects of Acceleration on Social and Emotional Development**

Few studies have how acceleration affects the social and emotional development of gifted children. However, the studies that have been published do not support the common belief that acceleration has negative effects on children’s social or emotional development. (Kulik and Kulik, 1984A; Southern, Jones, and Fiscus, 1989)

- Case studies of individual accelerated children who had skipped at least one grade reported that the children were happier socially and emotionally and reported greater self-confidence and fulfillment after their acceleration. These students tended to socialize with older students before they skipped the grade(s). (Vialle, 2001)
- A group survey of non-accelerated gifted students and gifted students who had grade-skipped, graduated early, or entered college early did not reveal any harmful effects of acceleration. There was no evidence of negative social and emotional adjustment as a result of acceleration. (Brody & Benbow, 1987)

**Practices that Help Make Acceleration Successful**

- Schools must have clear procedures and criteria for identifying students for acceleration. (Vialle, 2001)
- The classroom teacher should be knowledgeable about the needs of gifted students and must be supportive of the student’s placement. (Vialle, 2001)

**References**


For more information on services for gifted students, contact:
Exceptional Student Education Program Development and Services
Bureau of Instructional Support and Community Services
325 W. Gaines, Room 601
Tallahassee, FL 32399-0400 850-488-1106
www.myfloridaeducation.com/commhome
TOPIC 10 – STUDENT OUTCOMES

KEY QUESTION: How can a meaningful educational plan (EP) for a gifted student be developed?

OBJECTIVES:
- Demonstrate the ability to identify student outcomes, evaluate student progress, and develop an appropriate Educational Plan (EP).

KEY CONCEPTS:
- Understand the purpose and procedures of developing an EP
- Determining who should have a role in EP development
- The role of the parent in development of an EP
- Familiarity with the state rule for EP development
- Identify the required components on an EP
- Determine whether the needs of the student are being addressed on the EP
- Consideration of affective behaviors as factors in student performance
- Determining how products will be assessed or evaluated
- Setting appropriate goals and objectives for the student
- Familiarity with measurable objectives
- Determining the purpose of an EP review

RECOMMENDED READING ASSIGNMENT:

LEARNING OPTIONS - ACTIVITIES:
- Review State Rule 6A-6.0331, FAC, Identification and Assignment of Exceptional Students to Special Programs (http://www.firn.edu/doe/rules/rules.htm); and Rule 6A.6.030191, FAC, Development of Educational Plans for Exceptional Students Who Are Gifted (available at the above web address). List factors related to an Educational Plan in terms of the impact on the education of students determined eligible for Special Programs for Students Who Are Gifted. List required participants and what information each would be able to provide.
- Discuss the participation of a regular education teacher at the EP meeting. How might the situation be handled if the gifted students are served at a school other than the general education setting and what might be the best procedure at the middle or high school when a student has more than one regular teacher.
Prior to the current rule, a district could choose to develop an Individualized Educational Plan (IEP) for gifted students. Some districts chose to have an EP and an IEP if the student was a dual-exceptional student who was gifted and evidenced a disability. Discuss why you believe the current rule states that an EP must be developed for students who are gifted only, with related services that do not require special services [for example, occupational therapy (OT), physical therapy (PT), counseling, or a 504 plan for medical conditions that do not designate a disability, such as diabetes or ADD.]

The new rule specifies that if a student is dual exceptional and is gifted with a disability that student must have an IEP which addresses the disability and the giftedness – all the special needs of the student.

The focus of the development of the EP is on the strengths of the child. How is this student gifted? Since an EP is a plan for this child only, what evidence is there of how the student evidences gifted characteristics? What does this student need beyond what is offered in a general education classroom in terms of specially designed instruction?

Traditionally gifted students have been provided with more of the same or busy work when they complete their regular assignments. One teacher assigns 10 extra math problems for the gifted students, an extra page on written assignments, or an opportunity to go to a center or to help slower students. Develop an opinion paper about the message this may send to the gifted learner. Describe the significance of pre-testing to determine what the student already understands. Understanding that basic skills need to be taught and that gifted students learn in different ways, address how differentiation in terms of content, process, and learning environment may be altered to make learning meaningful. How might a teacher address a subject with tasks with more depth and rigor for these students?

Discuss whether appropriate expectation levels can be set for gifted learners. Does the nature of the gifted learner defy such attempts? (VanTassel-Baska, 1992, 2003). The need to document present levels of performance requires appropriate measures. Discuss what could be used to provide this information.

Research and provide a summary of each of the following instructional and management strategies for differentiated, mixed-ability classrooms:

- Curriculum compacting
- Independent projects
- Interest centers or groups
- Tiered assignments
- Learning centers
- Varying questions
- Mentorships/apprenticeships
- Contracts
• Discuss how the affective concerns of the student may be considered in establishing goals. For example, gifted students may feel they are “different” and see themselves as less than capable. Or a student, under peer pressure, may feel the need to fit in with others and underachieve. Some gifted students are so accustomed to receiving good grades they panic if they think they may get lower than perfect scores. How is this impacting the student’s performance levels? Tools some teachers use to evaluate progress include:
  - Rating scales
  - Conferences
  - Self evaluation
  - Peer evaluation
  - Teacher evaluation
  - Performance assessments
  - Portfolios
  - Product assessments
  - Pre-post assessments
  - Journals
  - Evaluation by appropriate audience

  Develop a brief statement justifying a case when each would be effective.

• What approaches to measuring outcomes are most convincing? (VanTassel-Baska, 2003). Document your findings. Types of instruments:
  - Formal vs. informal
  - Standardized vs. non-standardized

• Using an existing curriculum unit, create a rubric or rating scale to assess student performance in one or more areas. Consider the prior discussions of moving a student from Novice to Expert.

• Review Assessment Links (H01) and summarize findings.

• Gifted students often learn they can “get by” with minimum effort unless appropriate expectations are put in place. Learning outcomes set expectations, so it is important to establish rigorous expectations for the student based on present levels of performance. Given data on an eligible gifted student, create an appropriate educational plan; ensuring the plan meets all district compliance requirements and appropriately addresses the specific needs of the student.

• The student’s needs change over time with increased achievement. Development of a new EP or an EP review (which may be requested at any time by the parent, teacher, or school staff member) should assess how the child’s needs have changed, what new goals should be set, whether the services currently provided are still appropriate. A change in services or placement can only take place at an EP meeting. The parent does not need to be present, but should be notified of any change. Also, whenever an EP is written for longer than a two year
period, there should be a review of the EP. Discuss why or when it might be necessary to review the EP.

**EVIDENCE OF MASTERY:**
- Compiled list of factors from reading and review of state rules. Discuss and chart in class.
- Summarize the purpose of an EP and roles of the required participants and identify the required components of an EP.
- Well-developed paper about appropriately addressing the needs of the gifted learner.
- Summary of instructional and management strategies
- Statement justifying a case when each evaluative tool would be effective.
- Documentation of findings regarding approaches to measuring outcomes.
- Creation of rubric and/or rating scale to assess student performance.
- Summary of assessment links.
- Development of an appropriate and justifiable EP

**RESOURCES:**
- Assessment links document (HO 2)
- Rubric development guidelines: http://webquest.sdsu.edu/rubrics/weblessons.htm
- www.geniusdenied.com
Assessment links

http://www.exemplars.com  (preview samples)

http://www.teach-nology.com/web_tools/rubrics/  (rubric generators)

http://rubistar.4teachers.org/  (Create rubrics on-line. RubiStar is free, supported by the US Department of Education)

http://www.sdcoe.k12.ca.us/score/actbank/trubrics.htm  (Schools of California On-line Resources for Educators)

Readings on assessment

http://www.ascd.org/readingroom/edlead/0002/andrade.html  (Using Rubrics to Promote Thinking and Learning)
TOPIC 11 – COMMUNICATING AND ADVOCATING EFFECTIVELY

KEY QUESTION: How can educators of the gifted communicate and advocate effectively with the many constituencies they serve?

OBJECTIVES:
• Demonstrate the ability to effectively communicate and work in partnerships with students, families, and school personnel in the interests of gifted students.

KEY CONCEPTS:
• Knowledgeable, articulate teachers of the gifted can be powerful advocates
• Gifted programs need support from within the school, the district and community
• Collaboration with general education teachers is critical
• Communication should be clear and unambiguous

RECOMMENDED READING ASSIGNMENT:

LEARNING OPTIONS - ACTIVITIES:
• Review recommended readings and discuss the more common communication mistakes and how to avoid them.
• Read pages from Walker. Discuss ways that advocating might improve gifted programs and/or services in your area. Decisions about service are made at the district level. What changes do you feel need to be made and what difference would those changes make for students in terms of receiving appropriate services?
• Design a newsletter or article for the gifted program at the local school based on one or more of the topics about which you feel strongly
• Prepare a short workshop for the faculty of the school or a parent group about the gifted curriculum, goals and objectives.
• Create a role-play with colleagues and present to the class featuring examples and non-examples for conducting a parent conference or meeting with a school board member or legislator
Curriculum Development for the Gifted

- Shrinking budgets make the gifted program a target for cut backs. Prepare a presentation for, or write a letter to the school board defending the costs of the program.

- **EVIDENCE OF MASTERY:**
  - Newsletter or article
  - Workshop outline, agenda, and materials
  - Presentation of role play scenario
  - Presentation or letter aimed for school board

**RESOURCES:**
Public Relations: A Necessary Tool for Advocacy in Gifted Education

Public relations should be an integral part of advocacy in gifted education. Advocacy is the act of speaking or writing in favor of an issue by providing public recommendation and support. Public relations, on the other hand, are the activities of an organization, institution, or individual that are designed to win the favor of the general public and promote a better understanding of policies and purposes; it involves disseminating information in print and by nonprint media. Without building the knowledge base for understanding the unique needs and educational methods of gifted education, advocacy is likely to meet with limited success. Therefore, building a strong knowledge base among the public is critical. Gifted supporters need to go beyond talking for and among themselves to provide accurate information to other educators and the general public.

Reasons for Public Relations in Gifted Education

Several specialists have provided reasons for public relations in gifted education. Karnes and Riley (1991) stated that gifted children are often misunderstood, the victims of damaging myths and stereotypes. Grika (1986) indicated a widespread misunderstanding of giftedness which can mean public resistance to funding for gifted education. Dettmer (1991) pointed out that public relations for advocacy has taken a subordinate role behind other issues in gifted education. She stated that it is by crisis rather than design that public relations and advocacy are undertaken. Renzulli (1987) cited the lack of a large, dedicated cadre of persons who affiliate and know the need for gifted education as one reason for the limited longevity of gifted programs at the local, state, and national levels. The reasons for public relations for advocacy include: to promote a better understanding of the nature and needs of gifted children and youth, to gain positive support for appropriate programs, to keep all constituent groups informed on key issues, and to build a knowledge base for advocacy (Riley & Karnes, 1993a).

Importance of Media Coverage

Examination of national media coverage of gifted education in newspapers found that few news articles supported gifted education (Meadows & Karnes, 1992; Lewis & Karnes, 1995). Newspaper articles for both studies were cited in the NewsBank Electronics Index, a CD-ROM service with access to 500 newspapers from all 50 states. The more recent publication calls attention to the many critical areas in gifted education that are not
being adequately addressed. In addition, there was only one listing on the more than 75 Javits programs. Of the many articles published after the U.S. Department of Education issued the National Excellence report in November, 1993, one was indexed in NewsBank. When two or more articles were listed on a topic, such as identification, minority enrollment, or funding, that listing usually indicated an unresolved problem (Lewis & Karnes, 1995). This selective indexing of news articles depicts an incomplete picture of gifted children and their education. It is important for supporters to use newspapers as a means of educating the general public. Lewis and Karnes (1995) offered many suggestions for more effective newspaper coverage to disseminate accurate information about critical issues in gifted education.

Local, state, and national magazines provide useful opportunities for public relations. Lewis and Karnes (1997) found that the number of articles on gifted education has dramatically decreased in recent years. However, numbers do not tell the entire story. Articles not written by gifted specialists vary as to their accuracy and support. Clearly this is an opportunity for advocates of gifted education to reach a wide audience. Magazines that have published articles on gifted children in the past include those with a general editorial format or focus on business news, education, news and opinion, parenting, psychology, science, and women (Lewis & Karnes, 1997). Renzulli (1993) wrote, "We [researchers] have been guilty in the gifted field of 'preaching to the converted,' and therefore a part of our effort is to reach out to other readerships" (p. 101). If specialists in gifted education were to write just one article for the general press each year, the quantity of accurate information available to the general reading public would increase dramatically. Teacher educators and researchers could write about their specialty areas; teachers could write about activities for parents to do with their gifted children at home or curricular ideas for other teachers (particularly important during the current trend toward inclusive education); and parents could write about their personal experiences that were positive learning opportunities (Lewis & Karnes, 1997). For guidelines, interested parties can contact the periodical's editor. Care should be taken when selecting a title, subtitle, section heads, and picture captions to ensure that the intended message is unambiguous and does not project an elitist tone (e.g., "Aren't we smart?").

State Level Strategies

Riley and Karnes (1993b) studied the possible impact of a state gifted organization joining together with other state educational and parenting associations. Of those responding, all expressed a positive interest in gifted education. Almost 370,000 individuals within these state associations could be impacted through presentations at state conferences and news articles in their magazines, journals, and newsletters.
Unfortunately, none of the groups had a position statement, committee, or special interest group in gifted education. Networking with other state organizations provides many opportunities to break down barriers between special interest groups and to build the groundwork for mutual trust and support. Another technique to determine support for gifted education is to use a state-wide telephone public opinion survey. The response of a representative, statistical sample of residents in a given state was very positive toward gifted education (Karnes & Riley, 1996). The initial sharing of results could be facilitated through a press conference and newspaper releases. The topic may lend itself to further discussion through radio and television talk shows. Key legislators need to be apprised of the findings to garner support for increased funding. The process of surveying for public opinion and the results of such endeavors could be disseminated at local, state, and national conferences on gifted child education.

Target Your Audiences

Everyone who is interested in working for and with the gifted should know a variety of effective public relations tools. Dettmer (1991) reminded us of the many groups to target both within a district and outside of it. Those individuals within a district include: gifted and talented students; their teachers, parents, and program personnel; regular classroom teachers; school administrators; psychologists and psychometricians; guidance counselors and curriculum specialists; librarians and media consultants; school board members; and special education personnel. Those suggested outside of a district include: legislators, members of state boards of education, and other policy makers; business and professional leaders; community leaders and members; medical personnel; social psychologists; persons having the responsibility for teacher preparation in general and special education; curriculum and textbook consultants; visionaries and futurists; and theorists and researchers. Other groups include members of Congress; members and leaders in religious, humanities, and art associations; interdisciplinary groups and organizations in academic areas; and the general public.

How to Get Started

Local, state, and national groups will benefit from having an organized approach to public relations and a committee charged to design and implement a written plan. Several crucial decisions must be made as the public relations campaign plan is developed, implemented, and evaluated:

- What is the purpose of the campaign? That is, what are you trying to make happen or prevent?
- Who is the target audience, and who in that audience has the power to make changes?
• What is the best message for that group?
• What public relations strategies should be employed, based on the resources and expertise available?

When these questions can be answered effectively, then:

• Decide on a clear goal.
• Identify objectives and activities to reach your goal.
• Select appropriate strategies.
• Determine cost effectiveness.
• Establish a reasonable timeline with dates for initiation, completion, and person(s) responsible.
• Develop evaluation criteria so you will know when you have achieved your goal.
• Get others involved so that you increase your support and communications base.

Always remember the knowledge level and sophistication of your target audience in selecting and planning specific strategies.

**Strategies -- Nonprint Media**

A variety of public relations strategies can be employed, based on the message to be imparted, the target population, and objectives and resources of the group. Nonprint media could include radio, telephones and answering machines, television, videotapes, videodiscs, and interactive videos. Radio and television include paid advertising, talk show interviews (which involve no costs, except those of transportation), public service announcements, or news reports focused on gifted children, their program activities, or the beneficiaries of some special project. Planned telephone trees or networks allow for quick dissemination of important information. An answering machine with its phone number and time and date(s) of activation can be set up to deliver a short message with the advertised information. Videos, including those produced by students, can be utilized at meetings, malls, fairs, conferences, and on television. Experts can provide a wide array of informative topics suitable for parent meetings and staff development (Karnes & Lewis, 1996).

**Strategies -- Print Media**

Print media include letters, faxes, magazines and journals, newsletters, newspapers, brochures, buttons, post cards, posters, and T-shirts. Some frequently underutilized methods include advertising slugs (postal stamps used on postage meters for mass mailings), billboards, bookmarks, bus placards, electronic signs and commercial message boards, piggyback mailings (information included in another group’s mailings), stickers, and
the wire service. Also gaining in popularity is use of the Internet. Gifted
education centers; college and university departments of gifted education;
local, state, and national organizations; state departments of education;
and teachers, administrators, and other school personnel can set up home
pages linked to other informative sources on the World Wide Web to
provide ready access to a wide range of resources.

Other Strategies

Other forms of public relations include displays and presentations at
conferences, meetings, and special events. The latter may take the form of
proclamations (for example, a governor announcing gifted education
month); ribbon cutting events; recognition ceremonies for supporters,
parents, or teachers; conferences; panel discussions; seminars and
workshops. Student performances in school and at meetings, conferences,
and mall events also afford great opportunities for public relations.
Volunteering or being solicited for speaking engagements at business,
civic, social, and arts events should bring a better understanding of gifted
children to those groups.

Link Between Public Relations and Advocacy

Support for gifted education has always been limited. Advocates for gifted
children need to be involved in positive public relations on a continuing
basis. In times of educational reform, it is even more essential to build a
foundation of general understanding about gifted children and their
educational needs. When advocacy becomes necessary, more people in
positions of power will be informed, making the advocate’s job easier and
more likely to be successful. Use public relations to increase support for
gifted education--locally, state-wide, and nationally.

References

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Gifted Endorsement Module Evaluation Form

In an attempt to constantly address the quality and value of the Gifted Endorsement Modules, the role of a critical examination or evaluation becomes essential. While presenting this module or upon its completion, please complete the following evaluation and send it to:
Chris Weber
COEHS, C&I, Bldg 9
University of North Florida
4567 St. Johns Bluff Rd. S.
Jacksonville, FL 32224

Using a Likert-like scale of 1 to 5, with 1 being Not Present or Not Appropriate (negative) and 5 being Much in Evidence or Very Appropriate (positive), rate the following elements of this Gifted Endorsement Module:

Module _________________________________

a) Flexible structure/sequence 1 2 3 4 5
b) Modifiable according to student interests 1 2 3 4 5
c) Diverse use of References and Resources 1 2 3 4 5
d) Both Lower and Higher Level Thinking Activities 1 2 3 4 5
e) Depth of Concepts Covered 1 2 3 4 5
f) Multiple Means of Assessment 1 2 3 4 5
g) Diverse learning opportunities 1 2 3 4 5
h) Originality 1 2 3 4 5
i) Dealing with Contemporary Issues 1 2 3 4 5
j) User Friendly 1 2 3 4 5

General Comments or suggestions(use reverse):