



**Introduction**

In an Educational Digest for ERIC Tomlinson (2000) notes the obvious: all students learn in a variety of ways and have different interests. Some students excel in some areas but not in others. Hence, she suggests, the best school instruction is fitted to a diverse student population which is called “differentiated.” Research notes that there is ample evidence that students experience greater school success (i.e. personally satisfying) if teaching is responsive to their learning needs. There is no one recipe for differentiation, but several broad principles that might be used to establish differentiated classrooms.

Tomlinson notes that good teaching includes offering students a range of learning tasks developed along eight differentiations: (1) concrete to abstract, (2) simple to complex, (3) basic to transformational, (4) fewer facets to multi-facets, (5) smaller leaps to greater leaps, (6) more structured to more open, (7) less independence to greater independence, and (8) slower to quicker.

Ainslie’s work (1994) discusses instruction for student groups of mixed abilities. She examines factors that determine mixed ability which include students’ motivations, interests, and needs; linguistic ability; general educational background; learning styles; age; external pressures and time available to study; and student anxiety. She believes that teachers need to differentiate student instruction.

Teachers who attend to these different needs must first create different instructional goals for their students. To do this well, one key is to know the students. How can this task – knowing students – be done efficiently and well? This review uses research to explain some general ideas, and provide some hints for teachers who want to create activities that address a wide range of student needs and abilities.

**Key Findings**

1. All students differ so teachers must attend to different needs by first creating unique instructional goals for each student. Teachers need to follow up on these goals with practical learning activities. Research indicates that differentiation improves student learning.
2. The term “differentiation” differs from mixed-ability teaching. Differentiation emphasizes the needs of individual learners, while mixed-ability teaching is managing groups of students for teaching purposes. The goal of differentiation is to create learning environments, content, process, and products that enable students with learning challenges (including giftedness) to succeed with meaningful curriculum.

3. There are several ways classrooms and teaching might be differentiated. As Tomlinson notes, differentiation takes into account:
  - (i) content – what students need to learn or how students should access information
  - (ii) process – activities where students work to make sense of the content
  - (iii) products – projects or activities that allow students to rehearse, apply, and extend what they have learned
  - (iv) learning environments – how the classroom works and feels
4. Tomlinson further says that differentiation can occur by utilizing:
  - (i) differences in texts
  - (ii) differences in support for students
  - (iii) differences in expectations for learning outcomes
  - (iv) differences in students’ abilities
  - (v) differences in student interests
  - (vi) differences in curriculum tasks
5. Instructional activities should be created based on instructional needs, multiple intelligences, learning modalities, cognitive levels, student backgrounds, and personal interests. Differentiated teaching strategies include cooperative learning, individual learning, learning centers, and technology.
6. The best differentiated classrooms are proactive, qualitative (which involves producing superior student work), student-centered, and use a mix of whole-class, group, and individual instruction. Differentiating learning experiences means that teachers must understand and attend to the needs of both advanced and struggling learners.
7. Content and instructional modifications include multilevel instruction, the use of learning contracts, small-group instruction, language study, the use of centers, projects, using different tasks for different ability levels, supporting independent learning, utilizing more carefully organized group work, curriculum replacement, acceleration, course compacting, pull-out programs, competitions, and out-of-school programming.
8. The techniques most useful for meeting students’ needs include differentiated instruction, student choice, flexible grouping, and mixing enrichment with acceleration.
9. Both traditional (Bloom’s Taxonomy) and new ways (brain-based research and constructivist learning theories) to differentiate instruction are promising.
10. Parents whose children struggle to learn report that schools often seemed unfriendly and unresponsive to the needs of their children and that differentiated instruction was not evident. Parents believe differentiated instruction supports their children in acquiring self-esteem, practical skills, and learning strategies.
11. As leaders of a school, administrators bear responsibility for differentiation because they respond to the needs of students and the community while shaping curriculum. They need to support their staff members as teachers attempt to use differentiated instruction in their classrooms. Administrators must promote parent participation, provide special education counseling, and advocate staff professional development.

## Suggestions for Teachers

To differentiate instruction, teachers could use the following strategies in their classrooms:

- Create a positive classroom atmosphere that is proactive, qualitative, and student-centered.
- Get to know your students in the first few weeks of school by conducting ice-breaking classroom activities and written activities to help students know themselves and each other.
- Group wisely for instruction. Use flexible grouping – a mix of whole-class, group, and individual instruction.
- Plan an optimal physical arrangement for the classroom.
- Use multiple texts and supplementary materials in lessons.
- Utilize homogeneous grouping, along with differentiated instruction, to benefit students of medium ability and low ability.
- Allow students to have choice in learning.
- Use individual learning and independent projects.
- Try a variety of activities: word searches, matching games, and language exercises – such as cloze, un-jumbling, sequencing, word study, reading comprehension, and writing.
- Incorporate cooperative learning – simulation, projects, teaching games, problem-based learning, and inquiry models.
- Use Bloom’s Taxonomy to develop learning centers by organizing work around each level (knowledge, comprehension, application, analysis, synthesis, and evaluation).
- Use computers to help in the area of information-handling activities, multiskill tasks, foreign language writing, desktop publishing, and the increased use of CD-Rom resources.
- Use different ways of teaching from the textbook; text alteration.
- Make student work real and relevant.
- Deliver challenging, high-level, fast-paced instruction to the gifted and talented.
- Group the gifted and talented together for subjects in which they are talented.
- Share personal contributions, such as stories, collected memorabilia, and hobbies, which encourages students to contribute as well.
- Mix enrichment with acceleration for some students.
- Try peer mentoring or tutoring.
- Set appropriate and achievable individual student goals.
- Involve students as planners and organizers of lessons.
- Use role-play and drama in the classroom.
- Teach students critical thinking skills.
- Use learning contracts to motivate students.
- Consider differentiation in areas such as classroom management, community building lessons/activities, literacy and mathematics education, and student assessment and evaluation.

## Additional Readings for AISI Coordinators and Teachers

**Note: Bold Font indicates Best/Most Useful Resources**

### **Books and Articles**

Ainslie, S. (1994). Mixed ability teaching: Meeting learners' needs. *Network 3: Teaching Languages to Adults*. ERIC Document Reproduction No. ED382020.

Bender, W. (2002) *Differentiating instruction for students with learning disabilities: Best teaching practices for general and special educators*. Thousand Oaks: Corwin Press, Inc. ERIC Document Reproduction No. ED469551.

Booth, J. & Brown, K.E. (1985). The administrator's role in the education of gifted and talented children. *1985 Digest*. ERIC Document Reproduction No. ED262516.

Bulgren, J. (2002). *The educational context and outcomes for high school students with disabilities: The perceptions of parents of students with disabilities*. Research Report. ERIC Document Reproduction No. ED469288.

Bull, K. Sather & Land, I. (1985). *Developing learning centers utilizing Bloom's Taxonomy for secondary students [and] Blooming for vertical and horizontal expansion or creative obfuscations to confuse and bewilder your friends: A student guide to Bloom's Taxonomy*. ERIC Document.

Butler, K. (1986). Successful learning strategies for the emerging adolescent. *Oklahoma Middle Level Education Association Journal*.

**Convery, A. & Coyle, D. (1993). Differentiation--Taking the initiative. *Pathfinder 18*. ERIC Document Reproduction No. ED382025.**

Distad, L. & Heacox, D. (2000). Differentiating instruction using a matrix plan. *Southern Social Studies Journal*, 25(2), 70-76.

Feldhusen, J.F. (1989). Why the public schools will continue to neglect the gifted. *Gifted Child Today*, 12 (2), 55-59.

**Forsten, C., Grant, J. & Hollas, B. (2002). *Differentiated instruction: Different strategies for different learners*. ERIC Document Reproduction No. ED464060.**

Gartin, B., Murdick, N., Imbeau, M., & Perner, D. (2002). *How to use differentiated instruction with students with developmental disabilities in the general education classroom*. ERIC Document Reproduction No. ED471951.

**Gregory, G. & Chapman, C. (2002). *Differentiated instructional strategies: One size doesn't fit all*. Corwin Press: Thousand Oaks, CA.**

Hughes, L. (1999). Action research and practical inquiry: How can I meet the needs of the high-ability student within my regular education classroom? *Journal for the Education of the Gifted*, 22(3), 282-97.

Johnson, G. (1996). *Gifted and talented education Grades K-12 program evaluation*. ERIC Document Reproduction No. ED411636.

Reis, S. (1998). A response: Equal does not mean identical. *Educational Leadership*, 56(3), 74-77.

Renzulli, J., Leppien, J., & Hays, T. (2000). *The multiple menu model: A practical guide for developing differentiated curriculum*. ERIC Document Reproduction No. ED453621.

**Skowron, J. (2001). How to differentiate instruction. Adapted from Chapter 3 of *Powerful lesson planning models: The art of 1,000 decisions*. A Skylight Guide. Grades K-12. ERIC Document Reproduction No. ED457142.**

Smith, L. & Renzulli, J. (1982). The assessment and application of learning style preferences: A practical approach for classroom teachers. ERIC Document Reproduction No. ED229444.

Strickland, D., Ganske, K. & Monroe, J. (2002). Supporting struggling readers and writers: Strategies for classroom intervention 3-6. ERIC Document Reproduction No. ED458548.

**Tomlinson, C.A. (1995a). *Differentiating instruction for advanced learners in the mixed-ability middle school classroom*. ERIC Digest E536. ERIC Document Reproduction No. ED389141.**

**Tomlinson, C. A. (1995b). *How to differentiate instruction in mixed-ability classrooms*. ERIC Document Reproduction No. ED386301.**

**Tomlinson, C. A. (2000) *Differentiation of instruction in the elementary grades*. ERIC Digest. ERIC Document Reproduction No. ED443572.**

**Wilgosh, Lorraine. (1993). *Implications of inclusive education for gifted and talented children*. ERIC Document Reproduction No. ED371561.**

### **ERIC Resources**

**Lord, L. Hurley & Rule, A. (Eds.) (2003). *Activities for differentiated instruction addressing all levels of Bloom's Taxonomy and eight multiple intelligences*. ERIC Document Reproduction No. ED475517.**

This 83-page manuscript lays out a number of unit plans useful at all grade levels. These plans incorporate Gardner's multiple intelligences, and all levels of Bloom's taxonomy.

Siegle, D. & Gubbins, E. J. (Eds.) (2001). National Research Center on the Gifted and Talented newsletter. ERIC Document Reproduction No. ED467839.

Two, semi-annual issues of the newsletter contain a variety of articles directed to educators of gifted and talented students. They include ways to use gifted and talented instruction for students of all abilities, and a number of other articles pertaining more generally to differentiated instruction.

**Skowron, Janice (2001) How to differentiate instruction. Adapted from Chapter 3 of Powerful lesson planning models: The art of 1,000 decisions. ERIC Document Reproduction No. ED457142.**

This resource describes the functioning of a differentiated classroom environment, and specific planning and implementation strategies. It includes planning tools and templates.

### Websites

Adran Addysg Education Department. (2003). *Differentiated Instruction*. United Kingdom: University of Wales, Aberystwyth. Retrieved from <http://www.aber.ac.uk/education-odl/DiffSEN/difflearn1.html>

**Fisher, B. (2002). Technology and Differentiated Instruction Web Resources. Charlottesville, VA: Abermarle County Public Schools. Retrieved from <http://k12.albemarle.org/Technology/DI/>**

Hess, M. A. (March 1999). *Teaching in mixed-ability classrooms: Teachers guide students down many paths to a common destination*. Wisconsin: Wisconsin Education Association Council (WEAC). Retrieved from <http://www.weac.org/kids/1998-99/march99/differ.htm>

**Oaksford, L. (2004). *Differentiated Instruction: Sources of information & sample lessons*. Florida: Leon County Schools & Florida State University. Retrieved from <http://tst1160-35.k12.fsu.edu/mainpage.html>**

**PD Online. (2000). Lesson 1 What Is differentiated instruction? The Association for Supervision and Curriculum Development. Retrieved from <http://www.ascd.org/pdi/demo/diffinstr/differentiated1.html>**

Schuler, P. (1997). Cluster grouping coast to coast. *Newsletter of the National Research Center for the Gifted and Talented*. Retrieved from <http://www.gifted.uconn.edu/wintr974.html>

Theroux, P. (2004). *Differentiating Instruction*. Alberta: Enhance Learning with Technology. Retrieved from <http://www.enhancelearning.ca> & <http://members.shaw.ca/priscillatheroux/differentiating.html>

**Ibid. (2004). *Differentiating instruction links*. Alberta: Enhance Learning with Technology. Retrieved from <http://members.shaw.ca/priscillatheroux/differentiatinglinks.html>**

**Ibid. (2004). *Strategies for Differentiating Instruction*. Alberta: Enhance Learning with Technology. Retrieved from <http://members.shaw.ca/priscillatheroux/differentiatingstrategies.html>**