Differentiated Instructional Strategies: Meeting the Diverse Needs of Learners

A Distance Learning Graduate Course

Course Syllabus

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Brain research confirms what experienced teachers have always known:

- No two children are alike.
- No two children learn in the identical way.
- An enriched environment for one student is not necessarily enriched for another.
- In the classroom we should teach children to think for themselves.

Consequently, it necessarily follows that although essential curricula goals may be similar for all students, methodologies employed in a classroom must be varied to suit to the individual needs of all children: ie. learning must be differentiated to be effective.

Marian Diamond
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Carol Ann Tomlinson
Sharon Longert
Theresa London Cooper
Benna Golubtchik
Judy Jones
Jennifer Fettig
Kathryn Voigt
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Rationale

Every child is unique. Although we may rejoice in this fact, it poses a dilemma for educators. When students are diverse, teachers can either "teach to the middle" and hope for the best, or they can face the challenge of diversifying their instruction.

Today, more and more teachers are choosing the second option. Determined to reach all students, teachers are struggling to tailor their instruction to individual student needs. They are striving to provide the right level of challenge for gifted students, for students who lag far behind grade level, and for everyone in between. They are working to deliver instruction in ways that meet the needs of auditory, visual, and kinesthetic learners. And they are trying to tap into students' personal interests. In short, these teachers are differentiating instruction.

One Size Doesn't Fit All

Differentiated instruction is a teaching philosophy based on the premise that teachers should adapt instruction to student differences. Rather than marching students through the curriculum in lockstep, teachers should modify their instruction to meet students' varying readiness levels, learning preferences, and interests.

Differentiated instruction is not a new concept, experts say. Back in the days of the one-room schoolhouse, when students ages 6–16 learned together, differentiated instruction "was how they did school," notes Carol Ann Tomlinson, an associate professor at the University of Virginia and author of the 1999 book The Differentiated Classroom: Responding to the Needs of All Learners.

The need to differentiate instruction is obvious, proponents say. "We want to accommodate the full diversity of academic needs" that students bring to the classroom, says Susan Demirsky Allan, assistant superintendent for curriculum and instruction for the Grosse Pointe, Mich., public schools. "We know those differences are out there, and we have to recognize that reality," Allan says. "Teachers can't assume they have 25 clones sitting in front of them." Without differentiated instruction, any child who varies from the norm will suffer, she contends.

Traditional schools are "designed for organized, left-brain learners who are book lovers," says Donna Strigari, principal of Frank J. Smith School in East Hanover, N.J., and co-facilitator of ASCD's network on differentiated instruction. This type of learner, however, represents only one-quarter of the population, Strigari says. To meet the needs of all students, educators need to "break the old patterns" of teaching and change perceptions of what school should be like, she asserts.
Living Our Beliefs

Nearly all teachers believe that it's better to differentiate instruction, experts agree—but the challenge lies in translating that belief into action. According to Tomlinson, teachers can differentiate three aspects of the curriculum: content, process, and products.

- **Content** refers to the concepts, principles, and skills that teachers want students to learn. All students should be given access to the same core content, Tomlinson believes. Struggling learners should be taught the same big ideas as their classmates, not given watered-down content.

  "Teachers should address the same concepts with all students but adjust the degree of complexity," Tomlinson emphasizes. "The same concept can be explained in a way that's comprehensible to a very young child or in a way that challenges a Ph.D. candidate." To illustrate this point, she cites the example of a professor whom she observed teaching Shakespearean sonnets—with great success—to 1st graders.

  *Content* also refers to the means teachers use to give students access to skills and knowledge, such as texts, lectures, demonstrations, and field trips. Teachers can vary these vehicles as well, Tomlinson says. For example, a teacher might direct an advanced learner to complex texts, Web sites, and experts to interview, while providing a student of more modest capacity with reading buddies, videos, demonstrations, and "organizers that distill information and make it more accessible."

- **Process** refers to the activities that help students make sense of, and come to own, the ideas and skills being taught. Teachers can modify these activities, Tomlinson advises, to provide some students with more complexity and others with more scaffolding, depending on their readiness levels. (Examples of scaffolding include step-by-step directions, reteaching, and additional models.) Like content, process can be varied by student interest and learning preferences as well.

- **Products** refers to culminating projects that allow students to demonstrate and extend what they have learned. Products reveal whether students can apply learning beyond the classroom to solve problems and take action. Different students can create different products, Tomlinson suggests, based on their readiness levels, interests, and learning preferences. For example, some students might work alone on a product, while others might work in groups.

This approach—differentiating content, process, and products—requires teachers to be "crystal clear" about what they are trying to teach, Tomlinson says. "Often, that's where we miss the boat."

A Challenge Worth Meeting

No one claims that differentiating instruction is easy. "There's no question that it's a big challenge," Woodin-Weaver says, "but there's no bigger challenge than trying to insert
kids in a one-size-fits-all [classroom] and then having to deal with the spillover of emotional and behavioral reactions. If kids are not in a place where they can learn, they let us know loud and clear," she says.

Teachers are inspired to persevere with differentiated instruction when they see the results, Allan says. Students are more engaged and make rapid progress. Bright students are no longer bored, and struggling students are finding learning more accessible—and hence their sense of self-efficacy is rising. In response, "I see veteran teachers becoming energized, and new teachers becoming enormously excited," Allan says. As one veteran teacher told her: "This differentiation is exhausting, frustrating, and time-consuming—and I would never go back to the old way."

(Excerpted from “Differentiating Instruction: Finding Manageable Ways to Meet Individual Needs” by Scott Willis and Larry Mann)
Course Title

Differentiated Instructional Strategies:
Meeting the Diverse Needs of Learners

Course Description

"Differentiated Instructional Strategies: Meting the Diverse Needs of Students” is a three semester (five quarter) hour graduate course designed to give K-12 teachers the theory and skills to create and teach lessons that are varied to meet the individual learning needs of all students. Participants will engage in various learning activities through which they will learn and implement teaching strategies designed to create multiple paths so that students of different abilities, interest or learning needs experience equally appropriate ways to absorb, use, develop and apply concepts as a part of the daily learning process.

In addition, participants will show evidence of differentiating instruction by varying content, process, and product in their units and lessons. Teacher will demonstrate proficiency in teaching the same curricula to all students but individualizing the complexity of the content, learning activities and/or products so that all students are challenged and no students frustrated.

Course Goals

The goals of this course are to have participants develop an understanding of the differentiated instructional strategies and how they can be applied in their teaching situations. By the end of the course, participants will be able to explain the role of differentiation in effective instruction, identify ways to assess students strengths, preferences, and learning styles; create lessons and units that utilize a range of differentiated instructional strategies; reflect upon and evaluate the effectiveness of their strategies, and plan for the continued use of the information and skills gain in this course.

Course Outline

In the following outline, the term "Course of Study" refers to a study plan that includes required reading, video viewing, worksheets, application assignments and progress reports.
Session #1: Differentiated Instructional Strategies: An Introduction

Objective: To have participants understand the scope and sequence of this course, to expose them to key concepts through an interview with author Dr. Carol Ann Tomlinson, to have them preview course videos and lessons, and have them complete an assessment of their current approach to meeting the individual learner needs of their students.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and setting of a learning goal for the course.

Session #2: Differentiated Instructional Strategies: Flexible Reading Formats/Self Evaluation (Dumas –Accelerated Reading- Lower Elementary)

Objectives: To have participants develop an understanding of using flexible reading formats and the multiple levels of mastery to teach the same lesson to a multi-age classroom; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #3: Differentiated Learning Strategies: Games and Authentic Assessment (Mr. Puccio-Jeopardy Game-High School SPED)

Objectives: To have participants develop an understanding of the value of using think/pair/share to cover a unit of knowledge while promoting peer tutoring; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Supplementary reading and activities; video viewing or research activity; and the creation and evaluation of a lesson or unit.

Session #4: Differentiated Instructional Strategies: Real World Learning/Authentic Tasks, KWL (Ms. Countryman-Coin Game-Lower Elementary)

Objectives: To have participants develop an understanding of how integrating classroom material with real world situations can allow students of all levels of understanding practice and assess new knowledge; to have participants create, implement, and evaluate a lesson or unit based either
on the techniques demonstrated in the video or strategies suggested in the course text and readings.

**Assignments and Activities:** Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

**Session #5: Differentiated Instructional Strategies: Tiered Activities/Multi-Level Questions (Ms. Letteman – Measurement Man- Lower Elementary)**

**Objectives:** To have participants develop an understanding of how team games can provide tiered levels of an activity while providing an opportunity for the teacher to evaluate students’ competency level with new information; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

**Assignments and Activities:** Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

**Session #6: Differentiated Instructional Strategies: Graphic Organizers – Tiered Learning SPED (Ms. Lester – Science Animal Classifications - Upper Elementary School)**

**Objectives:** To have participants develop an understanding of the benefits of using graphic organizers in teamwork to organize data and new knowledge; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

**Assignments and Activities:** Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

**Session #7: Differentiated Learning Strategies: Simulations/Self-Assessment/Peer Teaching (Mr. Caballero/Ms. Jacobis-News Report/History- High School)**

**Objectives:** To have participants develop an understanding of the value of using simulations to demonstrate new knowledge and provide a venue for class wide assessment of the success of the simulation; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

**Assignments and Activities:** Supplementary reading and activities; video
viewing or research activity; and the creation and evaluation of a lesson or unit.

Session #8: Differentiated Instructional Strategies: Learning Stations and Portfolios (Ms. Mohler/Ms. Hanggi – Learning Stations, Self-select Assignments-Self Assessment Lower Elementary)

Objectives: To have participants develop an understanding of how learning contracts and portfolios can be used to track the individual progress of students of varying reading abilities in a classroom; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #9: Differentiated Instructional Strategies: Problem-Based Learning/Peer Assistance/Grouping (Ms. Foster – Maze Game- Lower Elementary)

Objectives: To have participants develop an understanding of the value of group investigation and games to promote teamwork and problem solving as a group; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #10: Differentiated Instructional Strategies: Compacting (Kent-Math Fractions -Lower Elementary)

Objectives: To have participants develop and understand the use of grouping students of like ability to work on assignments of varying complexity on the same subject; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.
Session #11: Differentiated Instructional Strategies: Multiple Intelligences, grouping (Ms. Ties-Math Calculator Game-Lower Elementary)

Objectives: To have participants understand the role collaboration and peer tutoring can play in reviewing material and assessing comprehension; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #12: Differentiated Instructional Strategies: Jigsaw Lessons/Learning Stations (Ms. Valdez/Mr. Shepler - Solar System/Learning Stations-Lower Elementary)

Objectives: To have participants develop an understanding of how a subject matter material can be divided amongst groups in the class to promote teamwork and peer tutoring; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #13: Differentiated Instructional Strategies: Open Ended Questioning (Ms. Kerr-ESL/Reading-Upper Elementary)

Objectives: To have participants develop an understanding of the value of using open-ended questioning to assess ongoing reading comprehension in a class discussion about a novel; to have participants create, implement, and evaluate a lesson or unit based either on the techniques demonstrated in the video or strategies suggested in the course text and readings.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.

Session #14: Differentiated Instructional Strategies: Self-Select Study

Objectives: To have participants select a video from one of the previous lesson to view again and develop another lesson based on its content; or, to select a topic of their choosing for further research.

Assignments and Activities: Required reading in course text, viewing of video, course of study supplementary reading and activities, and the creation and evaluation of a lesson or unit.
Session #15: Participant Reflection and Planning for Future Use of Course Concepts

Objectives: To have participants reflect on their course experience and on insights gained in the course; to have participants identify those course concepts that most apply to their teaching situations; to have participants develop a plan for the future use of the knowledge and skills gained in this course.

Assignments and Activities: Required reading in course text, review of videos and assignments, discussions with study team, and the creation of a plan for the future use of the knowledge and skills gain in this course.
Participant Characteristics

This course is designed for teachers and administrators in grades kindergarten through twelve. Participants will have a bachelor's degree and a valid teacher credential (if applicable). There are no other prerequisites.

Instructional Materials

Instructional materials for this course include:

a.) Basic text:


b.) Course Media (All videos produced in 2007):

Differentiated Instructional Strategies - Disc #1
Video #1 An Introduction
Video #2 Differentiation and Choices
Video #3 Differentiation and Assessment
Video #4 Differentiation and K.W.L.

Differentiated Instructional Strategies - Disc #2
Video #1 Differentiation and Tiered Learning
Video #2 Differentiation and Graphic Organizers
Video #3 Differentiation and High School

Differentiated Instructional Strategies - Disc #3
Video #1 Differentiation and Learning Centers
Video #2 Differentiation and Problem-Based Learning
Video #3 Differentiation and Learning Options

Differentiated Instructional Strategies - Disc #4
Video #1 Differentiation and Multiple Intelligences
Video #2 Differentiation: Jigsaw and Centers
Video #3 Differentiation and Flexible Grouping
c.) Course of Study.

This book contains supplemental articles, summaries of course content, pre-video viewing activities, discussion questions, group activities, individual activities, worksheets, classroom application assignments, and learning reports.

d.) Bibliography.

e) Recommended Reading.

f) Internet Resources.
Learning Activities
1. For each of the fifteen (15) sections of this course, participants will complete the following activities:
   a.) Read the assigned chapters of the course text.
   b.) Read supplemental articles in the course of study book.
   c.) Participate in a study/preparation activity with a colleague.
      NOTE: While benefits are greatest when participants take this course as a part of a study team, participants can successfully complete course requirements by working with a friend or colleague who is not enrolled in the course; or, by reflecting upon the material and considering how they might use it in their teaching situations.
   d.) View instructional videos.
   e.) Discuss (see above note) course material in terms of participants’ own students.
   f.) Record summary of discussion activities in progress report
   g.) Design, implement, and evaluate an application of course content in their teaching situation.
      NOTE: If participants are taking this course during the summer or at a time when they do not have access to a classroom, they follow these directions with respect to classroom application projects.
      1. If they choose to design a classroom lesson or activity for their project, they design it for a class that they have had in the past.
      2. Instead of implementing their activity in a classroom, they share their activity design with a colleague and ask for their input.
      3. Based on the input received from their colleagues, they make whatever changes they feel are appropriate to improve their activity design.
   h.) Summarize classroom application design, application experience, and evaluation in progress report. 2. Submit a final paper.

Course Outcomes
As a result of their work in this course, participants will be able to:
1.) Demonstrate the use of differentiated instructional techniques to create lessons that engage students in learning.
2.) Demonstrate proficiency in analyzing and evaluating differentiated lessons taught by other teachers.
3.) Demonstrate proficiency in assessing their students’ learning styles and preferences.
4.) Develop, implement, and evaluate various differentiated instructional strategies designed to maximize learning.
5.) Develop a systematic plan to achieve an instructional goal set at the beginning of the course.
6.) Develop and describe an action plan to implement and evaluate their systematic plan.
7.) Evaluate and reflect upon their course experience and plan for the future use of knowledge and skills gained in this course.
Progress Reporting and Assessment

Participant achievement will be measured by a combination of the following:

A. An evaluation of participant's 15 progress reports. (Outcomes 1, 2, 3, and 4.)

   Each progress report will be evaluated for:
   – completeness and quality of responses.
   – accuracy of information.
   – appropriateness of classroom application.
   – quality of reflection.

B. An evaluation of participant's professional paper. (Outcomes 5, 6, and 7.)

   The professional paper will be evaluated for:
   – inclusion of required components.
   – synthesis and analysis of course concepts.
   – presentation in an organized, professional manner.
References and Bibliography


Internet Resources

Differentiated Instruction Strategies

http://olc.spsd.sk.ca/DE/PD/instr/instrsk.html
   Includes information on concept maps, graphic organizers, Jigsaw, learning contracts, lit circles, and other strategies.

http://curry.edschool.virginia.edu/go/readquest/strat/
   Includes information on carousel brainstorming, clock buddies, column notes, KWL revised, word maps and other strategies.
http://www.englishcompanion.com
Includes information on a variety of graphic organizers, reciprocal teaching, using visual aids to improve instruction and other strategies.

**Differentiated Instruction Resources**

**Enhance Learning with Technology**
http://members.shaw.ca/priscillatheroux/differentiatingsstrategies.html
Provides a wealth of information about differentiation with a specific focus on strategies for differentiated instruction. Lots of links to other sites, both on differentiating instruction and other related topics such as brain biology, learning styles, constructivism, sample lesson plans, project base learning, and much more.

**What Is Differentiated Learning?**
http://www.scusd.edu/gate_ext_learning/differentiated.htm
A brief, focused definition of differentiated learning from the Sacramento City Unified School District.

**How to Differentiate Instruction**
http://www.teach-nology.com/tutorials/teaching/differentiate/planning/
A commercial site from Teach-Nology with things to sell, it still has good information with useful links to topics such as cooperative learning, lesson plans, inquiry based learning and so forth.

**Teaching in a Mixed Ability Classroom**
An article by Mary Ann Hesse that provides a basis and rationale for differentiating instruction and covers a lot of useful information. Includes a bibliography with links.

**Differentiated Instruction**
http://www.cast.org/ncac/DifferentiatedInstruction2876.cfm
A detailed guide to differentiating instruction from the National Center on Assessing the General Curriculum, this site provides a lot of good information. Includes an extensive annotated bibliography with links to other useful sites.

**Differentiated Instruction Hot List**
http://www.frhs.k12.nj.us/rmslibrarylab/di/differentiated_instruction.htm
Provides a wide variety of links to topics that are associated with differentiated instruction, including learning styles, multiple intelligences, critical and creative thinking, layered curriculum, assessment, and many others.

**Differentiating Instruction for Advanced Learners in the Mixed-Ability Middle School Classroom. ERIC Digest E536.**
http://eric.ed.gov
An ERIC Digest report on differentiating instruction at the middle school level,
based on Tomlinson's work. Offers a rationale for differentiating and research support for the strategy.

Preparing Teachers for Differentiated Instructions
http://www.ascd.org/portal/site/ascd/menuitem.8835d3e3fbb1b0cddeb3fadb62108a0c/
   An Educational Leadership article by John H. Holloway, it discusses the key elements of putting differentiated instruction into practice, and focuses on barriers to doing this and how they can be overcome.

Mapping a Route Toward Differentiated Instruction
http://www.ascd.org/portal/site/ascd/menuitem.fdd976cd7e54fcddeb3ffdb62108a0c/
   An Educational Leadership article by Carol Ann Tomlinson, it provides a detailed look at two classrooms and the methods used for instruction, then offers alternate approaches that are more appropriate and effective for differentiation.

From Theory to Practice: The Challenges of Heterogeneous Classrooms
   An article that discusses clustering as a strategy for differentiating the heterogeneous classroom. Susan Winebrenner is cited as a resource.

What is Differentiated Instruction?
http://www.ascd.org/portal/site/ascd/menuitem.3adeebc6736780dddeb3fadb62108a0c/
   Lesson 1 of a series of lessons from ASCD on differentiating instruction, with many links to related articles and other resources. At the bottom is a link to Lesson 2, so this may become an in-depth study if desired.

Accelerated and Enriched Mathematics
http://search.mcps.k12.md.us/query.html?qp=&qt=accelerated+and+Enriched+Mathematics&qs=&qc=&pw=100%25&ws=0&la=&qm=0&st=1&nh=10&lk=1&rf=0&oq=&rq2=0#skip
   A site dedicated to differentiating math, it has many excellent suggestions and links to other web resources.

Teaching Mathematics to Gifted Students in a Mixed-Ability Classroom
http://www.teachervision.com/lesson-plans/lesson-3778.thml
   Provides background about differentiation and specific information about working in the area of math.

Guidelines to Differentiated Instruction
http://www.cedu.niu.edu/tedu/portfolio/diffclass.htm
   A simple and effective template for thinking about the stages and elements of differentiated instruction.