

**Innovative Method of Teaching**

**DIFFERENTIATED INSTRUCTION**

**By**

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# Differentiated Instruction

- Differentiation means tailoring instruction to meet individual needs. Whether teachers differentiate **content, process, products, or the learning environment**, the use of ongoing assessment and flexible grouping makes this a successful approach to instruction.
- At its most basic level, differentiation consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to an individual or small group to vary his or her teaching in order to create the best learning experience possible, that teacher is differentiating instruction.

# Brain-based learning

- Differentiation is rooted and supported by literature and research about the brain. Evidence suggests that, by instructing through multiple learning pathways, more "dendritic pathways of access" are created.
- This can be achieved by using **several senses (i.e. sight, sound, smell)** or by **creating cross-curricular connections**.
- When more regions of the brain store data about a subject, there is more interconnection and cross-referencing of data from multiple storage areas in response to a single cue, meaning one has learned rather than memorized.

- As Wolfe (2001) argues, information is acquired through the five senses: sight, smell, taste, touch and sound. This information is stored temporarily, and the brain decides what to do with the acquired data.
- The more of these stimuli that are activated, the more impact the data has on the brain. This information is pertinent to differentiation, which can activate multiple senses and thus have a greater impact on the brain.
- Further, Howard Gardner's theory of multiple intelligences identified eight distinct intelligences: linguistic, logical-mathematical, musical, bodily-kinesthetic, spatial, interpersonal, intrapersonal and naturalist.
- This is important when looking at how students possess different kinds of minds and therefore learn, remember, perform, and understand in different ways. He argues that students would be better served if teachers could teach in a number of ways and learning could be assessed through a variety of means.

Teachers can differentiate at least four classroom elements based on student readiness, interest, or learning profile:

- **Content** – what the student needs to learn or how the student will get access to the information;
- **Process** – activities in which the student engages in order to make sense of or master the content;
- **Product** – culminating projects that ask the student to rehearse, apply, and extend what he or she has learned in a unit; and
- **Learning environment** – the way the classroom works and feels.

# CONTENT

- The content of lessons may be differentiated based on what students already know. The most basic content of a lesson should cover the standards of learning set by the district or state.
- Some students in a class may be completely unfamiliar with the concepts in a lesson, some students may have partial mastery of the content - or display mistaken ideas about the content, and some students may show mastery of the content before the lesson begins.
- The teacher may differentiate the content by designing activities for groups of students that cover different areas of revised Bloom's taxonomy (**Anderson's Taxonomy**).

- For example, students who are unfamiliar with the concepts may be required to complete tasks on the lower levels of revised Bloom's Taxonomy: **Remembering & Understanding**
- Students with partial mastery may be asked to complete tasks in the **Applying, Analysing** and students who have high levels of mastery may be asked to complete tasks in **Evaluating and Creating**.
- When teachers differentiate content, they may adapt what they want students to learn or how students access the Remembering, understanding, and skills (Anderson, 2007).

- Examples of differentiating content at the elementary level include the following:
- **Using reading materials at varying readability levels;**
- **Putting text materials on tape;**
- **Using spelling or vocabulary lists at readiness levels of students;**
- **Presenting ideas through both auditory and visual means;**
- **Using reading buddies; and**
- **Meeting with small groups to re-teach an idea or skill for struggling learners, or to extend the thinking or skills of advanced learners.**



# PROCESS

- The process of how the material in a lesson is learned may be differentiated for students based on their **LEARNING STYLES**, taking into account what standards of performance are required for the age level.
- This stage of differentiation allows students to learn based either on what method is easiest for them to gain knowledge, or what may challenge them most: some students may prefer to read about a topic (or may require practice in reading), and others may prefer to listen (or require practice in listening), or acquire knowledge by manipulating objects associated with the content.
- Information may be presented in multiple ways by the teacher, and may be based on any available methods or materials. Many teachers use areas of Multiple Intelligences to provide learning opportunities.

- Examples of differentiating process or activities at the elementary level include the following:
- Using tiered ( levelled) activities through which all learners work with the same important understandings and skills, but proceed with different levels of support, challenge, or complexity;
- Providing interest centers that encourage students to explore subsets of the class topic of particular interest to them;
- Developing personal agendas (task lists written by the teacher and containing both in-common work for the whole class and work that addresses individual needs of learners) to be completed either during specified agenda time or as students complete other work early.
- Offering manipulatives or other hands-on supports for students who need them; and
- Varying the length of time a student may take to complete a task in order to provide additional support for a struggling learner or to encourage an advanced learner to pursue a topic in greater depth.

# PRODUCT

- The product is essentially what the student produces at the end of the lesson to demonstrate the mastery of the content: tests, evaluations, projects, reports, or other activities.
- Based on students' skill levels and educational standards, teachers may assign students to complete activities that demonstrate mastery of an educational concept (writing a report), or in a method the student prefers (composing an original song about the content, or building a 3-dimensional object that explains mastery of concepts in the lesson or unit).
- The product is an integral component of the differentiated model, as preparation of the assessments determines both the 'what' and 'how' of instruction delivery.

- **Examples of differentiating products at the elementary level include the following:**
- **Giving students options of how to express required learning (e.g., create a puppet show, write a letter, or develop a mural with labels);**
- **Using rubrics that match and extend students' varied skills levels;**
- **Allowing students to work alone or in small groups on their products; and**
- **Encouraging students to create their own product assignments as long as the assignments contain required elements.**

# LEARNING ENVIRONMENT

- Differentiating through the environment is important as it creates the conditions for optimal learning to take place. According to Tomlinson (2003), "Environment will support the student's quest for affirmation, contribution, power, purpose, and challenge in the classroom,".
- The learning environment includes the physical layout of the classroom, the way that the teacher uses the space, environmental elements and sensitivities including lighting, as well as the overall atmosphere of the classroom. The teacher's goal is to create an environment that is positive, structured, and supportive for each student.

- The physical environment should be a place that is flexible with varied types of furniture and arrangements, and areas for quiet individual work as well as areas for group work and collaboration.
- This supports a variety of ways to engage in flexible and dynamic learning. Teachers should be sensitive and alert to ways that the classroom environment supports students' ability to interact with others individually, in small groups, and as a whole class.
- They should employ classroom management techniques that support a safe and supportive learning environment.

- **Examples of differentiating learning environment**
- Making sure there are places in the room to work quietly and without distraction, as well as places that invite student collaboration;
- Providing materials that reflect a variety of cultures and home settings;
- Setting out clear guidelines for independent work that matches individual needs;
- Developing routines that allow students to get help when teachers are busy with other students and cannot help them immediately; and
- Helping students understand that some learners need to move around to learn, while others do better sitting quietly (Tomlinson, 1995, 1999; Winebrenner, 1992, 1996).

# Thank You