Research Paper

EDUCATION



Differentiating Classroom Instruction to Cater Learners of Different Styles

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To meet the needs of all students and design programs that are responsive to the intellectual strengths and personal interests of students, we must explore alternatives to traditional instruction. We need to examine not only what is taught but how it is taught and how students learn. With contemporary classrooms becoming increasingly diverse, educational authorities, teachers and school administrators are looking to teaching and learning strategies that cater for a variety of learning profiles. A paradigm that is gaining ground in many educational circles is Differentiated Instruction. This model proposes a rethinking of the structure, management and content of the classroom, inviting participants within the learning context to become engaged in the process, to the benefit of all. While the model has been accepted and set to work, there remains room for theoretical support to give it momentum. This paper therefore seeks a comprehensive analysis of the literature in this area, examining the model within the context of increasing academic diversity. Later the paper elucidates the presentation of a grounded learning theory to support the move to differentiated instruction. Following on from this, attention is focused on the factors that intensify a shift in instructional practice. Finally, the differentiated instruction model is presented as a response to addressing different styles of learner.

KEYWORDS

Individual Differences, Learning Styles, Differentiated Instruction, Engaging Learners.

INTRODUCTION

On that first day of school, the individual differences in your class will jump out at you. Gender and physical differences are only the tip of the iceberg. Beneath the surface are students from different socioeconomic strata, students who come from various family backgrounds, students with special needs, differing interests, and abilities, students with different cultural backgrounds, different languages, different learning styles, and different attitudes toward school. This is not a new phenomenon. Not all students are alike. Based on this knowledge, differentiated instruction applies an approach to teaching and learning so that students have multiple options for taking in information and making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum. Classroom teaching is a blend of whole-class, group and individual instruction. Differentiated Instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms

CONCEPTUAL FRAMEWORK Addressing Individual Differences

Contemporary student populations are becoming increasingly academically diverse. The inclusion of students with disabilities, students with language backgrounds other than English, students with imposing emotional difficulties and a noteworthy number of gifted students, reflect this growing diversity (Tomlinson, 2001, 2004). Learning within the inclusive classroom is further influenced by a student's gender, culture, experiences, aptitudes, interests and particular teaching approaches (Guild, 2001; Stronge, 2004; Tomlinson, 2002, 2004). Most children accept that in a classroom they are not all alike, that while some possess strengths in sport, others may be academically strong (Tomlinson, 2000). While it is accepted that the common basis for them all is a need for acceptance, nurturing and respect (Tomlinson, 2004), attending to differences, assists each student in experiencing a degree of triumph while encouraging them to be all that they can be as individuals. It is necessary to take into account the vast differences among students in a classroom, acknowledging each student's strengths while accommodating their limitations. Contemporary classrooms should accept and build on the basis that learners are all essentially different (Brighton, 2002; Fischer and Rose, 2001; Guild, 2001; Tomlinson, 2002).

Learning Styles

New evidence emerges regularly to support the premise that not all children learn in the same way (Guild, 2001). It is apparent that an awareness of different learning styles is a significant tool to understand differences and assist with student development (Strong, Silver, and Perini, 2001). Models of education based on learning styles have equipped teachers with the ability to plan their lessons and their curriculum, bearing in mind how students learn best. Being able to identify a student's learning style and teach to accommodate these can assist students to achieve better results academically and improve their attitudes toward learning (Green, 1999). Identifying learning styles enables a teacher to capitalise on a student's strengths and to become familiar with concepts they may find challenging (Green, 1999). Fine (2003) reported a significant gain in the test scores of students on special education programs, after their preferred learning style was incorporated into the instruction. Students' performances were significantly better when they were instructed through learning style approaches rather than traditional teaching methods. Furthermore, the attitudes of these students toward learning improved significantly, as they felt that their individual strengths were being accommodated (Fine, 2003).

Multiple Intelligences

A differentiated instruction approach uses a variety of curriculum and instructional strategies to respond to student diversity and differences in learning needs. Multiple intelligences, a concept developed by Howard Gardner in the early 1900s, offer one flexible framework for planning for differentiation. Gardner identified eight basic types of intelligence that could provide potential pathways to learning. These are:

- Verbal-linguistic intelligence (or word smarts)
- Logical-mathematical intelligence (or number smarts)
- Interpersonal intelligence (or people smarts)
- Intrapersonal intelligence (or self smarts)
- Spatial intelligence (or picture smarts)
- Musical-rhythmic intelligence (or music smarts)
- Bodily-kinaesthetic intelligence (or body smarts)

• Naturalist intelligence (or nature smarts).

Purposefully planning to engage as many of these intelligences as possible throughout the school day will ensure more students have additional opportunities to learn.

The Implications of Vygotsky's Theory

Vygotsky's general theory of cognitive development was used as a framework for this investigation, as it has implications for teaching and learning in contemporary times. The areas of social interaction, engagement between teacher and student, physical space and arrangement, meaningful instruction, scaffolding, student ability and powerful content all become elements to consider within the context of contemporary education. With its emphasis on social interaction, Vygotsky's theory sees the student-teacher relationship as collaborative, with the learning experience becoming reciprocal. The instructional environment, including the physical arrangement of furniture would be so structured to promote interaction (Riddle and Dabbagh, 1999). Furthermore, the teacher would so design the lesson that instruction will extend the student to just above the student's current developmental level, building on that which the student already knows, but encouraging the student to move ahead into areas that pose greater challenge. In this regard, scaffolding would be an appropriate strategy to access the zone of proximal behaviour. The teacher would again engage student interest and modify tasks to suit ability levels. Lesson content will also be meaningful, compelling learner interest and providing a basis for the use of mediating tools like language. Within this framework, this study investigates the use of the differentiated instruction model as a pedagogical instrument to facilitate the learning process.

DIFFERENTIATED INSTRUCTION: RESPONDING TO THE NEEDS OF DIFFERENT LEARNERS

To differentiate instruction is to recognize students varying background knowledge, readiness, language, preferences in learning, interests, and to react responsively. Differentiated instruction is a process to approach teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student's growth and individual success by meeting each student where he or she is, and assisting in the learning process. Tomlinson (2005), a leading expert in this field, defines differentiated instruction as a philosophy of teaching that is based on the premise that students learn best when their teachers accommodate the differences in their readiness levels, interests and learning profiles. A chief objective of differentiated instruction is to take full advantage of every student's ability to learn (Tomlinson, 2001, 2004, 2005). In addition, she points out that differentiating can be performed in a variety of ways, and if teachers are willing to use this philosophy in their classrooms, they opt for a more effective practice that responds to the needs of diverse learners. Tomlinson (2000) maintains that differentiation is not just an instructional strategy, nor is it a recipe for teaching, rather it is an innovative way of thinking about teaching and learning. To differentiate instruction is to acknowledge various student backgrounds, readiness levels, languages, interests and learning profiles (Hall, 2002). Differentiated instruction sees the learning experience as social and collaborative, the responsibility of what happens in the classroom is first to the teacher, but also to the learner. Building on this definition, Mulroy and Eddinger (2003) add that differentiated instruction emerged within the context of increasingly diverse student populations. Within the learning environment permitted by the differentiated instruction model, teachers, support staff and professionals collaborate to create an optimal learning experience for students. Also in this environment, each student is valued for his or her unique strengths, while being offered opportunities to demonstrate skills through a variety of assessment techniques.

Engaging Students

A fundamental tenet of the differentiated model is that teachers must engage students. Research supports the view that curricula should be designed to engage students; it should

have the ability to connect to their lives and positively influence their levels of motivation. Teachers are required to know their students, their backgrounds and their cultural links. Knowing students well allows teachers to figure out their strengths, thereby helping them to move forward. Engaging students actively in the learning process and in the content allows them to see patterns developing, to see the overlap between disciplines, to see learning as a cumulative whole (Coleman, 2001).

COMPONENTS OF DIFFERENTIATED CLASSROOM INSTRUCTION

When done effectively, differentiated instruction is a seamless part of everyday instructional planning and practice. It is woven throughout the school day for all students and is integrated into how the physical space is organized, what learning resources are used, how instruction is planned and delivered, and how student learning is assessed. The very nature of differentiated instruction means that it will look different in different learning contexts and environments, depending on the students, teacher, and/or curriculum. In all contexts, however, effective differentiated instruction involves:

- Knowing your students
- Understanding the curriculum
- Providing multiple pathways to learning
- Sharing responsibility with students
- Taking a flexible and reflective approach.

Tomlinson (2001) identifies three elements of the curriculum that can be differentiated: Content, Process, and Products. Additionally, several guidelines are noted to help educators form an understanding and develop ideas around differentiating instruction.

CONTENT

- Several elements and materials are used to support instructional content. These include acts, concepts, generalizations or principles, attitudes, and skills. The variation seen in a differentiated classroom is most frequently the manner in which students gain access to important learning. Access to the content is seen as key
- Align tasks and objectives to learning goals. Designers of differentiated instruction determine as essential the alignment of tasks with instructional goals and objectives. Goals are most frequently assessed by many high-stakes tests at the state level and frequently administered standardized measures. Objectives are frequently written in incremental steps resulting in a continuum of skills-building tasks. An objectives-driven menu makes it easier to find the next instructional step for learners entering at varying levels.
- Instruction is concept-focused and principle-driven. The
 instructional concepts should be broad based and not focused on minute details or unlimited facts. Teachers must
 focus on the concepts, principles and skills that students
 should learn. The content of instruction should address the
 same concepts with all students but be adjusted by degree
 of complexity for the diversity of learners in the classroom.

PROCESS

- Flexible grouping is consistently used. Strategies for flexible grouping are essential. Learners are expected to interact and work together as they develop knowledge of new content. Teachers may conduct whole-class introductory discussions of content big ideas followed by small group or pair work. Student groups may be coached from within or by the teacher to complete assigned tasks. Grouping of students is not fixed. Based on the content, project, and on-going evaluations, grouping and regrouping must be a dynamic process as one of the foundations of differentiated instruction
- Classroom management benefits students and teachers.
 Teachers must consider organization and instructional delivery strategies to effectively operate a classroom using differentiated instruction

PRODUCTS

- Initial and on-going assessment of student readiness and growth are essential. Meaningful pre-assessment naturally leads to functional and successful differentiation. Assessments may be formal or informal, including interviews, surveys, performance assessments, and more formal evaluation procedures. Incorporating pre and on-going assessment informs teachers to better provide a menu of approaches, choices, and scaffolds for the varying needs, interests and abilities that exist in classrooms of diverse students.
- Students are active and responsible explorers. Teacher's respect that each task put before the learner will be interesting, engaging, and accessible to essential understanding and skills. Each child should feel challenged most of the time
- Items to which students respond may be differentiated for students to demonstrate or express their knowledge and understanding. A well-designed student product allows varied means of expression, alternative procedures, and provides varying degrees of difficulty, types of evaluation, and scoring.

Guidelines for engaging learners of different styles:

- Clarify key concepts and generalizations to ensure that all learners gain powerful understandings that serve as the foundation for future learning. Teachers are encouraged to identify essential concepts and instructional foci to ensure all learners comprehend.
- Assessment should occur before, during, and following the instructional episode, and help to pose questions regarding student needs and optimal learning.
- Emphasize critical and creative thinking as a goal in lesson design. The tasks, activities, and procedures for students should require that students understand and apply meaning. Instruction may require supports, additional motivation, varied tasks, materials, or equipment for different students in the classroom.
- Teachers are encouraged to strive for development of lessons that are engaging and motivating for a diverse class of students. Vary tasks within instruction as well as across students. In other words, and entire session for students should not consist of all drill and practice, or any single structure or activity.
- A balanced working structure is optimal in a differentiated classroom. Based on pre-assessment information, the balance will vary from class-to-class as well as lesson-to-lesson. Teachers should assure that students have choices in their learning.

CONCLUSION

The principles from Vygotsky's grounded learning theory, which holds that reciprocal social interaction and the collaborative relationship between teacher and student, accommodates learning in a developmental and historical sense. The learning context is a social context which encourages the development of cognitive functions and communication skills. Social interaction between the learner and a knowledgeable adult enhances the possibility of intellectual activity. The principle, drawn from research into the workings of the human brain and recent revelations regarding the multiple intelligences and learning styles, acknowledges that the potential for learning is enlarged if learners are engaged, associate new learning with existing information and are allowed to consolidate this information in a manner suited to an individual learning style. The design and development of differentiated instruction as a model began in the general education classroom. The initial application came to practice for students considered gifted who perhaps were not sufficiently challenged by the content provided in the general classroom setting. As classrooms have become more diverse with the introduction of inclusion of students with disabilities, and the reality of diversity in public schools, differentiated instruction has been applied at all levels for students of all abilities. Many advocates of differentiated instruction strongly recommend that teachers adapt the practices slowly, perhaps one content area at a time. Additionally, these experts agree that teachers should work together to develop ideas and menus of options for students together to share the creative load. As noted previously, studies on the package of differentiated instruction are lacking in India.

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