

Learning For All - Summary

Instruction that both responds to the various needs of a diverse group of students and is precisely tailored to the unique needs of each student can be achieved on the basis of the principles and guidelines of three instructional approaches: Universal Design for Learning (UDL), differentiated instruction, and the tiered approach to prevention and intervention.

Used in combination, UDL and differentiated instruction enable teachers to respond effectively to the needs of all students. UDL provides the teacher with broad principles for planning instruction for a diverse group of students, whereas differentiated instruction allows them to address specific skills and difficulties (Raynal & Rieunier, 1998). The two approaches overlap, sharing certain goals and strategies, such as providing a range of instructional strategies, resources, activities, and assessment tools in order to meet the different strengths, needs, readiness, and learning styles or preferences of the students in a class.

The tiered approach to ongoing prevention and intervention embodies principles of UDL and differentiated instruction, offers a systematic method for the early identification of students who are experiencing particular difficulties and, through ongoing monitoring of their progress, provides the precise level of support those students need.

All these approaches help improve student achievement because they rely on greater personalization and precision in instruction. Their success depends on teachers' clear understanding of who their students are, what kinds of learners they are, their readiness to learn in a given subject at a given time, and the kinds of activities that are likely to engage their interest, and stimulate their thinking.

Universal Design for Learning (UDL)

UDL was inspired by work in architecture on the planning of buildings with a view to accessibility for people with physical disabilities (Turnbull et al., 2002). Architects observed that the added improvements facilitated access for all users, not just people with physical disabilities. An access ramp, for instance, provides a person using a wheelchair with easier access to a building, but it also makes it easier for a parent with a child's stroller, a cyclist, or someone using a walker.

The notion that assistance targeted at a specific group can help everyone, bolstered by evidence from research, found its way into the field of education. Educators began to realize that a teaching strategy or pedagogical materials that respond to the special needs of a specific student or group of students can also be useful for *all* students. For example, the use of visuals to support the learning of an English language learner or a student who is hard of hearing will also enhance learning for *all* students who have a visual learning style. The aim of UDL, then, is to provide access to the curriculum for *all* students, and to assist educators in designing products and environments to make them accessible to everyone, regardless of age, skills, or situation.

Differentiated Instruction

Differentiated instruction is based on the idea that because students differ significantly in their *interests, learning styles, and readiness to learn*, it is necessary to adapt instruction to suit these differing characteristics. Teachers can differentiate one or a number of the following elements in any classroom learning situation (Tomlinson, 2004):

- the *content* of learning (what students are going to learn, and when);
- the *process* of learning (the types of tasks and activities);
- the *products* of learning (the ways in which students demonstrate learning);
- the *affect/environment* of learning (the context and environment in which students learn and demonstrate learning).

Learning For All - Summary

The approach, driven by an understanding of the student, may facilitate high levels of both achievement and student engagement (Caron, 2003; Tomlinson, 2004).

Differentiated instruction draws on the theories of Lev Vygotsky, in particular on the theory of the Zone of Proximal Development (ZPD). Within the ZPD, the student may not yet be capable of solving a particular kind of problem on his or her own, but can do so with assistance and is thereby supported to move on to another level of knowledge. The instructional approach that provides such support at the right times in the student's cognitive development -- that is, at the times that the student is "ready to learn" -- is called "scaffolding". In differentiated instruction, teachers scaffold and tailor instruction to individual students' needs and understanding, providing the emotional support and opportunities for practice that students may need.

In differentiating instruction according to students' interests, a teacher attempts to increase the likelihood that any given lesson or project is highly engaging and personally meaningful for each student in the class. Teachers who know students' interests can vary projects, themes, and examples used in instruction to reflect those interests.

Students' learning styles and preferences influence their "learning profile". Understanding how students learn best enables teachers to differentiate instruction effectively. Students may be better at internalizing, processing, and communicating information through *auditory, visual, tactile, or kinesthetic* modes or learning styles. In his *Frames of Mind: The Theory of Multiple Intelligences* (1993), Howard Gardner identified eight types of intelligence -- *verbal/linguistic; logical/mathematical; visual/spatial; musical/rhythmic, bodily/kinesthetic; interpersonal; intrapersonal; and naturalist* -- which strongly influence the ways in which students learn best.

A key strategy in differentiated instruction is the use of flexible groupings, which allows teachers to assign different tasks to different students, individually or in small groups, based on interests, learning styles, or readiness. Students may be grouped by interest, but may also have activities set at different levels of complexity (questioning levels/abstract thinking processes) resulting in varying products that employ students' preferred learning modality (auditory, visual, or kinesthetic) (Theroux, 2004).

It is important to note, however, that the approach does not exclude instruction and activities in which all students are working on the same learning task at the same time, whether individually, in groups, or as a class.

Ongoing assessment, and then adjustment of strategies and resources according to assessment results, is critical to sustaining the effectiveness of a differentiated instructional approach.

The Tiered Approach

The "tiered" approach to prevention and intervention is a systematic approach to providing high-quality, evidence-based assessment and instruction and appropriate interventions that respond to students' individual needs. It is based on frequent monitoring of student progress and the use of assessment data, focusing on learning rate and level, to identify students who are having difficulty and to plan specific assessment and instructional interventions of increasing intensity to address their needs effectively. The tiered approach can be used to address both academic and behavioural needs. The nature, intensity, and duration of interventions may be decided by teachers individually or in collaboration with a school team, always on the basis of evidence derived from monitoring student achievement. The tiered approach can facilitate early identification of students who may be at risk and ensure appropriate and timely interventions for students who exhibit persistent learning difficulties, significantly reducing the likelihood that they will develop more intractable problems in the future (Vaughn, Linan-Thompson, & Hickman, 2003).

Learning For All - Summary

The Core Concepts of UDL

Universality and equity.

UDL is intended to ensure that teaching will meet the needs of all students. The “universal” in UDL does not imply that there is one optimal solution for everyone; rather, it reflects awareness of the unique nature of each learner and the need to accommodate differences, creating learning experiences that suit individual learners and maximize their ability to progress (Rose & Meyer, 2002). This does not mean planning instruction for students with average achievement levels, and then making after-the-fact modifications to meet the special needs of certain students.

Flexibility and inclusion.

The planning of teaching and the time teachers allocate to students’ activities and needs must be sufficiently flexible to provide real learning experiences for all the students, regardless of their performance level. Students are accommodated through:

- a variety of teaching strategies and pedagogical materials that make use of all the senses and vary in form, level of difficulty, and manner of presentation;
- a variety of suitable technological media/software;
- different types of assessment strategies, involving a range of media, formats, and response options. (*Note:* During assessments, students have access to the same supports that they have during instruction unless those supports undermine the purpose of the assessment.);
- various ways of using space.

An appropriately designed space.

Teachers can make sure that:

- all students have a clear line of sight;
- resources such as dictionaries and texts are within comfortable reach of all students;
- there is adequate space for the use of assistive devices or the presence of teacher’s assistants.

Simplicity.

Teachers avoid unnecessary complexity and minimize distracting information by:

- communicating consistent and achievable expectations;
- sharing the learning goals of a lesson in student-friendly language;
- arranging information sequentially to clarify its relative importance;
- breaking instructions down into small steps;
- providing descriptive feedback during the learning.

Safety.

Classrooms must be safe, with minimal hazards and no elements that might cause accidents. The assessment of safety might depend on the specific students in the classroom. If a student has a safety plan or protocol, every adult in the school needs to be aware of it and able to act on it.

One of the keys to ensuring success when following UDL principles is to provide assessment and feedback to students and to adjust instruction as necessary to maximize learning.

Learning For All - Summary

Strategies That Draw on Principles of UDL and Differentiated Instruction

UDL and differentiated instruction overlap, sharing a number of goals and strategies. Both promote varying the form of assessment and instructional materials (e.g., printed text, visual or auditory representations), using different media, providing opportunities for different kinds of activities and different means of demonstrating learning. In addition, both UDL and differentiated instruction recognize the importance of a safe and supportive environment for improving student learning.

Teachers already use many assessment and instructional approaches that are compatible with the principles of UDL and differentiated instruction. These strategies take into account the background and experiences of all students to meet their diverse interests, aptitudes, and learning needs. They include the following (adapted from *Education for All K-6*, pp. 16–17):

Cooperative learning approach:

Cooperative learning emphasizes small-group work. The teacher puts students with different abilities and talents into a small group and assigns that group a specific task, with the requirement that the students work together to achieve this goal (Clarke, Eadie, & Wideman, 1992; Howden & Kopiec, 1999; Howden & Martin, 1997; Perrenoud, 1998a). The teacher needs to structure the task so that no member of the team can complete it on his or her own (Arcand, 2004; Clarke et al., 1992; Howden & Kopiec, 1999; Howden & Martin, 1997).

Project-based approach:

This approach requires the teacher to facilitate learning through a variety of projects dealing with a particular topic or theme. Students may be required to analyse data, develop a synthesis, and present their newly acquired knowledge (Francoeur-Bellavance, 2001). The open nature of project-based learning allows students to choose subjects they are interested in, at their own level (Leclerc, 1998; 2000). Teachers use open or parallel questions to provide students in mixed-ability groupings with the opportunity to work simultaneously on a number of options. Teachers need to make sure that they find at least one task appropriate to each student, and should monitor carefully that students are attempting tasks at the most appropriate instructional level (Perrenoud, 1997; 1999).

Problem-based approach:

This approach requires the teacher to present students with a realistic, believable problem that they can solve only through the acquisition of a new skill. Students reflect on the best process or strategy for solving the problem, and are also encouraged to develop or question effective procedures used in other problem situations (Perrenoud, 1998a). Teachers should carefully plan what they want to work on and what cognitive challenges they wish to provide their students. The teacher's challenge when using this approach is to ensure differentiation of instruction. It is tempting in problem-solving tasks for teachers to favour the most able, vivacious, perceptive, and independent students (Perrenoud, 1998a).

Explicit instruction:

Students' abilities to learn independently fall on a continuum, so teachers must provide students with a range of structured to unstructured learning opportunities (Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998; Pressley, Yokoi, & Rankin, 1996). Some students require instruction that uses overt thinking processes (e.g., using modelling and think-aloud), or what is sometimes referred to as explicit instruction (Gaskins, 1998; Kamil, Mosenthal, Pearson, & Barr, 2000; National Reading Panel, 2000). Explicit instruction requires teachers to frequently model the use of assessment tools and learning strategies. To help students "discover" that a strategic approach is superior to a non-strategic one, teachers can:

- verbalize their thought processes, including the steps they take in a strategy or learning process, as well as the parameters associated with the use of these thought processes;
- share relevant personal learning experiences related to the concept or strategy they are teaching;
- provide students with opportunities to practise using the strategy, mentor and monitor students' practices, provide timely feedback, and guide their attempts until they can carry out the strategy independently (Almasi, 2003; Woloshyn, Elliott, & Kaucho, 2001).