

Curriculum Planning

Instructional Models, Strategies and Methods

Teaching as Decision Making

Planning a unit or lesson involves a number of instructional decisions. The teacher must identify the following: the content and processes to be addressed, the strengths, needs, and interests of students, the Common Essential Learnings that could be incorporated, and the most effective instructional approaches. Such decisions are critical and must be made consciously and purposefully.

As Glickman (1991) states:

"Effective teaching is not a set of generic practices, but instead is a set of context-driven decisions about teaching. Effective teachers do not use the same set of practices for every lesson . . . Instead, what effective teachers do is constantly reflect about their work, observe whether students are learning or not, and, then adjust their practice accordingly (p. 6).

Because there are so many variables for teachers to consider when making decisions about teaching and learning, it is essential that they have a conceptual base for understanding Saskatchewan's Core Curriculum and a framework for understanding the levels associated with instructional decision making. This chapter deals first with the conceptual base and instructional framework, then goes on to define instructional models, strategies, methods, and skills.

The Conceptual Base

The Goals of Education presented in *Directions: The Final Report (1984)* are central to the development of Core Curriculum. Figure 1 illustrates the pervasive influence the Goals of Education exert upon the areas of curriculum and instruction. In addition, it demonstrates how the Common Essential Learnings and the Adaptive Dimension link the Goals of Education with the educational environment.

The **Common Essential Learnings** (C.E.L.s) and the Adaptive Dimension are central to effective instructional decision making. They are, in many respects, the "bond" that ties the distinct elements of Core Curriculum together and integrates curriculum and instruction. In this sense, they are the unifying elements of Core, and have as much to say about effective instruction as they do about effective curriculum design.

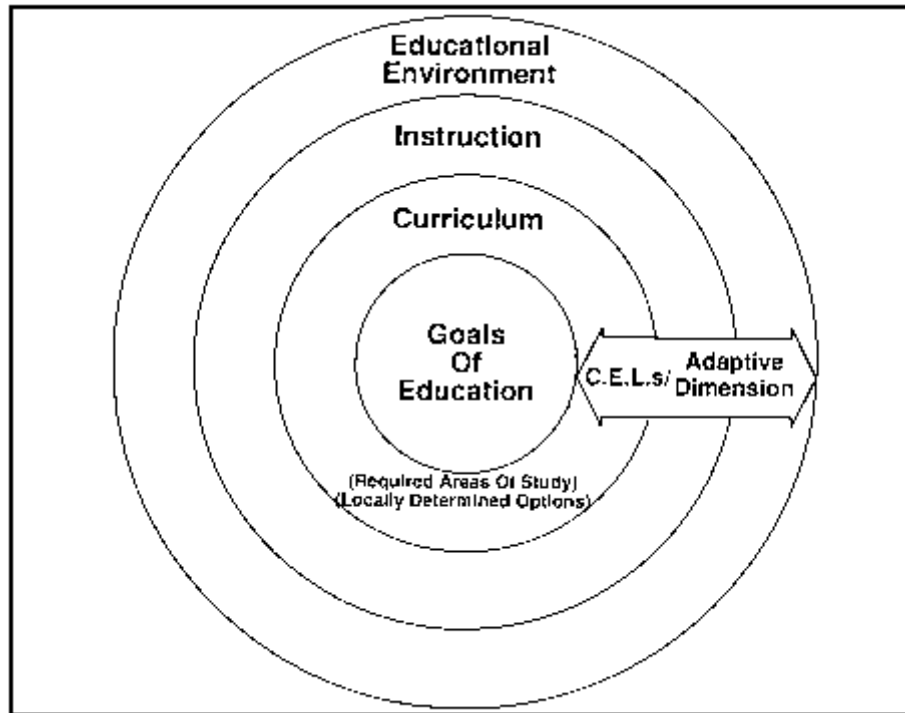


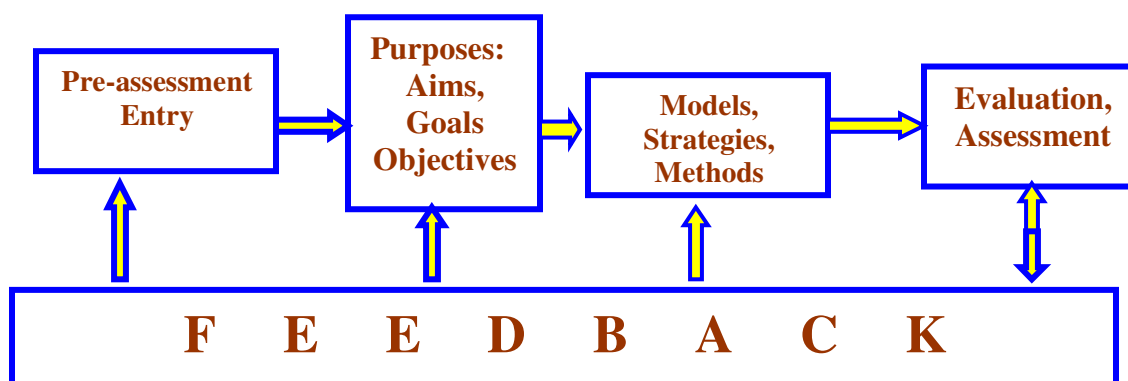
Figure 1 Conceptual Base for Core Curriculum

The instructional approaches identified in the document are flexible enough to incorporate the Common Essential Learnings and to accommodate individual student needs, abilities, interests, and strengths through the Adaptive Dimension. The following discussion focuses specifically upon the instructional portion of the Conceptual Base.

The Model of managing learning outcomes (R. Glaser, 1992, V. Ilyin, 1988) includes the skills of: pre-assessment entry, learning objectives formulation, instructional procedures development, evaluation of learning outcomes, and the feedback on each stage of the educational process. **This model is applicable to any level of instructional dimension: a school year, a semester, a unit, or a daily lesson.**

Basic Model of Pedagogical System

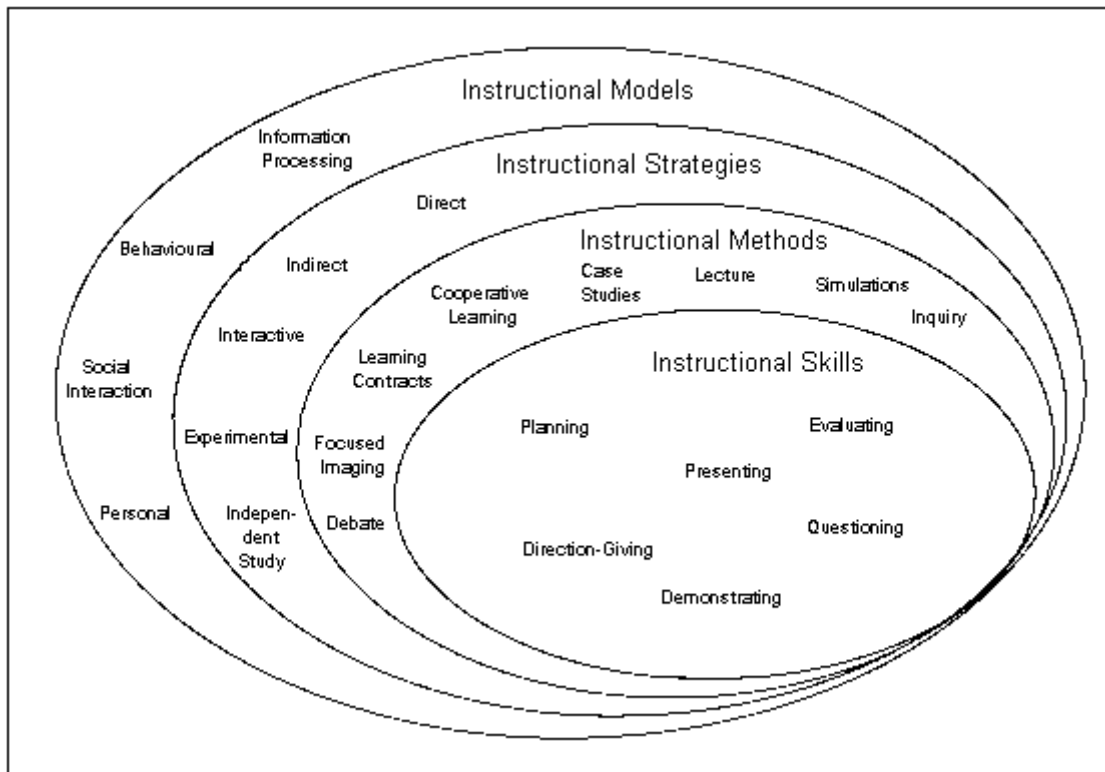
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The Instructional Framework

Figure 2, the Instructional Framework, identifies and illustrates the interrelationship among instructional **approaches** that, properly used, are acknowledged to be consistent with sound educational practice. The approaches are referenced to the goals of education and apply to the objectives of the various curricula. Figure 2 also illustrates the levels of approaches in instruction ranging from an instructional model, a broad approach, to an instructional skill, which represents a specific teaching behavior or technique. Within each level the potential exists for developing

both the science and the art of teaching.



Defining the Instructional Framework

The following definition of terms will help to interpret the framework and to clarify the relationships between and among the levels.

Instructional Models

Models represent the broadest level of instructional practices and present a philosophical orientation to instruction. Models are used to select and to structure teaching strategies, methods, skills, and student activities for a particular instructional emphasis. Joyce and

Weil (1986) identify four models: information processing, behavioral, social interaction, and personal.

Instructional Strategies

Within each model several strategies can be used. Strategies determine the approach a teacher may take to achieve learning objectives. Strategies can be classed as direct, indirect, interactive, experiential, or independent.

Instructional Methods

Methods are used by teachers to create learning environments and to specify the nature of the activity in which the teacher and learner will be involved during the lesson. While particular methods are often associated with certain strategies, some methods may be found within a variety of strategies.

Instructional Skills

Skills are the most specific instructional behaviours. These include such techniques as questioning, discussing, direction-giving, explaining, and demonstrating. They also include such actions as planning, structuring, focusing, and managing.

Figure 3 illustrates the relationship among instructional models, strategies, methods, and skills.

The Instructional Framework is intended to encourage teachers to examine their own instructional practice. Reflective assessment of the use of strategies, methods, and skills may lead teachers to broaden and deepen their repertoire of instructional approaches. Expanding the knowledge and expertise regarding various instructional approaches can enrich the artistry of teaching and, in turn, enhance the effectiveness of instruction. The remainder of this chapter is devoted to a study of specific instructional models, strategies, methods, and skills.

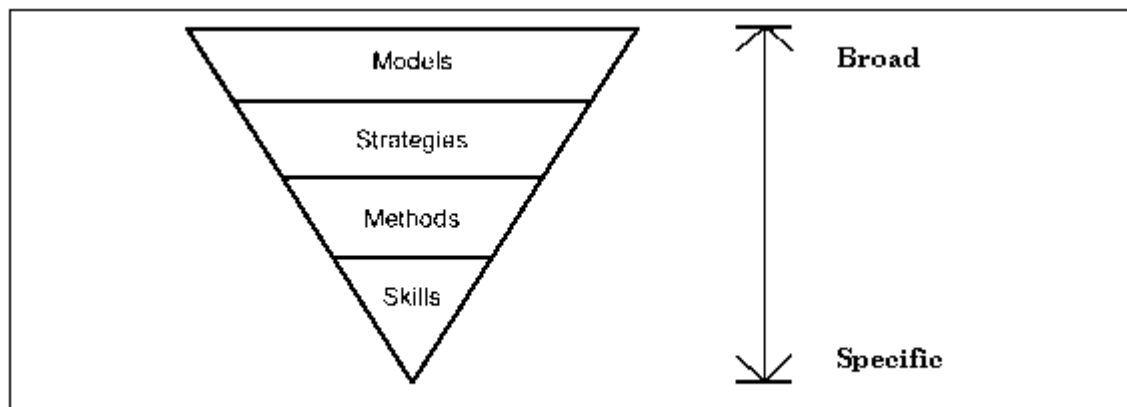


Figure 3. Relationship Among Instructional Models, Strategies, Methods, and Skills

Instructional Models

Joyce and Weil (1986) present four broad models for instruction. These models are defined as follows.

Behavioral

The behavioral model emphasizes changing the visible behaviour of the learner to be consistent with his or her own self concept. As a result of its **basis in the stimulus control/reinforcement theories**, the behavioral model of instruction stresses that learning tasks should be broken into a series of small, sequenced tasks and behaviors.

The preceding four models are not necessarily exclusive. A unit of instruction might draw from several of the models, while a single lesson might incorporate aspects of more than one model.

Information Processing

This model emphasizes **the acquisition, mastery, and processing of information**. The cognitive functioning of the student is the focus.

Social Interaction

This model emphasizes **the personal and societal relationships among people**. The focus is on improving the student's ability to relate to others, to engage in democratic processes, and to work productively in society.

Personal

The emphasis in this model is on the development of the individual's self concept. This involves development of the processes an individual uses to build and organize his or her unique self. The focus on a strong, realistic self concept helps to build productive relationships with others and the environment.

Instructional Strategies

Decision making regarding instructional strategies requires teachers to focus on curriculum, the prior experiences and knowledge of students, learner interests, student learning styles, and the developmental levels of the learner. Such decision making relies on ongoing student assessment that is linked to learning objectives and processes.

Although instructional strategies can be categorized, the distinctions are not always clear-cut. For example, a teacher may provide information through the lecture method (from the **direct instruction** strategy) while using an interpretive method to ask students to

determine the significance of information that was presented (from the **indirect instruction** strategy).

Five categories of instructional strategies and the interrelationship between and among strategies are illustrated in Figure 4. Explanations of the five categories follow. Although samples of instructional methods pertaining to each category are sometimes included, these will be explained further in the section "Instructional Methods".

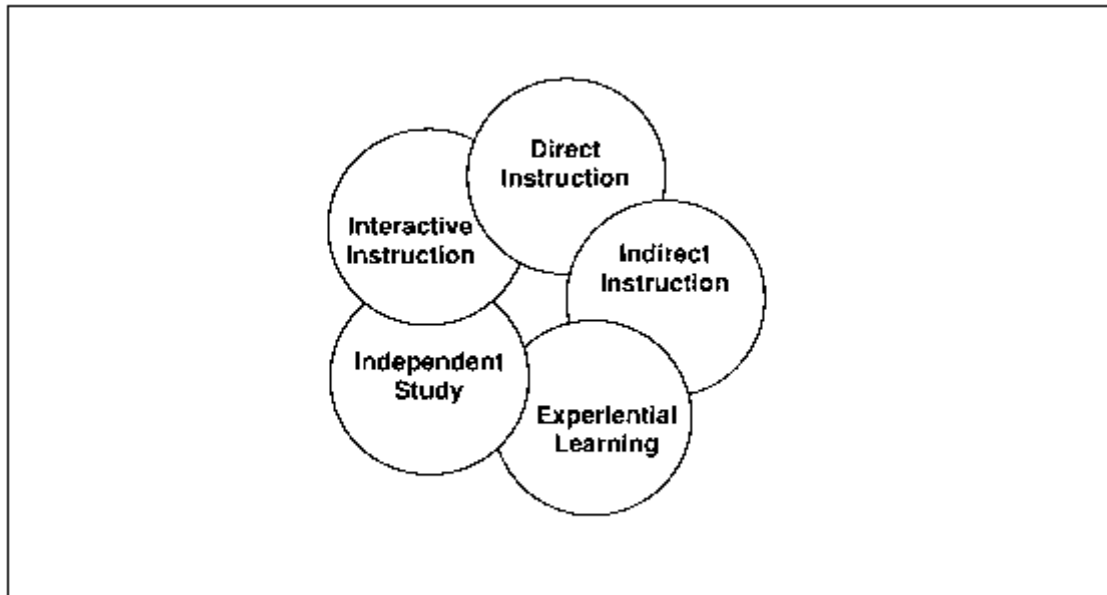


Figure 4. Instructional Strategies

Direct Instruction

The **Direct instruction** strategy is highly teacher-directed and is among the most commonly used. This strategy includes methods such as lecture, didactic questioning, explicit teaching, practice and drill, and demonstrations.

The direct instruction strategy is effective for providing information or developing step-by-step skills. This strategy also works well for introducing other teaching methods, or actively involving students in knowledge construction.

Direct instruction is usually deductive. That is, the rule or generalization is presented and then illustrated with examples. While this strategy may be considered among the easier to plan and to use, it is clear that effective direct instruction is often more complex than it would first appear.

Direct instruction methods are widely used by teachers, particularly in the higher grades. The predominant use of direct instruction methods needs to be evaluated, and educators need to recognize the limitation of these methods for developing the abilities, processes, and attitudes required for critical thinking, and for interpersonal or group learning. Student understanding of affective and higher level cognitive objectives may require the

use of instructional methods associated with other strategies. To ensure that the Saskatchewan Goals of Education are achieved, teachers will need to employ a variety of instructional strategies.

Indirect Instruction

Inquiry, induction, problem solving, decision making, and discovery are terms that are sometimes used interchangeably to describe **indirect instruction**. In contrast to the direct instruction strategy, indirect instruction is mainly student-centred, although the two strategies can complement each other. Examples of indirect instruction methods include **reflective discussion, concept formation, concept attainment, cloze procedure, problem solving, and guided inquiry**.

Indirect instruction seeks a high level of student involvement in observing, investigating, drawing inferences from data, or forming hypotheses. It takes advantage of students' interest and curiosity, often encouraging them to generate alternatives or solve problems. It is flexible in that it frees students to explore diverse possibilities and reduces the fear associated with the possibility of giving incorrect answers. Indirect instruction also fosters creativity and the development of interpersonal skills and abilities. Students often achieve a better understanding of the material and ideas under study and develop the ability to draw on these understandings.

In indirect instruction, the role of the teacher shifts from lecturer/director to that of **facilitator, supporter, and resource person**. The teacher arranges the learning environment, provides opportunity for student involvement, and, when appropriate, provides feedback to students while they conduct the inquiry (Martin, 1983). Indirect instruction relies heavily on the use of print, non-print, and human resources. Learning experiences are greatly enhanced through cooperation between teachers, and between teachers and the teacher-librarians.

The indirect instruction strategy can be used by teachers in almost every lesson. This strategy is most appropriate when:

- thinking outcomes are desired;
- attitudes, values, or interpersonal outcomes are desired;
- process is as important as product;
- students need to investigate or discover something in order to benefit from later instruction;
- there is more than one appropriate answer;
- the focus is personalized understanding and long term retention of concepts or generalizations;
- ego involvement and intrinsic motivation are desirable;
- decisions need to be made or problems need to be solved; and,
- life-long learning capability is desired.

In order for students to achieve optimum benefits during indirect instruction, it may be necessary for the teacher to pre-teach the skills and processes necessary to achieve the intended learning outcomes. Skills and processes include observing, encoding, recalling, classifying, comparing/contrasting, inferring, interpreting data, predicting, elaborating, summarizing, restructuring, and verifying.

Indirect instruction, like other strategies, has disadvantages. Indirect instruction is more time consuming than direct instruction, teachers relinquish some control, and outcomes can be unpredictable and less safe. Indirect instruction is not the best way of providing detailed information or encouraging step-by-step skill acquisition. It is also inappropriate when content memorization and immediate recall is desired.

Interactive Instruction

Interactive instruction relies heavily on discussion and sharing among participants. Seaman and Fellenz (1989) suggest that discussion and sharing provide learners with opportunities to "react to the ideas, experience, insights, and knowledge of the teacher or of peer learners and to generate alternative ways of thinking and feeling" (p. 119). Students can learn from peers and teachers to develop social skills and abilities, to organize their thoughts, and to develop rational arguments.

The interactive instruction strategy allows for a range of groupings and interactive methods. These may include total class discussions, small group discussions or projects, or student pairs or triads working on assignments together. It is important for the teacher to outline the topic, the amount of discussion time, the composition and size of the groups, and reporting or sharing techniques. Interactive instruction requires the refinement of observation, listening, interpersonal, and intervention skills and abilities by both teacher and students.

The success of the interactive instruction strategy and its many methods is heavily dependent upon the expertise of the teacher in structuring and developing the dynamics of the group.

Experiential Learning

Experiential learning is inductive, learner centered, and activity oriented. Personalized reflection about an experience and the formulation of plans to apply [earnings to other contexts are critical factors in effective experiential learning. Experiential learning occurs when learners:

- participate in an activity;
- critically look back on the activity to clarify [earnings and feelings;
- draw useful insights from such analysis; and,
- put [earnings to work in new situations. (Pfeiffer & Jones, 1979)

Experiential learning can be viewed as a cycle consisting of five phases, all of which are necessary:

- **experiencing** (an activity occurs);
- **sharing** or publishing (reactions and observations are shared);
- **analyzing** or processing (patterns and dynamics are determined);
- **inferring** or generalizing (principles are derived); and,
- **applying** (plans are made to use [earnings in new situations).

The emphasis in experiential learning is on the process of learning and not on the product. A teacher can use experiential learning as an instructional strategy both in and outside the classroom. For example, in the classroom students can build and stock an aquarium or engage in a simulation. Outside the classroom they can, for example, observe courtroom procedures in a study of the legal system, or conduct a public opinion survey. Experiential learning makes use of a variety of resources.

There are obvious limitations to the kinds of experiences that students may gain first hand. Concern for student safety, limitations on financial resources, and lack of available time are some of the reasons this strategy cannot be applied in all situations. The benefits to students, however, justify the extra efforts this strategy may require.

Experiential learning is an effective instructional strategy if direct or "hands-on" experience is needed before teaching methods that involve iconic learning (for example, looking at pictures) or symbolic learning (for example, listening to the teacher talk). Experiential learning greatly increases understanding and retention in comparison to methods that solely involve listening, reading, or even viewing (McNeil & Wiles, 1990). Students are usually more motivated when they actively participate and teach one another by describing what they are doing.

Independent Study

For the purposes of this document, **independent study** refers to the range of instructional methods which are purposefully provided to foster the development of individual student initiative, self-reliance, and self-improvement. While independent study may be initiated by student or teacher, the focus here will be on planned independent study by students under the guidance or supervision of a classroom teacher. In addition, independent study can include learning in partnership with another individual or as part of a small group.

The importance of independent study is captured in the following statement:

Independent learning has implications for responsible decision-making, as individuals are expected to analyze problems, reflect, make decisions and take purposeful actions. To take responsibility for their lives in times of rapid social change, students need to acquire life-long learning capability. As most aspects of our daily lives are likely to undergo profound changes, independent learning will enable individuals to respond to the changing demands of work, family and society. (Saskatchewan Education, 1988, p. 53)

A primary educational goal is to help students become self-sufficient and responsible citizens by enhancing individual potential. Schools can help students to grow as independent learners. However, if the knowledge, abilities, attitudes, and processes associated with independent learning are to be acquired, they must be taught and enough time must be provided for students to practice. Use of independent study methods may begin as early as kindergarten and should continue to be used through all the grades. Students should be able to continue to learn after they have left the structured learning environment of the school.

Independent study encourages students to take responsibility for planning and pacing their own learning. Independent study can be used in conjunction with other methods, or it can be used as the single instructional strategy for an entire unit. The factors of student maturity and independence are obviously important to the teacher's planning.

Adequate learning resources for independent study are critical. The teacher who wishes to help students become more autonomous learners will need to support the development of their abilities to access and handle information. It is important to assess the abilities students already possess. These abilities often vary widely within any group of students. Specific skills and abilities may then be incorporated into assignments tailored to the capabilities of individual students. The co-operation of the teacher librarian and the availability of materials from the resource center and the community provide additional support.

Independent study is very flexible. It can be used as the major instructional strategy with the whole class, in combination with other strategies, or it can be used with one or more individuals while another strategy is used with the rest of the class.

Derived from: *Understanding the Common
Essential Learnings*. Saskatchewan
Education, 1988