CRITICAL LEARNING INSTRUCTIONAL PATH:

Assessment *for* Learning in Action

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An essential part of developing a critical learning path, explain CARMEL CRÉVOLA, PETER HILL, and MICHAEL FULLAN, is being able to make a direct link between a student's results on a set of assessments, their stage of development, and specific teaching strategies relevant to that stage of development.

A decade of experience has led us to propose what we see as the *breakthrough* that will transform classroom instruction and lead to quantum improvements in literacy outcomes. Not 75 per cent success (Ontario's current target for strong student achievement in literacy and numeracy), but 90 per cent or more students being literate. Because we are talking about all classrooms, this means large-scale reform. We propose a framework for doing this, a framework based on concrete work we are engaged in at all three levels of what we call the tri-level reform solution—the school (including every classroom) and community; the district; and the state or government levels (see Fullan, Hill & Crévola, 2006).
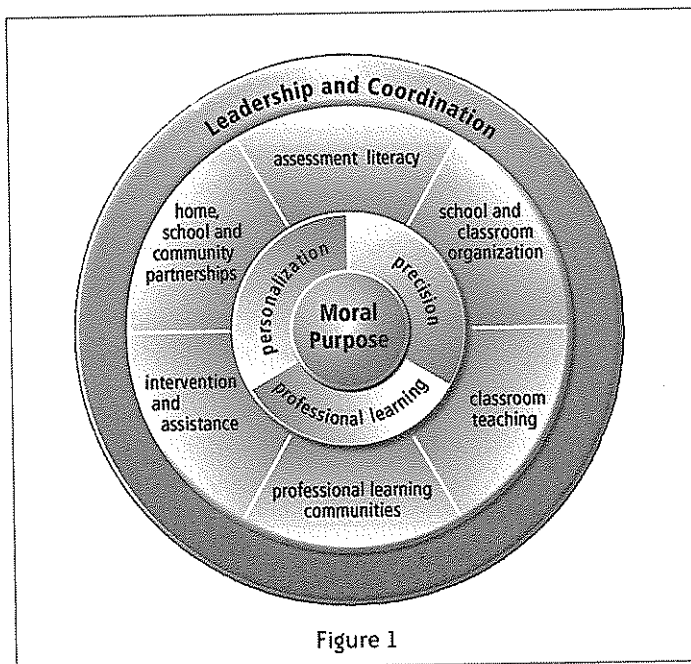

Figure 1

Breakthrough Components

A breakthrough will be achieved when virtually all students are served well by the public education system. The model, which we propose for achieving breakthrough results, is shown in Figure 1.

We do not go into detail in this article—the important point is that if we aspire to reach and engage all students we will need a system that is powerful enough to do the task. Models of differentiated instruction by themselves will not mobilize the whole system.

Personalization or individualization is what advanced instructional systems aspire to. Personalization puts the learner at the centre and attempts to provide an education that is tailored to the students' learning and motivational needs at any given moment.

Individualized instruction must be effective for every student, which means it must be "precise" without falling into what we call the "prescription trap." To be precise is to get something right; to prescribe is to lay down rigid rules. Precision is about addressing the unique needs of individuals, in a dynamic fashion on a daily basis. It is also about harnessing the power of "assessment *for* learning" so that individually tailored data are available and used on a daily basis.

In this article we focus on the school and classroom levels of the tri-level model and on the individualization of instruction using the Critical Learning Instructional Path (CLIP) model.

Assessment *for* Learning

Assessment *for* learning is the process of seeking and interpreting evidence for use by teachers and their students to decide where the students are in their learning, where they need to go, and how best to get there (Black & Wiliam, 1998; Sadler, 1989; Stiggin 2004). This requires that teachers are provided with the tools necessary for effectively and efficiently gathering, analyzing, and making sense of the data.

There are key principles of assessment *for* learning that have guided our work with districts and schools—assessment *for* learning should:
1. be recognized as central to classroom practice,
2. be part of effective planning of teaching and learning,
3. focus on how students learn,
4. be regarded as a key professional skill of all teachers,

5. promote commitment to learning goals and shared understanding of the criteria by which students are being assessed,
6. provide constructive guidance about how to improve,
7. develop learners' capacity for self assessment so they can become reflective and self managing, and
8. recognize the full range of achievements of all learners.

Critical Learning Instructional Paths (CLIPs)

Given what we know about the problems facing systems trying to achieve 90 per cent literacy success, we need data-driven systems that focus on the learning needs of *all* students and teachers. The solution must be simultaneously efficient and effective. In particular, such a system must include four essential components:
1. A set of powerful and aligned assessment tools tied to the learning objectives of each lesson;
2. A method to capture assessment *for* learning data in a way that is not time-consuming, and impact instructional decisions immediately;
3. A means of using the assessment information on each student to design and implement personalized instruction; and
4. A built-in means of monitoring and managing learning, of testing what works, and of systematically improving the effectiveness of classroom instruction.

We have developed Critical Learning Instructional Paths (CLIPs) which are devices for bringing expert knowledge to bear on the detailed decisions that every teacher must make day-to-day and minute-to-minute in order to meet the individual needs of all students. We place teachers at the centre of this process as the experts. The core feature of this work requires *professional learning*, or learning in context on a daily basis, for all teachers.

A CLIP must be able to guide and monitor the learning and teaching on a day-to-day basis: it is therefore detailed in nature. Without detail, we cannot achieve precision. Whereas much traditional curricula focuses on end-points of instruction, a CLIP is about the actual route to be taken by the average learner, including the detours or loops followed by significant numbers of students who, for one reason or another, can be expected to take alternate pathways at certain points.

Mapping the Learning Journey

A helpful metaphor in thinking about a Critical Learning Instructional Path is the notion of a journey—but with different starting points for different individuals and with some individuals needing to take departures from the main pathway.

Start with a *description of the terrain* as a means of clarifying exactly what it is that students are doing when they embark on the journey of learning to read. These descriptors are "big picture" ideas that might form part of this initial step of clarifying the nature of the journeys taken by beginning readers.

Critical Learning Instructional Paths (CLIPs) 12-Step Process

Step 1. Defining the terrain—big picture overview.

Step 2. Key stages—mapping the journey.

Step 3. Objectives—medium-term goals for instruction.

Step 4. Indicators—specific and comprehensive short-term outcomes.

Step 5. Pre-assessment—starting points for instruction.

Step 6. Assessments—short and aligned.

Step 7. Student learning profile—summaries of students' starting-, mid-, and end-points.

Step 8. Focus sheet—planning, assessing, and evaluating "on the run."

Step 9. Instructional strategies matrix—aligning curriculum intent, assessment information, and instructional strategies.

Step 10. Instructional strategies and grouping practices—a core of powerful strategies for use in whole- and small-group instruction.

Step 11. Ongoing monitoring—focus sheets, student learning profiles, indicators.

Step 12. Post-assessment—end-points of instruction.

Identify the key *stages* in the journey taken by learners. Returning to our early literacy example, in working with schools, we have highlighted six developmental stages of reading that typify the paths taken by young learners. Although we present these stages as a developmental continuum, we realize they do not necessarily form an invariant sequence. It is not uncommon to see students exhibiting a range of behaviours that span a number of stages, depending on the text that they are reading.

Outcomes	K	1	2	3
1. Oral Language	All	All	At Risk	At Risk
2. Benchmark Text Level/ Comprehension	All	All	All	All
3. Fluency	All	All	All	All
4. Concepts About Print	All	All	At Risk	At Risk
5. Phonemic Awareness	All	All	At Risk	At Risk
6. Letter Identification	All	All	At Risk	At Risk
7. Phonics	All	All	All	At Risk
8. Word Knowledge	All	All	At Risk	At Risk
9. Vocabulary	All	All	All	All

Figure 2. Example of a Literacy Assessment Regime: Grades K–3

The stages are:
1. pre-emergent
2. early emergent
3. emergent
4. beginning
5. transitional
6. established

Identify medium-term objectives or outcome statements and more detailed, short-term *indicators of progress*. The outcome statements provide medium-term goals for instruction— for example, what the typical student will have achieved by the end of the school year. The indicators of progress are short-term outcome statements that enable the teacher to trace the steps made by the learner as he or she moves from being a novice to having partial understanding or mastery to acquiring competence. They provide *feedback to teachers* on the effectiveness of their instruction and specific *instructional foci* for their daily lessons. They also form the basis for *feedback to students* to enable them to "self monitor" their learning, to evaluate their performance, and to know what constitutes an improved performance.

What should these indicators look like? Sometimes they will resemble and have the tight specificity of behavioural objectives, and will be amenable to temporal sequencing. This would apply, for example, to indicators of progress in acquiring letter-sound knowledge. Sometimes indicators will be of a kind that cannot be expressed as either present or not present, that require the use of metacriteria in arriving at overall judgments of quality, and that are not hierarchical in the sense that one logically precedes or follows another. This characterization would apply, for example, to indicators of progress in comprehending interpretive meanings of texts.

Mapping and Monitoring the Learning

Having mapped the CLIP followed by students in the early years as they learn to read, the next task is to design a system for measuring and monitoring their progress with reference to the key stages and the indicators. Focused teaching requires that teachers have precise and continuously updated information on students' starting points and on their progress along the way.

The first step in measuring and monitoring learning is to specify the key outcomes that will be assessed throughout the CLIP. Next, a schedule of pre- and post-assessment must be established in order to measure the beginning and end points of students within each school year and with reference to the key stages of the journey as captured in the outcome statements for each stage (See Figure 2).

Few schools adopt an assessment regime that involves pre-assessment, and from experience we know how difficult it is to persuade schools to do so. An effective assessment regime needs to provide information on students' instructional needs as well as acting as a "first alert" for those students who need direct intervention. Once these needs are established, teachers can more easily group students and provide focused

1	*That car in the yard used to be my Dad's.*	
2	*The boy on the horse is holding the reins.*	
3	*Over the holidays Mum bought me some sneakers.*	
4	*These are the pilots who fly the big planes.*	
5	*The girl made a snowman up on the mountain.*	
		Subtotal

Figure 3. Segment of oral language assessment

Stage / Assessment	Pre Emergent	Early Emergent	Emergent	Beginning	Transitional	Established
Oral Language*	0-4	5-7	8-12	13-15		
Benchmark Text Level*	Not on text	A-B	B-D	D-G	G-K	K-S
Fluency*	N/A	20 WPM Level B text	30 WPM Level D text	40 WPM Level G text	40 WPM Level I text	90/110 WPM Level M/N text
Concepts About Print*	0-6	7-14	15-18			
Phonemic Awareness*	0-15	16-35	36-52			
Letter Identification	n-nn	nn-nn	nn-nn	nn-nn	nn-nn	nn-nn
Phonics	n-nn	nn-nn	nn-nn	nn-nn	nn-nn	nn-nn
Work Knowledge*	0-5	6-10	11-15	16-20		
Vocabulary	n-nn	nn-nn	nn-nn	nn-nn	nn-nn	nn-nn
Small-Group Instructional Strategies	• Read To • Oral Language • Language Experience • Shared Reading	• Read To • Oral Language • Language Experience • Shared Reading • Guided Reading	• Oral Language • Language Experience • Shared Reading • Guided Reading	• Oral Language • Language Experience • Guided Reading	• Guided Reading	• Guided Reading • Reciprocal Teaching

Grade K

Grade 1

Grade 2

Grade 3

* Keyed to instruments published in Crévola and Vineis (2004b)

Figure 4. Instructional Strategies Matrix

teaching that is targeted at the appropriate level. Focused teaching means ensuring that students are operating in their zone of proximal development, where competence and challenge are aligned. The hallmark of the expert teacher is that he/she operates in a focused instructional mode consistently, on a day-to-day basis, for all students. At the end of the year, information gained by using the same assessment tools allows measurement of the gains made during the year.

An essential requirement for making this do-able is a set of quick, easy-to-administer assessment tools. In recent years, thanks to the increased attention policy-makers have paid to early reading, a wide range of assessment tools have been developed for use in classrooms and schools. Figure 3 shows a segment of an oral language assessment for use with K–3 students (Crévola & Vineis, 2004a; 2004b). The instrument provides a means of assessing the structures of oral English that students understand and can control. As such, it is a measure of receptive language. It consists of a series of sentences of increasing structural complexity.

A score of one point is awarded for each sentence repeated correctly in every detail. Altogether, a student is presented with 15 sentences and five sentence types. This particular assessment takes approximately five minutes to administer and yet it reveals a powerhouse of information to generate discussion and instructional exploration.

Using the Data to Drive Instruction

In addition to a method for capturing formative assessment data in a way that is not overwhelmingly time-consuming, teachers need a method of analyzing the data automatically and converting it into information that is powerful enough to drive instructional decisions. Finally, attention must be given to the design of procedures for monitoring on a daily basis student

progress with reference to the indicators. These all form part of the instructional regime of the classroom.

The first step is to generate summaries of students' starting points through the creation of Student Learning Profiles. These enable teachers to summarize all the assessment data generated through the pre-testing, to identify strengths and weaknesses, and to determine the stage of (reading) development of each student. Once this is done, teachers can effectively group their students to tailor the instruction in both whole class and small group learning settings (Crévola & Vineis, 2004b).

Being able to make a direct link between a student's results on a set of assessments, their stage of development, and specific teaching strategies relevant to that stage of development is an essential part of developing a CLIP. It makes the whole process of diagnosing students' strengths and weaknesses, and the planning of instruction explicit, and as such, amenable to ongoing improvement and refinement. Figure 4 gives an example of an Instructional Strategies Matrix.

It is clear that implementing a CLIP for early literacy depends very much on the effective use within classes of small instructional groups and a variety of powerful instructional strategies to provide focused teaching. This is where the Focus Sheet comes into play. Both the planning of the instruction and the monitoring of student progress are facilitated through the use of a Focus Sheet (Crévola & Vineis, 2004b; Fullan, Hill, & Crévola, 2006). The Focus Sheet ensures that the planning of instruction, the recording of student progress, and the evaluation of teaching are a single, seamless process.

Conclusion

CLIPs are devices for bringing expert knowledge to bear on the detailed decisions that every classroom teacher makes every day. The good news is educators know a great deal about early literacy: more than enough to construct a typical learning pathway and to specify appropriate instructional strategies. While all this expert knowledge is available, it is not currently in the hands of every teacher. CLIPs represent breakthrough thinking because they provide schools and teachers with powerful and easy-to-use tools to manage instruction in the most expert way possible.

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