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How Should Adult and Student Learning Be Linked?

> *A collective groan can be heard as you finish distributing the three-page questionnaire during the afterschool faculty meeting. Undaunted, you enthusiastically urge the staff, "Please respond to each item on this Needs Assessment, as it will help the School Improvement Committee plan our professional development program for the year." The sixth-grade team leader raises her hand to ask, "What do you think they mean by 'some' on the degree-of-interest scale from 'none' to 'much'?" Another teacher observes, "It seems like we just filled out one of these for the science grant application we submitted last month." The Reading Specialist clarifies, "No, I think that was the staff survey required for the accreditation review."*

D o the teachers you work with have similar concerns about surveys and rankings of their interests, perceptions, or preferences? What are some alternatives to the paper-and-pencil needs assessments

that frequently accompany school improvement planning? Are there better ways to determine what the focus of your school's adult learning initiatives should be?

This chapter addresses these and other questions important to decision making about worthwhile professional development *content.* In the past, questionnaires such as the one alluded to in the opening vignette were often relied upon for identifying the content, substance, or topics for teachers' continuing education on the job. But state-of-the-art thinking about professional development content has shifted in recent years. As this chapter describes and illustrates those shifts, there are three key points to keep in mind:

1. Student learning priorities should drive adult learning content.

2. Micro- and macro-level student needs' analysis can help define priorities.

3. Data analysis can be simplified.

Why the Shift Away From Adult Needs Assessment?

There are several reasons why written surveys of teachers' needs have fallen out of favor as the preferred means of targeting professional development content. First, it is debatable whether the results of such assessments more accurately reflect respondents' needs rather than wants. In part, the concern is that sometimes what we want is not really what we need. Additionally, even when framed anonymously, experienced professionals may be reluctant to identify genuine areas of weakness, uncertainty, or needs that warrant improvement or intervention. On both these counts, the validity of the data derived from adult needs assessment is called into question.

Second, constructivist and democratic theories of teaching, learning, and curriculum improvement have garnered renewed attention in recent years (Beane, 2002; Brooks & Brooks, 1999). These perspectives converge around the idea of increasing student-centeredness. Applying this idea involves developing creative responses to questions such as: How can I more actively engage all children in today's language arts lessons? How can we design school experiences so that students help each other learn? And how can we construct curricula that build on today's youths' interests? Extrapolating learner-centered, constructivist themes to teachers' professional development

means making students' (rather than adults') needs the primary, substantive focus.

Third, education's current political environment emphasizes students' learning *outcomes,* often as measured by performance on standards-driven exams. Consistent with this emphasis, the value of children's test results and other forms of student data has been elevated significantly in recent years. That value is reinforced in expert opinion about best practices for professional development (Holloway, J., 2003; Killion, 2002; Lindstrom & Speck, 2004; National Staff Development Council, 2001; Sparks, 2002). That is, the content of teachers' on-the-job continuing education should be derived from data on student learning needs—not the needs of adults who may respond to a survey questionnaire about their interests or preferences.

There will always be times when formal, written assessments of teachers' thinking, observations, knowledge, and practice are useful (e.g., school climate surveys and program evaluations of various sorts, including those described in Chapter 2). Currently, however, two other approaches to determining the content of professional development are considered more student-centered and, therefore, more meaningful. One is guided by a micro-level perspective and is strongly curriculum-based. The other emphasizes macro-level data-based decision-making processes. Familiarity with both approaches will strengthen your repertoire of strategies for linking the content of adult professional development to students' learning needs.

Micro-Level Strategies for Focusing on Students' Needs

What should be the content of teachers' professional development? From a micro-level perspective, the answer is short and straight-forward: *the curriculum.* More specifically, the parts of the curriculum that students are struggling with most.

In this context, the curriculum means the lessons, units, assignments, and instruction students routinely experience. The curriculum also includes the projects, performances, products, and tests through which their learning is assessed on a regular basis. The focus is on what children experience every day in classrooms—the taught and tested curriculum.

In today's schools, of course, district and state standards shape the curriculum that children in a particular grade or subject area experience. Standards for what students should know and be able to do

also serve as common reference points around which teachers can identify student underperformance and other learning needs.

So, what would the adults in your school be doing if their professional development centered on the parts of the everyday curriculum that students were struggling with most? Several things.

Everyday Lessons

Sometimes, they would be meeting in grade-level, content area, or other relevant teams to share, discuss, develop, revise, monitor, and problem-solve around what they teach in common. For groups with solid working relationships and team leaders, potentially productive discussion starters might sound as informal as the following questions.

Discussion Starters

- Here are examples I've used to illustrate "X" concept or skill. What are others you've found helpful for students who have difficulty "getting it" the first time around?
- We'll all be including a unit on "Y" at some point this quarter. How are you thinking about your plans? And what might we learn from the last time some of our students didn't achieve mastery on this standard?
- I was disappointed with the essays I received when I assigned "Z." Could the group take a look at both my instructions for the task and my lower-performing students' essays to come up with suggestions for how it might be possible to get better results next time?
- The two new members of our team haven't yet taught "ABC." How can we help them anticipate the misconceptions students will likely come with, the questions that will arise, and the trouble spots students typically encounter?

What these conversation prompts have in common is: (a) their focus on a particular skill, idea, or standard students are having difficulty with; (b) their reliance on teachers' formative assessments and direct observations of students' struggles; and (c) the intent to modify strategies by drawing on other teachers' insights. (See Chapter 3 for more on Collaborative Problem Solving and Action Research as two of five possible design options for professional development.) Thus,

the *content* for adult learning is clear and targeted to the near term: one lesson or strategy at a time from the curriculum students experience every day (Schmoker, 2004).

Setting a measurable goal for the selected skill or underachieved standard can help focus content even more sharply (Killion, 2002). Schmoker (2002) shares the example of a team of teachers concerned that just 4 of 90 children were succeeding with writing "descriptive settings," a particular kind of narrative assessed through a rubric used in their state. The teachers studied exemplars available in curriculum guidebooks and brainstormed alternative ways of teaching descriptive settings. They collectively developed a new lesson they each would use in their classrooms before evaluating students' writing again and meeting a month later. The results were that 85 of the 90 students wrote better descriptive settings when assessed with the same rubric after the targeted intervention. Change experts point out that small steps and tangible classroom results such as these can motivate teachers and impact student performance more directly than larger, more complex, school improvement initiatives typically do (Fullan, 2000).

Teacher-Made Assessments

The foregoing examples focused primarily on teachers' monitoring, adjusting, and refining particular *lessons.* A slightly different approach to centering adult learning on students' everyday classroom experience involves teachers creating and administering common *assessments* (Schmoker, 2003). That is, adult teams collectively develop and examine the results of unit quizzes, tests, or other performance assessments that all children take regardless of who is teaching the course or grade-level section. In order to do this, teachers must inevitably grapple with the standards, skills, and knowledge most important for students to learn, as well as what students should be expected to show as evidence of that learning. Team scrutiny of student outcomes on these teacher-made assessments can then prompt idea sharing and working together to improve upon common student weaknesses (DuFour, 2002a).

Student Work

In addition to everyday lessons and common assessments, a third source of adult learning content centered on children's needs is the actual work that students create. It can take myriad forms, including

written responses to problems they are asked to solve, science lab results, videotapes of presentations they make, exhibits they produce, projects they complete, writing samples, portfolios in various subject areas, or any other products resulting from assignments and class activities.

Similar to the lessons and assessments mentioned earlier, these work samples become the focus of teacher discussion and problem solving around how to improve student performance (Langer, Colter, & Goff, 2003; Roberts & Pruitt, 2003). As such, student work related to the standards and learning goals considered essential for a particular grade level or subject area may be the best kind of example to start with. Initial questions for group deliberation might include: What essential skills and knowledge does this work sample demonstrate? What weaknesses or gaps in knowledge does it illustrate? What evidence of ability to synthesize information appears in this sample? What do these samples suggest students are struggling with most?

Although all of the previous questions focus exclusively on the students' work, connections to curriculum and instruction logically follow. What are some ways the teacher's prompts can bring out higher-level thinking? How could the assignment be altered to inspire greater student creativity? What additional supports does this child evidently need? How might we change the course syllabus to address the recurring weaknesses that appear in these samples?

Guides That Can Help

Clearly, not all grade-level or subject area teachers will have experience productively discussing student work or developing common lessons and assessments. Nor will all groups have a history of fruitful problem solving around student underperformance. In these cases, experienced group facilitators and more structured processes for focusing curricular dialogues will be required (Richardson, 2001a). Chapter 3 provides a broad overview of Collaborative Problem Solving and Action Research as two of five design options for professional development. However, you should also be aware that numerous protocols (discussion guides) for examining student work and studying lessons together are available online. You can quickly access many practical, ready-to-use tools developed by the Annenberg Institute for School Reform (www.lasw.org) and the Coalition of Essential Schools (www.essentialschools.org).

What many of these protocols have in common are guiding questions to help group members stay focused on describing and

improving the work (rather than judging it or nitpicking). They often also specify sequences of procedures so as to ensure active listening and turn taking to better capitalize on all members' insights. All are aimed at clarifying and deepening teachers' reflection on, and constructive problem solving around, issues important to student learning.

Curriculum-Based Adult Learning Content

The three foci for adult learning reviewed thus far—lessons, assessments, and student work—all are intended to keep professional development content grounded in the classroom. They share an emphasis on teachers collaborating to decrease children's struggles with the curriculum routinely experienced in a particular grade or subject area. They are guided by a micro-level perspective on what is most important for continuous professional growth: improving one lesson, assignment, or assessment at a time. This perspective serves as a valuable lens for understanding and supporting adult development.

But savvy school leaders view their organizations from multiple vantage points, using a variety of lenses. Accordingly, I turn next to a more systemic, macro-level perspective for determining what the content of teachers' professional development should be. It too is aimed at linking adult learning to students' learning needs. However, it is based on: (a) more varied sources of student data, (b) more systematic analysis of those data, (c) patterns of needs beyond individual classrooms, and (d) schoolwide priorities (Killion, 2002).

A Macro-Level Strategy for Focusing on Students' Needs

From a whole-school perspective, what are some examples of the range of student data from which foci for adult professional development can be derived?

- Grades earned
- Affective or attitudinal assessment (e.g., report card commentary on effort, interests, cooperation, motivation, etc.)
- Attendance records
- Participation in extracurricular activities or community service
- Graduation and dropout rates
- College attendance or postsecondary employment information
- Homework completion rates

- Enrollments in special education, remedial, gifted and talented, advanced placement, honors, and other targeted programs
- Disciplinary referrals, detentions, suspensions, and expulsions
- Portfolios, writing rubrics, and other project-based or performance assessment results
- Teacher-made test results
- Standardized or other test scores
- Socioeconomic status (e.g., poverty indicators such as eligibility for free or reduced price lunch)
- Demographics (e.g., race, ethnicity, sex, English language proficiency)

Strategies for Success

There are several features of this sample listing that suggest practical action steps for school leaders:

1. Capitalize on existing data before taking the time and trouble to gather more. If your school is like most in the United States, you are already required to gather, tally, and periodically report (to your community, district office, or state education department) on many of the items listed earlier. Also, virtually every time your school or a collaborating agency submits a grant or other funding request, careful documentation of pressing needs is included. Avoid duplication of effort by taking advantage of all such existing data about your students.

2. Focus on information most important to your school's mission and unique context. In some communities in recent years, there has been a backlash against overreliance on high-stakes testing and other single measures of student achievement. You will notice that the examples listed above purposefully span a wide range of academic, affective, and demographic indicators. Because individual schools' visions reflect differences in student outcomes most highly valued, improvement efforts (including those aimed at teachers' professional development) should be aligned with those values. For example, if creating well-rounded, contributing citizens is the school's most valued outcome, then participation rates in extracurricular activities and community service may be the data warranting considerable attention. In contrast, if admission to college is the top priority, then grades earned and SAT data may be the more appropriate foci. Because you will not be able to give equal attention to all data, being selective—and consistent with the local school community's values—is key.

3. Rely on longitudinal data whenever possible. Just as multiple sources of data are preferable to single sources, multiyear data can almost always provide a more complete picture of your students than data for a single point in time. Virtually all of the variables bulleted earlier are or could be collected over several years. Longitudinal data have the potential to more clearly illustrate patterns. They enable analysis of trends and serve as a check on intermittent blips in data. Because school improvement efforts (and their associated professional development) will be more effective if sustained over time (Fullan, 2000; Gordon, 2004; Sparks, 2002), you will want your interventions to be aimed at the most enduring challenges.

Gap Analysis

Let's assume you have taken these three principles to heart and are ready to work with these or other selected student data. What is it you should be looking for in the data? The short answer is *gaps,* that is, differences or discrepancies between where your students—or some identifiable subset of them—currently are and where you and your school community would like them to be.

How to get from the data to the gaps? Analysis. More specifically, through one of two general approaches to analysis as follows:

a. D*etailed,* methodologically rigorous, statistical, or qualitative content analysis. Choose this option if your central office, regional service center, or state education department has the staff, expertise, and other resources needed to conduct comprehensive reviews of your data at a reasonable cost and time schedule. This option may also be feasible if there are able and willing colleges, universities, or doctoral dissertation students at your school's disposal.

b. *Simplified,* statistically imperfect but potentially telling gap analysis. Choose this option if you and your school teams will need to work with the data yourselves. The remainder of this chapter is devoted to this, rather than the first, approach.
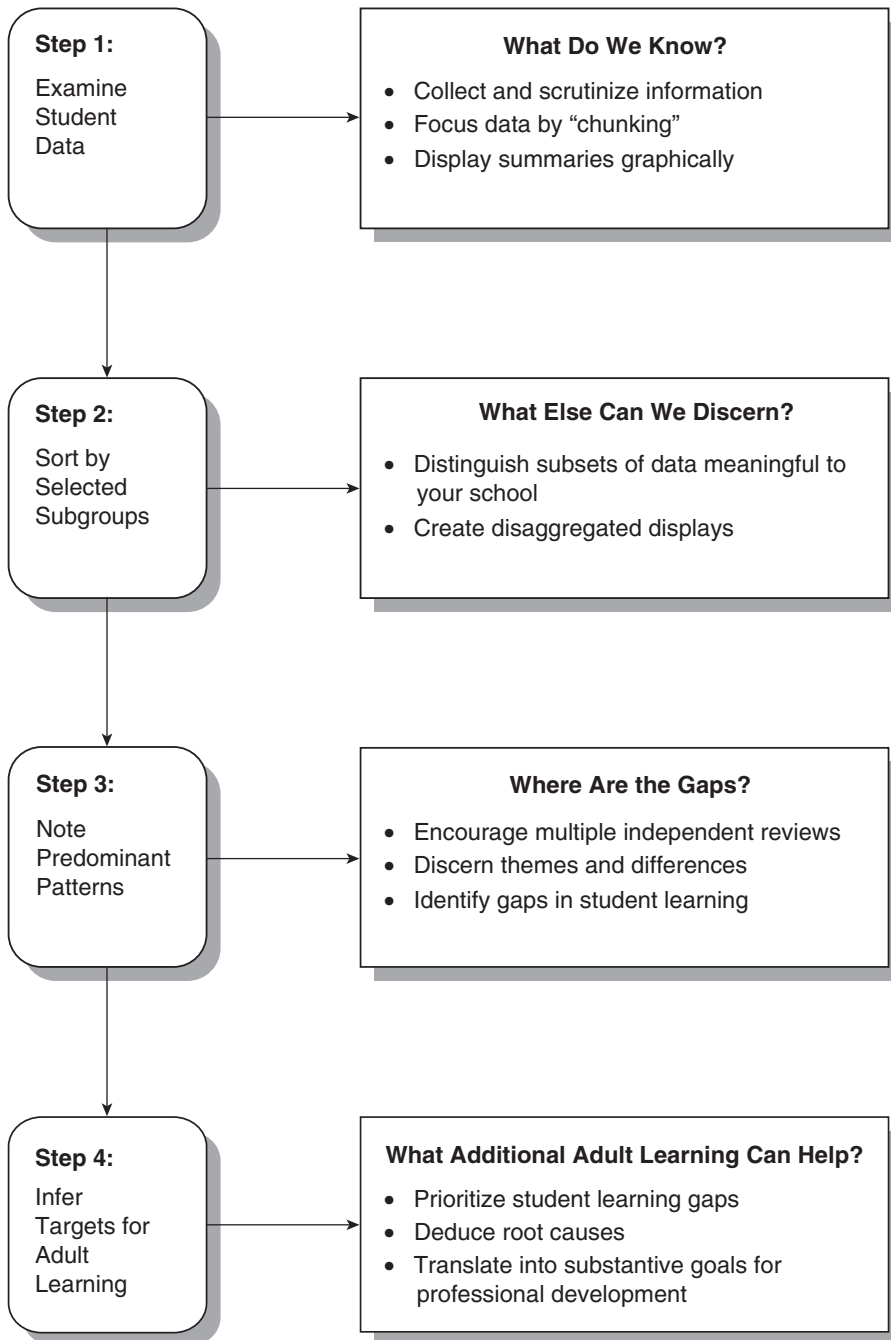
Simplifying Data Analysis

For our purposes here, it helps to think of the key, component activities of gap analysis in terms of the following (see Figure 1.1):

- Careful examination
- Sorting

Figure 1.1   Gap Analysis Model

Following these steps can help link adult professional development content to students' most important learning needs.

Step 1:

Examine
Student
Data

What Do We Know?

- Collect and scrutinize information
- Focus data by "chunking"
- Display summaries graphically

Step 2:

Sort by
Selected
Subgroups

What Else Can We Discern?

- Distinguish subsets of data meaningful to your school
- Create disaggregated displays

Step 3:

Note
Predominant
Patterns

Where Are the Gaps?

- Encourage multiple independent reviews
- Discern themes and differences
- Identify gaps in student learning

Step 4:

Infer
Targets for
Adult
Learning

What Additional Adult Learning Can Help?

- Prioritize student learning gaps
- Deduce root causes
- Translate into substantive goals for professional development

- Pattern recognition
- Making inferences

Why these terms? First, they represent skills and abilities you and your colleagues already have. This language frames analysis as a series of doable and manageable (rather than formidable or onerous) tasks. Second, these are also competencies teachers often work at cultivating in their students and, thus, can easily relate to. What does each entail?

Careful Examination

Study and scrutiny are helpful synonyms here. Commonplace study tools are applicable. For example, begin by reading and rereading the data, then *chunk* it into more compressed forms. In the case of numbers, chunking typically means tallying, calculating averages, and converting tallies into percentages. For qualitative (word-based) information, it involves grouping similar data into categories. Chunking also means displaying in formats that lend themselves to accessible, visual examination, such as graphs, tables, outlines, or concept maps (Killion, 2002). The figures and tables interspersed throughout this book are examples of useful summary display formats.

Sample questions to guide data examination might include: What have been the commonly recurring reasons for our students' absences? Which elements of the writing rubric do students appear to have mastered? Which elements have they not? What have been our students' average scores on the statewide third- and eighth-grade tests in language arts and mathematics? On which subtests of those disciplines are our students performing best? Worst? Which items on the exams are our students most frequently answering correctly? Incorrectly?

Sorting

The synonym you may frequently hear today is *disaggregation*. For example, the No Child Left Behind Act of 2001 requires that student achievement exam data be sorted and reported (that is, disaggregated) by specific subgroups: students receiving special education services, students who are English language learners, students identified by race, and students in numerous other categories. Your own school community's priorities and values may suggest other relevant subsets warranting disaggregation.

Sorting by category typically involves asking more focused questions of the data, as well as chunking and comparing them in different ways. For example, What has been our female students' rate of participation in advanced mathematics and science courses? How does this rate compare to the males' rate? On which subtests of the fifth-grade social studies exams have our Hispanic students been doing best? Worst? How do those strengths and weaknesses compare to the performance of our Caucasian students? The demographic and socioeconomic data you collect about your students will make this kind of sorting possible.

Pattern Recognition

The graphs, charts, and other kinds of summary displays suggested earlier can help make apparent any regularities or variations (that is, patterns) in your students' data. Patterns may include qualitative characteristics, quantifiable increases or decreases over time, identification of anomalies or outliers, similarities and differences among subgroups, and other kinds of recurring themes or changes. Some patterns may reveal small differences that affect many students. Others may be large differences that affect relatively small numbers of students. Either pattern can signal important areas warranting attention and intervention.

As anyone who has ever taken a Rorschach test can confirm, the same inkblot will suggest quite different things to different people. Similarly, as individual teachers, administrators, or community members, we may notice different patterns in the same data display or set of information. To enrich your analysis by taking advantage of these potentially diverse insights, ask a variety of people to independently review the same data summaries, sorts, and graphic representations (Killion, 2002). The key questions to ask are: What, if any, patterns do you see? Which patterns suggest gaps between where our students currently are and where we would like them to be?

Making Inferences

This final stage of the process demands considerable professional judgment and negotiation, to translate gap analyses into actionable next steps. More specifically, it involves interpreting salient patterns and reaching consensus in the following three key areas:

1. Which gaps in student learning are the most important to us as a school? This question recognizes that most schools will have more gaps than resources to address all of them well. Therefore, student

needs will have to be prioritized so that improvement efforts can be targeted and the finite resources available can be brought to bear most effectively.

2. What do we think are causing these results? This second question underscores the importance of root cause analysis—of thinking carefully and creatively to discern what may really lie beneath students' less-than-desirable performance. There will likely be multiple factors contributing to significant gaps in student learning (Killion, 2002; McTighe & Thomas, 2003). For example, some factors may relate directly to the curriculum: Is there a mismatch between what is tested in second-grade arithmetic and our school's curriculum goals for that grade? Some factors may center on instructional materials: How does the biology textbook we adopted address the gap we have identified in our students' science knowledge? Some factors will point to the students themselves: Are our poorest essay writers the adolescents who have the worst attendance in the middle grades? Then what is at the root of many of their absences? Some contributors may relate directly to school structures and programs: Are support systems available in time to intervene and remediate early difficulties in reading? Some contributors to key gaps may have to do with district policies: How, if at all, does the new zero-tolerance policy for fighting relate to at-risk students' falling further behind? And some factors will relate more directly to the adult staff's current knowledge and skills: How familiar are our teachers with varied instructional strategies that foster the kinds of student problem solving required on today's state exams? Accordingly, your overall school improvement planning will likely involve several categories for action, including, perhaps, curriculum development, materials acquisition, academic assistance programming, community partnerships, and policy revision. Adult professional development is but one of a number of possible interventions.

Just as it was necessary to prioritize student learning gaps judged most important to you as a school, the results of root cause analyses will likely also require ranking and prioritizing, in order to be able to effectively target next steps. It will always be better for your school to focus its improvement efforts on addressing the most salient root causes in-depth and well, rather than to create numerous interventions that scatter resources among all possible contributing factors. The latter leads to fragmentation and overload, rather than sustainable change that can make a difference to students (Fullan, 2001).

3. Of the root causes our school can do something about, what goals for adult learning can help us narrow the gap(s)? This question recognizes that there will be some contributing factors that your school can ameliorate and others that are beyond its current capacity. It also reinforces several premises that will resurface throughout this book. First, supporting teachers' continuous development on the job is an important piece of comprehensive school improvement (Gordon, 2004). Second, goals for adult learning should be specified both to make clear its purpose and to enable evaluation of effectiveness (Guskey, 2000; Killion, 2002). Third and most important, top-priority student needs should drive the goals and determine the content for adult learning (Holloway, J., 2003; Killion, 2002).

What does inferring professional development targets from student learning gaps look like in practice? Let's say your analysis of data across four different subject areas at the middle school reveals high performance on fact-based comprehension, but recurring and widespread poor performance on items requiring the application of knowledge in new situations. A general staff development goal might be for teachers to implement four different instructional strategies that have been shown to improve adolescents' abilities to *use* (rather than simply recall) concepts. A more specific goal might be that, in the marking period following their completion of relevant forms of professional development geared to the four strategies, teachers will share two lessons they have created that demonstrate their use of two of the four strategies requiring students to apply previous knowledge to a new problem. A follow-up goal might be that, after receiving feedback on the lessons and participating in peer coaching, teachers will share with others in their department at least five student work samples representing assignments based on the teacher's implementation of three of the strategies learned. A capstone goal might require teachers to share examples of student work that demonstrate improvement in students' abilities to apply selected knowledge or concepts to new situations.

This progression of goals suggests that staff development targets should shift from adult learning to student outcomes, as time and supports for teacher development increase. Additionally, as Chapter 2 will underscore, the more specific and measurable the adult learning goal, the more useful it is to assessing which professional development initiatives have been successful and which may warrant revision.

An Image of Success

The Director of Curriculum and Instruction has been facilitating afterschool meetings with your faculty for about eight weeks. She has guided the staff through a methodical process of analyzing student data to identify significant gaps in learning. Although initially disconcerted by the range of student underperformance, the Director's adept facilitation helped you and your teachers reach a decision about what to target.

Improving students' reading comprehension became a top priority. Three related goals for teachers' professional development were generated, each emphasizing instructional strategies for increasing reading comprehension across subject areas.

School Improvement Committee members took the lead on investigating relevant resources. They examined research studies, instructional materials, and Web sites. They contacted several expert consultants and schools where reading comprehension gains were impressive. Their investigations included tough questions, such as: What do best practices for improving comprehension look like? Where have they been implemented? Under what conditions? With what resources? (Killion, 2002).

The particular formats for your school's adult professional development have yet to be determined, but its substantive focus is now clear. Most teachers are pleased to have an unambiguous direction for the school's collective efforts.

Summary

Gone are the days when the most renowned school district staff development programs were the ones with the heftiest, most comprehensive catalogs of topics from which teachers selected their preferred focus. This chapter has described and illustrated two more student-centered means of determining what the *content* for your schools' adult learning initiatives should be:

- A big picture, schoolwide data analysis strategy that situates teachers' professional development among other school improvement priorities
- A smaller scale, curriculum-driven process aimed at improving one lesson, assessment, or student product at a time, within particular grade levels and subject areas

Both approaches rely on you and your teams accomplishing the following tasks:

1. Identifying gaps in student learning

2. Deriving adult learning targets from those student needs

Moreover, both approaches share many of the features of the backward design procedures you and your teachers have grown accustomed to using for curriculum development and revision (McTighe & Thomas, 2003; Wiggins & McTighe, 1998). That is, starting with the end in mind, set specific goals or standards for student learning (Killion, 2002).

Next Steps

Now that the focus of your school's professional development has been clarified, you need to devise a plan for tracking progress toward targets for adult and student growth. In the next chapter, additional strategies are suggested to help guide the longer-term implementation of the content you and your faculty have decided upon.