1 The Collaborative Analysis of Student Learning

Essential Features and Benefits

Through the Collaborative Analysis of Student Learning, teachers move away from using uniform "best practices" toward the personalization of learning that is culturally and linguistically responsive so that each and every one of their students successfully reaches standards of excellence.

Let us go back to earlier in the school year, when Sue Baker is heading into her meeting with her Collaborative Analysis of Student Learning (CASL) study group. Sue has been taking Nika's work to her CASL study group for the last few months to inquire into how she might more effectively help him become a more proficient writer. She was beginning to see some real progress in Nika's expository writing when his performance started to decline during a unit on the westward expansion. Even after analyzing his work and experimenting with several strategies, his writing was still disappointing.

Sue, who is generally successful with her students, is baffled and frustrated. Most students in her class are engaged and working hard to meet her high expectations. She used to feel that she could reach most students, but now she is not so sure. In fact, she finds herself wanting to blame Nika for his lack of engagement and his sloppy, incomplete work. Many might have given up at this point and let Nika find his own way, but not Sue.

Fortunately, as a teacher committed to the success of every student, Sue refuses to let Nika fail and acknowledges that she can't meet this challenge on her own. So she brings Nika's most recent written assignment to her CASL study group.

As Sue and her colleagues analyze Nika's work sample, they talk about his most recent classroom behavior, his heritage, and his prior life experiences. As several explanations for his performance are considered, one idea in particular catches Sue's attention.

One of Sue's colleagues wonders whether Nika, who is Native American, is disengaged because he is aware of how disruptive and painful the westward expansion was for his people. The colleague suggests that, since the Native American elders often share their oral histories, Nika has probably heard such stories handed down by his grandparents. His work may reflect his anger and frustration that the textbook ignores the sacrifices of his people. In fact, it focuses only on the economic benefits of the westward expansion and on how the Native Americans actually helped the pioneers navigate across the country.

As the conversation continues, Sue and her colleagues come to understand Nika's point of view. They use these insights to consider how Sue might be more responsive to his learning needs and draw on his prior experiences as well as those of other students from diverse backgrounds.

In the process of the dialogue about Nika, Sue acknowledges that she has been presenting only the white middle-class perspective to her history students, even though she is well aware of the struggles the Native Americans and other cultural and racial groups had during the westward expansion. This makes her think long and hard about other ways she may be allowing her own cultural views to drive her instructional approach. She begins to wonder how her decisions may be creating barriers to learning for other students with cultural backgrounds different than her own.

Based on the insights gained in her study group, Sue decides to have her students read and discuss several primary sources depicting the experiences of the Native Americans and slaves during the westward expansion. She also personalizes her instruction by inviting Nika's father to share some of his people's oral history from this time. Finally, she revises the expository writing assignment to include both the positive impact on the country and the negative consequences for Native Americans and African Americans.

Sue's efforts to identify the barriers to Nika's learning and then to respond accordingly pay off. Nika's engagement in class has increased, and his final paper is very thorough and well written, as are those of Sue's African American students.

In the absence of her study group, Sue may have chosen to either lower her expectations for Nika or give up on him. Instead, by collaboratively

analyzing her student's work, she increased her capacity to create an equi-table learning environment not only for Nika, but for each and every one of her other students, especially her students of color, so they will become successful writers.

WHY IS THE COLLABORATIVE ANALYSIS OF STUDENT LEARNING NECESSARY?

The story of Sue and Nika illustrates how the Collaborative Analysis of Student Learning not only improves teachers' effectiveness as they dili-gently pursue responsive approaches for learning but also alters teachers' beliefs about their students and their own practice. We have found that such *transformative professional learning* is particularly critical in contexts in which students' cultural background is notably different than that of their teachers. Why is this important?

In our experience, as student diversity grows in schools, so too does teachers' uneasiness about successfully meeting the learning needs of all of their students. We believe, as many do, that these feelings of inadequacy can be transformed into a sense of efficacy and effectiveness when teachers use "systematic, thoughtful, and innovative . . . collaboration" to form new "visions and beliefs that guide educational practices in diverse settings" (Cooper, He, & Levin, 2011, 4–5). Such transformative learning is most likely to happen when teachers

- engage in reflection about their own cultural identities, biases, and experiences;
- explore the cultural backgrounds of their students, families, and the communities; and
- find ways to negotiate their roles as teachers and administrators to leverage students' strengths and assets to maximize learning (Cooper et al., 2011, pp. 4–5).

There are many different ways to define *culture*. We have chosen to adopt the broad definition promoted by the highly respected Lindsey, Kikanza, Robins, & Terrell (2009, pp. 11–12):

Culture is the set of practices and beliefs that is shared with mem-bers of a particular group and that distinguishes one group from others. We define *culture* broadly to include all shared character-istics of human description, including age, gender, geography, ancestry, language, history, sexual orientation, faith, and physical

ability, as well as occupation and affiliations. Defined as such each person may belong to several cultural groups. An ethnic group is defined by shared history, ancestry, geography, language, and physical characteristics. Individuals may identify most strongly with their ethnic group, as well as several other groups that influence who they are.

All of our beliefs are "judgments . . . that we make up about ourselves, others, and about the world around us. Beliefs are generalizations about things such as causality or the meaning of specific actions" (Yero, 2002, p. 21). Our beliefs help us understand and respond to our world in a fairly predictable manner. Unfortunately, some of our beliefs are limiting and hinder our own success. Unless we are open to examining them, like Sue was in terms of her white middle-class beliefs, we may continue to get the same unfavorable results.

Mezirow (1995), the founder of transformative learning theory, wrote that people tend not to transform their beliefs or behaviors as long as their existing perspectives work for them. For real change to occur, individuals need to experience some dissonance between the beliefs that they hold and what they are experiencing. Thompson and Zeuli (1999) proposed that, since this kind of dissonance rarely occurs in the normal course of a teacher's day, teachers need deliberate interventions for this purpose. We found that the analysis of student learning over an extended period of time is such an intervention (Goff, Langer, & Colton, 2000; Putnam & Borko, 2000).
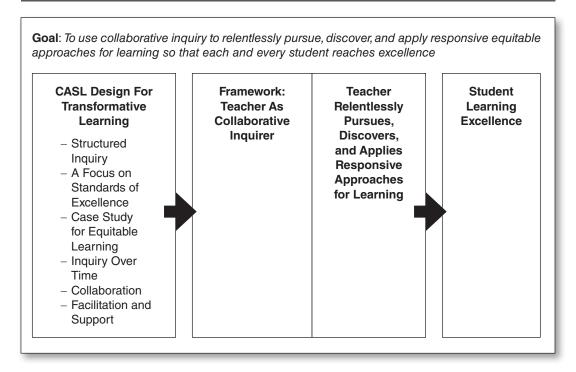
WHAT IS CASL?

CASL promotes such transformative professional learning by engaging small study groups of teachers in the analysis of specific students' work samples to increase their understanding of how such students construct meaning of complex content. As teachers examine their beliefs and practices about teaching and learning, they bring to the surface any assumptions or attitudes that may be limiting their capacity to effectively respond to their students' learning needs. As they dig deeper, teachers learn how their cultural perspectives may differ from those of their students and how these differences may be influencing their practice. In turn, they develop a more nuanced and multifaceted understanding of diversity (Cooper et al., 2011).

During the months of the CASL inquiry, the effectiveness of various culturally responsive approaches to learning are tested and analyzed. As discoveries are made, the teachers store this professional knowledge so that they can personalize their teaching for future students.

Consequently, the collaborative analysis of student work enables teachers to find *equitable ways* for all students in the present and future to reach *standards of excellence*.

Figure 1.1 (CASL's Theory of Change) illustrates how the CASL professional learning design develops teachers' capacities and commitment to relentlessly pursue, discover, and use responsive approaches to learning to promote learning excellence in their students. Take a moment to note the two boxes in the middle of the figure, labeled "Framework: Teacher as Collaborative Inquirer" and "Teacher Relentlessly Pursues, Discovers, and Applies Responsive Approaches for Learning." In the case of Sue, the CASL group helped her inquire into and reframe her initial impressions of Nika's behavior. She went from seeing him as a resistant problem student to understanding his frustration about the way his ancestors were portrayed in the unit's resources. Out of this new perspective, Sue could then find a way to respond to Nika's convictions. But the transformation did not end with Sue's experience with Nika. Sue also questioned how other groups in her class, specifically, the African American students, were experiencing the unit. As a result of this inquiry, she developed her capacities as a collaborative inquirer and discovered and used equitable approaches that helped all of her culturally diverse students succeed.

Figure 1.1 CASL's Theory of Change

Goal: *To use collaborative inquiry to relentlessly pursue, discover, and apply responsive equitable approaches for learning so that each and every student reaches excellence*

CASL Design For Transformative Learning	**Framework: Teacher As Collaborative Inquirer**	**Teacher Relentlessly Pursues, Discovers, and Applies Responsive Approaches for Learning**	**Student Learning Excellence**
– Structured Inquiry – A Focus on Standards of Excellence – Case Study for Equitable Learning – Inquiry Over Time – Collaboration – Facilitation and Support			

Now take a look at the left half of the figure, which lists the six distinct and essential features of the CASL design. Although we provide ideas about how to modify CASL to fit local contexts, we believe these features must be maintained to reap the full benefits found in our and others' research. The seventh feature, the conceptual framework, is described next. Together, these features facilitate transformative learning that leads to increased cultural proficiency, teaching effectiveness, and results for all students.

- Structured inquiry
- A focus on standards of excellence
- Case study for equitable responsiveness
- Inquiry over time
- Productive and intentional collaboration
- Skilled facilitation and organizational support

A CONCEPTUAL FRAMEWORK: TEACHER AS COLLABORATIVE INQUIRER

The CASL professional learning design is grounded in the "Framework: Teacher as Collaborative Inquirer" (formerly referred to as the "Framework for Reflective Inquiry"). The framework, portrayed in the left half of Figure 1.1, and described fully in Chapter 2, outlines the teacher capacities being developed through CASL.

The framework is a synthesis of the literature on the dispositions, professional knowledge base, and thinking of a teacher who is aware of her own culture and the impact it has on her students; values the diversity of her students; and is committed to continuous learning that leads to responsive approaches for the learning needs of individual students.

We have used the framework for over two decades to guide the development of various programs for teachers during different stages of their careers (e.g., Colton & Sparks-Langer, 1993; Goff et al., 2000; Langer & Colton, 2005; Langer, Colton, & Goff, 2003; Sparks, Simmons, Pasch, Colton, & Starko, 1990). The concepts integrated into the framework are congruent with many of the professional teaching standards used for teacher appraisal systems, for example, the National Board for Professional Teaching Standards Five Core Propositions (1987), Charlotte Danielson's *Framework for Teaching* (2011), and Robert Marzano's Causal Teacher Evaluation Model (2011).

The ideas in the framework have remained fairly stable since we first published it (Colton & Sparks-Langer, 1993). The most dramatic revision reflects our current understanding of how teachers' personal filters—beliefs

and feelings—influence how they construct meaning of their experiences and how they choose to respond to what they observe.

Our framework is a key decision-making tool for us (and we hope for you) because it provides a vision of the responsible and effective teacher. As such, it guides decisions about how best to implement and adapt CASL. It also serves as a diagnostic tool for facilitators and leaders to determine teachers' skills, knowledge, and dispositions and how best to support teachers' continued growth and development.

A central feature of the framework is the *collaborative inquiry cycle*, which describes how teachers build much of their professional knowledge (adapted from Kolb, 1984). This cycle is woven into the fabric of each of the CASL phases and builds teachers' skills of analysis and self-reflection, enriches their professional knowledge base, and further develops their dispositions as culturally responsive teachers.

Structured Inquiry

Teachers engaged in CASL complete five structured phases (see Figure 1.2). These phases are designed to facilitate teachers' relentless quest to discover how best to personalize their students' learning so each student reaches standards of excellence. Each phase has a specific purpose, a focus of inquiry, and a protocol that provides task directions, prompts, and the responsibilities of the study group members. Section C and Chapters 6–9 present a full description of how to facilitate each phase.

Teachers begin the inquiry process in Phase I by identifying the standards of excellence to which they will hold all of their students during the year. We refer to these standards as the *target learning area* (TLA). The TLA is an area of the curriculum that has been consistently challenging to teach as evidenced in student performance data year after year. After selecting the area for inquiry, teachers define it by describing how students will ultimately demonstrate their proficiency. We have found that the more specific teachers are about the learning outcomes they wish to promote, the more effective and targeted their instruction and assessments will be. Next, teachers identify the learning outcomes students need to master on the journey toward the success in the TLA. Finally, teachers design and administer an *initial whole-class assessment* to determine (a) the current status of their students' learning in the TLA and (b) where to begin instruction.

In Phase I, Sue's study group selected the following TLA: "To write explanatory text to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant social studies content." For the initial assessment, they asked students to read and write a summary of an article from the local newspaper.

Figure 1.2   The Five CASL Phases*

Phase I: Establishing a Focus for CASL Inquiry

What area of the curriculum is most challenging for our students?

- Define Target Learning Area
- Design Initial Whole-Class Assessment
- Begin Teacher Autobiography

Phase II: Defining Teachers' Professional Learning Goals

Which students would be most fruitful to study over time so that we may discover equitable responses?

- Analyze Initial Assessment Results
- Establish Professional Learning Goal
- Select Focus Student and Begin Biography

Phase III: Inquiring Into Teaching for Learning (3–5 months)

Which approaches are most responsive to our students' specific strengths and needs?

- Analyze Each Focus Student's Work Sample (every 2–4 weeks)
- Continue Focus Student Biography
- Continue Teacher Autobiography

Phase IV: Assessing Learning Progress

What progress have our students made? Who needs further assistance?

- Analyze Whole-Class Final Assessment Results
- Plan for Students Not Reaching Proficient Performance

Phase V: Integrating Learning Into Teachers' Professional Practice

What have we learned about ourselves and our teaching and what might we need to learn more about?

- Reflect on Teacher and Student Learning
- Set Professional Learning Goals
- Celebrate Accomplishments

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*Throughout phases: reflect on learning and collaboration, find more information, and seek further professional learning as necessary.

In Phase II, teachers analyze their students' performances on the initial assessment of the TLA. They find patterns to determine which areas of the content are most challenging and to discover who the struggling students

are as learners and people. At the conclusion of this phase, teachers have *framed a statement of their professional learning goals* and have *selected a focus student* who will help them reach these goals.

In Phase II, Sue selects Nika because he represents other students in her class who struggle to organize their thinking in writing. She also wants to study Nika because he is Native American and Sue acknowledges she knows very little about the background and culture of students in this racial group.

Phase III extends over three to five months as study groups of three to five teachers meet every few weeks to *analyze work samples from each focus student*. The story of Sue and Nika in the opening of this chapter illustrates this phase. A teacher begins by describing the focus student, the instruction that preceded the work sample, and the desired learning outcome (e.g., concept or skill). From there, the student work analysis cycle begins as the teachers make *observations* about the work using descriptive, not evaluative, words. Then the group asks questions to prompt an *analysis* of what factors may have caused the learning demonstrated in the work, for example, "What do you know about this student that might explain why she performed in this way?" "What influence might your instructional approach have had on the student's learning?" "What about the student's prior experiences might be supporting or hindering learning?"

During the *analysis*, the study group members refrain from giving advice or offering solutions. Indeed, one purpose of the work analysis is to formulate questions that might need further investigation. For example, the teacher might decide that it would be useful to hear the student "think aloud about how he did the work" before deciding what he needs. Sometimes teachers ask parents or other professionals about the student's interests and motivations. Teachers may also need to clarify how the specific understanding or skill relates to the school or district curriculum.

Finally, the group discusses a *plan*—personalized teaching strategies tailored to the specific student needs and strengths discovered during the analysis step. Each of these potential actions is examined to see if it might help the student improve (at this point, research literature and other experts are often consulted). The teacher presenting the work makes the final decision about how to respond to the student's learning needs. Once the planning step is done, the study group members *reflect* on what was learned from examining the work, how they might use what they learned, and the quality of their collaboration.

After the first student's work sample is studied, the same process is repeated for the next focus student. During the following weeks, the

teachers implement the planned actions and collect the next sample of student work for another round of group observation, analysis, planning, reflection, and action. Over the months of experimentation, they come to understand their students and themselves more deeply and use their new insights to facilitate their students' learning.

Occasionally, the study group finds it necessary to suspend the student work analysis to learn more about concepts or skills in the curriculum, how students learn in the TLA, specific ways of teaching, or other areas. This may involve consulting research, theory, and experts. It is not long before they return to analyzing their students' work.

After several months of meeting in study groups, teachers complete Phase IV by assessing their entire class's performance to *determine progress toward the TLA*. The tasks during this phase are very similar to those in Phase II, with one exception. The analysis of the students' learning gains ends with significant reflection on (a) what contributed to the students' successes, (b) what responsive approaches might help those not succeeding, and (c) what additional professional learning might teachers still need to help those students who are not yet reaching the TLA.

Throughout the CASL inquiry phases, we ask teachers to keep written notes about their insights and questions. Their notes include learning about themselves, their teaching and their students' learning of the TLA, and any questions for further inquiry. This written dialogue with oneself is a powerful means to reframe problems, create new understandings of the nature of student learning, communicate information about students, and document teacher growth.

In Phase V, teachers prepare their *final reflections.* They step back from the process, review their notes, and write about their growth, their students' progress, what they might do differently in future years, and what additional professional learning they still need.

The culmination of Phase V is the CASL celebration, during which participants share with other teachers and leaders what they and their students have learned throughout the year. Section C provides details about how to engage in each of the CASL inquiry phases.

At the CASL celebration for Sue's group, the energy level in the room was noteworthy as Sue and the other teachers shared their successes. Every teacher saw impressive gains in their students' expository essays. Sue shared what she learned about using primary sources as a way to present multiple perspectives in history. She also pointed out how she was able to actively engage more students when she took the time to get to know them as people because she could then connect their backgrounds to the content being taught. Sue and her social studies colleagues let the principal know that they would like to learn more about teaching writing.

A Focus on Standards of Excellence

When teachers clearly define the TLA in Phase I, they are establishing the standards of excellence to which all their students will be held. Culturally proficient teachers believe that each and every student is capable of reaching high and rigorous standards, regardless of race, ethnicity, socioeconomic status, cultural background, learning style, disability, or life experiences. They see such standards as the intellectual, social, and moral competencies that students will use throughout their lives to claim respect and dignity and to critically examine beliefs and policies as responsible citizens.

With the *standards of excellence* well defined, teachers begin their quest to discover ways they can personalize learning for each of their students.

Case Study for Equitable Responsiveness

Equity ensures that every effort is made to eliminate potential barriers to learning to afford all students every opportunity to succeed. Providing equitable learning opportunities is no easy task, in large part because teachers regularly face unpredictable situations in their classrooms and no single approach works for every student or for all outcomes. As Ball and Cohen wrote, "No amount of knowledge can fully prescribe appropriate or wise practice" (1999, p. 10). The challenge for teachers, then, is to figure out which strategies work for whom, and in what combination and sequence.

Teachers usually connect their instructional insights to *specific cases* of student learning rather than to uniform best practices. Such expertise is called "case knowledge" (Shulman, 1987). For these reasons, teachers in a CASL study group select a focus student from their class who represents a cluster of students who exhibit similar learning challenges in the TLA and whose cultural backgrounds are different (and perhaps not well understood) by their teachers. What teachers discover about facilitating the learning of the focus student will help them personalize instruction for others in the cluster and future similar students. To further broaden the study group's learning, each teacher selects a student with different learning challenges so that every teacher learns how to address multiple student needs. The case study process also builds teachers' capacity to learn from their own practice, which prepares them to face future classroom dilemmas and challenges.

Inquiry Over Time

Collaborative inquiry is most powerful when teachers look at an individual student's work over time for four very important reasons. First, educators usually agree that deep learning of complex outcomes rarely results from a single learning experience. It is much easier—and

faster—to teach a fact in history, for example, than a concept such as racism. Through longitudinal studies of students' evolving understandings, teachers test out various strategies and scaffolded learning experiences. Based on the results, they reconstruct their theories of how best to help individual students reach the learning targets (Putnam & Borko, 2000).

A second reason to extend the inquiry is that it takes time for teachers to develop relationships with students and parents to the point where both feel comfortable to share stories and facts about themselves. Through such interactions, teachers gain useful insights about their students.

Another benefit of this long-term experimentation and reflection is that teachers discover gaps in their knowledge and skills and any beliefs that may be hindering their students' learning. Over time, they either improve in these areas or seek out specific professional learning opportunities.

A final reason for extended inquiry is that it takes time for teachers to develop trusting relationships with their colleagues. Such rapport allows fellow group members to bring a struggling student's work to the group without fear of being judged or criticized. For such transformative learning to happen, colleagues need to feel comfortable both sharing and hearing new perspectives. A culture of collaboration, although slow to develop, is worth its weight in gold when it comes to discovering responsive teaching approaches for struggling learners.

Productive and Intentional Collaboration

The way teachers interact when they are not in the classroom influences the success of any professional learning program. Like CASL, the most productive environments are those in which teachers regularly engage in collaborative conversations—*dialogues*—around meaningful and relevant issues (Darling-Hammond, 1998; Sparks, 2002). During such times, assumptions are revealed and examined, and teachers allow their thinking to be open to the influence of others.

Dialogue is a central process of the CASL system because it invites multiple interpretations, helps teachers examine limiting assumptions, and unleashes teachers' creativity and expertise (Love, Stiles, Mundry, & DiRanna, 2008). A major consequence of collaborative inquiry is *collective efficacy*—a sense that teachers can overcome learning challenges when they rely on one another's expertise (Goddard, How, & Hoy, 2000).

Collaboration, however, does not happen automatically. For teachers to move beyond a culture of "polite" conversation (Little, Gearhart, Curry, & Kafka, 1999) toward deep analysis of teaching and learning, groups need to intentionally develop, practice, and reinforce *working agreements* and *communication skills*. Furthermore, such dialogue becomes possible only through intentional facilitation and leadership.

Skilled Facilitation and Organizational Support

Few innovations are sustained without skilled facilitation and organizational support. The CASL facilitator guides teachers to the kinds of thinking, problem posing, and analysis necessary for transformative learning. A skilled facilitator can ensure that working agreements are developed and followed, that everyone develops the necessary communication and analytical skills, and that teachers stay focused on student learning. The facilitator also helps teachers to reflect on their beliefs and assumptions, identify their own learning needs, and seek additional support when necessary.

Support from school administrators is also critical to the success of the CASL professional learning design. We have identified seven things that school leaders have done to support the implementation of the CASL design (each is described in Chapter 4):

- develop an interest in CASL,
- establish collaborative teams,
- provide time to meet,
- identify the target learning area(s) for inquiry,
- provide resources,
- provide incentives and celebrate victories, and
- model a commitment to collaborative inquiry.

WHAT ARE THE BENEFITS OF CASL?

We recognize the investment of time and money that any new professional learning program represents. You are probably wondering what evidence we have that CASL makes a difference in teachers' professional practice and in student success. To answer this question, we explore recent research on the characteristics of effective professional learning. Then we share the findings from studies of CASL.

Professional Learning Research

As mentioned in the Introduction, researchers (Blank & de la Alas, 2009; Croft, Coggshall, Dolan, & Powers, 2010; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hawley & Valli, 1999; Hord, Roussin, & Sommers, 2009) have found higher levels of student achievement and teacher expertise in schools where professional learning

- focuses on students' learning of important content;
- is sustained over time;
- facilitates a cycle of continuous improvement where teachers assess students, share expertise, and find solutions for authentic problems of practice;
- is school- or classroom-based, and integrated into the workday; and
- develops collaborative teams with collective responsibility for student learning.

These same findings are reflected in the *Standards for Professional Learning* (Learning Forward, 2011). The standards define the essential characteristics and conditions for designing, implementing, and evaluating professional learning that increases educator effectiveness and student learning.

Studies of CASL

Since the CASL learning design aligns closely with the research on effective professional learning, it is not surprising that research on CASL has yielded impressive outcomes. Since 1999, ten studies (Colton & Langer, 2001; Goff, 1999; Gray, 2009; Langer, 1999, 2001; Langer & Colton, 2006, 2007, 2008, 2011; Loyd, 2006) of over 300 elementary and secondary teachers in CASL study groups show valuable benefits to students, teachers, parents, and organizations. Figure 1.3 presents the major studies that we have conducted with the location, sample, author, data sources, and results.

With all this experience and data, the benefits of CASL are numerous. Figure 1.4 lists them.

Figure 1.3   Studies of CASL

Forest Hills School District, Michigan (5 years of CASL, 2007–2012)

- 90 teachers in all K–6 buildings; Language Arts
- Suburban, with increasing diversity each year
- Study of teacher and student learning (Gray, 2009)
- Study of implementation and outcomes (Langer & Colton, 2011)
- Data: Test scores, teacher portfolios, study group interviews.

Results:

- District writing assessment scores increased 131%.
- Improvements in Language Arts were linked to CASL, among other improvements.

(Continued)

(Continued)

- Teachers, facilitators, and leaders sustained implementation over a 5-year period.
- Trained facilitators provided distributed leadership of study groups.

Four Ann Arbor, Michigan Elementary Schools (3 years of CASL, 2004–2007)

- 30 teachers in Grades K–5; Language Arts and Math
- Diverse socioeconomic status and ethnicity
- Study of teachers' and students' growth (Langer & Colton, 2007, 2008)
- Data: Questionnaires, portfolios, teacher reflections, principal reflections

Results:

- Teachers gained skills to personalize their teaching and could link that knowledge to students similar to the focus students studied.
- The documentation of interventions and student learning results provided an alternative to test-based decisions about Special Education placement.

Adrian Community Schools, Michigan (3 years of CASL, 2004–2007)

- All 40 teachers in two middle schools; all subjects
- Rural; low-income
- Study of teachers' use of CASL inquiry for middle school curriculum design (Langer & Colton, 2007)
- Data: Questionnaires, teacher reflections, principal interviews, and logs

Results:

- Teachers developed into collaborative teams and used norms, standards, and assessment results to create and revise project-based curriculum.
- Teachers clarified understanding of standards and felt more capable of helping students reach them.
- Over two-thirds of teachers reported using more active teaching strategies, authentic assessment, collaborative skills, and shared leadership.

Paddock Elementary, Michigan (3 years of CASL, 2002–2005)

- All 15 teachers, Grades K–2; Language Arts
- Rural; low-income; Title I
- Study of changes in teachers and in student learning (Langer & Colton, 2006)
- Study of four teachers' discourse during study groups (Loyd, 2006)
- Data: Reading assessments, teacher questionnaires, interviews, recorded study group sessions, written reflections, and observations

Results:

- Medium to large pre- to post-test effect sizes in reading achievement.
- Teachers' grew in confidence and ability to move students forward.
- Teachers increased their ability to interpret assessments and help students succeed.

- Teachers recognized gaps in their professional knowledge base and reported a need for professional development in these areas.
- Teachers approved policies to make CASL study groups a regular part of their schedules.

George County, Georgia (2 years of CASL, 1996–1998)

- 49 K–12 teachers; writing across the curriculum
- Low-income; Title I
- Study of teachers' growth and student learning (Goff, 1999)
- Data: Interviews and portfolios
- Results reported in Figure 1.4

Michigan Schools (6–12 months of CASL, 1998–2000)

- 75 K–12 teachers, various subjects
- Various schools with diverse settings
- Study of teachers' growth and student learning (Langer, 1999, 2001; Colton & Langer, 2001)
- Data: Surveys and portfolios
- Results reported in Figure 1.4

Figure 1.4   Benefits of CASL Inquiry

Benefits to Students

- Improved student learning in writing, reading, and other content areas
- Increased student clarity about intended learning

Benefits to Teachers

- Commitment and confidence in ability to promote student learning
- Cultural competence
- Analytical and reflective inquiry skills
- Growth in professional knowledge: content, student development and learning, personalized instruction (pedagogy), assessment design and interpretation, and contextual factors
- Alignment among classroom standards, assessments, and instruction
- Collaborative and group facilitation expertise
- Awareness and self-assessment of professional practice and needs
- National Board for Professional Teaching Standards certification

Benefits to Parents and Organizations

- Parent clarity about learning targets and student progress
- Curriculum alignment within and across grade levels
- Professional development targeted to teachers' needs
- Ongoing, institutionalized collaborative inquiry into student success

Benefits to Students

The most important benefit of CASL is the impressive learning of the students whom teachers have typically found challenging to reach. Of the 55 K–12 students studied by Goff (1999), 90% showed improved learning in their work samples (Goff, Colton, & Langer, 2000).

More recent CASL studies showed significant increases in the entire class's learning of elementary-level reading and writing skills (Langer & Colton, 2006, 2007; Langer & Colton, 2011; Loyd, 2006). As one first-grade teacher said, "I have done assessment in the past, but have never taken the time to pinpoint my students' results on a chart to discover areas of strengths and weaknesses." Another teacher said, "Analyzing the work of a student I'd struggled with, and trying different strategies has made all the difference."

Benefits to Teachers

Commitment to and Confidence in Ability to Promote Student Learning

One of our most consistent findings is that CASL teachers report and demonstrate a heightened commitment to student success, and they feel more confident (efficacious) in their ability to support student learning.

As one middle school teacher stated,

> Before CASL, I felt helpless. I would think, "The students aren't doing well . . . are they studying?" I didn't have the training to analyze their work. I would justify the lack of learning by thinking "Well, they just don't have the background" or "They missed something in an earlier class." Now I ask myself, "Is there something I could do or say or some type of instruction that would get the light bulb to come on?"

After participating in CASL, teachers were less likely to write off some factors as "out of my control" and would try to overcome the many barriers that interfere with learning. For example, in the early sessions, one group of teachers made many hopeless references to poor children from a particular part of town. As they inquired into their learning and experimented with different strategies, the teachers' sense of efficacy grew and they believed they could have a positive effect on those students' learning, despite the economic challenges.

Cultural Competency

It is an uncomfortable fact that teachers tend to have less success with students who are least like them in terms of background and culture (Lynn, Bacon, Totten, Bridges, & Jennings, 2010). That is why we encourage teachers to select a focus student who represents some aspect of diversity in their classroom along with a common content-learning challenge.

When teachers select a focus student who is very different from them, they gain new understandings and more flexible perspectives about why students from diverse backgrounds appear to struggle. This awareness results in part from looking at how teachers' own values and beliefs affect their interpretations of student behavior. These new ways of looking can be helpful in finding culturally responsive ways to teach their other struggling students.

As one teacher said, "It's hard to filter out your own bias." Another reflected, "I'm more mindful of my own philosophy, theories and beliefs because I've had to verbalize them." Gray (2009) concluded, "The deeper and sharper focus on student needs had pushed them away from operating out of preconceived notions about their students . . . they didn't make assumptions about students' needs based on background or economic status but saw each child with specific learning needs" (p. 38).

Analytical and Reflective Inquiry Skills

Many teachers have reported growth in the analytical and reflective inquiry skills required to explore the link between their teaching and students' learning. CASL changed their way of thinking by helping them discover, define, and analyze their students' learning needs. Then the teachers could identify teaching practices to correct the misunderstandings or fill in the gaps. As one teacher stated, "We become frustrated because we can't get students to produce what we want. This process gave me a better insight into why they couldn't do what I wanted."

It is encouraging to see this type of analytical thinking about student performance become an automatic "self-questioning script." At first, teachers followed the analysis process in a step-by-step manner. In time, however, the inquiry stance became second nature. "It is automatic; I do it without thinking. The change is embedded. Before, I had to force it. I used the question sheets. Now I do it automatically."

Professional Knowledge

We have also seen teachers gain valuable professional knowledge about their curriculum, students, methods, assessment, and contextual factors. For example, a high school science teacher discovered that her expectations

for writing assignments were not clear because she was not sure how to teach writing. After seeking help from an English teacher in the study group, she was able to clarify outcomes and use new instructional strategies. She noticed (and documented) marked improvement in her students' writing.

Alignment Among Standards, Assessments, and Instruction

A large part of school reform involves the alignment of curriculum guidelines with assessments and instruction. As a result of their experience with CASL, many teachers realized that they could improve in this area. For example, one teacher noted, "If they were busy, then I hoped they learned something. But now I know." This teacher explained that she had dutifully followed the teacher's edition of the textbook, but now she uses her assessment of student understanding of the standards to help plan her instruction. Another elementary teacher stated, "This experience has changed my understanding of my subject matter to the extent that it has made me think more about this gap between teachers' expectations and students' actual successes (or lack thereof)."

Collaborative Sharing of Expertise

We frequently receive comments about the opportunity to problem solve with other teachers. As one teacher explained, "We talked about different things that we could do. It helped to be able to work with someone instead of just trying to do it on your own." In her reflections, one teacher stated, "I have learned a great deal from other teachers during this process." We have also seen wonderful mentoring of new teachers occur in the study groups, for example, sharing of rubrics and assessment ideas. One first-year teacher stated, "It taught me to re-look and talk to everybody and get help."

Professional Awareness and Self-Assessment

During CASL sessions, many teachers come to surprising realizations about their professional practice. Typically, these are private, internal "a-ha" moments. For example, they may realize that they do not have a thorough understanding of a crucial concept in math or that a particular assessment does not really get at the target learning area or standards.

Some teachers awaken to the uncomfortable fact that they have prematurely given up on a student, possibly due to their own cultural background. CASL is designed to provoke such insights in an environment of respect and commitment to student success. It is a safe place to admit a professional or personal shortcoming.

As one teacher remarked, "It made me look at my teaching styles. It made me really think about what I was doing and why I was doing it. I understood myself more." A common statement found in the final reflections is, "I now know I need more [professional] training on [e.g., teaching of reading for comprehension]."

NBPTS Certification

The first group of 49 CASL teachers included 12 who applied for National Board for Professional Teaching Standards (NBPTS) certification. All 12 went through this rigorous teacher-assessment process and received the certification. They reported that the CASL project helped them immensely, especially in writing their analyses of student learning and the reflections on their practice.

This remark summarizes many of the ways CASL benefits teachers:

I think about teaching differently. I spend more time talking with students and listening to what they are saying. I ask, "Why did you do it this way?" The process made my strategies better and I feel like I have more ability in the classroom. I am a better teacher because I have a lot more confidence and I can figure out what their problems are.

Benefits to Parents and Organizations

We are happy to report that the CASL system also benefits parents and organizations. The teachers' clarity about what they want their students to be able to do in the target learning area results in *clearer communication with parents* and other teachers. As one principal stated, "Parents love the fact that you can use work samples to talk to them about their children. 'This is where your child started, and this is where he ended up.'" A parent shared, "I've seen my child's portfolio from the beginning and . . . compared to now, he's achieved so much. . . . It's such a big difference."

As teachers begin to discuss standards and assessments within grade levels, a higher degree of curriculum consistency can be reached. When such discussions occur across grade levels, teachers begin to delineate a logical sequence of skills from grade to grade. As teachers in one school compared the writing rubrics for each grade level, they found inconsistencies in what was required and made changes to close the gaps. Such insights can have a positive effect on *curriculum alignment* and school improvement efforts.

The detailed information about students' learning is also useful in setting *school improvement goals* and for documenting student growth that results from curriculum and instructional interventions. One school found that its

teachers did not thoroughly understand the specific nature of their students' reading problems. After using a reading assessment and charting the results, they were able to find programs tailored to the needs of the students.

The student-learning data gathered early in the year can assist with school *decisions about the allocation of resources*. For example, as a result of analyzing each classroom's data on language-arts skills, staff at one school decided that some classrooms needed more paraprofessionals than others. Since all teachers were involved in interpreting the assessment data together, they agreed that this was the best way to help students succeed.

Professional-learning planning is often easier after CASL because teachers are aware of where and how they need to grow. When teachers are masters of their own destiny, they are more likely to value what they learn and integrate it into their professional knowledge base. After studying students' writing in science, some teachers requested more professional learning on the teaching of writing. In other groups, teachers might request professional learning in cultural proficiency after hearing others struggling with reaching children from cultures different than their own. As one principal said, "It allows you to use your limited professional development monies in a more precise manner that meets teacher needs and student needs."

One of the greatest benefits to the school community is the *culture for collaborative inquiry* developed through CASL groups, schools, and districts. As teachers and other leaders join together with the explicit purpose of helping students grow in a particular learning area, they develop a sense of collective responsibility, moral purpose, and collegiality.

SUMMARY

When schools implement all of CASL's distinct and essential features with fidelity, the result is increased cultural proficiency, teaching effectiveness, and student success. The story of Sue and Nika illustrates just what can be accomplished when teachers engage in such transformative learning.

Sue's level of collective efficacy soared as a result of her CASL inquiry. She ended the year believing that with the help of her colleagues she could tackle any future challenge that may come her way. Her group's inquiry not only enriched her professional knowledge about how to teach history and writing, her study of Native American students revealed how limiting one's own cultural lenses can be when setting student expectations and designing lessons. As a result, Sue left the school year with a long summer reading list around issues of culturally proficient instruction.