This brief provides a research-based blueprint for teacher learning, including the goals it can serve, strategic content priorities, and effective approaches or strategies. In “learning centered” schools—where there is an emphasis on both student and teacher learning—teacher professional communities are the hub of a learning system that focuses on instructional improvement. These communities are strategically linked with various other modes of professional development within and outside the school.

A school is more likely to be effective in supporting high levels of student learning and well-being when it also plays a significant role in teacher learning. Although this point is supported by decades of research, few teachers have regular access to intensive and effective learning opportunities. More often, they experience professional development as episodic, superficial, and disconnected from the problems of practice.

Recent research suggests that there is a critical need to make teacher learning a top priority and to rethink all aspects of it: the location, the goals it serves, the content priorities, and the strategies or approaches. This brief suggests conceptual benchmarks for best practice in teacher professional communities and professional development derived from research. Table 1 summarizes the benchmarks for best practice and compares them with typical existing practices.

**Focus on the School**

Today, a new vision of teacher learning is emerging from research. School-based professional communities are the core of the system. These communities are purposefully and coherently linked with external professional development opportunities.

In the past, most professional development for teachers took place outside the school, in formal settings such as workshops and university courses. Now, the concept of professional development has been broadened to encompass the full range of activities—formal and informal, within and outside the school—that engage teachers or administrators in new learning about their professional practice.

We have moved away from an individualistic view of teacher growth to one that emphasizes the importance of building the collective capacity of the school staff. Every school has an important stake in promoting teacher learning. Effective professional development builds individual and collective staff expertise and equips the school to tackle its most pressing goals, priorities, and problems.
### Table 1. Benchmarks for Professional Community and Professional Development

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<thead>
<tr>
<th>Benchmarks for…</th>
<th>Moving from…</th>
<th>Moving toward…</th>
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<tr>
<td>Purposes for professional development</td>
<td>Individual knowledge or change</td>
<td>Individual, collective, and school goals:</td>
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<td></td>
<td></td>
<td>▪ Making headway on school goals and problems</td>
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<td>▪ Building knowledge and skill to teach to high standards</td>
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<td>▪ Cultivating a strong professional community</td>
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<td>▪ Sustaining professional commitment.</td>
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<td>Content focus of professional development</td>
<td>Unfocused “laundry list” of topics not related to school improvement goals</td>
<td>Focus on the “instructional triangle”:</td>
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<td></td>
<td>Relationship to student learning unclear, unexamined, or left up to teachers to figure out</td>
<td>▪ Pedagogical content knowledge</td>
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<td></td>
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<td>▪ Student thinking, learning, and assessment</td>
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<td>▪ Understanding and responding to student diversity.</td>
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<tr>
<td>Strategy for professional development</td>
<td>Episodic training events on topics often disconnected from practice</td>
<td>School-based professional communities are the core; these are coherently linked with external professional development opportunities.</td>
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<td></td>
<td>Strategies poorly designed to achieve effect</td>
<td>Strategies have characteristics associated with effectiveness: collective participation, active learning, coherence, sustained duration.</td>
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<td>Professional community as resource for professional learning</td>
<td>Professional community a weak resource for professional learning</td>
<td>Continuous learning is a schoolwide norm; learning is embedded in the professional community.</td>
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<td>Little attention by school leaders to building strong professional community</td>
<td>Cultivating professional community is a focus for school leaders.</td>
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<td>Working conditions weakly or unevenly conducive to professional learning</td>
<td>Working conditions are conducive to professional learning (teaching assignment, time, space, materials, and access to colleagues).</td>
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<tr>
<td>External professional development supports</td>
<td>Insufficient external support for teacher learning and school capacity building</td>
<td>Multiple external professional development opportunities link school professional communities with</td>
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<td></td>
<td></td>
<td>▪ New advances in knowledge about subject content, learning, and teaching</td>
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<td></td>
<td></td>
<td>▪ Opportunities to understand students and their diverse communities</td>
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<td>▪ Externally developed tools and materials.</td>
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Goals for Teacher Learning
Every school has a stake in teacher learning. The value of teacher learning can be judged by the extent to which it enables the school to address four ambitious goals that join the needs of individual teachers to the collective interests of the school.

Addressing the School’s Goals. A key test of professional development lies in its capacity to mount a strong collective response to schoolwide goals. Some goals arise out of a broad policy agenda affecting all schools—raising the bar of educational achievement for all students and closing the achievement gap. Others arise from interests that go beyond academic achievement, such as fostering students’ social, moral, and political development or their self-confidence and autonomy. Finally, each school must be prepared to address issues that reflect its unique circumstances, such as meeting the needs of an influx of new immigrants.

Teaching to High Standards. A second test is whether teachers come to know more over time about their subjects, their students, and their practice and to make informed use of what they know. Sound hiring practices are one resource for ensuring teacher quality, but hiring practices are not sufficient. Insights into teacher expertise reveal the complex interplay of knowledge, skill, and disposition needed to teach well and the resulting need for continuous teacher learning throughout a career.

Cultivating Professional Community. Professional development might also be judged by its capacity for building (and building on) the structures, values, and intellectual and leadership resources of a professional community. In strong professional communities that yield higher levels of student achievement, staff members espouse a shared responsibility for student learning, and they collaborate on instructional improvement.

Sustaining Commitment to Teaching. A final test of professional development is whether it sustains teachers’ commitment to teaching by affording them satisfaction, support, and stimulation appropriate to their stage of career and by making good use of their expertise and experience. Intersections of professional career and professional development are important to consider, but they are often overlooked.

Strategic Content Priorities
The content of professional development for teachers has traditionally consisted of a laundry list of topics not strategically related to school improvement goals. More recently, there has been an emphasis in some places on “teaching to the test.” The research suggests that neither of these approaches is likely to yield the kind of significant improvements in teaching and learning that most reformers hope for. Instead, effective, research-based professional development is firmly rooted in the core problems of teaching and learning.

The instructional triangle (Figure 1) focuses our attention on “the stuff” that matters most in teaching and learning: the relationships between students, teacher, and content. This schema is a useful guide to establishing priorities for the content of professional development.

Working from the instructional triangle, three key entry points for professional development can be identified. Each represents one of the three principal relationships in the triangle and refers to teachers’ knowledge of subject content for teaching, students’ thinking and content learning, and student diversity.

Subject Content for Teaching. Simply knowing a subject is not sufficient for knowing how to teach it. Nor is familiarity with a generic set of teaching routines. Research indicates that teachers need a unique type of knowledge called pedagogical content knowledge. Broadly defined, this is the practical knowledge that enables teachers to transform the content and epistemology of a subject discipline for purposes of teaching. In other words, teachers must be able to find ways to connect the subjects they teach to students’ ideas and experiences in ways that enable them to understand it and build their skills.

Studies of various professional development approaches have identified characteristics that are most effective in developing teachers’ pedagogical content knowledge. One important characteristic is a sustained focus on subject teaching. Professional development experiences consistent with this goal should be strongly tied to the curriculum, instruction, and assessment that students will encounter.
A second set of desirable characteristics includes collective participation, active learning, and coherence. Individual participation has less of an influence than participation by groups of teachers from the same school, department, or grade level. Teachers (like students) learn more when they have opportunities for active learning, such as discussing student work. Finally, coherence—both linking activities with each other and building on teachers’ prior knowledge—is identified with program effectiveness.

Time matters, but in order to yield results, investments of time must be coupled with the kinds of strategic design choices related to content and process just described.

**Students’ Thinking and Content Learning.** Systematic attention to students’ thinking and learning pays off in improved teaching and student outcomes. Teachers can access student learning in several ways, including formative assessment, use of various kinds of performance assessments that track student progress, and collective examination of student work.

Formative assessment occurs in and through instruction. It provides both teachers and students with information on the progress of learning. Students can use the feedback it provides to self-correct, and teachers can use it to guide instruction.

Although the evidence suggests that formative assessment can boost student achievement as much or more than most other interventions, most teachers in the United States are ill prepared to make effective use of it. Teachers tend to think of assessment primarily for the purpose of grading.

Although expanding formative assessment is a promising school improvement strategy, implementing it would create professional development challenges in most schools. Changing beliefs and practices will involve sustained efforts of professional development and support. Some successful experiments have involved teacher participation in a series of one-day professional development experiences introducing the theory, interspersed with opportunities for teachers to try out new approaches and to discuss their ideas and changing practices over an extended period.

Another promising strategy is fostering conversations about student learning and achievement in teacher learning communities. One mark of schools that have made headway on closing achievement gaps is a propensity for conversations based in evidence of student progress. In gap-closing schools, these conversations occurred more frequently (a few times a month) than in other schools. Also, the evidence-based conversations were not limited to the results of external tests; they encompassed developing a collective capacity for formative assessment, taking stock of student achievement (summative assessment), and using multiple measures of student progress.

**Student Diversity.** Studies of teachers who are unusually successful with diverse students provide clues about the kind of professional development teachers need. These teachers have deep knowledge of subject matter, a conception of students as active participants in learning, and a passion for engaging their students.

In addition, studies of effective multicultural education emphasize the importance of building on children’s knowledge and strengths, accepting and capitalizing on differences, and creating a classroom environment that is physically and emotionally safe for learning.

When we add up the implications of these two strands of research, the importance of keeping all
the relationships suggested by the instructional triangle in view when preparing teachers to teach for diversity is clear. However, most professional development programs available today fail to do this. Those that emphasize subject-matter content usually stop short of specifically exploring how the content can be connected to the prior understandings of diverse students. Those that emphasize diversity are often too general and disconnected from subject matter. These two strands of professional development function like parallel lines rather than the intersecting lines suggested by the instructional triangle. Finding ways for these lines to intersect in the design of professional development is a challenge for the future.

A Hub and Spokes
Vigorous professional communities are hubs of activity in schools that emphasize teacher learning. These professional hubs have a variety of spokes that strategically link them to external sources of knowledge and other supports for teacher learning. Figure 2 illustrates school-based learning communities as the center of a larger constellation of coherently connected professional development opportunities and other supports for teacher learning. This vision of the most effective means for promoting teacher learning is a significant departure from existing practices that tend to emphasize sporadic training events outside the school.

Professional community exists at multiple levels and locations. One example might be a professional community located in a high school mathematics department that is linked within the school to a schoolwide improvement team and externally to a professional association and a university partner—all working together on a more challenging mathematics curriculum for the school.

The Meaning of Professional Community.
What do professional communities do? Teacher professional communities work together to enhance their own knowledge and continuously improve their practice in order to produce higher levels of student learning and achievement. The research evidence suggests that schools can achieve higher levels of student performance when teachers form a professional community oriented toward learning.

Teacher professional communities have several defining elements:

- Shared values and purposes
- Collective focus on and responsibility for student learning
- Collaborative and coordinated efforts to improve student learning

Figure 2. Linking Professional Community and Professional Development
Practices supportive of teacher learning, such as inquiry, problem solving, and advice giving

Collective control over important decisions affecting curriculum.

Professional communities may organize their learning around such activities as research-based curriculum reform, inquiry into teaching and learning processes, lesson study, and peer observation (either in person or through video clubs).

However, professional communities vary in significant ways. Not all of them are associated with improved student outcomes. Some may be “weak” professional cultures in which teachers feel a sense of collegiality but their practice remains private. Others are “strong” in that teachers actively collaborate and share a set of commitments regarding teaching and learning.

Two types of strong professional communities have been identified. One is tradition-oriented. Here, teachers unite to preserve their preferred conceptions of subject and pedagogy even in the face of student failure. The other type takes a more dynamic and innovative stance. In such communities, teachers routinely question teaching practices that are ineffective with students, develop shared expertise, feel collective obligations for student success, and exhibit a willingness to change.

The kinds of professional communities associated with student success are the strong and innovative ones that develop a shared responsibility for student learning and achievement. Collegiality and unfocused staff cooperation are not enough to make a difference.

Cultivating Professional Community.
Creating and sustaining a robust teacher professional community is a significant challenge for a school. The leadership must support norms conducive to the development of professional communities and nurture them as they develop. Teachers in effective professional communities are at ease with disclosing their teaching dilemmas; they value inquiry and in-depth discussion; and they are willing to help one another. They also acknowledge their differences and tolerate conflict.

Teacher communities need material, temporal, and intellectual resources to act productively on their commitments. Participants develop expectations and routines for extended talk about teaching. They make frequent and purposeful use of many types of curricular resources and samples of teacher and student work, such as teaching demonstrations and student projects.

Conclusion
At their best, high-quality professional development for teachers and vibrant teacher communities intersect to form strong foundations for the learning-centered school. Professional community and professional development are mutually supportive; it makes sense to link them strategically.

Thus, a school’s strategy for teacher learning has two parts. One element of the strategy involves investing time and money in teachers’ access to high-quality professional development inside and outside the school. High-quality professional development might involve teachers collectively in such experiences as summer institutes or teacher networks.

The second element focuses on creating the kind of teacher workplace in which teachers experience both structural supports for professional growth and an organizational ethos conducive to professional learning. Within-school professional communities typically occupy various naturally occurring niches, such as subject departments, grade-level groups, or schoolwide teams.

Although the nature and location of these teacher learning experiences differ, for maximum impact, they are all focused on one or more of the content priorities discussed earlier: developing teachers’ pedagogical content knowledge, enabling them to do a better job of connecting students with school knowledge, and making the most of student diversity.

Tip for Use: This material is most effectively used to frame group discussion among teachers and teacher-candidates in which the focus is on fundamentally rethinking professional community and professional development. As participants discuss the research concepts, they should be encouraged to contribute practical examples from their classrooms and school. The summary table in the brief can become an overhead transparency and may be useful as a discussion guide. The working paper on which this brief is based supports a more in-depth discussion.