
Appendix A

*Standards for Professional Learning**

LEARNING COMMUNITIES

Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment.

Professional learning within communities requires continuous improvement; promotes collective responsibility; and supports alignment of individual, team, school, and school system goals. Learning communities convene regularly and frequently during the workday to engage in collaborative professional learning to strengthen their practice and increase student results. Learning community members are accountable to one another to achieve the shared goals of the school and school system and work in transparent, authentic settings that support their improvement.

Engage in Continuous Improvement

Learning communities apply a cycle of continuous improvement to engage in inquiry, action research, data analysis, planning, implementation, reflection, and evaluation. Characteristics of each application of the cycle of continuous improvement are

- the use of data to determine student and educator learning needs;
- identification of shared goals for student and educator learning;

* From Learning Forward. (2011). *Standards for Professional Learning* (3rd ed.). Oxford, OH: Author, pp. 24–50.

professional learning to extend educators' knowledge of content, content-specific pedagogy, how students learn, and management of classroom environments;

selection and implementation of appropriate evidence-based strategies to achieve student and educator learning goals;

application of the learning with local support at the work site;

use of evidence to monitor and refine implementation; and

evaluation of results.

Develop Collective Responsibility

Learning communities share collective responsibility for the learning of all students within the school or school system. Collective responsibility brings together the entire education community, including members of the education workforce—teachers, support staff, school system staff, and administrators—as well as families, policy makers, and other stakeholders to increase effective teaching in every classroom. Within learning communities, peer accountability rather than formal or administrative accountability ignites commitment to professional learning. Every student benefits from the strengths and expertise of every educator when communities of educators learn together and are supported by local communities whose members value education for all students.

Collective participation advances the goals of a whole school or team as well as those of individuals. Communities of caring, analytic, reflective, and inquiring educators collaborate to learn what is necessary to increase student learning. Within learning communities, members exchange feedback about their practice with one another, visit each other's classrooms or work settings, and share resources. Learning community members strive to refine their collaboration, communication, and relationship skills to work within and across both internal and external systems to support student learning. They develop norms of collaboration and relational trust and employ processes and structures that unleash expertise and strengthen capacity to analyze, plan, implement, support, and evaluate their practice.

While some professional learning occurs individually, particularly to address individual development goals, the more one educator's learning is shared and supported by others, the more quickly the culture of continuous improvement, collective responsibility, and high expectations for students and educators grows. Collective responsibility and participation foster peer-to-peer support for learning and maintain a consistent focus on shared goals within and across communities. Technology facilitates and

expands community interaction, learning, resource archiving and sharing, and knowledge construction and sharing. Some educators may meet with peers virtually in local or global communities to focus on individual, team, school, or school system improvement goals. Often supported through technology, cross-community communication within schools, across schools, and among school systems reinforces shared goals, promotes knowledge construction and sharing, strengthens coherence, taps educators' expertise, and increases access to and use of resources.

Communities of learners may be various sizes, include members with similar or different roles or responsibilities, and meet frequently face-to-face, virtually, or through a combination. Educators may be members of multiple learning communities. Some communities may include members who share common students, areas of responsibility, roles, interests, or goals. Learning communities tap internal and external expertise and resources to strengthen practice and student learning. Because the education system reaches out to include students, their families, community members, the education workforce, and public officials who share responsibility for student achievement, some learning communities may include representatives of these groups.

Create Alignment and Accountability

Professional learning that occurs within learning communities provides an ongoing system of support for continuous improvement and implementation of school and system-wide initiatives. To avoid fragmentation among learning communities and to strengthen their contribution to school and system goals, public officials and school system leaders create policies that establish formal accountability for results along with the support needed to achieve results. To be effective, these policies and supports align with an explicit vision and goals for successful learning communities. Learning communities align their goals with those of the school and school system, engage in continuous professional learning, and hold all members collectively accountable for results.

The professional learning that occurs within learning communities both supports and is supported by policy and governance, curriculum and instruction, human resources, and other functions within a school system. Learning communities bridge the knowing-doing gap by transforming macro-level learning—knowledge and skill development—into micro-level learning—the practices and refinements necessary for full implementation in the classroom or workplace. When professional learning occurs within a system driven by high expectations, shared goals, professionalism, and peer accountability, the outcome is deep change for individuals and systems.

Related Research

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LEADERSHIP

Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning.

Leaders throughout the preK–12 education community recognize effective professional learning as a key strategy for supporting significant school and school system improvements to increase results for all students. Whether they lead from classrooms, schools, school systems, technical assistance agencies, professional associations, universities, or public agencies, leaders develop their own and others' capacity to learn and lead professional learning, advocate for it, provide support systems, and distribute leadership and responsibility for its effectiveness and results.

Develop Capacity for Learning and Leading

Leaders hold learning among their top priorities for students, staff, and themselves. Leaders recognize that universal high expectations for all students require ambitious improvements in curriculum, instruction, assessment, leadership practices, and support systems. These improvements require effective professional learning to expand educators' knowledge, skills, practices, and dispositions. All leaders demand effective professional learning focused on substantive results for themselves, their colleagues, and their students. Leaders artfully combine deep understanding of and cultural responsiveness to the community they serve

with high expectations and support for results to achieve school and school system goals. They embed professional learning into the organization's vision by communicating that it is a core function for improvement and by establishing and maintaining a public and persistent focus on educator professional learning.

Leaders of professional learning are found at the classroom, school, and system levels. They set the agenda for professional learning by aligning it to classroom, school, and school system goals for student and educator learning, using data to monitor and measure its effects on educator and student performance. They may facilitate professional learning, coach and supervise those who facilitate it, or do both. As facilitators of professional learning, they apply a body of technical knowledge and skills to plan, design, implement, and evaluate professional learning. As coaches and supervisors of those who facilitate professional learning, they develop expertise in others about effective professional learning, set high standards for their performance, and use data to give frequent, constructive feedback.

To engage in constructive conversations about the alignment of student and educator performance, leaders cultivate a culture based on the norms of high expectations, shared responsibility, mutual respect, and relational trust. They work collaboratively with others, such as school- and system-based resource personnel and external technical assistance providers, so that all educators engage in effective job-embedded or external professional learning to meet individual, team, school, and system goals.

Systems that recognize and advance shared leadership promote leaders from all levels of the organizations. Leaders can hold formal roles, such as principal, instructional coach, or task force chair, for long periods of time or informal roles, such as voluntary mentor or spokesperson, for shorter periods. All leaders share responsibility for student achievement among members of the school and community. Leaders hold themselves and others accountable for the quality and results of professional learning. Leaders work collaboratively with others to create a vision for academic success and set clear goals for student achievement based on educator and student learning data.

Advocate for Professional Learning

Leaders clearly articulate the critical link between increased student learning and educator professional learning. As supporters of professional learning, they apply understanding of organizational and human changes to design needed conditions, resources, and other supports for learning and change.

As advocates for professional learning, leaders make their own career-long learning visible to others. They participate in professional learning within and beyond their own work environment. Leaders consume information in multiple fields to enhance their leadership practice. Through learning, they clarify their values and beliefs and their influence on others and on the achievement of organizational goals. Their actions model the attitudes and behavior they expect of all educators.

Leaders engage with all stakeholders—those within the education workforce, students, public officials who oversee schools, parent and community organizations, and the business community—to communicate the importance of professional learning. They engage parents and other caretakers in the education of their children and establish partnerships with key community organizations to promote the success of all students.

Create Support Systems and Structures

Skillful leaders establish organizational systems and structures that support effective professional learning and ongoing continuous improvement. They equitably distribute resources to accomplish individual, team, school, and school system goals. Leaders actively engage with policy makers and decision makers so that resources, policies, annual calendars, daily schedules, and structures support professional learning to increase student achievement. Leaders create and align policies and guidelines to ensure effective professional learning within their school systems or schools. They work within national, regional, and local agencies to adopt standards, monitor implementation, and evaluate professional learning's effectiveness and results.

Related Research

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RESOURCES

Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning.

Effective professional learning requires human, fiscal, material, technology, and time resources to achieve student learning goals. How resources are allocated for professional learning can overcome inequities and achieve results for educators and students. The availability and allocation of resources for professional learning affect its quality and results. Understanding the resources associated with professional learning and actively and accurately tracking them facilitates better decisions about and increased quality and results of professional learning.

Prioritize Human, Fiscal, Material, Technology, and Time Resources

Resources for professional learning include staff, materials, technology, and time, all dependent on available funding. How these resources are prioritized to align with identified professional learning needs affects access to, quality of, and effectiveness of educator learning experiences. Decisions about resources for professional learning require a thorough understanding of student and educator learning needs, clear commitment to ensure equity in resource allocation, and thoughtful consideration of priorities to achieve the intended outcomes for students and educators.

Staff costs are a significant portion of the resource investment in professional learning. Costs in this category include school and school system leaders and other specialized staff who facilitate or support school- or school system–based professional learning, such as instructional coaches, facilitators, and mentors, as well as salary costs for educators when professional learning occurs within their workday. The time that leaders commit to professional learning, either their own or for those they supervise, is a cost factor because it is time these leaders are investing in professional learning; managing this time is another area of responsibility for leaders.

Time allocated for professional learning is another significant investment. Education systems worldwide have schedules that provide time in the school day for teacher collaboration and planning to increase student learning. Learning time for educators may extend into afterschool meetings, summer extended learning experiences, and occasional times during the workday when students are not present.

Professional learning embedded into educators' workdays increases the opportunity for all educators to receive individual, team, or school-based

support within the work setting to promote continuous improvement. Dedicated job-embedded learning time elevates the importance of continuous, career-long learning as a professional responsibility of all educators and aligns the focus of their learning to the identified needs of students they serve. Including substantive time for professional learning, 15 percent or more, within the workday shifts some costs for external professional learning to support job-embedded professional learning.

Technology and material resources for professional learning create opportunities to access information that enriches practice. Use of high-speed broadband, web-based and other technologies, professional journals and books, software, and a comprehensive learning-management system is essential to support individual and collaborative professional learning. Access to just-in-time learning resources and participation in local or global communities or networks available to individuals or teams of educators during their workday expand opportunities for job-embedded professional learning.

Investments in professional learning outside the school or workplace supplement and advance job-embedded professional learning. To increase alignment and coherence between job-embedded and external professional learning, both must address the individual, school, and school system goals for educator and student learning.

When economic challenges emerge, schools and school systems often reduce investments in professional learning. In high-performing countries, professional learning is valued so highly as a key intervention to improve schools that reducing it is not an option. Top-performing businesses frequently increase training and development in challenging times. In lean times, professional learning is especially important to prepare members of the workforce for the changes they will experience; maintain and increase student achievement; develop flexibility to detect and adapt to new economic conditions and opportunities; and sustain employee morale, retention, commitment, and expertise.

Monitor Resources

Resources for professional learning come from many sources, including government allocations, public and private agencies, and educators themselves. Tracking and monitoring these resources is challenging, yet essential. Some costs, such as those for staff, registrations, consultants, materials, stipends for mentor teachers, and relief teachers, are relatively easy to track. Others, such as the portion of time educators are engaged in job-embedded professional learning and technology used for professional learning, are more difficult to monitor. Yet without a consistent and comprehensive

process to track and monitor resources, it is difficult to evaluate the appropriateness or effectiveness of their allocation and use.

The level of funding for professional learning in schools varies tremendously. Some studies on professional learning in public schools have suggested that the investments range from less than 1 percent of total operating expenses to as high as 12 percent. In the highest-performing countries, investments in professional learning for educators, particularly teachers and principals, are much higher. Decisions about funding must specifically address inequities in learning needs and opportunities to learn and be given highest priority so that all students and the educators who serve them have the resources to achieve at the highest levels.

Coordinate Resources

The coordination of resources for professional learning is essential to their appropriate and effective use. With funding for professional learning, school improvement, and other reform initiatives coming from multiple sources and for multiple purposes, ensuring alignment and effectiveness in resource use is paramount to ensuring success. School and school system leaders are primarily responsible for coordinating resources. However, all educators have a shared responsibility to understand and contribute to decisions about and monitor the effectiveness of resources allocated for professional learning.

To make certain that resources invested in professional learning achieve their intended results, school system leaders regularly convene representatives of all stakeholders to examine and recommend changes to policies, regulations, and agreements related to professional learning.

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DATA

Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning.

Data from multiple sources enrich decisions about professional learning that lead to increased results for every student. Multiple sources include both quantitative and qualitative data, such as common formative and summative assessments, performance assessments, observations, work samples, performance metrics, portfolios, and self-reports. The use of multiple sources of data offers a balanced and more comprehensive analysis of student, educator, and system performance than any single type or source of data can. However, data alone do little to inform decision making and increase effectiveness.

Thorough analysis and ongoing use are essential for data to inform decisions about professional learning, as is support in the effective analysis and use of data.

Analyze Student, Educator, and System Data

Data about students, educators, and systems are useful in defining individual, team, school, and system goals for professional learning. Probing questions guide data analysis to understand where students are in relationship to the expected curriculum standards and to identify the focus for educator professional learning. Student data include formal and informal assessments; achievement data such as grades and annual, benchmark, end-of-course, and daily classroom work; and classroom assessments. Other forms of data, such as those that cover demographics, engagement, attendance, student perceptions, behavior and discipline, participation in extracurricular programs, and postgraduation education, are useful in understanding student learning needs, particularly if they are analyzed by student characteristics.

Knowing student learning needs guides decisions about educators' professional learning, yet student data alone are insufficient. A comprehensive understanding of educators' learning needs is essential to planning meaningful professional learning. Sample data to consider for identifying goals for educator learning include preparation information, performance on various assessments, educator perceptions, classroom or work performance, student results, and individual professional learning goals.

Changes at the student and educator levels are best sustained when school and system-level learning occur simultaneously. School and system administrators also engage in data collection and analysis to determine changes in policy, procedures, fiscal resources, human resources, time, or technology, for example, needed to support school- and team-based learning. Administrators might analyze data about inputs, such as fiscal, personnel, and time allocation; outputs, such as frequency of participation, level of engagement, and type of communication; and outcomes, such as changes in educator practice and student achievement.

Assess Progress

Data also are useful to monitor and assess progress against established benchmarks. At the classroom level, teachers use student data to assess the effectiveness of the application of their new learning. When teachers, for example, design assessments and scoring guides and engage in collaborative analysis of student work, they gain crucial information about the effect of their learning on students. Evidence of ongoing increases in student learning is a powerful motivator for teachers during the inevitable setbacks that accompany complex change efforts.

At the school level, leadership teams use data to monitor implementation of professional learning and its effects on educator practice and student learning. Engaging teams of teacher leaders and administrators in analyzing and interpreting data, for example, provides them a more holistic view of the complexity of school improvement and fosters collective responsibility and accountability for student results.

Frequent collection and use of data about inputs, outputs, and outcomes of professional learning reinforce the cycle of continuous improvement by allowing for ongoing adjustments in the learning process to increase results for students, educators, and systems. Ongoing data collection, analysis, and use, especially when done in teams, provide stakeholders with information that sustains momentum and informs continuous improvement.

Evaluate Professional Learning

Those responsible for professional learning implement and maintain standards for professional learning and use the standards to monitor, assess, and evaluate it. Well-designed evaluation of professional learning provides information needed to increase its quality and effectiveness. Evaluation of professional learning also provides useful information for those who advocate for professional learning; those responsible for

engaging in, planning, facilitating, or supporting professional learning; and those who want to know about the contribution of professional learning to student achievement.

Internal and external evaluators conduct evaluations of professional learning. Some professional learning, such as programs funded through grants or other special funding, requires formal, external evaluations. Whether or not an external evaluation is required, all professional learning should be evaluated on an ongoing basis for its effectiveness and results. For example, a school system might engage in a rigorous evaluation of its mentoring and induction program every three years and collect other output data annually for formative assessment.

Questions that guide the evaluation of professional learning address its worth, merit, and effects. Evaluation questions are designed based on the goals of professional learning and the various audiences interested in the evaluation. For example, federal policy makers might want to know whether the investment in professional learning contributed to changes in student achievement. School system leaders may want to know whether increasing time for teacher collaboration and adding coaches result in changes in teacher practice and student learning. Teachers might want to know whether the implementation of new instructional practices increased their effectiveness with certain types of students. Evaluators design a process to answer the evaluation questions, gather quantitative and qualitative data from various sources, analyze and interpret the data, form conclusions, and recommend future actions.

Evaluation of professional learning includes examination of data related to inputs, outputs, and outcomes. Evaluation of professional learning follows a rigorous process, international standards for evaluation, and a code of ethics for evaluators.

Related Research

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LEARNING DESIGNS

Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes.

Integrating theories, research, and models of human learning into the planning and design of professional learning contributes to its effectiveness. Several factors influence decisions about learning designs, including the goals of the learning, characteristics of the learners, their comfort with the learning process and one another, their familiarity with the content, the magnitude of the expected change, educators' work environment, and resources available to support learning. The design of professional learning affects its quality and effectiveness.

Apply Learning Theories, Research, and Models

Cognitive psychologists, neuroscientists, and educators have studied how learning occurs for nearly a century. The resulting theories, research, and models of human learning shape the underlying framework and assumptions educators use to plan and design professional learning. While multiple designs exist, many have common features, such as active engagement, modeling, reflection, metacognition, application, feedback, ongoing support, and formative and summative assessment, that support change in knowledge, skills, dispositions, and practice.

Professional learning occurs in face-to-face, online, and hybrid settings. Some professional learning focuses on individual learning, while other forms focus on team-based or whole-school learning. Most professional learning occurs as a part of the workday, while other forms occur outside the school day. Both formal and informal designs facilitate and organize educator learning. Some learning designs use structured processes such as courses or workshops. Others are more fluid to allow for adjustments in the learning process. Some learning designs require team members or external experts as facilitators, while others are individually organized. Learning designs use synchronous or asynchronous interactions, live or simulated models and experiences, and print and nonprint resources to present information, model skills and procedures, provide low-risk practice, and support transfer to the workplace.

Job-embedded learning designs engage individuals, pairs, or teams of educators in professional learning during the workday. Designs for job-embedded learning include analyzing student data, case studies, peer observation or visitations, simulations, co-teaching with peers or specialists, action research, peer and expert coaching, observing and analyzing

demonstrations of practice, problem-based learning, inquiry into practice, student observation, study groups, data analysis, constructing and scoring assessments, examining student or educator work, lesson study, video clubs, professional reading, or book studies. Learners and facilitators of learning may weave together multiple designs within on-site, online, or hybrid learning to achieve identified goals and to differentiate learning designs to meet the unique needs of individual learners. Learning designs that occur during the workday and engage peers in learning facilitate ongoing communication about learning, develop a collaborative culture with peer accountability, foster professionalism, and support transfer of the learning to practice.

Technology is rapidly enhancing and extending opportunities for professional learning. It particularly facilitates access to, sharing, construction, and analysis of information to enhance practice. Technology exponentially increases possibilities for personalizing, differentiating, and deepening learning, especially for educators who have limited access to on-site professional learning or who are eager to reach beyond the boundaries of their own work setting to join local or global networks to enrich their learning.

Select Learning Designs

When choosing designs for professional learning, educators consider multiple factors. The first is the intended outcome, drawn from analysis of student and educator learning needs. Learning designs that engage adult learners in applying the processes they are expected to use facilitate the learning of those behaviors by making them more explicit. Effective designs for professional learning assist educators in moving beyond comprehension of the surface features of a new idea or practice to developing a more complete understanding of its purposes, critical attributes, meaning, and connection to other approaches. To increase student learning, educator learning provides many opportunities for educators to practice new learning with ongoing assessment, feedback, and coaching so the learning becomes fully integrated into routine behaviors.

Educators are responsible for taking an active role in selecting and constructing learning designs that facilitate their own and others' learning. They choose appropriate learning designs to achieve their individual, team, or school goals. Educators' learning characteristics and preferences also inform decisions about learning designs. Learners' backgrounds, experiences, beliefs, motivation, interests, cognitive processes, professional identity, and commitment to school and school system goals affect how educators approach professional learning and the effectiveness of various learning designs. Decisions about learning designs consider all phases of the learning process, from knowledge and skill acquisition to application, reflection, refinement, assessment,

and evaluation. Learning designers consider how to build knowledge, develop skills, transform practice, challenge attitudes and beliefs, and inspire action.

Promote Active Engagement

Active engagement in professional learning promotes change in educator practice and student learning. Active engagement occurs when learners interact during the learning process with the content and with one another. Educator collaborative learning consistently produces strong, positive effects on achievement of learning outcomes. Active engagement respects adults as professionals and gives them significant voice and choice in shaping their own learning. Through active engagement, educators construct personal meaning of their learning, are more committed to its success, and identify authentic applications for their learning. Active learning processes promote deep understanding of new learning and increase motivation to implement it. Active learning processes include discussion and dialogue, writing, demonstrations, inquiry, reflection, metacognition, co-construction of knowledge, practice with feedback, coaching, modeling, and problem solving. Through exploration of individual and collective experiences, learners actively construct, analyze, evaluate, and synthesize knowledge and practices.

Related Research

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IMPLEMENTATION

Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change.

The primary goals for professional learning are changes in educator practice and increases in student learning. This is a process that occurs over time and requires support for implementation to embed the new learning into practices. Those responsible for professional learning apply findings from change process research to support long-term change in practice by extending learning over time. They integrate a variety of supports for individuals, teams, and schools. Finally, they integrate constructive feedback and reflection to support continuous improvement in practice that allows educators to move along a continuum from novice to expert through application of their professional learning.

Apply Change Research

Effective professional learning integrates research about individual, organization, technical, and adaptive change through supporting and sustaining implementation for long-term change. Those responsible for professional learning, whether leaders, facilitators, or participants, commit to long-term change by setting clear goals and maintaining high expectations for implementation with fidelity. Drawing from multiple bodies of research about change, leaders provide and align resources, including time, staff, materials, and technology, to initiate and sustain implementation. Individuals, peers, coaches, and leaders use tools and metrics to gather evidence to monitor and assess implementation. Leaders and coaches model salient practices and maintain a sustained focus on the goals and strategies for achieving them. Leaders create and maintain a culture of support by encouraging stakeholders to use data to identify implementation challenges and engage them in identifying and recommending ongoing refinements to increase results. They engender community support for implementation by communicating incremental successes, reiterating goals, and honestly discussing the complexities of deep change.

Understanding how individuals and organizations respond to change and how various personal, cognitive, and work environment factors affect those experiencing change gives those leading, facilitating, or participating in professional learning the ability to differentiate support, tap educators' strengths and talents, and increase educator effectiveness and student learning.

Sustain Implementation

Professional learning produces changes in educator practice and student learning when it sustains implementation support over time. Episodic, periodic, or occasional professional learning has little effect on educator practice or student learning because it rarely includes ongoing

support or opportunities for extended learning to support implementation. Formal professional learning, such as online, on-site, or hybrid workshops, conferences, or courses, is useful to develop or expand knowledge and skills, share emerging ideas, and network learners with one another. To bridge the knowing-doing gap and integrate new ideas into practice, however, educators need three to five years of ongoing implementation support that includes opportunities to deepen their understanding and address problems associated with practice.

Ongoing support for implementation of professional learning takes many forms and occurs at the implementation site. It may be formalized through ongoing workshops designed to deepen understanding and refine educator practice. It occurs through coaching, reflection, or reviewing results. It may occur individually, in pairs, or in collaborative learning teams when educators plan, implement, analyze, reflect, and evaluate the integration of their professional learning into their practice. It occurs within learning communities that meet to learn or refine instructional strategies, plan lessons that integrate the new strategies, share experiences about implementing those lessons, analyze student work together to reflect on the results of use of the strategies, and assess their progress toward their defined goals. School- and system-based coaches provide extended learning opportunities, resources for implementation, demonstrations of the practices, and specific, personalized guidance. Peer support groups, study groups, peer observation, co-teaching, and co-planning are other examples of extended support. When educators work to resolve challenges related to integration of professional learning, they support and sustain implementation. Professional learning is a process of continuous improvement focused on achieving clearly defined student and educator learning goals rather than an event defined by a predetermined number of hours.

Provide Constructive Feedback

Constructive feedback accelerates implementation by providing formative assessment through the learning and implementation process. It provides specific information to assess practice in relationship to established expectations and to adjust practice so that it more closely aligns with those expectations. Feedback from peers, coaches, supervisors, external experts, students, self, and others offers information for educators to use as they refine practices. Reflection is another form of feedback in which a learner engages in providing constructive feedback on his or her own or others' practices.

Effective feedback is based on clearly defined expected behaviors, acknowledges progress toward expectations, and provides guidance for achieving full implementation. Giving and receiving feedback about

successes and improvements require skillfulness in clear, nonjudgmental communication based on evidence; commitment to continuous improvement and shared goals; and trusting, respectful relationships between those giving and receiving feedback.

To add validity and reliability to the feedback process, educators develop and use common, clear expectations that define practice so that the feedback is focused, objective, relevant, valid, and purposeful. Educators consider and decide what evidence best demonstrates the expected practices and their results. Frequent feedback supports continuous improvement, whereas occasional feedback is often considered evaluative. Feedback about progress toward expected practices provides encouragement to sustain the desired changes over time. Tools that define expected behaviors facilitate data collection and open, honest feedback.

Related Research

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OUTCOMES

Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards.

For all students to learn, educators and professional learning must be held to high standards. Professional learning that increases results for all students addresses the learning outcomes and performance expectations education systems designate for students and educators. When the content of professional learning integrates student curriculum and educator performance standards, the link between educator learning and student learning becomes explicit, increasing the likelihood that professional learning contributes to increased student learning. When systems increase the stakes for students by demanding high, equitable outcomes, the stakes for professional learning increase as well.

Meet Performance Standards

Educator performance standards typically delineate the knowledge, skills, practices, and dispositions of highly effective educators. Standards guide preparation, assessment, licensing, induction, practice, and evaluation. Frequently regulated by government agencies, standards establish requirements for educator preparation, define expectations of an effective workforce, guide career-long professional learning of the education workforce, and set fair and reliable indicators of effectiveness for measuring educator performance.

Teacher standards specify what teachers need to know and do to deliver on the promise of an effective, equitable education for every student. Typical areas included in teacher standards are knowledge, skills, and dispositions related to content knowledge; pedagogy; pedagogical content knowledge; assessment; understanding how students learn; understanding how students' cognitive, social, emotional, and physical development influences their learning; engaging students with diverse cultures, language, gender, socioeconomic conditions, and exceptionalities; engaging families and communities in student learning; creating learning environments; professional growth and development; and professional collaboration.

Standards for school and system leaders, like teacher standards, describe what effective leaders know and do so that every student and educator performs at high levels. Whether for teacher-leaders or school or school system administrators, these standards delineate specific expectations for preparation, assessment, licensure, professional learning, practice, and evaluation of those engaged in leadership roles within a school or school system. Typical areas covered in leader standards include establishing a vision and strategic plan for effective learning; leading learning of students and staff; developing workplace culture to support learning; engaging in their own professional learning; managing facilities, workforce, operations, and resources; establishing effective relationships and communication systems; managing change; sharing leadership with others; engaging staff and families in decision making; understanding and responding to the diverse needs of students and communities; understanding and responding to cultural, political, social, legal, and financial contexts; and securing individual, team, school, and whole-system accountability for student success.

Standards for other members of the education workforce delineate the unique knowledge, skills, qualities, and dispositions required of those in specialized roles. These roles include school nurses, guidance counselors, librarians, instructional coaches, resource personnel, classroom assistants, and other instructional and noninstructional staff who are vital to schools

and school systems. Standards for advanced or specialized certification guide professional learning for those who seek career advancement or differentiated roles.

Address Learning Outcomes

Student learning outcomes define equitable expectations for all students to achieve at high levels and hold educators responsible for implementing appropriate strategies to support student learning. Learning for educators that focuses on student learning outcomes has a positive effect on changing educator practice and increasing student achievement. Whether the learning outcomes are developed locally or nationally and are defined in content standards, courses of study, curriculum, or curricular programs, these learning outcomes serve as the core content for educator professional learning to support effective implementation and results. With student learning outcomes as the focus, professional learning deepens educators' content knowledge, pedagogical content knowledge, and understanding of how students learn the specific discipline. Using student learning outcomes as its outcomes, professional learning can model and engage educators in practices they are expected to implement within their classrooms and workplaces.

Build Coherence

Coherence requires that professional learning builds on what educators have already learned; focuses on learning outcomes and pedagogy aligned with national or local curriculum and assessments for educator and student learning; aligns with educator performance standards; and supports educators in developing sustained, ongoing professional communication with other educators who are engaged in similar changes in their practice. Any single professional learning activity is more likely to be effective in improving educator performance and student learning if it builds on earlier professional learning and is followed up with later, more advanced work to become a part of a coherent set of opportunities for ongoing professional learning. Coherence also ensures that professional learning is a part of a seamless process that begins in the preparation program and continues throughout an educator's career and aligns tightly with the expectations for effectiveness defined in performance standards and student learning outcomes.

Related Research

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