Indicator Explanation

DOMAIN	EFFECTIVE PRACTICE	INDICATOR
Leadership	Customize and target support to meet needs	1C.1 The School Improvement Team plans and implements improvement strategies that are focused on student learning needs and tailored to address the professional learning needs of individual teachers.

Explanation: Complexes and schools need to provide and assess the effectiveness of personalized professional development that enables educators' control and flexibility over selecting experiences that meet their needs and goals, and that offer job-embedded, competency-based, learning progressionals. PD must include models and modeling of effective practice and substantial time for teacher planning and collaboration within active professional communities. Educators should be further encouraged and supported with coaching supports, and if possible, cross-school networks that allow teachers to develop, test and refine strategies within supportive professional communities. PD must also be throughly evaluated for its effectiveness and translation into improvements in instructional practice.

Questions: Does PD need to be restructured to better personalize profes- sional learning for educators? How much control do educators have regarding the place, timing, and content of their PD? How can the district incorporate competency-based progression into PD systems? Do all teachers have access to a coach and models of exemplary practice? Are processes in place to support cross-school collaboration and net-works of support or communities of practice both in-person and virtually? How will the effectiveness of PD be evaluated and the extent to which it translates into changes in classroom instruction?

The one-size-fits-all model of traditional PD typically does not meet the needs of teachers, who should be viewed as professionals with a range of expertise and experience (Borko, 2004). Educators need to understand their students' experiences as learners, and personalized, competency-based professional learning plans offer a way for teachers to set goals for improved competencies and chart a course for professional growth based on their expertise and experience (Pape & Vander Ark, n.d.; SRI International, 2018; Schifter, 2016; U.S. Department of Education, n.d.). Cator, Schneider, & Vander Ark (2014) suggest that high quality ongoing professional learning opportunities in student-centered systems should offer:

1. Some degree of teacher control over time, place, path and/or pace;
2. Balance between teacher-defined goals, goals developed through teacher evaluation efforts, and school/district goals;
3. Job-embedded and meaningful integration into classroom instruction; and,
4. Competency-based progression.

Teachers must be empowered to make decisions about the professional learning they need, be encouraged to develop their own challenging and individualized professional learning plans, follow through to attain mastery, and share their learning and evidence with colleagues (Calvert, 2016; Overstreet, 2018). Teachers

also need to see models of best practices as part of their development (Bingham et al., 2018; Darling-Hammond, Hyler, & Gardner, 2017), and adequate school time for planning, access to learning sciences research, and networks of supportive colleagues who address challenges, strategies and lessons learned through PD implementation (Pape & Vander Ark, n.d.). Implementing new curricula, tools and approaches most often also requires coaches or other expert personnel who can scaffold support for these practices for teachers (Darling-Hammond et al., 2017).

Gross and DeArmond (2018) concluded that schools needed extra support beyond traditional PD to develop educators' capacity for innovation. Innovation involves "a systematic and cyclical process of experimentation, testing, evaluation, and monitoring and refinement" (Gross & DeArmond, 2018, p. 26). Teachers needed support in building their capacity to create instructional models and test their effectiveness (e.g., through short-cycle Plan-Do-Study-Act approaches). One school had developed such a systematic approach:

Teachers in this school worked in teams to map out their strategies and approaches. When a team identified a problem, its members collectively considered data on the problem and potential strategies to address it. Together they decided on one or more strategies that they would test independently. After testing the strategies, the team reconvened to reflect on the new strategy, its feasibility, and any data that showed how well the strategy worked. If any strategies proved worthwhile, the team would agree on what and how to implement them across the team. In addition to bringing coherence and a systematic process for problem solving, we noted that this deeply collaborative and reflective approach helped to quickly onboard new teachers to the school and team and created a strong professional culture. (Gross & DeArmond, 2018, p. 26)

The researchers offered the following recommendations to incorporate effective PD and establish networks of support:

1. Build embedded coaching supports for teachers developing new strategies by bringing in expertise in improvement systems such as Plan-Do-Study-Act;
2. Create structured support systems for principals to lead and manage change by developing a vision, the case for change, leveraging resources, and developing and communicating strategic plans for action; and,
3. Develop and implement a plan to get knowledge into the hands of many educators across the complex, through initiatives such as cross-school networks, and strategies to distribute lessons and instructional strategies that have been proven effective. (SRI International, 2018)

Teacher practice networks of support can serve as a way to provide professional learning and supplement other types of PD available to teachers by providing access, training and support for teachers' use of instructional resources and strat- egies, and facilitating teacher connections to other peers using these same resources and strategies (Gerdeman, Garrett, & Monahan, 2018). For example, in one Colorado district middle and high school teachers implementing PD collaborated with their subject colleagues to develop "common units":

These teachers not only draft unit plans together but also follow up to discuss implementation, review student work, and revise the plan for next year…When I talked with [a] teacher after class, he described the collaborative unit development process as deeply professional and engaging. This struck me as a triple win: the students had a high-quality learning experience, the teacher had a rewarding professional experience, and the burden of creating the unit was shared among a group of teachers rather than each teacher laboring in isolation. (Gross, 2017)

Gross (2017) concluded these types of networks can be valuable when they are teacher-led, capitalize on the knowledge teachers bring to the table while providing support and technical assistance to advance their collective learning, and include hallmarks of effective professional learning, such as opportunities for practice and feedback and treating teachers as adult learners working to solve "problems of practice."

Less formally, these supportive networks are often established on social media platforms to allow teachers to engage in self-regulated, individualized professional learning with or without the support of school leadership. These social media tools can "allow teachers to connect with peers, to collaborate across time and space, and to establish critical friendships that can support self-directed, individualized learning… [that] may or may not support common goals within a specific school" (Schifter, 2016, p. 232).

How Can Districts and Schools Measure the Effectiveness of Professional Learning?

Measuring the effectiveness of PD in both the short- and long-term has often been a challenge for districts and schools (Desimone, 2009), but should be an integral part of PD planning which is separate and distinct from teachers' performance evaluations (Haslam, 2010). The results of system-wide PD must be thoroughly evaluated by Complexes and leaders must develop clear outcomes for PD that are aligned with the Complex's vision (U.S. Department of Education, n.d.). Comprehensive evaluations should at a minimum address questions of 1) whether PD took place as planned and whether teachers who were expected to participate actually did; 2) teachers' perceptions of the PD's quality and usefulness, including school-based follow-up; and, 3) whether PD achieved the intended outcomes (Haslam, 2010).

Using adapted versions of tools such as the Observation Checklist for High-Quality Professional Development (Noonan, Gaum- er Erickson, Brussow, & Langham, 2015) can help districts further evaluate how well PD aligns with research-identified indicators of high-quality PD. Complexes and schools should additionally support teachers and other stakeholders as they "collaboratively examine evidence of student learning, including student work, recordings of classroom activity, formative and summative assessment results, learning analytics, and teacher and student observations and reflections" (U.S. Department of Education, n.d., p. 9) (see above on P-D-S-A cycles). The Complex and school can then use the analysis to inform goal setting and modifications to practice as needed.

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