

Measurement instruments for assessing the performance of professional learning communities



Tools

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This tool compiles 49 instruments for measuring key performance indicators of professional learning communities for teachers. It is intended as a resource for researchers, practitioners, and education professionals who seek solid evidence as the basis for planning, implementing, and evaluating teacher professional learning communities.

Why this tool?

For more than a decade education practitioners have promoted the professional learning community (PLC) as an effective way to provide professional development to teachers (Chappuis, Chappuis, & Stiggins, 2009; DuFour, Eaker, & DuFour, 2005). Though the term “professional learning community” has been used to describe many forms of learning communities (Talbert, 2010), in practice, PLCs are teams of educators (most commonly teachers) who meet regularly (often but not always during scheduled school time) to develop lesson plans, examine student work, monitor student progress, assess the effectiveness of instruction, and identify their professional learning needs. These collaborative teams expose teachers to new ideas and practices and can improve their pedagogy through a process of critical reflection (Hord, 1997; Wood, 2007). The goal is to boost student achievement by cultivating PLCs that can improve teaching and classroom practices.

As more PLCs are established in schools and districts nationwide, education stakeholders—researchers, practitioners, administrators, and policymakers—are interested in evaluating the performance of PLCs. Stakeholders want to know more about PLCs’ contributions to a range of outcomes, including teacher and administrator professional development, instructional practices, school culture, and, ultimately,

student learning and achievement. Although a common perception in the literature and among practitioners is that PLCs generally achieve their goals (for example, Hord, 1997; Stoll & Louis, 2007; Wood, 2007), rigorous evaluation studies of PLCs are limited in number and scope, and the evidence regarding their efficacy is mixed (Lomos, Hofman, & Bosker, 2011; Vescio, Ross, & Adams, 2008). Given these limitations, better assessments of PLC performance are needed.

Regional Educational Laboratory Mid-Atlantic created this tool in partnership with its Professional Learning Research Alliance, which brings together state and district education leaders. This group of educators expressed a need for a tool to help identify appropriate instruments for evaluating PLC initiatives. Accordingly, the primary objective of this project was to collect, review, classify, and archive valid and reliable measures of key performance indicators of teacher/principal PLCs that have been previously tested in the research literature.

The study team used a rigorous process of searching and screening the literature for relevant qualitative and quantitative measurement instruments that meet acceptable standards of quality, such as reliability and validity (see appendix A for a detailed description of this study's research methodology and analytical approach). The 49 measurement instruments located by the study team were compiled into this tool, which educators can use to evaluate various aspects of PLCs, including teacher/principal, team, and school/student levels. Because the lack of standard measures and performance indicators continues to challenge efforts to evaluate PLCs (Desimone, 2009), access to a comprehensive resource on PLC assessments could help researchers and practitioners review the evidence that can inform their planning, implementation, and evaluation of PLCs.

How to use this tool

Measurement is most effective in program evaluation when it is tailored to the specific circumstances of the program (Rossi, Lipsey, & Freeman, 2004), including:

- Its purpose: what the program is intended to achieve.
- Its inputs: the resources invested and activities carried out to achieve the goals.
- Its logic: the way the program is expected to achieve its goals.
- Its outputs: the program's activities/products, participants, and organization models.
- Its outcomes: the program's short-, intermediate-, and long-term impacts.
- The external factors that affect the program's ability to achieve its goals.

While measurement of variables can be a valuable tool for informing all stages of a program's lifecycle (planning, implementation, and evaluation), the information collected at each stage tends to have a different emphasis. For example, planning is often supported by formative evaluation, including the pilot-testing of crucial program elements, to inform the program's design. Implementation is typically accompanied by process evaluation, which focuses on collecting and analyzing quality control indicators such as whether all program activities and components are implemented according to the plan and whether they produce the desired response. The summative or program evaluation most commonly focuses on the outcomes and the degree to which program outputs contributed directly to these outcomes.

To help users of this tool identify and apply an appropriate measurement instrument that can answer their questions about teacher PLCs, this tool includes a PLC logic model previously created by the study team to determine which program-related variables may be most valuable to measure (Blitz, 2013; see appendix B); a decision aid to help select a relevant instrument (see appendix C); and a profile sheet for each instrument that provides information about the instrument and how it may be accessed and used (see appendix D).

The PLC logic model was based on a synthesis of the literature. The model focuses on identifying central elements of PLCs and the processes that link these elements to the intended outcomes of PLCs. Accordingly, the logic model is organized into three sections:

- Inputs: the resources typically invested in PLCs.
- Outputs: the specific activities of PLC members.
- Outcomes: the short-, intermediate-, and long-term impacts of PLCs.

Thus, the PLC logic model outlines the process of change that individuals (teachers and principals) and PLC teams are expected to experience, beginning with short-term outcomes (effects on attitudes, perceptions, and motivations), through intermediate-term outcomes (changes in teachers' instructional practices and establishment of effective and efficient work routines of PLC teams), and concluding with the intended long-term outcomes of PLCs (the institutionalization of norms and work routines that favor continuous learning and improvement).

Because change occurs simultaneously at multiple levels (the individual teacher/principal level, the PLC team level, and the school or district level), the logic model also organizes key variables by level. At the teacher/principal level, variables to be measured include beliefs about supportive conditions, self-efficacy, school culture, school/PLC functioning, school-based change, group dynamics processes, and group dynamics outcomes. Variables at this level also include perceived level of empowerment, perceived level of school academic optimism, professional development outcomes, instructional practices outcomes, performance outcomes, and satisfaction outcomes. Team-level variables include PLC team professional development outcomes, group dynamics outcomes, group dynamics processes, and PLC team culture. School/student-level variables include knowledge outcomes.

Researchers, practitioners, and education professionals who use this tool are encouraged to first consult the PLC logic model to determine their information needs (what variables should be measured to answer the question of interest) before settling on a measurement instrument. Once they are clear about what they want to know about the PLC and for what purpose (planning, implementation, or evaluation), users are encouraged to consult the table in appendix C in selecting which measurement instruments to use (see box 1). The table is organized by stage (planning, implementation, and evaluation—see column 1) and lists the key tasks that program evaluators typically take on in each stage (see column 1). For example, collecting baseline data on participants' PLC-related perceptions, expectations, and behavior is a key part of the planning process because this information can influence the program's optimal design and can also be used to track and assess the impact of PLCs once implemented.

Box 1. Finding a relevant measurement instrument

Step 1: Consult appendix B (the PLC logic model) to determine what information you want and for what purpose (planning, implementation, or evaluation).

Step 2: Depending on your goal (planning, implementation, or evaluation), use the table in appendix C to identify the key tasks you are interested in (column 1) and select the key indicators you are most interested in measuring (column 2). Finally, note the class or classes of measurement instruments most relevant to measuring the indicators of interest (column 3).

Step 3: Click on the hyperlink of a specific instrument in appendix D's table of contents to retrieve the information about the instrument, determine whether it meets your needs, and find out how to obtain a copy.

For each key task the table in appendix C also includes a list of key indicators to be measured based on the PLC logic model (see column 2) and finally the relevant class of instruments that can be tapped to measure these indicators (see column 3). The user can then find the instruments included in this class from the hyperlinked table of contents in appendix D. Clicking on each hyperlink will lead to a profile sheet with information about the particular instrument (that is, what concepts it is designed to measure, how it was used previously, and what is known about its validity and reliability) and how to obtain a copy of the instrument.

What measurement instruments are available to evaluate professional learning communities?

In all, the study team identified 49 relevant instruments—31 quantitative and 18 qualitative—that measure a range of teacher/principal-, team-, and school/student-level variables that assess one or more dimensions of PLCs (such as shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, and supportive conditions for structure and relationships). See appendix D for a detailed profile sheet for each instrument, which summarizes both descriptive information (instrument name, developers, description, and citations) and technical information (validity and reliability) about the instrument.

Table 1 summarizes the key characteristics of the measurement instruments included in this tool: level of analysis (teacher/principal, PLC team, or school/student) and type of outcomes measured (attitudes and beliefs, behaviors/practices, or performance indicators). While there are a total of 49 instruments, some instruments fit into more than one PLC outcome category because they were designed to measure multiple outcomes. The frequency count in each table cell reflects the instrument's primary outcome category—that is, an instrument is not listed more than once in each column, even if it falls under more than one category.

Most of the PLC-related instruments were designed to measure teacher/principal-level variables, such as beliefs and self-reported behaviors. Far fewer instruments were designed to measure team- or school/student-level variables (see table 1). In some cases there is no need to develop a PLC-specific measure (for example, student learning and achievement outcomes, for which standardized tests are routinely used). In such cases the task is not measurement related but involves modeling and analyzing plausible links between what PLCs produce by way of improved instructional practices and the targeted interventions and changes observed in student learning and achievement outcomes. Possibly, team- or school/student-level outcomes could be represented by aggregating the individual responses of teachers who belong to the same PLC team or are working in the same school. While this measurement approach may have some merit, it raises concerns (for example, validity and reliability, fallacy of composition) that would need to be addressed before such measures could be widely used.

The measurement instruments focus heavily on teachers' perceptions and beliefs about the effects that PLCs will have on them, as well as on the actions they will take following their PLC experience. Measures that capture team dynamics (such as work routines, communication, group norms, and leadership styles) are less common despite the emphasis in the literature on PLCs as a means to engage teachers in a community that focuses on continual learning and improvement (Hord, 1997; Wood, 2007). In addition, assessing the relationship between team dynamics and how well PLC teams reach their goals can aid in designing and implementing PLCs. Instruments that measure such variables have been developed and used in other research fields, most notably the study of small groups and organizations (such as Haynes, 2012; Kerr & Tindale, 2014) and could be used in evaluating PLCs. However, they would need to be adapted to the PLC context, and for this reason, they are not included in this tool.

Table 1. Distribution of measurement instruments by level and by type of professional learning community outcome

Professional learning community (PLC) outcome	Teacher/ principal level variables	PLC team level variables	School/ student level variables	Quantitative instruments	Qualitative instruments	Acceptable validity	Acceptable reliability
Belief measures							
Belief about supportive conditions	2	0	0	2	0	2	1
Efficacy-related beliefs	3	0	0	3	0	3	3
Beliefs about school culture	2	0	0	2	0	2	2
Beliefs about school/PLC functioning	5	0	0	4	1	4	4
Beliefs about school-based change	1	0	0	0	1	1	0
Beliefs about group dynamics processes	5	0	0	2	3	5	2
Beliefs about group dynamics outcomes	2	0	0	2	0	2	1
Perceived level of empowerment	1	0	0	1	0	1	1
Perceived level of school academic optimism	1	0	0	1	0	1	1
Behavior/practice measures							
Knowledge outcomes	0	0	1	1	0	1	1
Professional development outcomes	4	2	0	5	1	6	6
Instructional practices outcomes	8	0	0	4	4	6	5
Group dynamics processes	0	5	0	2	3	3	1
Performance measures							
Performance outcomes	1	0	0	1	0	1	1
Satisfaction outcomes	3	0	0	0	3	0	0
Group dynamics outcomes	0	2	0	1	1	2	1
PLC team culture	0	1	0	0	1	1	1

Source: Authors' analysis based on measurement instruments identified in the review.

Most instruments profiled in this tool are designed to collect information that is self-reported by teachers and principals in surveys and interviews. Few instruments are based on alternative methods of data collection, such as direct-observation protocols or systematic analysis of documents and other artifacts. There are some potentially useful data collection methodologies that have not been fully used in evaluating PLCs (although they are routinely used in education research). Future research on PLCs may benefit from these methodologies.

Limitations of this tool

The study team systematically compiled measures of key PLC performance indicators into a single resource. Researchers, practitioners, and education professionals can tap this resource for support in evaluating and improving PLC performance. While this tool may not list all previously used instruments, it does cover a broad range of PLC performance indicators for teacher/principal-, team-, and school/student-level outcomes. Evaluators can use these indicators regardless of the methodology they choose.

The choice of instrument should be based on the objectives or questions of the evaluation. The choice should also depend on the methodology that is best suited to answering the question of interest, given the circumstances and constraints in which a particular PLC operates (which is likely to differ across schools and districts). Although some measures or measurement items (for example, survey questions) may need to be modified to fit the circumstances of a particular PLC, the instruments profiled in this report provide a foundation for any needed adjustments.

Appendix A. Literature search methodology and analysis

The study team employed a rigorous process of searching and screening the scientific literature and other sources for relevant instruments for assessing professional learning communities (PLCs). Since much of the literature promotes the use of mixed methods to study the different aspects of PLCs, the study team decided to include both qualitative and quantitative instruments to help users make an informed choice of measurement instruments for their particular program or initiative.

Search methodology

The literature search strategy, which was used previously to search for relevant work on PLCs (Blitz, 2013), followed a two-tiered approach. The initial effort (tier 1) included searching the primary databases that archive peer-reviewed scholarly work on PLCs in education. In tier 1 the study team used the same combination of keywords that had previously been determined to be most effective for retrieving relevant work on PLCs in educational settings (“professional learning communities” OR “communities of practice”) AND [education] AND “professional development”) and experimented with additional keywords (such as methodology, method, measurement, measures, instrument, survey, and interview) to produce an optimal query (or search phrase). This strategy was precise (it retrieved mostly relevant results), while minimizing the likelihood of missing potentially relevant work resulting from the use of a too-specific search phrase. The search was restricted to studies available in English and published in peer-reviewed journals between January 1997 and January 2014. The study team manually scanned the retrieved sources for inclusion of measurement instruments or references to measurement instruments. Members of the study team had at least a master’s degree, and all had been previously involved in education research.

The study team applied the tier 1 search strategy to three databases (Academic Search Premier, ERIC, and PsycINFO) using this iterative procedure, which aimed to generate the most complete pool of qualitative and quantitative instruments. The basic (broadest) search using “methodology” as an additional keyword in the previously validated query returned a total of 492 published manuscripts. These manuscripts were manually screened for the inclusion of or reference to a measurement instrument that examined one or more dimensions of PLCs. Forty (8.1 percent) of these articles were retained for the next step of the analysis (coding). An additional eight relevant articles were found by manually searching the references in the 40 retained articles. Replacing the keyword “methodology” with “instrument” or “measures” yielded seven more relevant items beyond those retrieved by the basic search. Using “survey” added two more items to the pool. Thus, the study team identified 57 relevant peer-reviewed published works based on this combination of keywords.

Of the 57 relevant studies retrieved, about half employed qualitative instruments (interviews, focus groups, analysis of documents and artifacts), and half used quantitative instruments (surveys, observations, administrative records). In two-thirds of the cases the study included the instrument used, and in the remaining cases (for example, review articles or meta-analyses), the referenced instrument needed to be tracked down through the original reference or direct contact with the developer. Supporting the argument in the PLC literature that standard evaluation measures in the field are lacking, there was virtually no overlap in the instruments used in these different studies. In most cases, researchers created their own instrument and used it only once or twice. Hence, an important task of this project was to critically evaluate each available instrument for its desirable measurement properties (validity, reliability, and ability to detect a variable’s change over time).

The tier 2 search strategy supplemented the tier 1 efforts with additional targeted searches for relevant published work in books (including those written by practitioners), edited volumes, and state- or

government-sponsored reports, as well as relevant work published in conference proceedings. A combination of searching Google Scholar using the same query developed for the tier 1 search and snowball sampling was used to identify additional instruments based on the reference list of relevant sources found.

The basic (broadest) search during the tier 2 effort, which employed “instrument” as an additional keyword, returned 804 published works in journals, books, edited volumes, and state- or government-sponsored reports, as well as relevant work published in conference proceedings. These published works were scanned manually for the inclusion of or reference to a measurement instrument that examined one or more dimensions of PLCs. Twenty-four (2.9 percent) of these sources were retained for the next step of the analysis (coding). Of these sources, 18 were doctoral dissertations. The other six included papers presented at conferences, government-sponsored reports, and books. The results included both qualitative and quantitative methods. A few instruments were used in multiple studies identified in tier 2 or also appeared in studies retrieved from the tier 1 search.

Analysis

Study team members screened all instruments found during the tier 1 and tier 2 searches (that is, they read articles about the development process and validation of the instruments) to determine whether the instruments were appropriate to include in the tool. They paid particular attention to what the instruments were measuring, as well as their validity and reliability. They contacted developers for information about the instruments that was not in the published work, including technical information, as well as copies of the instruments. Based on the information provided in the published work or by the developers, the study team found that some instruments were inappropriate for inclusion (for example, they were too specific or they did not have strong reliability or validity). In addition, the developer of two instruments asked that the study team not include the surveys because they are too context-specific. Some qualitative instruments, such as interview protocols, were included even if formal assessments of the validity and reliability of the instruments had not been conducted. The study team decided to include them because other researchers could ensure the instruments’ validity and reliability by pretesting or sharing transcripts of the interviews with interviewees to verify the information.

For each instrument the study team created an instrument profile of PLC key performance indicators identified through the rigorous search procedure. Each profile contains the following information:

- Instrument name and developers.
- Description (for example, composition or dimensions measured and subscales, method of administration, number of items, and response scale).
- Technical information (validity and reliability).
- Availability (free or for a fee, where and how to obtain a copy of the instrument). The profile sheets provide a link to the vendor site when the instrument is offered for a fee and sometimes a link to the instrument when the instrument is free.
- Population (population the instrument has been used with).
- Primary citations (articles about the instrument’s development and technical information).
- Sample items (questions included in the instrument)
- Components of PLC logic model (the level of analysis: individual teacher/principal, PLC team, school/student, as well as specific constructs and outcomes).

The principal investigator reviewed each instrument profile for completeness and accuracy. The study team completed 31 instrument profiles for quantitative measures and 18 instrument profiles for qualitative measures and organized them by their level of analysis: individual teacher/principal, PLC team, school/student, as well as specific constructs and outcomes.

Appendix B. Logic model for professional learning communities

Inputs/investments	Outputs		Outcomes/impact		
	Activities/products	Participation	Short	Intermediate	Long
<p>Staff time and expertise</p> <p>Support services</p> <ul style="list-style-type: none"> • Teamwork-related training (working collaboratively, managing conflicts) • Training and technology troubleshooting for online collaboration tools (for online and hybrid models) • Professional learning community (PLC) protocols or guides • Incentives for participation • Logistics (regular meeting time and place; for online and hybrid models, online collaboration tools, tech support, and laptops) • Facilitation by coaches or lead teachers • Pairing of expert learners with less experienced learners <p>Funding</p> <ul style="list-style-type: none"> • School professional development funding • District professional development funding • External sources of funding (grants, awards) <p>Partnerships and networks</p> <ul style="list-style-type: none"> • Other schools and districts • Government offices • Parents and community • Higher education institutions 	<p>Meet (face-to-face or online) at least an hour a week in small groups to work collaboratively on improving instruction and student learning</p> <ul style="list-style-type: none"> • Discuss and shape goals and structure; assess collaboration • Design activities that promote self-reflection • Discuss and delineate challenges (ideally, based on assessment data) • Set learning goals and objectives that are aligned with national or state standards • Compare and share instructional strategies and identify effective approaches for meeting challenges • Revise or create common formative assessment instruments and protocols • Implement selected approaches • Collaboratively analyze assessment data for each learning target and identify nonproficient students, develop and implement differentiated instruction modules to assist nonproficient students, and extend and enrich learning for proficient students • Continually revise plan and curriculum 	<p>Participants</p> <ul style="list-style-type: none"> • Content area teachers • School administrators • Other school staff (instructional coaches) <p>Organizational models</p> <ul style="list-style-type: none"> • Single-grade PLC teams (aligning learning targets, curriculum, and assessments within a single grade) • Multigrade PLC teams (aligning curriculum and ensuring coherent learning pathways across grades) • Multischool PLC teams 	<p>Teacher/principal outcomes</p> <ul style="list-style-type: none"> • Greater focus on collaboration and openness to feedback • Greater focus on results (rather than instruction) • Enhanced knowledge of subject content • Enhanced skills in examining and analyzing data • Enhanced efficacy in teaching effectively in content area • Positive attitude toward improving student learning outcomes • Change in beliefs related to PLC team, or school/student outcomes <p>Team outcomes</p> <ul style="list-style-type: none"> • Defined roles and responsibilities • Defined goals and objectives of collaboration • Effective communication channels • Collaborative knowledge sharing • Collaborative data analysis and interpretation 	<p>Teacher/principal outcomes</p> <ul style="list-style-type: none"> • Mastery of subject content • Adoption of effective instructional practices, including increased use of differentiated instruction • Self-reflection and critical evaluation of the effectiveness of instructional practices • Personal commitment to collaborative learning <p>Team outcomes</p> <ul style="list-style-type: none"> • Shared values and vision emphasizing learning and research-based standards • Shared norms of collaboration • Mutual trust • Shared (distributed) leadership • Shift from sharing and exchanging knowledge and ideas to critically examining practice • Mutual accountability for student growth and success 	<p>Teacher/principal outcomes</p> <ul style="list-style-type: none"> • Professional growth, including increased ability to lead and respond to learning challenges • Increased job satisfaction • Stronger commitment to school's mission and goals <p>Team outcomes</p> <ul style="list-style-type: none"> • Institutionalization (integration of PLCs into teachers' daily work routine) • Knowledge dissemination <p>School/student outcomes</p> <ul style="list-style-type: none"> • Improved results for all students through collective, consistent, and context-specific professional learning • Culture of collaboration • Continued critical reflection on goals and practices • Students' continued improvement on statewide, school, and classroom assessments

Note: External factors found to facilitate or hinder successful PLCs: presence or absence of supportive school/district leadership and community support; structural/logistical support (blocked time and space to meet regularly, availability of and access to comparative assessment data, dedicated staff support); and degree of agreement or conflict with current school norms or teacher resistance.

Source: Blitz, 2013.

Appendix C. Deciding which instruments to use

To use this table, determine your goal (planning, implementation, or evaluation) as per column 1. Next, select the key indicators you are most interested in measuring given your goal from the relevant list of indicators in column 2, which are taken from the professional learning community logic model (see appendix B). Finally, consult the list of measurement instruments in the relevant cell in column 3 to identify potentially useful instruments that you can then find more details about by using the instrument profile sheets in appendix D.

Key tasks	Key indicators	Relevant class of instruments in appendix D
Planning		
Assess staff's motivation to engage in PLCs	<ul style="list-style-type: none"> • Staff beliefs regarding the likely impact of PLCs on them personally • Staff relationship with colleagues, their school, and their students 	<ul style="list-style-type: none"> • Beliefs about school-based change • Beliefs about school/PLC functioning • Beliefs about group dynamics outcomes • Beliefs about school culture
Determine staff's PLC readiness	<ul style="list-style-type: none"> • Prior experience with collaborative work • Trust in colleagues • Perceived collective commitment to collective inquiry and continuous improvement • Self-efficacy to collaborate in PLCs • Sense of empowerment to lead change • Receipt of PLC-relevant training 	<ul style="list-style-type: none"> • Beliefs about supportive conditions • Efficacy-related beliefs • Perceived level of empowerment • Beliefs about school/PLC functioning • Beliefs about school culture
Explore staff's concerns and perceived barriers regarding PLCs	<ul style="list-style-type: none"> • Perceived personal barriers (such as time and commitment) • Perceived institutional or logistical barriers (space, meeting time, available resources to support PLCs) • Perceived cultural barriers (lack of trust, lack of commitment or incentives for collaboration) • Professional concerns (relationship between PLCs and teacher evaluation) 	<ul style="list-style-type: none"> • Beliefs about school-based change • Beliefs about school/PLC functioning • Beliefs about group dynamics processes • Beliefs about school culture • Beliefs about supportive conditions
Implementation		
Assess staff's attitudes toward and satisfaction with PLC implementation	<ul style="list-style-type: none"> • Satisfaction with PLC experience • Optimism about PLC's success • Beliefs about likely outcomes of PLCs 	<ul style="list-style-type: none"> • Satisfaction outcomes • Perceived level of school academic optimism • Beliefs about school-based change • Beliefs about school/PLC functioning
Assess PLC team climate and development	<ul style="list-style-type: none"> • Functional group dynamics • Group leadership • Supportive team norms 	<ul style="list-style-type: none"> • Group dynamics processes • PLC team culture • Team professional development outcomes
Identify objective and perceived barriers and challenges to implementation		<ul style="list-style-type: none"> • Beliefs about school-based change • Beliefs about school/PLC functioning • Beliefs about group dynamics processes • Beliefs about school culture • Beliefs about supportive conditions
Assess initial impact, if any, on classroom instruction and use of data to track students' progress	<ul style="list-style-type: none"> • PLC work and products (such as formative assessments) are informed by relevant student and instructional data • Work done in PLCs informs modification of instructional practices and student-tailored interventions 	<ul style="list-style-type: none"> • Professional development outcomes • Instructional practices outcomes

(continued)

Key tasks	Key indicators	Relevant class of instruments in appendix D
Evaluation		
Collect and analyze artifacts produced by the PLC team and determine the extent to which they inform instruction and assessment	<ul style="list-style-type: none"> • Number, quality, and standard use of artifacts created by PLC team, sharing of insights and best practices with other members of the community 	<ul style="list-style-type: none"> • Instructional practices outcomes • Performance outcomes • Knowledge outcomes
Assess contributions of PLCs to school culture	<ul style="list-style-type: none"> • Focus on and commitment to continuous improvement through collective learning and inquiry, institutionalization of PLCs in schools, adequate institutional support of PLCs 	<ul style="list-style-type: none"> • Beliefs about school-based change • Beliefs about school culture • Beliefs about supportive conditions
Evaluate contributions of PLCs to professional development of staff	<ul style="list-style-type: none"> • Teachers' improved knowledge mastery, greater perceived self-efficacy as teachers • Engagement in self-reflective assessment • Comfort using data to guide instructional practices 	<ul style="list-style-type: none"> • Professional development outcomes • Team professional development outcomes

PLC is professional learning community.

Appendix D. Professional learning community measurement instruments

The study team identified 49 relevant instruments—31 quantitative and 18 qualitative—that measure a range of teacher/principal-, team-, and school/student-level variables that assess one or more dimensions of professional learning communities (PLCs). This appendix contains a detailed profile sheet for each instrument, which summarizes both descriptive information and technical information about the instrument. The appendix begins with a hyperlinked table of contents that lists each measurement instrument. Clicking on a hyperlink leads to the profile sheet for that instrument.

Teacher/principal-level variables

Beliefs about supportive conditions

- Omnibus Trust Scale
- Teachers Using Technology Survey (see also *Instructional practices outcomes*)

Efficacy-related beliefs

- Collective Teacher Belief Scale
- Science Teaching Efficacy Belief Instrument
- Teachers' Sense of Efficacy Scale

Beliefs about school culture

- School Cultural Elements Questionnaire
- School Culture Scale

Beliefs about school/PLC functioning

- Group Development Questionnaire
- Principal Interview—School as a Learning Organization
- Professional Learning Communities Assessment—Revised
- Professional Learning Community Questionnaire
- School Professional Staff as Learning Community Questionnaire

Beliefs about school-based change

- Principal Interview—Watts (see also *Beliefs about school/PLC functioning*)

Beliefs about group dynamics processes

- Communities of Continuous Inquiry and Improvement Interview Protocol
- Moderator and Member Interviews for Online PLCs (see also *Beliefs about group dynamics outcomes*)
- School Community Survey
- Semi-Structured Teacher Interview Protocol—Levine (see also *Beliefs about group dynamics outcomes* and *Instructional practices outcomes*)
- Teacher Collaboration Assessment Survey

Beliefs about group dynamics outcomes

- Professional Learning Team Survey (see also *Beliefs about group dynamics processes*)
- Teacher Rating Scale

Perceived level of empowerment

- School Participant Empowerment Scale

Perceived level of school academic optimism

- School Academic Optimism Survey

Professional development outcomes

- Teacher Narratives
- Technology Survey (see also *Instructional practices outcomes*)
- Reflective, Ethical, and Moral Assessment Survey
- Standards Assessment Inventory—Revised

Instructional practices outcomes

- Instructional Practice Scale
- Inventory of Teaching and Learning
- Online Communities of Practice Semi-Structured Interview Protocol (see also *Satisfaction outcomes*)
- Post-Participation Teacher Interview: Literacy Learning Communities (see also *Beliefs about school culture*)
- Professional Learning Team Interview
- Reformed Teaching Observation Protocol
- Teacher Interview Protocol—Bitterman (see also *Beliefs about group dynamics processes*)
- Teacher Survey (see also *Satisfaction outcomes*)

Performance outcomes

- Classroom Assessment Scoring System

Satisfaction outcomes

- Interview and Focus Group Questions—Hoffman et al. (see also *Beliefs about group dynamics processes*)
- Teacher and Administrator Interview Protocol—Yarbrough (see also *Instructional practices outcomes*)
- Teacher Interview Protocol—Bunker (see also *Beliefs about group dynamics processes* and *Instructional practices outcomes*)

Team-level variables

Team professional development outcomes

- Learning Community Concepts Survey
- Professional Online Learning Community Survey

Group dynamics outcomes

- PLC Team Meeting Observation Guide
- PLC Team Meeting Observation Instrument

Group dynamics processes

- Artifacts: Quick Check Form and Norm Review
- Professional Learning Communities Observation Guide (see also *Team professional development outcomes*)
- Professional Learning Community Research Journal (see also *Group dynamics outcomes*)
- Teacher Collaboration Assessment Rubric
- Team Instructional Practice Survey (see also *Group dynamics outcomes* and *Instructional practices outcomes*)

PLC team culture

- Ethnographic Interviewing and Spradley's 1979 Grand Tour Questions (see also *Group dynamics processes*)

School/student-level variables

Knowledge outcomes

- Student Assessment of Their Learning Gains Survey

Omnibus Trust Scale (Omnibus T-Scale)

Developers: Wayne K. Hoy and Megan Tschannen Moran

Description

The Omnibus T-Scale assesses three dimensions of faculty trust: faculty trust in principals, colleagues, and clients (which includes students and parents). The instrument measures six facets of trust within each dimension: benevolence, reliability, competence, honesty, openness, and willingness to risk vulnerability. The questionnaire comprises 26 items, across the three subscales. Individuals respond using a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

The Omnibus T-Scale provides useful information to educators and researchers about areas that need improvement, as faculty trust has been shown to be related to several variables and outcomes, such as collective efficacy, adaptive and technical leadership in educational contexts, academic optimism, school mindfulness, teacher commitment to students, and student achievement.

Technical information

Validity

- The survey was submitted to a panel of experts, all professors at Ohio State University from either the College of Education or the Fisher Business School, to check the content validity of the items. There was consensus that the items measured all facets of trust for each dimension (Hoy & Tschannen-Moran, 1999).
- During a pilot study of the instrument, teachers were also asked to respond to additional measures, including a self-estrangement scale (Forsyth & Hoy, 1978), a sense of powerlessness scale (Zielinski & Hoy, 1983), a teacher efficacy scale (discussed in Bandura, 1997), and one Likert item measuring the perception of conflict in the school. Discriminant validity of the measure was strong. Self-estrangement, powerlessness, and conflict were all negatively related to dimensions of trust, and teacher efficacy was positively related to the subscales of trust (Hoy & Tschannen-Moran, 2003).

Reliability

- Internal consistency was measured using Cronbach's alpha, and all coefficients for the three subscales were statistically significant: trust in principal (.98), trust in colleagues (.93), and trust in clients (.94) (Hoy & Tschannen-Moran, 2003).

Availability

- Price: Publicly accessible; free.
- A copy of the instrument, as well as scoring instructions, can be found at http://www.waynekhoy.com/faculty_trust.html.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to assess faculty trust in principals, colleagues, and clients.
- The instrument has also been translated into other languages (such as Chinese; Lee, Zhang, & Yin, 2011).

Primary citations

- Hoy, W. K. (2013). The Omnibus T-scale. Retrieved July 9, 2014, from http://www.waynekhoy.com/faculty_trust.html.
- Hoy, W. K., & Tschannen-Moran, M. (1999). The five faces of trust: An empirical confirmation in urban elementary schools. *Journal of School Leadership*, 9(3), 184–208.
- Hoy, W. K., & Tschannen-Moran, M. (2003). The conceptualization and measurement of faculty trust in schools: The Omnibus T-scale. In W. K. Hoy & C. G. Miskel (Eds.), *Studies in leading and organizing schools* (pp. 181–208). Greenwich, CT: Information Age Publishing.

Sample items

- Teachers in this school trust the principal.
- Teachers in this school are suspicious of each other.
- The principal of this school does not show concern for the teachers.
- Even in difficult situations, teachers in this school can depend on each other.
- Teachers can believe what parents tell them.
- The teachers in this school are open with each other.

Components of PLC logic model

- Teacher/principal-level variables: belief about supportive conditions.

Teachers Using Technology Survey

Developers: Cynthia Beatty Vavasseur

Description

The Teachers Using Technology Survey assesses the stage at which individual teachers perceive themselves to be in using technology in the classroom. The aim is to determine the level of confidence individual teachers perceive themselves as having for using technology in the classroom, and to measure teachers' self-efficacy on using technology in the classroom. This new survey was adapted from six instruments (Box, n.d.; Christensen, 1997; Knezek & Christensen, 1997; Norris & Box, 2005, Schwarzer & Jerusalem, 1993; Schwarzer, Schmitz, & Daytner, 1999).

The Teachers Using Technology Survey consists of four factors, including teachers' attitudes toward using computers as instructional tools, teachers' attitudes about their need for technology professional development, teachers' competence with using technology as an instructional tool, and teachers' confidence in integrating innovations. The instrument comprises 32 items. Teachers are asked to respond to each item using a Likert scale, ranging from strongly disagree to strongly agree. The Teachers Using Technology Survey can be administered before and after professional development programs to assess the effects of the intervention.

Technical information

Validity

- Content validity was established by modifying six existing published instruments to create the Teachers Using Technology Survey (Box, n.d.; Christensen, 1997; Knezek & Christensen, 1997; Norris & Box, 2005, Schwarzer & Jerusalem, 1993; Schwarzer, Schmitz, & Daytner, 1999).
- A pilot study was conducted with 70 middle school teachers to assess the validity of the instrument. Factor analysis supported the construct validity of the instrument.

Reliability

- No assessment of reliability was conducted.

Availability

- Price: Publicly accessible; free.
- A copy of the Teachers Using Technology Survey can be found in Vavasseur (2006).

Population

- The instrument has been administered to middle school teachers in a community located in the mid-south of the United States.

Primary citation

- Vavasseur, C. B. (2006). *How principal participation in an online community of practice impacts the professional development experience of middle school teachers*. (Doctoral dissertation). Retrieved from Louisiana State University Electronic Thesis & Dissertation Collection.

Sample items

- Computers are valuable tools that can be used to improve the quality of education.
- Teachers should know how to use computers in their classrooms.
- I need more training with technology.
- I believe I am a better teacher with technology.
- I feel comfortable working with a computer.
- I'm not afraid to let my students know I am still learning, too.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about supportive conditions outcomes and instructional practices outcomes.

Collective Teacher Belief Scale

Developers: Megan Tschannen Moran and Marilyn Barr

Description

The Collective Teacher Belief Scale was developed using the general format of the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001), which was based on Bandura's unpublished Teacher Self-Efficacy Scale. The scale assesses faculty's belief about its collective capability (as opposed to individual efficacy) to influence student achievement, despite any obstacles that could make learning difficult.

This instrument includes two subscales that measure the collective perception of the school's capacity for student discipline, as well as for instructional practices. The Collective Teacher Belief Scale contains 12 items. Teachers are asked to rate items on a nine-point scale with anchors at 1 (nothing), 3 (very little), 5 (some degree), 7 (quite a bit), and 9 (a great deal).

Previous research (Goddard, Hoy, & Woolfolk Hoy, 2000) has reported a positive association between collective teacher efficacy and school-level student achievement. In addition, collective efficacy has been shown to predict teacher commitment and influence the way faculty approach school-level improvement goals.

Technical information

Validity

- In a factor analysis, the 12 items loaded on one factor, with factor loadings ranging from .79 to .58, demonstrating adequate construct validity. When two factors were specified, the rotated factors divided along the predicted content, with factor loadings on the six items in the instructional strategies subscale ranging from .78 to .67 and the six items in the student discipline subscale ranging from .78 to .64 (Tschannen-Moran & Barr, 2004).

Reliability

- The instrument was field-tested in a study of 66 middle schools in the Commonwealth of Virginia, which found the Collective Teacher Belief Scale to demonstrate a reliability of .97. The student discipline subscale had a reliability of .94, and the instructional strategies subscale had a reliability of .96 (Tschannen-Moran & Barr, 2004).

Availability

- Price: Publicly accessible.
- A copy of the instrument can be found at http://mxtsch.people.wm.edu/ResearchTools/CTB_OMR.pdf.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to measure faculty's belief about its collective capability to influence student learning.
- The instrument has also been translated into other languages (such as Chinese: Lee, Zhang, & Yin, 2011; Hebrew: Schechter & Tschannen-Moran, 2006).

Primary citation

- Tschannen-Moran, M., & Barr, M. (2004). Fostering student learning: The relationship of collective teacher efficacy and student achievement. *Leadership and Policy in Schools*, 3, 189–209.

Sample items

- How much can teachers in your school do to produce meaningful student learning?
- To what extent can school personnel in your school establish rules and procedures that facilitate learning?
- How much can teachers in your school do to help students master complex content?
- How much can your school do to help students feel safe while they are at school?
- How much can teachers in your school do to help students think critically?

Components of PLC logic model

- Teacher/principal-level variables: efficacy-related beliefs.

Science Teaching Efficacy Belief Instrument (STEBI)

Developers: Iris M. Riggs and Larry G. Enochs

Description

Based on Bandura's (1977) social learning theory, the STEBI assesses elementary teachers' efficacy beliefs in teaching science. The STEBI has two forms: Form A, used for in-service teachers, and Form B, used for preservice teachers. The instrument consists of two subscales: the Personal Science Teaching Efficacy scale and the Science Teaching Outcome Expectancy scale. The Personal Science Teaching Efficacy scale measures teachers' beliefs in their own ability to teach science. This subscale consists of 13 of the instrument's 25 items (or 23 items for Form B). The remaining 12 items (or 10 items for Form B) inform the Science Teaching Outcome Expectancy subscale, which assesses teachers' beliefs that student learning can be influenced by effective teaching. Teachers are asked to respond to each question using a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree).

As a measurement instrument, the STEBI can lead to additional understanding of teacher behavior, which can facilitate the development of strategies that may assist in teacher preparation and teacher professional development to improve elementary science teaching. The instrument can also be used to assess the effects of professional development strategies and interventions.

Technical information

Validity

- To ensure a high degree of content validity of Form A, a measurement expert edited all proposed items of the instrument for clarity. The 50 resulting items were submitted to a panel of judges. The judges were asked to classify the dimension of each item, rate each scale, and rate the total instrument's items and their representativeness. Items classified inconsistently by three of the five judges were eliminated.
- Factor analysis conducted during a field test of Form A consisting of 331 practicing elementary teachers supported the prediction that the scales are distinct and measurable constructs.
- Construct validity of Form B was evaluated with a sample of 212 preservice elementary teachers in California and Kansas using factor analysis. Results showed that both scales are distinct and measurable constructs.

Reliability

- During a pilot study of Form A consisting of 71 practicing elementary teachers, reliability analysis of the Personal Science Teaching Efficacy scale produced an alpha of .92. Reliability analysis of the Science Teaching Outcome Expectancy scale resulted in an alpha of .74; item-total correlations, however, revealed many weak items. After factor analysis was used to aid in the selection of items, a reliability analysis for the Science Teaching Outcome Expectancy scale was run again, with a resulting alpha of .73.
- The refined instrument for Form A was administered in a field test of 331 practicing elementary teachers. For the Personal Science Teaching Efficacy scale, an alpha of .91 was achieved. Two items were deleted because of low item-total correlations, which raised the alpha to .92. The Science Teaching Outcome Expectancy scale produced an alpha of .76. Two items of this subscale were also removed, raising the alpha to .77.
- Form B was field tested with a sample of 212 preservice elementary teachers. Reliability analysis of the Personal Science Teaching Efficacy scale produced an alpha coefficient of .90. The Science Teaching Outcome Expectancy scale produced an alpha coefficient of .76.

Availability

- Price: Publicly accessible.
- A copy of the STEBI-Form A and scoring instructions can be found in Riggs and Enochs (1990).
- A copy of the STEBI-Form B and scoring instructions can be found in Enochs and Riggs (1990).

Population

- The instrument has been administered to elementary in-service and preservice teachers throughout the United States to assess teachers' efficacy beliefs in teaching science.

Primary citations

- Enochs, L. G., & Riggs, I. M. (1990). Further development of an elementary science teaching efficacy belief instrument: A preservice elementary scale. *School Science & Mathematics, 90*(8), 694–706.
- Riggs, I. M., & Enochs, L. G. (1990). Towards the development of an elementary teacher's science teaching efficacy belief instrument. *Science Education, 74*(6), 625–637.

Sample items

- I am continually finding better ways to teach science.
- I know the steps necessary to teach science concepts effectively.
- The inadequacy of a student's science background can be overcome by good teaching.
- The low science achievement of some students cannot generally be blamed on their teachers.
- When teaching science, I usually welcome student questions.
- I wonder if I have the necessary skills to teach science.

Components of PLC logic model

- Teacher/principal-level variables: efficacy-related beliefs.

Teachers' Sense of Efficacy Scale (TSES)

Developers: Megan Tschannen Moran and Anita Woolfolk Hoy

Description

The TSES assesses the extent to which teachers believe they can demonstrate their capabilities in three key areas: student engagement, instructional strategies, and classroom management. According to Tschannen-Moran and Woolfolk Hoy (2001), this teacher self-efficacy scale is considered superior to previous measures because it has a "unified and stable factor structure and assesses a broad range of capabilities that teachers consider important to good teaching without being so specific as to render it useless for comparisons of teachers across contexts, levels, and subjects" (pp. 801–802). Researchers have used this tool to assess how teachers' sense of efficacy is related to student outcomes, such as student achievement, motivation, and students' own sense of efficacy. In addition, researchers have used this instrument to assess the relationship between teachers' efficacy beliefs and their behavior in the classroom, including their level of planning and organization, as well as their willingness to experiment with new methods to better meet their students' needs.

The TSES comprises 24 items, or 12 items on the short form, across three subscales. Individuals respond using a Likert scale, ranging from 1 to 9 with pivoting points at 1 (nothing), 3 (very little), 5 (some influence), 7 (quite a bit), and 9 (a great deal).

Technical information

Validity

- To evaluate construct validity, Tschannen-Moran and Woolfolk Hoy (2001) correlated the TSES with other teacher efficacy instruments, including the RAND (Armor et al., 1976), the Teacher Efficacy Scale (Gibson & Dembo, 1984), Ashton Vignettes (Ashton, Buhr, & Crocker, 1984), the Webb Scale (Ashton, Olejnik, Crocker, & McAuliffe, 1982), the Teacher Locus of Control Scale (Rose & Medway, 1981), and the Responsibility for Student Achievement Questionnaire (Guskey, 1981). Data analyses determined that the TSES was reasonably valid and reliable for measuring the construct of teacher efficacy.

Reliability

- Internal consistency was measured using Cronbach's alpha, and all coefficients for the factored subscales were statistically significant: Instructional Strategies (.91), Classroom Management (.90), and Student Engagement (.87) (Tschannen-Moran & Woolfolk Hoy, 2001).
- Intercorrelations between the subscales of Instructional Strategies, Classroom Management, and Student Engagement were 0.60, 0.70, and 0.58, respectively ($p < 0.0001$). Means for the three subscales in the testing studies ranged from 6.71 to 7.27 (Tschannen-Moran & Woolfolk Hoy, 2001).

Availability

- Price: Publicly accessible with restrictions on use.
- For permission to use the TSES, contact Megan Tschannen-Moran at mxtsch@wm.edu or Anita Woolfolk Hoy at hoy.17@osu.edu.
- A copy of both the long and short forms, as well as scoring instructions, can be found at http://mxtsch.people.wm.edu/research_tools.php.

Population

- The instrument has been administered to professional staff in various grade levels in many U.S. school districts throughout the United States to assess teachers' perceived self-efficacy.

Primary citation

- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 785–805.

Sample items

- How much can you do to get through to the most difficult students?
- To what extent can you make your expectations clear about student behavior?
- How much can you do to help your students value learning?
- To what extent can you craft good questions to your students?
- How much can you gauge student comprehension of what you have taught?

Components of PLC logic model

- Teacher/principal-level variables: efficacy-related beliefs.

School Cultural Elements Questionnaire (SCEQ)

Developers: Robert Cavanagh and Graham B. Dellar

Description

The SCEQ assesses aspects of school culture, including leadership, collegial relations, collaboration, commitment, and professional relations. The SCEQ consists of two parts: what actually takes place in school (Actual Form) and what respondents might prefer their school to be like (Preferred Form).

The SCEQ comprises 42 practice (Actual Form) and 43 value (Preferred Form) items, across six subscales (Cavanagh & Dellar, 1996). Individuals respond using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire provides information to assess the school's readiness for improvement, to design intervention programs, and to monitor the impact of intervention initiatives.

Technical information

Validity

- To evaluate the construct validity of the questionnaire, Cavanagh and Dellar (1997) examined correlations among the six subscales with a sample of 422 teachers in eight Western Australian schools. Correlations ranged from .12 to .84. Mean correlations of each subscale with each of the other subscales ranged from .35 to .55, with most being close to .49. These moderate correlations indicate that the six identified subscales were measuring a single construct.
- The questionnaire was also administered to two schools one year later. About a third of the teachers in the English, math, science, and social studies departments in these schools were also interviewed. A comparison of the responses to the questionnaire and the interview over a one-year interval showed changes in a similar direction on both assessments. This indicates that the SCEQ can validly detect changes in culture.
- Cavanagh and Dellar (2001) demonstrated evidence of criterion-related validity of the instrument, as they found similar outcomes on scales of the SCEQ and those of the Parental Involvement in Schooling Questionnaire (PISQ). In particular, similar results were found on the scales of Collaboration on the SCEQ and PISQ and the scales of Emphasis on Learning on the SCEQ and School Culture on the PISQ.

Reliability

- Reliability coefficients for the six subscales of the Actual Form range from .70 to .81 (Cavanagh & Dellar, 1997).

Availability

- Price: Free.
- To obtain a copy of the SCEQ and receive permission to use the instrument, contact Robert Cavanagh at R.Cavanagh@exchange.curtin.edu.au.

Population

- The instrument has been administered to teachers in various grade levels in many school districts in Western Australia and the United States to examine aspects of school culture, including leadership, collegial relations, collaboration, commitment, and professional relations.

Primary citations

- Cavanagh, R. F., & Dellar, G. B. (1996, April). *The development of an instrument for investigating school culture*. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY, April 8–12.
- Cavanagh, R. F., & Dellar, G. B. (1997, March). *School culture: A quantitative perspective on a subjective phenomenon*. Paper presented at the Annual Meeting of the American Research Association, Chicago, IL, March 24–28.
- Cavanagh, R. F., & Dellar, G. B. (2001). *School improvement: Organisational development or community building?* Paper presented at the Annual Conference of the Australian Association for Research in Education.

Sample items

- Teachers have an understanding of how to support each other.
- Expressions of the school's future vision do not reflect staff consensus.
- Educational programs don't contribute to improving the quality of life in our society.
- Developing the social skills of students is important.
- Teachers do not make an effort to maintain positive relationships with colleagues.
- I am receptive to advice from colleagues about my teaching.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school culture.

School Culture Scale

Developers: The Consortium on Chicago School Research and the Consortium for Policy Research in Education developed scale items. Additional items specific to Cincinnati's team based schooling reform were developed in conjunction with the Cincinnati Public Schools, the Cincinnati Federation of Teachers, and the district's Interschool Council

Description

The School Culture Scale assesses dimensions of school culture, including peer collaboration, collective responsibility, faculty influence, deprivatization, and reflective dialogue. The Peer Collaboration subscale consists of four items and measures the extent of faculty collaboration around instructional, curricular, and administration issues. The Collective Responsibility subscale is made up of seven items and assesses the level at which school faculty feel responsible for the student body and the broader school environment beyond their specific students or assignments. The Faculty Influence subscale comprises eight items for classifying faculty involvement in school-related decisions, including staffing, finance, and other planning areas. The Deprivatization subscale consists of five items and assesses the extent to which teachers observe each other and receive suggestions or other feedback from colleagues. Finally, the Reflective Dialogue subscale comprises nine items and identifies the extent of teachers' meaningful interactions with colleagues on instructional and curricular issues.

Teachers are asked to respond to each question using a four-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree).

Technical information

Validity

- Factor analyses in research done for the Consortium for Policy Research in Education and Consortium on Chicago School Research found that the School Culture Scale items have strong construct validity.

Reliability

- Internal consistency was measured using Cronbach's alpha, and all coefficients for the factored subscales were statistically significant: Peer Collaboration (.74), Collective Responsibility (.94), Faculty Influence (.85), Deprivatization (.75), and Reflective Dialogue (.83).

Availability

- Price: Free.
- The items of the School Culture Scale are included in Supovitz (2002).

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to examine dimensions of school culture, including peer collaboration, collective responsibility, faculty influence, deprivatization, and reflective dialogue.

Primary citation

- Supovitz, J. (2002). Developing communities of instructional practice. *Teachers College Record*, 104, 1591–1626.

Sample items

- How many teachers in this school feel responsible to help each other do his or her best?
- How often have teachers received meaningful feedback on their performance from colleagues?
- How often have teachers visited each other's classrooms?
- To what extent do teachers have influence over school policy in the area of determining teaching assignments?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school culture.

Group Development Questionnaire (GDQ)

Developer: Susan A. Wheelan

Description

The GDQ assesses group effectiveness and productivity by examining complex interaction patterns among group members. The GDQ consists of 60 items across four subscales: I. Dependency and inclusion, II. Counterdependency and fight, III. Trust and structure, and IV. Work and productivity. Scale I measures the amount of energy that group members are exerting to cope with dependency and inclusion issues. Scale II assesses group dynamics relating to counterdependency and conflict. Scale III evaluates the amount of trust and structure in the group. Scale IV assesses the group's level of effectiveness and the group's success in accomplishing its tasks and goals (Wheelan, Murphy, Tsumura, & Kline, 1998).

Individuals respond using a five-point Likert scale, ranging from 1 (never true of this group) to 5 (always true of this group). After the assessment phase, a GDQ-certified consultant provides the group with feedback and intervention strategies to increase the group's effectiveness and productivity.

Technical information

Validity

- To assess construct validity, the GDQ was compared to a similar scale, the Group Attitude Scale (GAS; Evans & Jarvis, 1986). Results indicated that construct validity was in the moderate range for the GDQ and the GAS, with a significant positive correlation between the two measures overall and on all scales except Scale I (Wheelan & Hochberger, 1996).
- Evidence of criterion validity was found for the GDQ. Organizational groups that ranked high on external measures of productivity had significantly higher scores on GDQ Scales III and IV and higher effectiveness ratios than groups that ranked low on external productivity measures. High-ranked groups also scored lower on GDQ Scales I and II (Wheelan & Tilin, 1999).

Reliability

- Test-retest reliability for the GDQ ranged from .69 to .89 across the scales. All correlations were highly significant and supported the reliability of GDQ scales over time (Wheelan & Hochberger, 1996).
- Internal consistency was measured using Cronbach's alpha, and all coefficients were statistically significant: Scale I (.66), Scale II (.88), Scale III (.74), and Scale IV (.88) (Wheelan & Hochberger, 1996).

Availability

- Price: Accessible with restrictions and for a fee (must be a trained administrator).
- Information about the GDQ and the training program can be obtained by emailing gdq@gdqassoc.com, by calling 508-487-3750, or by mail to Dr. Susan A. Wheelan, President, GDQ Associates, 16 Aunt Sukey Way, Provincetown, MA 02657.
- The GDQ certification process consists of a four-day workshop aimed at teaching participants about the GDQ team assessment and intervention process.

Population

- Groups composed of adults in work and educational settings have used this instrument to measure teamwork effectiveness and complex interaction patterns.

Primary citations

- Wheelan, S. (1994). *The Group Development Questionnaire: A manual for professionals*. Philadelphia, PA: GDQ Associates.
- Wheelan, S., & Hochberger, J. (1996). Validation studies of the Group Development Questionnaire. *Small Group Research, 27*, 143-170.
- Wheelan, S. A., & Tilin, F. (1999). The relationship between faculty group effectiveness and school productivity. *Small Group Research, 30*, 59-81.

Sample items

- No sample items available. See availability section about obtaining a copy of the instrument.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school/PLC functioning.

Principal Interview—School as a Learning Organization

Developers: Sue C. Thompson, Larry Gregg, and John M. Niska

Description

Interviewing is considered a basic mode of inquiry. The Principal Interview—School as a Learning Organization can be conducted to gain an understanding of principals' beliefs and core values about leadership and learning. This interview can be conducted multiple times to assess changes resulting from interventions.

Availability

- Price: Publicly accessible; free.
- The interview questions can be found in Thompson, Gregg, and Niska (2004).

Population

- The instrument has been administered to middle school principals in a large, metropolitan Midwestern city and a midsize New England city.

Technical information

Validity

- No formal validity data were collected for this interview.

Reliability

- No formal reliability data were collected for this interview.

Primary citation

- Thompson, S. C., Gregg, L., & Niska, J. M. (2004). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online*, 28(1). Retrieved November 12, 2014, from <http://www.nmsa.org/Publications/RMLEOnline/tabid/101/Default.aspx>.

Sample items

- How do you define a learning organization/professional learning community?
- Do you believe your school is a learning organization?
- What do you do as a principal to facilitate making your school a learning organization?
- Do you feel that you, as a principal, have an impact on student learning?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school/PLC functioning.

Professional Learning Communities Assessment—Revised (PLCA-R)

Developers: Diane F. Olivier, Kristine Kiefer Hipp, and Jane Bumpers Huffman

Description

The PLCA-R assesses everyday classroom and school-level practices related to identified dimensions of PLCs. The PLCA-R is a 2010 revision of the initial Professional Learning Communities Assessment (2003). The questionnaire measures staff perceptions of school practices related to six dimensions of a PLC and its related attributes: shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions–relationships, and supportive conditions–structures (Olivier, Hipp, & Huffman, 2003).

The PLCA-R comprises 52 items across six scales. Staff members respond using a four-point Likert scale, from 1 (strongly disagree) to 4 (strongly agree).

Information gained from the results of this questionnaire can be used to formulate a PLC initial school plan. The PLCA-R can also be re-administered after the plan has been implemented for several months to assess the plan's effectiveness.

Availability

- Price: Accessible with restrictions on use; an online version of the questionnaire is available for \$1 per questionnaire, with a minimum order of 25 questionnaires. The cost is \$0.75 per survey for purchases of 250–500 questionnaires and \$0.50 per questionnaire for more than 500 questionnaires. The online PLCA-R allows a coordinator to quickly customize and deploy the questionnaire, as well as automatically report on the results as soon as the participants have completed the online questionnaire.
- For permission to use the PLCA-R, contact Dianne F. Olivier at dolivier@louisiana.edu.
- The online version of the questionnaire is available for purchase through Southwest Educational Development Laboratory (SEDL), either online (<http://www.sedl.org/pubs/search.html>) or by calling 1–800–476–6861. SEDL also allows users to request a demo account before making a purchase by sending an email to products@sedl.org. SEDL has an agreement with Drs. Olivier, Hipp, and Huffman to provide access to the online version of the PLCA-R.

Population

- The instrument has been administered to professional staff in various grade levels in many school districts throughout the United States to help determine the strength of practices within PLC dimensions in their own schools.

Technical information

Validity

- The instrument has demonstrated satisfactory construct validity through expert study and factor analysis.

Reliability

- Internal consistency was measured using Cronbach's alpha, and all coefficients for the factored subscales were statistically significant ($n = 1,209$): shared and supportive leadership (.94), shared values and vision (.92), collective learning and application (.91), shared personal practice (.87), supportive conditions–relationships (.82), supportive conditions–structures (.88), and one-factor solution (.97).

Primary citations

- Olivier, D. F., & Hipp, K. K. (2010). Assessing and analyzing schools as professional learning communities. In K. K. Hipp & J. B. Huffman (Eds.), *Demystifying professional learning communities. School leadership at its best*. Lanham, MD: Rowman & Littlefield Education.
- Olivier, D. F., Hipp, K. K., & Huffman, J. B. (2003). Professional learning community assessment. In J. B. Huffman & K. K. Hipp (Eds.), *Recruiting schools as professional learning communities*. Lanham, MD: Scarecrow Press.

Sample items

- The principal incorporates advice from staff members to make decisions.
- Leadership is promoted and nurtured among staff members.
- School goals focus on student learning beyond test scores and grades.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school/PLC functioning.

Professional Learning Community Questionnaire

Developer: Anna Kristin Sigurðardóttir

Description

The Professional Learning Community Questionnaire assesses nine dimensions of PLCs: shared values and vision that focus on students' learning, high expectation of students' academic achievement, shared leadership that values teachers' participation in making decisions, a perception of mutual support among staff, collaborative learning among professional staff that addresses students' needs, an organizational arrangement that supports teachers' collaboration, work habits that encourage collaborative learning, a social climate that supports collaborative learning, and job satisfaction and commitment.

This instrument has 62 items. Teachers are asked to respond to each item using a four-point Likert scale, ranging from 1 (strongly agree) to 4 (strongly disagree). This instrument can be administered on multiple occasions to track PLC development and progress over time.

Technical information

Validity

- The instrument has demonstrated satisfactory construct validity through expert study and factor analysis. Many of the nine variables included in the questionnaire had been validated in previous studies: (Hord, 1999; Louis, Marks, & Kruse, 1996; McLaughlin, & Talbert, 2001; Leithwood, & Louis, 1998)

Reliability

- Internal consistency was measured using Cronbach's alpha when the questionnaire was piloted in different school districts in Iceland. The reliability of the total score in the questionnaire was found to be acceptable (.93). Reliability coefficients were also measured for each factored subscale: value and vision focuses on student learning (.73), shared leadership (.80), mutual support among staff (.76), collaborative learning (.63), organizational arrangement (.53), the habits of work support collaboration (.65), the social climate (.58), satisfaction and commitment (.67), and expectations of student achievement (.31).

Availability

- Price: Free.
- To obtain a copy of the Professional Learning Community Questionnaire and permission to use the instrument, contact Anna Kristin Sigurðardóttir at aks@hi.is.

Population

- The instrument has been administered to professional staff in various grade levels in three schools in Iceland to help determine the strength of practices within each PLC dimension within each school. The instrument was originally created in Icelandic and then translated into English.

Primary citations

- Sigurðardóttir, A. K. (2006). *Studying and enhancing the professional learning community for school effectiveness in Iceland*. (Doctoral thesis). Retrieved November 18, 2014, from <https://notendur.hi.is/aks/Anna-Kristin-Sigurdardottir.pdf>.
- Sigurðardóttir, A. K. (2010). Professional learning community in relation to school effectiveness. *Scandinavian Journal of Educational Research*, 54(5), 395–412.

Sample items

- Teachers in this school are continually learning and seeking new ideas.
- There is an open and honest relationship among all staff, reflecting mutual trust.
- The principals encourage teachers to collaborate.
- I try to support my colleagues in implementing new ideas into teaching.
- I can count on the staff members to help me anytime even though it may not be part of their official field of work.
- Students in this school are motivated to learn and really want to succeed.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school/PLC functioning.

School Professional Staff as Learning Community Questionnaire (SPSLCQ)

Developer: Shirley M. Hord

Description

The SPSLCQ assesses a school's progress and level of maturity as a PLC. The questionnaire focuses on five attributes: shared beliefs, values and vision, shared supportive leadership, collective learning and its application, and supportive conditions and shared personal practice.

The questionnaire comprises 17 items across five dimensions. Each dimension contains a response scale, ranging from 1 (low) to 5 (high). The response scale has anchor statements at each end and at the midpoint to distinguish high, middle, and low ratings for each dimension. The instrument was designed to measure one overall construct for a total scale score, which indicates the extent to which teachers view their school as a positive learning community.

Availability

- Price: Free.
- To obtain a review copy of the questionnaire, email info@sedl.org. Schools that wish to administer the questionnaire must complete an online copyright request form at http://www.sedl.org/about/copyright_request.html. This form must be approved before the questionnaire can be reproduced or used.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to assess a school's progress as a PLC.

Technical information

Validity

- During a pilot test of the instrument with 28 participants conducted by Hord et al. (1999), concurrent validity was assessed using the School Climate Questionnaire. The correlation of the total score of the SPSLCQ with the total score of the School Climate Questionnaire was .82.
- Content validity was assessed at three stages: during development, early review, and modest reformatting of the instrument. In the first stage, the author established the content of the five dimensions from her review of the literature (Hord, 1997), as well as through her field research with southwest U.S. schools that functioned as PLCs. The second stage of the content validity assessment was conducted by three Regional Educational Laboratory Appalachia staff members, who independently reviewed the five dimensions and 17 descriptors. They modified the instrument slightly after reaching consensus on wording to gain additional clarity and consistency. The content validity assessment was completed in the third stage after the author agreed with the proposed changes.
- A field test was conducted with 690 teachers in 21 schools throughout Kentucky, Tennessee, Virginia, and West Virginia. Concurrent validity was assessed by administering a school climate instrument to a subsample ($n = 114$). The correlation between the SPSLCQ and the climate instrument was .7489 ($p < .001$). Construct validity was assessed using the known-group methodology and factor analysis (Hord et al., 1999).

Reliability

- The pilot test (mentioned above) assessed the reliability of the instrument. Cronbach's alpha for the 17 items was .92, indicating appropriate instrument internal consistency. The test-retest procedure measured the instrument's stability, which yielded a Cronbach's alpha of .94.
- The field test (mentioned above) further assessed the reliability of the instrument. Internal consistency was measured using Cronbach's alpha, which was .94. The instrument's alpha reliabilities were also computed for the 21 individual schools in the field test. These reliability scores ranged from .62 to .95, with most scores falling in the .80s and .90s. In addition, the test-retest reliability coefficient was computed with a subsample of four high school faculties. The resulting value for the total instrument was .6147, which was considered marginally satisfactory, with the potential to increase or decrease with changes in sample size.

Primary citations

- Hord, S. M. (1996). *School professional staff as learning community* [survey]. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M., Meehan, M. L., Orletsky, S., & Sattes, B. (1999). Assessing a school staff as a community of professional learners. *Issues about Change*, 7, 1–8.

Sample items

- School administrators participate democratically with teachers, sharing power, authority, and decision making.
- The staff shares visions for school improvement that have an undeviating focus on student learning, and these visions are consistently referenced in the staff's work.
- The staff's collective learning and application of the learning (taking action) create high intellectual learning tasks and solutions to address student needs.
- Peers review and give feedback based on observing one another's classroom behaviors in order to increase individual and organizational capacity.
- School conditions and capacities support the staff's arrangement as a professional learning organization.
- Students in this school are motivated to learn and really want to succeed.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school/PLC functioning.

Principal Interview—Watts

Developer: Aileen Watts

Description

This principal interview can be used to gather information about principals' professional/educational backgrounds, as well as their experiences with leadership and culture, PLCs, and school-based change. The questions were developed around guiding questions of a research project: What is the relationship between PLCs and school-based change? What is the role of leadership in the relationship between PLCs and school-based change? What is the role of school culture in the relationship between PLCs and school-based change? What is the role of group dynamics in the relationship between PLCs and school-based change, and how are they managed? A review of the literature (DuFour, DuFour, Eaker, and Many's [2006] PLC model) also guided the choice of questions.

The interview consists of approximately 20 questions and typically takes 45–75 minutes depending on the participant's responses. Data can be coded using an open and axial coding system to identify themes and organized patterns (Coffey & Atkinson, 1996).

Technical information

Validity

- No formal validity data were collected for this instrument. It is considered to have adequate validity, however, because the questions were developed based on a review of the literature.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible.
- The interview questions can be found in appendix A of Watts (2007).

Population

- The instrument has been administered to middle school principals in a mid-size, rural school system in the southwest region of the United States. The author notes, however, that most of the questions can also be used when interviewing teachers.

Primary citations

- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data*. Thousand Oaks, CA: SAGE.
- Watts, A. (2010). *The relationship between professional learning communities and school based change*. (Doctoral dissertation). Retrieved from ProQuest LLC.

Sample items

- What role do professional learning communities play in influencing the process of school-based change?
- How would you characterize your role in supporting professional learning communities?
- What kinds of opportunities do you provide teachers to engage in collaborative professional dialogue?
- Do you believe that your school utilized PLCs effectively? In what ways?
- How would your staff describe your role in leading, initiating, and supporting a professional learning community?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about school-based change and beliefs about school/PLC functioning.

Communities of Continuous Inquiry and Improvement Interview Protocol

Developer: Shirley M. Hord

Description

The Communities of Continuous Inquiry and Improvement Interview Protocol diagnoses and evaluates schools as they work toward school reform. The interview assesses everyday classroom- and school-level practices related to identify dimensions of PLCs: supportive and shared leadership, shared values and vision, collective learning and application, supportive conditions, and shared personal practice (peers sharing with peers).

The interview consists of a broad question for each dimension, followed by more specific probes to assess the degree to which the school functions as a PLC within each domain.

Availability

- Price: Publicly accessible.
- The Communities of Continuous Inquiry and Improvement Interview Protocol is included in appendix D of Hipp et al. (2003).

Population

- The instrument has been administered to professional staff in various grade levels in many school districts throughout the United States and England to help determine the strength of practices within each PLC dimension in their own schools.

Technical information

Validity

- The interview is based on Hord's (1997) five dimensions of a PLC, which have been shown to have good construct validity. In addition, a research team analyzed the interviews using a variety of related indicators to examine and substantiate the thoroughness of Hord's five-dimensional model.

Reliability

- No formal reliability data were collected for this instrument.

Primary citations

- Hipp, K. K., Stoll, L., Bolam, R., Wallace, M., McMahon, A., Thomas, S., & Huffman, J. B. (2003). *An international perspective on the development of learning communities*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.

Sample items

- Tell me about leadership in your school.
- What process did the school use to create a vision? How is the vision reflected in the school activities and operation?
- Tell me about how the staff comes together to learn. How do staff members determine what they want to learn?
- How do staff members communicate with each other?
- What resources are available to support teachers learning together?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics processes.

Moderator and Member Interviews for Online PLCs

Developer: Sharon Elizabeth Booth

Description

The purpose of the Moderator Interview for Online PLCs is to better understand the practices of moderators that are intended to cultivate and sustain knowledge sharing and develop trust within the online community. The moderator interview includes questions across four domains: community structure, care and feeding, member roles, and trust. This interview can also be used to assess in-person PLCs if moderators are involved. If moderators are not part of the PLC structure, these questions can also be useful in interviews conducted with PLC members. The member interview for online PLCs can serve as a source of data triangulation.

This interview enables assessing whether the practices intended to cultivate knowledge sharing and the development of trust as described by moderators are the same as those described by members. It also makes it possible to examine whether the practices put in place achieved their intended purposes. The member interview includes questions about opportunities for knowledge sharing and personal examples of knowledge sharing, the role of the moderator, influential members of the community, and willingness to take risks.

Technical information

Validity

- The moderator and member interview protocols are considered to have sufficient construct validity because they were developed based on a review of literature on knowledge sharing and trust in online communities.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible.
- The interview questions can be found in Booth (2012).

Population

- The instrument has been administered to K–12 educators involved in online PLCs.

Primary citations

- Booth, S. E. (2012). Cultivating knowledge sharing and trust in online communities for educators. *Journal of Educational Computing Research*, 47, 1–31.

Sample items

- How was the community initially structured to create an environment for knowledge sharing?
- What were the characteristics of influential members?
- In what ways did the practices of the community increase members' confidence that their well-being or reputation would not be harmed by participating in knowledge-sharing activities?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics processes and beliefs about group dynamics outcomes.

School Community Survey (SCS)

Developers: Mary Lou Ruggiero and Judith W. Irwin

Description

The SCS was based on a school community questionnaire (Irwin, 2000) that emphasizes staff interactions. The SCS assesses collaborative staff interactions within a professional community of teachers, including teacher connection, teacher professional competence, and teacher individual autonomy. The SCS consists of 46 items across five factors: connection and support-whole group, characterized by interactions within the whole school faculty that both build community and support feelings of professional competence; connection and teacher support—small group, characterized by similar interactions as the first factor within small groups of teachers at the school; individual autonomy—small group, characterized by interactions within small groups of teachers that support individual autonomy, such as ownership and involvement in decisionmaking; individual autonomy—whole group, characterized by interactions within the whole school faculty that support autonomy; and instructional focus, characterized by interactions that build community by connecting teachers professionally through joint work focused on instruction.

Teachers are asked to respond to each item using a four-point scale, ranging from A (completely true) to D (completely untrue). Two additional questions gather demographic information, and two open-ended questions ask about barriers and supportive conditions that influence collaboration at the school.

Researchers can use this instrument to study schools that are clear examples of communities of collaborative professionals. In addition, the SCS can be used to collect baseline data and then determine if subsequent efforts result in a more collaborative community.

Technical information

Validity

- A panel of experts assessed the content validity of the instrument. The panel was asked to rate the descriptor statements with respect to how much they related to the conceptual definition of a collaborative teacher professional community and the operational definitions of collaborative interactions within professional communities. Descriptor statements that did not receive majority agreement or were considered ambiguous or questionable by the judges were deleted or revised.
- To evaluate the construct validity of the SCS, the instrument was field-tested by 318 teachers across 12 schools in an urban school district in Connecticut. Factor analysis results indicated statistical support for connection and support, individual autonomy, and instructional focus as the underlying constructs of collaborative teacher interactions.
- Concurrent validity was statistically significant ($r = .59, p < .01$). Data further supported the validity of teacher relationships as a factor in a collaborative community. Intercorrelations among the scores on the subscales were all statistically significant ($p < .01$), indicating that the constructs of collaborative teacher interactions are interrelated.

Reliability

- The alpha reliability coefficient for the total instrument was .95 and ranged from .83 to .94 for the five subscales.
- Within four weeks, the SCS was found to have high stability reliability based on a paired samples t-test, $p < .05$.

Availability

- Price: Ranges from \$38–\$72, depending on the format purchased.
- Must purchase: Ruggiero (2004). (Dissertation includes a copy of the SCS.)
- Must contact Mary Lou Ruggiero at marylouruggiero@cox.net for permission to use the instrument.

Population

- The instrument has been administered to K–8 teachers in many U.S. school districts to examine collaborative staff interactions within a professional community of teachers.

Primary citations

- Ruggiero, M. L. (2004). *Assessing collaborative interactions in a teacher professional community: The validity and reliability of a survey instrument*. (Doctoral dissertation). Received from UMI Dissertation Publishing, ProQuest LLC.

Sample items

- The author requested that no sample items be provided. See above for information on how to obtain a copy of the instrument.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics processes.

Semi-Structured Teacher Interview Protocol—Levine

Developer: Thomas H. Levine

Description

This Semi-Structured Teacher Interview Protocol can be used to explore how collaboration and the larger context of the school affect a teacher's teaching practices, relationships with students, and work with families. In particular, these interview questions allow researchers to gain insight into how teachers perceive their practice shifting and to what degree they associate these changes in practice with involvement in a PLC (or other type of collaborative work), as well as how teachers experience the content and processes of collaborative work. If researchers also conduct classroom observations, they can compare the objective data with the subjective data gathered through the interview. In addition, the interview allows researchers to assess the effects of the PLC, as perceived by the participants involved, including whether the group meets its goals.

Technical information

Validity

- Input in the development of the Semi-Structured Teacher Interview Protocol was sought from Dr. Pam Grossman, an expert in teacher learning communities and teacher learning, to increase the construct validity of the instrument.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Accessible with restrictions.
- A copy of the Semi-Structured Teacher Interview Protocol can be found in Levine (2005). (A ProQuest login is needed to access the full dissertation.)
- Contact Dr. Thomas Levine at thomas.levine@uconn.edu.

Population

- This instrument has been administered to high school teachers in multiple schools, though it can be used with teachers in all grade levels.

Primary citations

- Levine, T. H. (2005). Teachers' joint work and its influence on classroom practice: Moving beyond just me and my 32 kids. *Dissertation Abstracts International*, 66(8), 2895A.
- Levine, T. H. (2011). Experienced teachers and school reform: Exploring how two different communities facilitated and complicated change. *Improving Schools*, 14, 30–47.

Sample items

- What are the group's goals?
- What is helping you and what is hindering you as you aim to achieve these goals?
- Tell me about your own involvement in the group.
- Has your role or participation changed for the last X months?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics processes, beliefs about group dynamics outcomes, and instructional practices outcomes.

Teacher Collaboration Assessment Survey (TCAS)

Developer: The instrument was developed over time through an iterative process involving university based subject matter experts, school district leaders, and teachers.

Description

The TCAS is an updated version of the Teacher Collaboration Assessment Rubric (TCAR). It operationalizes and measures the four main attributes of teacher collaboration: dialogue, decisionmaking, action taking, and evaluation. High-functioning PLC teams typically engage in collective dialogue about student learning, the effects of instruction on student achievement, and how to provide an appropriate level of challenge and support to each student. Low-functioning PLC teams, in contrast, often discuss less consequential matters, such as curriculum pacing and alignment, test-taking strategies, allocation of materials, and bulletin board displays. Decisionmaking describes the extent to which teachers work together to uncover and determine relative differences in instructional quality and make decisions about what and how to improve practice. Action taking assesses whether teachers take actions as a result of their team's decisions. Evaluation describes the extent to which the team assesses its effectiveness on the basis of tangible evidence that students are acquiring essential knowledge, skills, and dispositions.

Data generated using the TCAS can be used to better understand and improve school districts' capacity for teacher collaboration and the effects of teacher collaboration on instructional improvements and student learning. The survey is composed of questions and Likert-type items measuring the components of dialogue, decisionmaking, action taking, and evaluation. Respondents are asked to rate their agreement on a Likert scale, ranging from strongly disagree to strongly agree.

Technical information

Validity

- Subject matter experts who assessed the alignment between collaboration theory and the items on the survey judged the instrument to have acceptable content validity. Evidence also came from a formal group interview and piloting of the survey with 12 school-based personnel (Woodland, Lee, & Randall, 2013).
- The TCAS was also determined to be valid based on response processes (Woodland, Lee, & Randall, 2013). This evidence was generated using pre- and post-survey administration interviews with school leaders and teachers, as well as focus group interviews. Evidence in this domain measured the extent to which respondents viewed and understood the TCAS items and its instructions in the way the instrument was intended.
- Rasch analysis determined that the TCAS has adequate construct validity and measures a unidimensional construct (teacher collaboration) (Woodland, Lee, & Randall, 2013).
- The convergent and divergent validity of the TCAS was assessed by examining the relationship between the four components in the cycle of inquiry and other similar variables/constructs (Woodland, Lee, & Randall, 2013, pp. 449–450). The examination found that all the variables had positive relationships with one another, yet the four components in the cycle of inquiry were more strongly correlated with one another than the rest of the variables, demonstrating both convergent and divergent validity.

Reliability

- The overall outfit mean square of the instrument was 1.07, suggesting that the items in the scale work well together to define their construct.

Availability

- Price: Publicly accessible with restrictions.
- A list of the survey items is included in Woodland, Lee, and Randall (2013).
- To obtain the full version of the instrument and to gain permission to use the TCAS, email Dr. Rebecca Woodland at Rebecca.Woodland@educ.umass.edu.

Population

- The instrument has been administered to teachers in the Northeastern and Mid-Atlantic regions of the United States to assess the four key domains of teacher collaboration: dialogue, decisionmaking, action, and evaluation. It is also being used in Switzerland to assess collaboration in afterschool settings.

Primary citation

- Woodland, R., Lee, M. K., & Randall, J. (2013). A validation study of the teacher collaboration assessment survey. *Educational Research and Evaluation: An International Journal on Theory and Practice*, 19(5), 442–460.

Sample items

- The purpose of our collaboration is to systematically improve instruction to increase student learning.
- Our dialogue is consistently focused on examination of evidence related to performance and the attainment of goals.
- Team members regularly identify strategies they will change or discontinue.
- As a group we regularly collect and analyze quantitative data (such as numbers, statistics, scores) about member teaching practices.

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics processes.

Professional Learning Team Survey

Developer: A. Michael Riskus (adapted from Jolly's [2004] guide)

Description

The Professional Learning Team Survey was adapted from A Facilitator's Guide to Professional Learning Teams (Jolly, 2004). The instrument assesses aspects of teacher collaboration and instructional learning and methods. The survey measures individuals' perceptions of the degree to which team meetings are productive, task oriented, and well facilitated, as well as the extent of compatibility and honest communication among group members. Further, the Professional Learning Team Survey measures individuals' perceptions of the team's success in discussing and assessing student needs and teaching approaches, as well as in designing new teaching techniques and materials.

Individuals are asked to respond to some items using a five-point Likert scale, ranging from 1 (not at all) to 5 (a great deal). Other questions require respondents to use a 10-point Likert scale, with 10 being the most positive. The survey also includes a small number of open-ended questions to allow individuals to express any additional thoughts on the positive and negative impacts of the professional learning team.

Technical information

Validity

- No formal validity data were collected for this instrument. The instrument can be considered to have acceptable content validity, however, because it was adapted from A Facilitator's Guide to Professional Learning Teams (Jolly, 2004), which was designed to introduce on-the-job learning opportunities to teachers at all grade levels. The guide includes a variety of tools to demonstrate the importance and benefits of collaboration and helps keep PLC teams focused on student learning and professional learning. The guide served as a framework for Dr. Riskus's professional development initiative, as well as for the Professional Learning Team Survey.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible.
- A copy of the instrument is included in Riskus (2011).

Population

- The instrument has been administered to middle school teachers in the southwest United States.

Primary citations

- Riskus, A. M. (2011). *The contribution of professional development to a middle-school team's collaboration and instructional learning*. (Doctoral dissertation). Retrieved from Arizona State University Digital Repository.
- Jolly, A. (2004). *A facilitator's guide to professional learning teams: Creating on-the-job opportunities for teachers to continually learn and grow*. Greensboro, NC: SERVE.

Sample items

- To what extent have you gained new knowledge about teaching and learning?
- To what extent have you gained a new outlet for expressing and sharing frustrations, concerns, and problems with teaching?
- How successful has your team been in analyzing and discussing student needs?
- How successful has your team been in designing new materials, lessons, or assessments for students?

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics outcomes and beliefs about group dynamics processes.

Teacher Rating Scale

Developer: Vanessa J. Bunker

Description

The Teacher Rating Scale measures teachers' perceptions of their group performance during collaborative team meetings. The Teacher Rating Scale consists of six traits: setting of student goals, data collection, consensus on teaching strategies, implementation of common teaching strategies, and quality of instructional practices. The measure was quantified using a five-point scale: 1 (emerging), 2 (basic), 3 (developing), 4 (proficient), and 5 (fluent). Teachers are supposed to complete the rating scale after each team meeting to track skill level and progress.

Availability

- Price: Publicly accessible; free.
- A copy of the Teacher Rating Scale appears in Bunker (2008), which can be accessed at <http://pqdtopen.proquest.com/pqdtopen/doc/304377222.html?FMT=AI>.

Population

- The instrument has been administered to teachers in multiple Oregon elementary schools to assess teachers' perceptions of the value of the collaborative process in a PLC.

Technical information

Validity

- The instrument was field-tested in many elementary schools for one year and was determined to have acceptable validity.

Reliability

- The instrument was field-tested in many elementary schools for one year and was determined to have acceptable reliability.

Primary citation

- Bunker, V. J. (2008). *Professional learning communities, teacher collaboration, and student achievement in an era of standards based reform*. (Doctoral dissertation). Retrieved from ProQuest LLC.

Sample items

- Student goals
- Consensus on teaching strategies
- Implementation of common teaching strategies
- Instructional practices
- Data collection

Components of PLC logic model

- Teacher/principal-level variables: beliefs about group dynamics outcomes.
-

School Participant Empowerment Scale (SPES)

Developers: Paula M. Short and James S. Rinehart

Description

The SPES assesses teachers' perceived level of empowerment across six dimensions: involvement in decisionmaking; opportunities for professional growth; earned status and respect; self-efficacy; autonomy in the job; and impact on other teachers, students, and events. The instrument comprises 38 items. Individuals are asked to respond using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The SPES has been used to evaluate the effects of interventions on teachers' perceived level of empowerment. In addition, researchers have assessed the relation between teachers' perceived level of empowerment and other variables, such as teachers' perceived sense of self-efficacy, job satisfaction, and student achievement.

Technical information

Validity

- To establish content validity, a panel of experts rated each of the initial 75 items on the empowerment characteristics list on the degree to which empowerment was represented in the schools researched, from highly representative (1) to highly unrepresentative (5; Short & Rinehart, 1992).
- Evidence of discriminant validity for the final instrument was established by comparing teacher ratings from two schools that participated in a project designed to empower teachers with ratings from a school that did not use empowerment interventions (Short & Rinehart, 1992).

Reliability

- Internal consistency was measured during a field test of the instrument with 211 teachers using Cronbach's alpha, and all coefficients for the factored subscales were statistically significant: decisionmaking (.89), professional growth (.83), status (.86), self-efficacy (.84), autonomy (.81), and impact (.82). The Cronbach's alpha for the total scale was also statistically significant (.94).

Availability

- Price: Publicly accessible with restrictions on use.
- For permission to use the SPES contact Paula M. Short at pmshort@uh.edu.
- A copy of the SPES can be found at <http://education.missouri.edu/orgs/mlc/Upload%20Area-Docs/SPES%20SURVEY.pdf>.

Population

- The instrument has been administered to teachers in various grade levels in many school districts throughout the United States and other countries to assess teachers' perceived empowerment.

Primary citation

- Short, P. M. & Rinehart, J. S. (1992). School participant empowerment scale: Assessment of the level of participant empowerment in the school. *Educational and Psychological Measurement*, 54, 951–960.

Sample items

- I am given the responsibility to monitor programs.
- I believe that I have the ability to get things done.
- I am able to teach as I choose.
- I have the opportunity for professional growth.
- I believe that I am empowering students.

Components of PLC logic model

- Teacher/principal-level variables: perceived level of empowerment.

School Academic Optimism Survey (SAOS)

Developer: Wayne K. Hoy

Description

The SAOS measures the construct of school academic optimism, which is made up of three dimensions: collective efficacy, faculty trust, and academic emphasis. The academic optimism of a school is the collective set of beliefs held by the faculty as a whole that the school faculty can teach even the most difficult students (collective efficacy), the school faculty trusts students and parents (faculty trust), and the school faculty emphasizes academics (academic emphasis).

The SAOS is a 30-item rating scale composed of three parts. Parts one and two consist of a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Part one assesses perceived collective efficacy, which includes all items from the short version of the 12-item Collective Efficacy Scale (Goddard, Hoy, & Woolfolk Hoy, 2000). In part two, faculty trust in students and parents is measured using questions from the Omnibus Trust Scale (Hoy & Tschannen-Moran, 2003). The third part, which measures academic emphasis, uses a four-point Likert scale, ranging from 1 (rarely) to 4 (often). Questions were taken from the academic emphasis subscale of the Organizational Health Inventory (Hoy & Miskel, 2005; Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991). The total academic optimism score for the school can be interpreted by comparing the school's score with a standardized score. Academic optimism is believed to be an important construct because multiple studies have found a significant correlation between academic optimism and student achievement.

Technical information

Validity

- Multiple studies have assessed the construct validity of this instrument through structural equation modeling and factor analysis. In a study that included 96 high schools, Hoy, Tarter, and Woolfolk Hoy (2006) found that collective efficacy, faculty trust in clients, and academic emphasis came together to create the general latent construct that they refer to as "academic optimism." A second study by McGuigan and Hoy (2006), consisting of 40 elementary schools, confirmed that academic optimism is a general latent construct comprising collective efficacy, teacher trust in clients, and academic emphasis. A third study, which involved 99 urban elementary schools, supported the findings of the previous studies and concluded that academic optimism is a second-order construct (Smith and Hoy, 2007).

Reliability

- The reliability of each subscale was assessed in a study with a sample of 96 high schools (Hoy et al., 2006). The alpha coefficient for the collective efficacy subscale was .91. The reliability of the faculty trust subscale was also significant, with an alpha coefficient of .94. In addition, the reliability of the academic emphasis subscale was supported, with an alpha coefficient of .83.

Availability

- Price: Publicly accessible; free.
- A copy of the instrument, as well as scoring instructions, can be found at <http://www.waynehoy.com/collective-ao.html>.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to assess academic optimism.

Primary citations

- Hoy, W. K. (2005). Academic optimism of schools. Retrieved July 14, 2014, from <http://www.waynehoy.com/collective-ao.html>.
- Hoy, W. K., & Miskel, C. G. (2005). *Educational administration: Theory, research, and practice*, 7th ed. New York, NY: McGraw-Hill.
- Hoy, W. K., Tarter, C. J., & Woolfolk Hoy, A. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal*, 43(3), 425–446.
- Hoy, W. K., Tarter, C. J., & Woolfolk Hoy, A. (2006). Academic optimism of schools: A second-order confirmatory factor analysis. In W. K. Hoy & C. Miskel (Eds.), *Contemporary issues in educational policy and school outcomes* (pp. 135–156). Greenwich, CT: Information Age.

Sample items

- Teachers in this school believe that every child can learn.
- Students here just aren't motivated to learn.
- Teachers in this school are able to get through to the most difficult students.
- Teachers here believe that students are competent learners.

Components of PLC logic model

- Teacher/principal-level variables: perceived level of school academic optimism.

Teacher Narratives

Developers: Amol Padwad and Krishna K. Dixit (for these particular teacher narrative topics)

Description

Teacher narratives can be used to elicit teachers' views and attitudes about different topics. Padwad and Dixit (2008), for example, used teacher narratives to examine teachers' views and attitudes about specific classroom problems and the methods they used to deal with them. The problems included students' lack of interest in learning, low ability, lack of resources, large classes, shortage of time, current evaluation systems, centrally prescribed textbooks, and irrelevant syllabuses and courses.

Cortazzi (1994) explains that narratives serve two purposes: a referential function, giving "the audience information through the teller's recapitulation of experience," and an evaluative function, giving "the meaning of the narrative by establishing personal involvement through the evaluative section" (p. 160). Teacher narratives are considered a good way to identify the thought processes of PLC members. In addition, teacher narratives can be used to compare the views and attitudes of individuals who were involved in a PLC with those of individuals who did not participate in a PLC, as in Padwad and Dixit's (2008) research.

Technical information

Validity

- Padwad and Dixit (2008) assessed teachers' attitudes towards classroom problems, asking teachers to respond to each prompt by indicating whether it was "a problem," "not a problem," or "uncertain/no answer." They found little difference between PLC members' and nonmembers' perceptions of what constitutes a problem and what does not. This validates the assumption that the problems chosen for consideration are common for teachers. The list of problems was identified through teachers' feedback, as well as through theory and research.

Reliability

- Because of the authors' familiarity with the respondents, the authors were able to notice "obviously unreliable information" (Padwad & Dixit, 2008, p. 4). If researchers using teacher narratives as data do not know their participants as well, it would be more difficult to assess the reliability of the information.

Availability

- Price: Publicly accessible.
- There is no specific copy of the instrument. Researchers can ask teachers to create narratives about any aspects of PLCs and outcome measures.

Population

- The instrument has been used in various types of education research throughout the United States and internationally.

Primary citations

- Cortazzi, M. (1994). Narrative analysis. *Language Teaching*, 27(3), 157–170.
- Padwad, A., & Dixit, K. K. (2008). Impact of professional learning community participation on teachers' thinking about classroom problems. *Teaching English as a Second or Foreign Language*, 12(3), 1–11.

Sample items

- Not applicable.

Components of PLC logic model

- Teacher/principal-level variables: professional development outcomes.

Technology Survey

Developer: The external evaluator of the Michigan Teachers' Technology Education Network (MITTEN) program

Description

The Technology Survey assesses teachers' technology confidence (comfort level) and competence (frequency of use). The instrument has two parts, each consisting of two scales. Part I includes nine items measuring teachers' confidence/competence related to technology literacy or knowing about technology. Part II consists of 13 questions measuring teachers' confidence/competence related to integration of technology into teaching and learning (that is, teaching with technology).

Teachers are asked first to indicate the degree to which the competency is within their "comfort zone," ranging from 1 (very anxious or even afraid) to 5 (eager). The teachers are then asked to indicate the frequency or degree to which they employ, use, or do each competency, tool, or task, ranging from 1 (never) to 5 (daily). The Technology Survey can be administered before and after program implementation to assess the effects of the intervention.

Technical information

Validity

- A panel of experts in educational technology reviewed and revised the instrument for content validity.

Reliability

- The external evaluator reported successful and satisfactory use of the instrument for a number of years in different professional development programs, confirming its reliability.

Availability

- Price: Publicly accessible; free.
- A copy of the Technology Survey can be found in Duran, Brunvand, and Fossum (2009).

Population

- The instrument has been administered to K–16 teachers in Michigan to assess project participants' technology confidence and competence.

Primary citation

- Duran, M., Brunvand, S., & Fossum, P. R. (2009). Preparing science teachers to teach with technology: Exploring a K–16 networked learning community approach. *The Turkish Online Journal of Educational Technology*, 8(4), 22–42.

Sample items

- Use computer for the "ordinary" purposes: word processing; opening, modifying, printing documents; record keeping.
- Use computer and appropriate software to use or create databases and spreadsheets.
- Create and modify a personal or professional webpage.
- Help students operate a variety of hardware.

Components of PLC logic model

- Teacher/principal-level variables: professional development outcomes and instructional practices outcomes.

Reflective, Ethical, and Moral Assessment Survey (REMAS)

Developers: Daisy Arredondo Rucinski and Patricia A. Bauch

Description

The REMAS measures individuals' perceptions of their use of reflective, ethical, and moral dispositions and leadership practices. The instrument assesses three areas of reflective practice: planning and receiving critical feedback from others, constructing meaning and exploring interpretations in conversations with others, and taking action based on reflection and dialogue. In addition, the survey measures individuals' perceptions of the frequency with which they view ethical and moral issues as dimensions of decisions and actions, and asks individuals about the results of their actions and decisions, their prioritization of ethical considerations, and whether their behavior includes moral intentions and results in actions and decisions (Arredondo Rucinski & Bauch, 2006).

The REMAS consists of 34 items across four underlying factors. The first factor, ethical, moral dimensions, comprises 13 items that require consideration of external results of actions, or ethical and moral aspects. The second factor, reflective dimensions, consists of 10 items that relate to internal considerations rather than results of actions. The third factor, defensive behaviors, is generated from five items requiring predominantly nonreflective responses. The fourth factor, ethical priorities, comprises six items assessing prioritization of the effects of actions and decisions on society, disadvantaged members, or clients. Individuals are asked to respond to each item using a six-point Likert scale, ranging from 1 (not at all) to 6 (often).

Technical information

Validity

- The researchers constructed the survey items based on extensive literature reviews of reflective thinking, ethical behavior, and moral intentions and behavior. The first version of the instrument was field-tested with 47 students in the current cohort of a small educational leadership preparation program. Prior to the second data collection, minor changes in wording were made to two or three items in the REMAS based on participant feedback from the field test.
- Factor analysis revealed four underlying factors of the REMAS.

Reliability

- The test-retest reliability of the survey items was found to be acceptable during a pilot test of the instrument.
- Internal consistency was measured during the second data collection, consisting of 106 participants using Cronbach's alpha. Cronbach's alpha coefficients indicated moderately strong internal consistency for the overall scale (.72) and very strong for the ethical, moral dimensions factor (.91) and the reflective dimensions factor (.89). Cronbach alpha coefficients were slightly lower for the defensive behaviors factor (.71) and the ethical priorities factor (.72).

Availability

- Price: Free with restrictions on use.
- Contact Dr. Daisy Arredondo Rucinski at darredo@bamaed.ua.edu to request permission to use the REMAS or for a copy of the instrument.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to assess individuals' perceptions of their use of reflective, ethical, and moral dispositions and leadership practices.

Primary citation

- Arredondo Rucinski, D., & Bauch, P. (2006). Reflective, ethical, and moral constructs in educational leadership preparation: Effects of graduates' practices. *Journal of Educational Administration*, 44(5), 487–508.

Sample items

- No sample items are available. See above for how to obtain a copy of the instrument.

Components of PLC logic model

- Teacher/principal-level variables: professional development outcomes

Standards Assessment Inventory—Revised (SAI2)

Developer: Learning Forward (Formerly the National Staff Development Council)

Description

In 2003 the Southwest Educational Development Laboratory (SEDL) employed a multistage scale process to develop the SAI to measure the alignment between a school's professional development program and the National Staff Development Council's 2001 Standards for Staff Development. This process resulted in a 60-item SAI, which measures all 12 of the 2001 standards. Learning Forward (formerly the National Staff Development Council) developed its third iteration of Standards for Professional Learning in 2011, and thus, a revision of the SAI was needed to assess the quality of professional learning related to the seven updated standards (learning communities, leadership, resources, data, learning designs, implementation, and outcomes).

The revised online instrument comprises 50 items. Teachers are asked to respond to each item using a six-point Likert scale, ranging from 0 (don't know) and 1 (never) to 5 (always). The SAI2 can be administered for program improvement planning, identification of clear expectations and actions, benchmark data, dialogue and reflection, and program evaluation. The Learning Forward Center for Results guides educators through data interpretation and action planning.

Technical information

Validity

- The original SAI items were analyzed to determine if the items aligned or correlated with the revised Standards for Professional Learning. All items that aligned with the revised standards were subjected to school-level factor analyses using data from 928 schools.
- The revised survey was also submitted to a panel of experts to check the content validity of the items.
- During a pilot study, the SAI2 was administered to approximately 2,000 teachers across 121 diverse schools to examine the instrument's construct validity. It was found that the SAI2 has adequate construct validity as assessed through multilevel, confirmatory factor analysis. Results supported a one-factor conceptualization and use of the SAI2.
- Predictive validity of the instrument with respect to student achievement was also assessed during the pilot test, using data from 75 schools. Adequate Yearly Progress (AYP) was used as the student achievement outcome. The results indicated that none of the relations was statistically significant. Although this might suggest that the SAI2 is not predictive of student performance as summarized by the AYP, the authors note that these results should be interpreted with caution, because the AYP is an imperfect proxy variable for student achievement, given that each school determines, with approval from the U.S. Department of Education, its own criteria for meeting AYP.

Reliability

- The pilot test (mentioned above) was also conducted to assess the reliability of the instrument, using Raykov's internal consistency reliability coefficient (which is similar to the more widely known Cronbach's alpha coefficient). The composite scale and subscale scores exhibited excellent reliability, with all coefficients estimated >.90: total score (.99), learning communities (.97), leadership (.98), resources (.93), data (.99), learning designs (.93), implementation (.99), and outcomes (.99).

Availability

- Price: Available online for a fee.
- One school: \$200.
- School systems with 10 or fewer schools participating: \$500 + \$35/school.
- School systems with more than 10 schools participating: \$1,000 + \$35/school.
- Regional service centers: \$1,000 plus \$35/school.
- States/provinces with fewer than 30 percent of all schools participating: \$1,000 + \$35/school.
- States/provinces with 30 percent of all schools participating: \$25/school.
- Contact the Learning Forward Center for Results: Sue Francis, Services Coordinator, sue.francis@learningforward.org.

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to assess the effectiveness and quality of professional development programs offered by schools and school districts.

Primary citation

- Denmark, V., & Weaver, S. R. (2012). *Technical report: Redesign and psychometric evaluation of the Standards Assessment Inventory*. Retrieved September 8, 2014, from <http://learningforward.org/docs/standards-for-professional-learning/technical-report-redesign-and-psychometric-evaluation-of-the-standards-assessment-inventory.pdf?sfvrsn=0>.

Sample items

- No sample items available. See above for information about how to obtain a copy of the instrument.

Components of PLC logic model

- Teacher/principal-level variables: professional development outcomes.

Instructional Practice Scale

Developers: The Consortium on Chicago School Research and the Consortium for Policy Research in Education developed scale items. Additional items specific to Cincinnati's team based schooling reform were developed in conjunction with the Cincinnati Public Schools, the Cincinnati Federation of Teachers, and the district's Interschool Council.

Description

The Instructional Practice Scale measures individual teacher instructional practices and group instructional practices. The Individual Teacher Instructional Practices subscale consists of eight items and assesses the frequency with which individual teachers use instructional preparation and practice strategies. The Group Instructional Practices subscale consists of seven items and measures the frequency with which individual teachers work with at least one other teacher in their school on instruction-related issues.

Availability

- Price: Publicly accessible.
- The items of the Instructional Practice Scale are included in Supovitz (2002).

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to examine individual teacher instructional practices and group instructional practices.

Technical information

Validity

- Factor analyses in research done for the Consortium for Policy Research in Education and the Consortium on Chicago School Research showed that the Instructional Practice Scale items have strong construct validity.

Reliability

- Internal consistency was measured using Cronbach's alpha, and coefficients for both of the factored subscales were statistically significant: Individual Teacher Instructional Practices (.88) and Group Instructional Practices (.90).

Primary citation

- Supovitz, J. (2002). Developing communities of instructional practice. *Teachers College Record*, 104, 1591–1626.

Sample items

- How frequently have teachers used student data from test results to plan for instruction?
- How often have teachers communicated with other teachers about individual students to adjust the way they interact with that student?
- How often have teachers shared teaching materials/ assignments?
- How frequently have teachers examined student work together?

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes.

Inventory of Teaching and Learning (ITAL)

Developers: Chad D. Ellett and Judy Monsaas

Description

The ITAL assesses teacher perceptions of elements of reformed (inquiry-based and standards-based) and traditional teaching and learning environments in science and math classrooms. The ITAL was developed as part of a mixed-methods, longitudinal, external evaluation of the Partnership for Reform in Science and Mathematics (PRISM) project in Georgia. Two key sources used for developing items for the ITAL were the Reformed Teaching Observation Protocol (Sawada et al., 2000) and the Professional Assessment and Comprehensive Evaluation System (Ellett, 2002).

The ITAL comprises 52 items across three domains: inquiry-based (30 items), standards-based (10 items), and traditional (12 items). Inquiry-based teaching and learning reflects a teaching and learning environment that is student centered rather than teacher centered. Standards-based teaching and learning refers to a teaching and learning environment in which curriculum objectives and teaching and learning activities are based on national, state, and/or professional standards. Traditional teaching and learning reflects a teacher-controlled rather than a student-centered environment. Teachers are asked to respond to each item using a six-point Likert scale, ranging from 1 (no emphasis) to 6 (very strong emphasis) to rate the extent to which they give emphasis to each ITAL teaching and learning activity in their classroom(s).

Technical information

Validity

- Studies of the validity of the ITAL through factor analysis with multiple, large-scale samples of K–12 science and math teachers have replicated results and supported the instrument's construct validity (Ellett & Monsaas, 2007, 2011).

Reliability

- In the Ellett and Monsaas (2007) study, consisting of 5,796 science and math teachers, internal consistency was measured using Cronbach's alpha, and all coefficients for the factored subscales were statistically significant: inquiry-based (.97), standards-based (.88), and traditional (.82) (Ellett & Monsaas, 2011). A sample of 3,012 science and math teachers also showed adequate internal consistency: inquiry-based (.95), standards-based (.90), and traditional (.85).

Availability

- Price: Free.
- To obtain a copy of the ITAL and to receive permission to use the instrument, contact Chad D. Ellett at cderesearch@att.net. A list of the questions is also included in Ellett and Monsaas (2011).

Population

- The instrument has been administered to large samples of K–12 teachers in Georgia as part of an external evaluation of the PRISM project in an effort to improve K–16 science and math education. The ITAL was initially developed and administered in 2004 and has been administered to teachers involved in the project each year since then.

Primary citations

- Ellett, C. D., & Monsaas, J. (2007, April). *Cross-sample validation of a measure of teaching and learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Ellett, C. D., & Monsaas, J. (2008, April). *Continued validation of a new measure of teacher perceptions of science and mathematics learning environments*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Ellett, C. D., & Monsaas, J. (2011). Development and validation of a new measure of teacher perceptions of science and mathematics learning environments. *Learning Environments Research, 14*, 91–107.
- Ellett, C. D., Monsaas, J., Payne, D. A., & Pevey, M. (2005, April). *Development of a new measure of reformed teaching in learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
- Ellett, C. D., Monsaas, J., Payne, D. A., & Pevey, M. (2006, April). *Continued development and validation of a measure of reformed teaching and learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Sample items

- Asking students to demonstrate more than one way to solve a problem.
- Engaging students to discuss and debate their ideas.
- Planning the same lessons for all students.
- Using direct instruction to teach knowledge and skills.

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes.

Online Communities of Practice Semi-Structured Interview Protocol

Developer: Robin Claire McLean

Description

The Online Communities of Practice Semi-Structured Interview Protocol assesses the use of communities of practice and teachers' sense of efficacy in three key areas: student engagement, instructional strategies, and classroom management. Questions about teachers' sense of efficacy were based on statements from the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001; see Teachers' Sense of Efficacy Scale (TSES) instrument profile sheet for more information).

Although this interview protocol was developed to assess outcomes of being involved in an online community of practice, the wording of the questions can be changed slightly to make them applicable to any type of PLC. This interview consists of 10 questions.

Technical information

Validity

- No formal validity data were collected for this instrument. However, part of the instrument was based on the TSES, which has been shown to be reasonably valid for measuring the construct of teacher efficacy.

Reliability

- No formal reliability data were collected for this instrument. However, part of the instrument was based on the TSES, which has been shown to be reasonably reliable for measuring the construct of teacher efficacy.

Availability

- Price: Publicly accessible.
- A copy of the Online Communities of Practice Semi-Structured Interview Protocol can be found in appendix D of McLean (2012).

Population

- The instrument has been administered to middle and high school teachers in a rural area.

Primary citation

- McLean, R. C. (2012). *Online communities of practice and teachers' perceived sense of efficacy*. (Doctoral dissertation). Retrieved from Rowan Open Access Repository.

Sample items

- What sort of instructional materials have you gotten from CoP [community of practice]?
- How has CoP helped you adjust lessons to different learning styles?
- What areas of CoP have helped you motivate your students?
- What tools have you found on CoP to help you with student engagement?

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes and satisfaction outcomes.

Post-Participation Teacher Interview: Literacy Learning Communities

Developer: Project RAISSE (Reading Assistance Initiative for Secondary School Educators)

Description

The Post-Participation Teacher Interview: Literacy Learning Communities can be conducted with teachers who participate in a PLC after a designated amount of time. Although it was developed for teachers participating in Project RAISSE (Reading Assistance Initiative for Secondary School Educators), which focuses on literacy, most of the questions relate to PLCs in general or can be altered slightly to be relevant to any type of PLC. The purpose of the interview is to collect qualitative data about teachers' perceptions of the effects of participating in the PLC (such as changes in instructional practices, school culture, and student performance).

Technical information

Validity

- To guide the development of the interview questions, the creators of the interview used Marshall and Rossman (2011).

Reliability

- No formal reliability data were collected on this instrument.

Availability

- Price: Publicly accessible.
- The interview questions can be found in the appendix of Clary, Styslinger, and Oglan (2012).

Population

- The instrument has been administered to secondary school teachers who teach various content areas, including social studies, English, science, and math.

Primary citation

- Clary, D. M., Styslinger, M. E., & Oglan, V. A. (2012). Literacy learning communities in partnership. *Journal of the National Association for Professional Development*, 5, 28–39.

Sample items

- Have you noticed any changes in your students' performances and/or attitudes since your participation in Project RAISSE? If so, what are they?
- Describe your relations with faculty and administration at your school since your involvement with Project RAISSE.
- Tell me about your current classroom practice. Do you think it has changed or not as a result of the Project RAISSE initiative?

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes and beliefs about school culture.

Professional Learning Team Interview

Developer: A. Michael Riskus

Description

The Professional Learning Team Interview can be used to assess the impact of collaboration on instructional learning in general and on instructional planning in particular. Questions also focus on how well the professional learning team functioned as a collaborative entity. In addition, questions are included to assess changes in opinions, beliefs, and instructional planning. Some of the questions may not be relevant to every PLC, but the instrument can be adapted to fit each PLC's needs.

Availability

- Price: Publicly accessible; free.
- A copy of the instrument is included in Riskus (2011).

Population

- The instrument has been administered to middle school teachers in the southwest United States.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Primary citation

- Riskus, A. M. (2011). *The contribution of professional development to a middle-school team's collaboration and instructional learning*. (Doctoral dissertation). Retrieved from Arizona State University Digital Repository.

Sample items

- Has your instructional planning changed as a result of your participation in the professional learning team? If so, how has it changed?
- Do you think your behavior has changed as a result of using the various instructional planning tools?
- Do you think your collaborative behavior has changed as a result of this professional development and your participation on a professional learning team? If so, how has it changed?
- What have you learned about teacher collaboration from your participation on a professional learning team?

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes.
-

Reformed Teaching Observation Protocol (RTOP)

Developer: Evaluation Facilitation Group of the Arizona Collaborative for Excellence in the Preparation of Teachers

Description

The RTOP provides a quantitative measure of the degree to which teaching is reformed. The instrument incorporates the recommendations and standards for teaching math and science that have been disseminated by professional societies of mathematicians, scientists, and educators. Reformed teaching involves acknowledging students' prior knowledge and constructing lessons to challenge students to accept and share responsibility for their learning. In addition, reformed teaching emphasizes active student engagement and collaboration between teacher and students, as well as among students.

The RTOP consists of 25 items in three subsets: lesson design and implementation (5 items), content (10 items), and classroom culture (10 items). Lesson design and implementation assesses the degree to which a teacher begins with recognition of students' prior knowledge and preconceptions, engages students as members of a learning community, values a variety of solutions to problems, and flexibly takes direction from ideas generated by students. The content subset has two parts, one that assesses the quality of the content of the lesson and one that captures the process of inquiry. The classroom culture subset assesses classroom climate. Observers are asked to score each item from 0 (never occurred) to 4 (very descriptive).

Technical information

Validity

- The face validity of the RTOP was drawn from three major sources (Piburn & Sawada, 2000):
 - National Council of Teachers of Mathematics: Curriculum and Evaluation Standards for School Mathematics (1989), Professional Standards for Teaching Mathematics (1991), Assessment Standards for School Mathematics (1995), and Principles and Standards for School Mathematics (2000).
 - National Research Council: National Science Education Standards (1996) and Inquiry and the National Science Education Standards (2000).
 - American Association for the Advancement of Science: *Project 2061: Science for all Americans* (1989) and *Benchmarks for Scientific Literacy* (1993).
- Factor analyses showed that the RTOP has strong construct validity.

Reliability

- Reliability assessments were conducted when the RTOP was originally developed for the Arizona Collaborative for Excellence in Preparation of Teachers. The sample consisted of 153 math and science classrooms in middle schools, high schools, community colleges, and universities. The first 16 pairs of observers were used to calculate estimates of reliability by doing a best-fit linear regression of one set of observations on the other. The reliability estimate for the full measure was .954.

Availability

- Price: Publicly accessible; free.
- A copy of the instrument, as well as the Training Guide, is available in the Reference Manual at https://mathed.asu.edu/instruments/rtop/RTOP_Reference_Manual.pdf.
- The RTOP was designed to be used by trained observers. The Training Guide provides specific information needed to interpret individual items in the protocol and is intended to be used as part of a formal training program in which trainees observe actual classrooms or videotapes of classrooms and discuss their observations with others.

Population

- The instrument has been used with classes at all levels, from primary school through university, to assess the degree to which math or science instruction is reformed.

Primary citation

- Piburn, M., & Sawada, D. (2000). *Reformed teaching observation protocol (RTOP) reference manual* (Technical Report ACEPT-TR IN00-32). Arlington, VA: National Science Foundation.

Sample items

- The instructional strategies and activities respected students' prior knowledge and the preconceptions inherent therein.
- The lesson was designed to engage students as members of a learning community.
- The lesson promoted strongly coherent conceptual understanding.
- Connections with other content disciplines and/or real world phenomena were explored and valued.
- Students were reflective about their learning.
- Students were engaged in thought-provoking activity that often involved the critical assessment of procedures.

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes.

Teacher Interview Protocol—Bitterman

Developer: Teresa Bitterman

Description

This Teacher Interview Protocol can be used to explain why and how PLCs may be affecting teacher and student learning. In addition, the protocol elicits information about the structure and functioning of PLCs, as well as data collected by the members of the PLC. The interview consists of 12 questions and takes approximately 15–20 minutes to conduct.

Availability

- Price: Publicly accessible.
- A copy of this teacher interview protocol can be found in appendix B of Bitterman (2010).

Population

- The instrument has been administered to middle school science teachers, but it can be used with teachers across all grade levels and subjects.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Primary citation

- Bitterman, T. (2010). *Teacher perceptions of the impact of professional learning communities on teaching and learning in middle school science*. (Doctoral dissertation). Retrieved from Proquest LLC.

Sample items

- How do you see PLCs contributing to student success?
- Why do you feel collaboration is an important part of PLCs?
- How does your PLC determine goals for the year?
- What are some challenges of a PLC?

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes and beliefs about group dynamics processes.
-

Teacher Survey

Developer: Vanessa J. Bunker

Description

The Teacher Survey assesses individual teachers' perceptions of the value of their involvement in collaborative processes in a PLC. The survey elicits quantitative feedback regarding teachers' feelings about the collaborative processes and practices in place, as well as about the results of the collaborative process, as indicated by changes in instructional practices. The Teacher Survey consists of 14 items. Teachers are asked to respond to each item using a four-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The Teacher Survey has been found to be highly correlated with assessments of student achievement.

Availability

- Price: Publicly accessible; free.
- A copy of the Teacher Survey can be found in Bunker (2008). It can be accessed at <http://pqdtopen.proquest.com/pqdtopen/doc/304377222.html?FMT=AI>.

Population

- The instrument has been administered to teachers in multiple elementary schools in Oregon to assess teachers' perceptions of the value of the collaborative process in a PLC.

Technical information

Validity

- The instrument was field-tested in many elementary schools for one year and was determined to have acceptable validity.

Reliability

- The instrument was field-tested in many elementary schools for one year and was determined to have acceptable reliability.

Primary citation

- Bunker, V. J. (2008). *Professional learning communities, teacher collaboration, and student achievement in an era of standards based reform*. (Doctoral dissertation). Retrieved from ProQuest LLC.

Sample items

- As a member of a team, I contribute and benefit from working with my colleagues.
- Use of assessment data impacts my instructional decisions.
- Data derived from assessments motivates me to focus on individual students' needs.
- Setting and tracking short term student centered goals has made a difference in the learning of my students.
- The time I spent collaborating with my team was focused on our instructional practices and the academic gains for students.

Components of PLC logic model

- Teacher/principal-level variables: instructional practices outcomes and satisfaction outcomes.

Classroom Assessment Scoring System (CLASS)

Developers: Robert C. Pianta, Karen M. LaParo, and Bridget K. Hamre

Description

CLASS assesses the classroom quality of infant to third-grade classrooms. There are four versions of the tool: infant, toddler, pre-K, and K–3. The infant version is for use with children from birth to 18 months to assess how teachers engage with infants and support their learning and development during everyday routines and activities. The tool assesses four dimensions of teacher–child interactions: relational climate, teacher sensitivity, facilitated exploration, and early language support. The toddler version of CLASS is for use with children ages 15–36 months to measure the effectiveness of interactions between teachers and children. The toddler version covers two domains of teacher–child interaction: emotional and behavioral support and engaged support for learning.

The pre-K and K–3 versions of the CLASS tool were designed to assess classroom quality in prekindergarten and kindergarten through third grade based on teacher–student interactions rather than on the physical environment or a specific curriculum. The instruments cover three domains of teacher–student interaction: emotional support, classroom organization, and instructional support. The tool establishes an accurate picture of the classroom through 30-minute cycles of observation and scoring, repeated six times over three hours. The pre-K version is also available in Spanish. Overall, ratings from the CLASS provide important descriptive information about the current status of early childhood and elementary classrooms and have a predictive value in academic and social outcomes for children (Pianta, LaParo, & Hamre, 2008a, 2008b, 2008c).

Technical information

Validity

- The CLASS tool was developed based on extensive research on classroom practices shown to relate to students' social and academic development in schools. To test the degree to which data from classrooms matched the theoretical framework, confirmatory factor analyses were conducted across six studies, consisting of 4,482 classrooms in multiple states. The factor loadings were in the moderate to high range, and each domain had adequate internal consistency across the studies. In addition, many experts in classroom quality and teaching effectiveness have agreed that the CLASS tool measures aspects of the classroom that are essential in determining student performance, suggesting adequate face validity.
- To assess criterion validity, the relationship between the pre-K CLASS and the Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) was examined. Classrooms with higher emotional support, classroom organization, and instructional support received higher scores on two factors, interactions and provisions, of the ECERS-R.

Reliability

- Training materials that provide potential observers with a clear and comprehensive understanding of the instrument's purposes and procedures help increase reliability by minimizing random error. As part of the CLASS training, trainees watch multiple videotaped segments that are consensus coded by at least three master CLASS coders. The consensus ratings establish a standard by which to judge the accuracy of ratings made by trainees. At the end of training, potential observers take a reliability test in which they watch and code classroom segments.

Availability

- Price: The manual for each of the four versions of the CLASS tool costs \$49.95. Each manual includes a detailed description of the CLASS dimensions for that age group, administration procedures, and information about the tool's development or a technical appendix. One copy of the CLASS dimensions overview, a tri-fold reference sheet for observers, is also included in the manual. A set of CLASS forms costs \$30 and includes 10 booklets, each with six observation sheets, seven note-taking pages, and one scoring summary sheet.
- All products needed for the CLASS tool (manual and forms) can be purchased through Brookes Publishing Company at <http://products.brookespublishing.com>.
- Individuals can become certified CLASS observers or affiliate trainers with comprehensive training and certification programs offered through Teachstone Training, LLC. Reliable use of the CLASS tool requires training.

Population

- The instrument has been used in more than 4,000 classrooms from infant through third grade throughout the United States and in other countries (including Australia, England, and Finland) to assess teacher–student interactions. The pre-K and K–3 versions are the most widely used. The toddler version of the CLASS tool has been used in several state evaluation systems and for national evaluations of Early Head Start programs.

Primary citations

- LaParo, K. M., Hamre, B. K., & Pianta, R. C. (2012). *Classroom Assessment Scoring System (CLASS) manual, toddler*. Baltimore, MD: Brookes Publishing Company.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008a). *Classroom Assessment Scoring System (CLASS) manual, infant*. Baltimore, MD: Brookes Publishing Company.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008b). *Classroom Assessment Scoring System (CLASS) manual, Pre-K*. Baltimore, MD: Brookes Publishing Company.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008c). *Classroom Assessment Scoring System (CLASS) manual, K–3*. Baltimore, MD: Brookes Publishing Company.

Sample items

- No sample items are available. See above for information about how to obtain a copy of the instrument.

Components of PLC logic model

- Teacher/principal-level variables: performance outcomes.

Interview and Focus Group Questions—Hoffman et al.

Developers: Patricia Hoffman, Anne Dahlman, and Ginger Zierdt

Description

Interview and Focus Group Questions can be used as part of a focus group or individual interviews. Focus groups involve group interviews with members of PLCs, while individual interviews are conducted with one person at a time. These Interview and Focus Group Questions can help researchers gain a detailed understanding of participants' experiences in a PLC and assess outcomes, including changes in members' beliefs and behaviors as a result of participating in a PLC. In addition, this instrument allows researchers to gain a greater understanding of the process the PLC went through from its inception until the present. These questions can also be used to follow up on survey responses. Various analytic procedures can be used to gain information from focus group and interview data, such as locating patterns and themes within datasets, developing case descriptions, and finding patterns across case descriptions.

Technical information

Validity

- No formal validity data were collected for this instrument.
- To ensure the instrument's validity, researchers can pre-test the instrument or share transcripts of the interviews with interviewees to verify the correctness of the information.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible; free.
- A copy of the Interview and Focus Group Questions can be found in Hoffman, Dahlman, and Zierdt (2009).

Population

- The instrument has been administered to K–12 teachers and administrators, as well as to higher education faculty and key community members from a Midwestern school–university partnership network.

Primary citation

- Hoffman, P., Dahlman, A., & Zierdt, G. (2009). Professional learning communities in partnership: A 3-year journey of action and advocacy to bridge the achievement gap. *School–University Partnerships*, 3, 28–42.

Sample items

- Please describe your participation in the PLC.
- Can you describe the process your PLC went through from start to finish? As an example, how did leadership develop? What were some of the outcomes?
- What were the most important benefits you derived from your participation in the PLC?
- What were the major strengths of your PLC?
- What would you change about your PLC?

Components of PLC logic model

- Teacher/principal-level variables: satisfaction outcomes and beliefs about group dynamics processes.

Teacher and Administrator Interview Protocol—Yarbrough

Developer: Shandra M. Yarbrough

Description

The Teacher and Administrator Interview Protocol consists of 10 open-ended questions. The questions were designed to elicit information from teachers and administrators about their current beliefs about PLCs and their perceptions of how participation in PLCs affects teacher practices and student achievement. The developer purposefully created open-ended questions to capture the respondents' perspectives. The interview takes approximately one hour. Data from the interviews can be coded to identify recurring themes.

Availability

- Price: Publicly accessible; free.
- A copy of the interview questions can be found in appendix B of Yarbrough (2010).

Population

- The instrument has been administered to elementary school teachers and school administrators of a medium-size public school district in Georgia, though it can be used with teachers across all grade levels.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Primary citation

- Yarbrough, S. M. (2010). *Efficacy of professional learning communities and the impact upon student academic outcome as perceived by local school administrators and teachers*. (Doctoral dissertation). Retrieved from Digital Commons@ Atlanta University Center Robert W. Woodruff Library.

Sample items

- Describe what you know about professional learning communities (PLCs) and how they compare to traditional faculty meetings.
- Please share your experience with PLCs.
- Has your use in PLCs affected your teaching or administrative practices?
- What do you perceive to be the benefits of PLCs?
- What do you perceive to be the obstacles of PLCs?

Components of PLC logic model

- Teacher/principal-level variables: satisfaction outcomes and instructional practices outcomes.
-

Teacher Interview Protocol—Bunker

Developer: Vanessa J. Bunker

Description

This semi-structured Teacher Interview Protocol illuminates the specific models and systems of collaboration employed in schools, as well as their impact. More specifically, this instrument was designed to investigate what teachers deem important to the collaborative process, how the collaborative process contributes to teachers' instruction, and how the collaborative process contributes to students' learning. In addition, the interview can be used to assess teachers' perceptions about the factors that facilitate or hinder collaboration and student achievement. Data from the interviews can be coded and analyzed for patterns and trends.

Availability

- Price: Publicly accessible.
- A copy of this Teacher Interview Protocol can be found in appendix E of Bunker (2008).

Population

- The instrument has been implemented in the Pacific Northwest of the United States with K–5 elementary school teachers, though it can be used with teachers across all grade levels.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Primary citation

- Bunker, V. J. (2008). *Professional learning communities, teacher collaboration, and student achievement in an era of standards based reform*. (Doctoral dissertation). Retrieved from ProQuest LLC.

Sample items

- How do you feel about your performance this year as a collaborative team?
- How does the data support or not support your opinions?
- Specific to your team, what about the collaborative process works for you?
- Do you feel as though collaboration contributes to your classroom instruction? Can you be specific as to how or why?
- How does our collaborative model impact student learning? (instruction, assessment, learning)

Components of PLC logic model

- Teacher/principal-level variables: satisfaction outcomes, beliefs about group dynamics processes, and instructional practices outcomes.

Learning Community Concepts Survey

Developers: Caryn Wells and Lindson Feun

Description

The Learning Community Concepts Survey aligns with the five dimensions of a learning community as defined by Hord (1997, 2004): supportive and shared leadership, collective creativity, shared values and vision, supportive conditions, and shared personal practice. The questions were designed to allow people to comment on what they saw happening in the school relative to the implementation of learning community concepts. In addition, the survey allows people to report which concepts were resisted and which were embraced, as well as to discuss challenges they faced and things that were working well.

The instrument has two parts to collect quantitative and qualitative data. The first part consists of 16 questions about the extent of implementation of various components of a PLC. Respondents are asked to respond to each item regarding some aspect of the PLC using a four-point scale from 1 (almost never) to 4 (almost always). Participants are then prompted to explain and describe their response. The second part of the survey includes six open-ended questions that ask respondents to describe what was happening in their schools relative to the implementation process. Participants are then given one final opportunity to make general comments. The Learning Community Concepts Survey is administered using an interview format, which typically takes 20–40 minutes to conduct, depending on the respondent's answers.

Technical information

Validity

- Professors with expertise in teaching about PLCs determined that the survey has adequate construct validity. Although the process for establishing content validity was not followed, the feedback from professors familiar with Hord's work on PLCs indicated strong agreement regarding the quality of the questions that measured the five dimensions of PLC implementation.
- The survey was also field-tested with one high school, and no changes were made for subsequent schools. The instrument yielded satisfactory results and did not require alterations.

Reliability

- The survey provides a check and balance between what participants say was occurring and what was actually occurring in their schools, because participants must provide explanations for questions that ask them to rate the extent to which PLC concepts are implemented. Any discrepancy between the numerical response and the explanation of the response should be noted by researchers to evaluate the reliability of participants' responses.

Availability

- Price: Publicly accessible with restrictions on use.
- A copy of the instrument is included in Wells and Feun (2007).
- To obtain permission to use the instrument, contact Caryn Wells at cmwells2@oakland.edu.

Population

- The instrument has been administered to teachers and administrators in more than 20 middle and high schools.

Primary citations

- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M. (Ed.). (2004). *Learning together: Leading together. Changing schools through PLCs*. New York: Teachers College Press.
- Wells, C. & Feun, L. (2007). Implementation of learning community principles: A study of six high schools. *NASSP Bulletin*, 91(2), 141–160.

Sample items

- The extent to which you meet with the teachers who teach the same course.
- The extent to which you discuss what and when you want to teach various concepts in the curriculum.
- The extent to which you develop common assessments for this course.
- The extent to which you examine and compare student-learning results.

Components of PLC logic model

- Team-level variables: team professional development outcomes.

Professional Online Learning Community Survey

Developers: Fan Chuan Tseng and Feng Yank Kuo

Description

The Professional Online Learning Community Survey measures five constructs: community identity, interpersonal trust, social awareness, knowledge-sharing self-efficacy, and knowledge-sharing behavior. Although the survey was developed for one school, it can be easily adapted for use in any school district. In addition, it can be altered to assess in-person PLCs.

Knowledge-sharing self-efficacy is measured by using a percentage scale composed of 10-point increments, rising in 10-unit intervals from 0 percent (not at all confident) to 100 percent (totally confident). The other four constructs are measured on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Technical information

Validity

- Three experienced members of the K12 Digital School examined the instrument for ease of understanding, logical consistencies, and context fitness. They determined that the instrument has acceptable content validity.
- Confirmatory factor analysis determined that the survey has sufficient construct validity.
- Convergent validity was also found to be significant, as all items had factor loadings greater than .5.
- To evaluate discriminant validity, the square root of average variance extracted (AVE) was compared with the correlations among constructs. All square roots of AVE values were greater than the correlations between pairs of constructs, thus showing evidence of discriminant validity.

Reliability

- Internal consistency was measured using Cronbach's alpha, and all constructs were statistically significant: community identity (.91), interpersonal trust (.91), social awareness (.90), knowledge-sharing self-efficacy (.91), and knowledge-sharing behavior (.89).
- Composite reliability (CR) was also calculated to determine the internal consistency of each construct. The CR value for each construct exceeded the generally recommended threshold value of .7: community identity (.94), interpersonal trust (.94), social awareness (.93), knowledge-sharing self-efficacy (.93), and knowledge-sharing behavior (.92).

Availability

- Price: Publicly accessible with restrictions on use.
- A list of the survey items is included in Tseng (2010).
- To gain permission to use the instrument, contact Dr. Fan-Chuan Tseng at misfctseng@gmail.com or Dr. Feng-Yang Kuo at bkuo@mis.nsysu.edu.tw.

Population

- The instrument has been administered to teachers in Taiwan who were enrolled in K12 Digital School, an e-learning platform for teachers interested in professional development and education issues. The instrument was originally written in Mandarin and then translated into English.

Primary citation

- Tseng, F.-C. (2010). The way we share and learn: An exploratory study of the self-regulatory mechanisms in the professional online learning community. *Computers in Human Behavior*, 26, 1043–1053.

Sample items

- I consider myself a member of the school.
- I feel good when I cooperate with other members of my school to complete a task.
- What the other members at my school discuss can help me with educational performance.
- When I encounter some problems, I know that other members of my school are willing to help me.

Components of PLC logic model

- Team-level variables: team professional development outcomes.

PLC Team Meeting Observation Guide

Developer: Aileen Watts (adapted from DuFour, DuFour, Eaker, & Many, 2006)

Description

The PLC Team Meeting Observation Guide formally observes and annotates the content and direction of conversations that occur during PLC team meetings. The PLC Team Meeting Observation Guide was created based on DuFour, DuFour, Eaker, and Many's (2006) PLC model and assesses various dimensions of a PLC. This instrument can be used to assess PLCs over time and to analyze PLCs' development and progress.

Availability

- Price: Publicly accessible.
- A copy of the PLC Team Meeting Observation Guide can be found in appendix B of Watts (2007).

Population

- The instrument has been used by researchers while observing PLC team meetings in a midsize rural school system in the southwest region of the United States.

Technical information

Validity

- No formal validity data were collected for this instrument. The observation guide is considered to have good construct validity, however, because it is based on DuFour, DuFour, Eaker and Many's (2006) PLC model.

Reliability

- No formal reliability data were collected for this instrument.

Primary citations (of possible methods to analyze the qualitative data)

- DuFour, R., Dufour, R., Eaker, R., & Many, T. (2006). *Learning by doing: A handbook for professional learning communities at work*. Bloomington, IN: Solution Tree Press.
- Watts, A. (2010). *The relationship between professional learning communities and school based change*. (Doctoral dissertation). Retrieved from ProQuest LLC.

Sample items

- Evidence of shared vision.
- Evidence of shared goals.
- Reference to team norms, assessment of norms.
- Evidence of focus on results.
- Evidence of issues directly impacting student learning.
- Evidence of collaboration vs. cooperation.
- Evidence of shared decision making.

Components of PLC logic model

- Team-level variables: group dynamics outcomes.
-

PLC Team Meeting Observation Instrument

Developers: A team of researchers, including Mieke Brekelmans, Loek Nieuwenhuis, Robert Jan Simons, Wilfried Admiraal, Sanne Akkerman, Jos Beishuizen, Rick de Graaff, Ditte Lockhorst, Albert Pilot, Nico Verloop, Jan Vermunt, Marjolein Dobber, Inne Vandyck, and Patricia Brouwer

Description

The PLC Team Meeting Observation Instrument is based on Admiraal and Lockhorst's (2010) teacher community model. The instrument codes PLC meetings across three domains, including mutual engagement, shared repertoire, and joint enterprise. Mutual engagement is measured with four indicators designed to assess group identity: identification, multiperspective contribution, mutual trust and responsibility, and social ties. Shared repertoire is measured with four indicators designed to assess shared interactional repertoire: intellectual building, regulation of interaction, role taking, and dynamic effort. Joint enterprise is measured with four indicators designed to assess shared domain: commitment to domain, common ground in concept, collective goal, and shared knowledge. The observation instrument yields qualitative descriptions, as well as quantitative data for each indicator.

On a scale of 0–1, a score of 0–.5 is considered weak, a score of .51–.8 is considered moderate, and a score of .81–1 is considered strong. Qualitative data, such as concrete team behavior for each indicator, should be used to add insight and understanding to the quantitative data. The observation instrument can be used to assess PLCs over time and to analyze PLCs' development and progress.

Technical information

Validity

- The observation instrument is considered to have good construct validity, because it is based on Admiraal and Lockhorst's (2010) model of teacher communities.

Reliability

- Inter-rater agreement between two raters was determined with coefficient kappa $\kappa = 0.66$ (Cohen, 1960). A level of $\kappa = 0.60$ is indicated as a minimum acceptable level of inter-rater agreement, and thus there was sufficient agreement between the two raters.

Availability

- Price: Publicly accessible.
- A list of the instrument domains and indicators, as well as scoring instructions, are included in Brouwer, Brekelmans, Nieuwenhuis and Simons (2012).

Population

- The instrument has been used to assess secondary school teacher teams in the Netherlands.

Primary citations

- Admiraal, W., & Lockhorst, D. (2010, May). *A descriptive model of teacher communities*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
- Brouwer, P., Brekelmans, M., Nieuwenhuis, L., & Simons, R.-J. (2012). Communities of practice in the school workplace. *Journal of Educational Administration*, 50(3), 346–364.

Sample items

- Multi-perspective contribution.
- Mutual trust and responsibility.
- Intellectual building.
- Role taking.
- Collective goal.
- Shared knowledge.

Components of PLC logic model

- Team-level variables: group dynamics outcomes.

Artifacts: Quick Check Form and Norm Review

Developer: A. Michael Riskus

Description

Quick check forms and norm reviews are two types of artifacts that can be collected throughout the existence of a PLC as evidence of whether collaborative interaction occurs during team meetings. A quick check form and a norm review can be used at the end of each PLC meeting to review how well the team is working collaboratively and to assess the extent to which the PLC is following its established norms.

Availability

- Price: Publicly accessible.
- A copy of a quick check form and a norm review are included in Riskus (2011).

Population

- The instrument has been used to assess a PLC in the southwest United States. Artifacts, in general, are used to assess many aspects of PLCs throughout the United States and internationally.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Primary citation

- Riskus, A. M. (2011). *The contribution of professional development to a middle-school team's collaboration and instructional learning*. (Doctoral dissertation). Retrieved from Arizona State University Digital Repository.

Sample items

- Did every member join in the team's discussions?
- Did each member listen attentively as others were speaking?
- Which norms did we usually observe well?
- Which norms do we seem to ignore?
- What behaviors are team members using now that seem to be useful?

Components of PLC logic model

- Team-level variables: group dynamics processes.
-

Professional Learning Communities Observation Guide (PLCOG)

Developer: The North Cascades and Olympic Science Partnership (NCOSP)

Description

The PLCOG was designed to “1) build and deepen a shared understanding of what it means to work effectively as a PLC, and 2) provide a meaningful tool for self-monitoring a PLC’s development” (North Cascades and Olympic Science Partnership, 2008) [see comment under Primary citation(s)]. The PLCOG is structured around three key domains of an effective PLC: shared vision and ways of working, collaboration, and reflective dialogue. The shared vision and ways of working domain assesses whether the group has a common vision and applies standards as criteria in its actions, reflections, and planning. The collaboration domain determines whether the group establishes an environment that fosters open communication, mutual support, sharing of ideas, and a shared responsibility for effective instruction. The reflective dialogue domain assesses whether the group monitors its actions, decisions, and reflections based on its common norms and goals.

The goal is for the elements of effective PLCs included in the observation guide to empower groups to move from supportive practices to developmental practices. Developmental practices are characterized by interactions and activities, which attempt to “improve the collective instructional capacity of their members and change classroom practices. These practices include questioning the effectiveness of teaching routines, sharing student work to identify possible areas for instructional improvement, developing plans for improvement, and implementing and monitoring improvement strategies” (North Cascades and Olympic Science Partnership, 2008).

Technical information

Validity

- No validity studies were conducted for the instrument; however, it was developed around a PLC framework focused on the components of shared vision, working processes, and reflective dialogue and derived from Garmston and Wellman (1999).

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible with restricted use.
- A copy of the instrument is available at <http://hub.mspnet.org/index.cfm/17753>. However, permission must be requested to use the observation protocol. The North Cascades and Olympic Science Partnership can be contacted by email (NCOSP@wwu.edu) or by phone (360-650-7605).

Population

- The instrument has been used in science PLCs through the North Cascades and Olympic Science Partnership, led by Western Washington University to assess the PLCs’ development and progress.

Primary citation

- North Cascades and Olympic Science Partnership. (2008). Professional Learning Community Observation Protocol: Reference Edition. Supported by NSF under Grant No. DUE-0315060. Retrieved July 31, 2014, from <http://hub.mspnet.org/index.cfm/17753>.

Sample items

- The team has standards or criteria that specify what determines proficiency in student work.
- The group plans for and pursues opportunities to enhance their content knowledge when needed.
- Responsibilities are shared amongst all members of the group.
- Criticism is constructive and there is a collegial challenging of diverse ideas.
- The group monitors its progress and adjusts its processes to become more effective when appropriate.

Components of PLC logic model

- Team-level variables: group dynamics processes and team professional development outcomes.

Professional Learning Community Research Journal

Developer: A. Michael Riskus

Description

The Professional Learning Community Research Journal serves as a record of a PLC's activities and behaviors. It is also a means to record and track the emergence of collaborative behaviors and improved instruction. This Research Journal uses a two-column notes approach, in which observations are recorded in one column, and thoughts, reflections, and inferences concerning the observations are recorded in the other.

The Professional Learning Community Research Journal can be used to focus on the words, actions, and interactions of team members related to effective collaboration, implementation of instructional learning tools, and learning team meetings. The Research Journal can also be used to record how classroom practices are changing. In addition, it can be used to develop interview questions to further assess the effects of PLCs.

Technical information

Validity

- No formal validity data were collected for this instrument.

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible.
- A copy of the instrument is included in Riskus (2011).

Population

- The instrument has been used to assess a PLC in the southwest United States.

Primary citation

- Riskus, A. M. (2011). *The contribution of professional development to a middle-school team's collaboration and instructional learning*. (Doctoral dissertation). Retrieved from Arizona State University Digital Repository.

Sample items

- What will professional development in collaboration contribute to my grade-level team's development as a professional learning team?
- What will my grade-level team's collaboration contribute to our instructional planning?
- What will the use of instructional planning tools contribute to my grade-level team's instructional planning?

Components of PLC logic model

- Team-level variables: group dynamics processes and group dynamics outcomes.
-

Teacher Collaboration Assessment Rubric (TCAR)

Developers: Rebecca Woodland (formerly Rebecca Gajda) and Christopher J. Koliba

Description

The TCAR assesses the quality of teachers' collaboration within PLCs. The rubric measures the level of team functioning on four elements: dialogue, decisionmaking, action, and evaluation. Dialogue refers to the extent to which the PLC engages in interpersonal communication about leadership or teaching practices, as well as the improvement of those practices. Decisionmaking describes the extent to which the team assesses the effectiveness or value of its practices and then decides on appropriate next steps. Action refers to the extent to which the PLC actually follows through with decisions once they are made. Evaluation describes the extent to which the team engages in assessing its practices through the systematic collection and examination of performance data.

The rubric is based on a six-point ordinal scale, ranging from 1 (low functioning) to 6 (high functioning). Principals can evaluate and score the quality of a PLC's functioning using the TCAR. Teachers can also use the TCAR to assess the quality of their own team's functioning. Further, rubric ratings should be collected over time to track the quality of teacher collaboration within PLCs, as well as generate findings that school administrators can use to make targeted and evidence-based decisions about how best to support and direct PLC teams in need of improvement (Gajda & Koliba, 2008).

Technical information

Validity

- The TCAR has not been formally validated. However, an updated version of the TCAR, the Teacher Collaboration Assessment Survey (TCAS), has been empirically validated (Woodland, Kim, & Randall, 2013; see the profile sheet for the TCAS).

Reliability

- No formal reliability data were collected for this instrument.

Availability

- Price: Publicly accessible with restrictions on use.
- A copy of the instrument can be found in Gajda and Koliba (2008).
- To obtain permission to use the TCAR, contact Dr. Rebecca Woodland at Rebecca.Woodland@educ.umass.edu.

Population

- The instrument has been used to assess teacher collaboration in various grade levels in the United States and South Africa.

Primary citation

- Gajda, R., & Koliba, C. J. (2008). Evaluating and improving the quality of teacher collaboration: A field tested framework for secondary school teachers. *National Association of Secondary School Principals, NASSP Bulletin*, 92(2), 133–153.

Sample items

- Agenda for team dialogue is pre-planned, prioritized, and documented.
- A documented agenda for team dialogue exists.
- The process for making any decision is formal, transparent, understood by all.
- Distribution of action-taking workload among members is equitable.
- Data is also collected through peer observations of instruction.

Components of PLC logic model

- Team-level variables: group dynamics processes.

Team Instructional Practice Survey

Developers: Scale items were developed by the Consortium on Chicago School Research and the Consortium for Policy Research in Education. Additional items specific to Cincinnati's team based schooling reform were developed in conjunction with the Cincinnati Public Schools, the Cincinnati Federation of Teachers, and the district's Interschool Council.

Description

The Team Instructional Practice Survey measures teachers' collaborative activities across three domains: academic preparation strategies, student grouping strategies, and collective team practices. The Academic Preparation Strategies subscale consists of six items and is used to gauge how often PLC teams work together in preparation for instruction. The Student Grouping Strategies subscale comprises three items and appraises the extent to which PLC teams flexibly group students for specific instructional purposes. The Collective Team Practices subscale is made up of two items and evaluates how often team members co-teach and observe one another's instruction.

Availability

- Price: Publicly accessible.
- The items of the Team Instructional Practice Survey are included in Supovitz (2002).

Population

- The instrument has been administered to teachers in various grade levels in many U.S. school districts to examine team instructional practices.

Technical information

Validity

- Factor analyses in research done for the Consortium for Policy Research in Education and Consortium on Chicago School Research found that the Team Instructional Practice Scale items have strong construct validity.

Reliability

- Internal consistency was measured using Cronbach's alpha, and coefficients for all factored subscales were statistically significant: Academic Preparation Strategies (.87), Student Grouping Strategies (.73), and Collective Team Practices (.82).

Primary citation

- Supovitz, J. (2002). Developing communities of instructional practice. *Teachers College Record*, 104, 1591–1626.

Sample items

- Developed and shared assessment tools and practices.
- Identified and implemented individual intervention strategies for students who needed additional assistance.
- Had individual students move to other teachers' classes for part of a day.
- Grouped students by skill.
- Co-taught classes.
- Observed other team members' classes.

Components of PLC logic model

- Team-level variables: group dynamics processes and group dynamics outcomes.
 - Teacher/principal-level variables: instructional practices outcomes.
-

Ethnographic Interviewing and Spradley's 1979 Grand Tour Questions

Developer: James P. Spradley

Description

Spradley (1979) describes a 12-step process of ethnographic interviewing: (1) locate an informant, (2) interview an informant, (3) make an ethnographic record, (4) ask descriptive questions, (5) analyze ethnographic interviews, (6) make a domain analysis, (7) ask structural questions, (8) make a taxonomic analysis, (9) ask contrast questions, (10) make a componential analysis, (11) discover cultural themes, and (12) write an ethnography. Ethnographic interviewing also involves two main processes: developing rapport and eliciting information. Rapport refers to a harmonious relationship between the ethnographer and informant and signifies that a basic sense of trust has developed that allows for the free flow of information. Spradley (1979) describes the rapport process as typically moving through four stages: apprehension, exploration, cooperation, and participation.

One category of descriptive questions is grand-tour questions. There are four types of grand-tour questions. The first type is called the typical grand-tour question, in which the ethnographer asks the informant to generalize about a cultural scene or situation (for example, "Can you describe a typical PLC meeting?"). Next, there are specific grand-tour questions, which seek information about the most recent or best-known event, location, activity, and so on (for example, "Can you tell me about your most recent PLC meeting?"). There are also guided grand-tour questions in which informants are asked to give an actual "grand tour" (for example, "Can you take me on a tour of teachers' classrooms that have been involved in the PLC?"). Last, there are task-related grand-tour questions, which ask the informant to complete a simple task that could aid the ethnographic description (for example, "Could you write out a typical PLC meeting agenda?"). Mini-tour questions, which use the same approaches as above but focus on smaller aspects, can follow grand-tour questions. Beyond grand-tour and mini-tour questions, other types of descriptive questions include example questions, experience questions, and native language questions.

Technical information

Validity

- Ethnographic interviewing is considered an extremely valid research method because the interview, including the specific questions asked, is typically guided by the informant to get a true sense of the culture, experience, and topic being studied and to gain an insider's perspective.

Reliability

- Since ethnographic interviews are not structured, these types of interviews are not always a consistent source of reliable data that can be compared across interviews. There are ways to code the interviews for major themes, however, such as by using Carspecken's (1996) reconstructive analysis.

Availability

- Price: Free to conduct the interview.
- For more information about conducting an ethnographic interview and developing grand-tour questions, purchase Spradley (1979).

Population

- The instrument has been used in research throughout the world.

Primary citation

- Spradley, J. P. (1979). *The ethnographic interview*. Belmont, CA: Wadsworth Group.

Sample items

- No sample items.

Components of PLC logic model

- Team-level variables: PLC team culture and group dynamics processes.

Student Assessment of Their Learning Gains Survey (SALG)

Developers: Elaine Seymour developed the original version of the instrument in 1997. Stephan Carroll, Elaine Seymour, and Tim Weston created a revised version of the SALG in 2007.

Description

The SALG measures the degree to which a course has enabled student learning, including skills, cognition, and attitudes, as well as the degree to which specific aspects of the course have contributed to that learning. The revised version of the SALG includes five overarching questions, each of which an instructor can customize to a course through subitems: How much did the following aspects of the course help you in your learning? As a result of your work in this class, what gains did you make in your understanding of each of the following? As a result of your work in this class, what gains did you make in the following skills? As a result of your work in this class, what gains did you make in the following (with subitems addressing attitudinal issues, such as enthusiasm for the course or subject area)? As a result of your work in this class, what gains did you make in integrating the following (with subitems addressing how the students integrated information)?

The template instrument offered on the website (www.salgsite.org) includes 46 items. At present, however, the site has 6,024 variations of the instrument that instructors have created and shared on the site for others to use. Students are asked to respond to each question using a five-point Likert scale, ranging from 1 (lowest) to 5 (highest) in terms of its perceived value in aiding their learning. There is an additional option of NA (not applicable).

Technical information

Validity

- A panel of experts assessed the content validity of the instrument by selecting and adapting questions that they considered most appropriate to their class.
- The validity of the SALG instrument was supported by comparing results from three studies in which data were independently gathered from similar student populations all experiencing modular pedagogy.
- During field testing of the instrument, evidence of concurrent validity was demonstrated by a high correlation between scores for the SALG questions that probe student understanding of conceptual items, scores on related American Chemical Society conceptual questions, and the instructor's examination questions exploring the same material.

Reliability

- Seymour et al. (2000) notes, "For the SALG instrument, tests for reliability would be either 1) with the same student group in the same class on different occasions, or 2) with comparable classes, each taught by the same teachers in the same way, either simultaneously, or serially" (p. 19). With regard to option 1, however, administering the instrument more than once with the same student group introduces multiple sources of bias. The authors explain that the second option is a "natural experiment" that introduces the normal variability of student groups and teacher behavior over time. Therefore, instructors who decide to use the SALG must "test its reliability over time as they discover which form of which questions used in what combination gives them the clearest picture of student perceptions of their learning gains" (p. 20).
- Seymour et al. (2000) argues that the SALG instrument is more reliable than student evaluations based on unstated, mixed, or ill-defined criteria, because of its specific focus on learning gains.

Availability

- Price: There is no charge to use the site or to adapt the instrument; however, citation of the authors' copyright is requested.
- Go to www.salgsite.org to create or use a SALG survey. The website includes both an instructor side and a student side.

Population

- The instrument is used primarily with a college population, although it can be adapted to any course, to assess the degree to which a course has enabled student learning. The SALG site has 10,808 instructors and 236,045 student responses at the time of this writing. The SALG can be used for classes of any size.

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Sample items

- How much did the following aspects of the course help you in your learning?
- As a result of your work in this class, what gains did you make in your understanding of each of the following?
- As a result of your work in this class, what gains did you make in the following skills?

Components of PLC logic model

- School/student-level variables: knowledge outcomes

References for professional learning community profiles

- American Association for the Advancement of Science. (1989). *Project 2061: Science for all Americans: A Project 2061 report on literacy goals in science, mathematics, and technology*. Washington, DC: Author.
- American Association for the Advancement of Science. (1993). *Benchmarks for scientific literacy*. Washington, DC: Author.
- Admiraal, W., & Lockhorst, D. (2010, May). *A descriptive model of teacher communities*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., et al. (1976). Analysis of the school preferred reading programs in selected Los Angeles minority schools, REPORT NO. R-2007-LAUSD. Santa Monica, CA: Rand Corporation (ERIC Document Reproduction Service No. 130 243).
- Arredondo Rucinski, D., & Bauch, P. (2006). Reflective, ethical, and moral constructs in educational leadership preparation: Effects of graduates' practices. *Journal of Educational Administration*, 44(5), 487–508.
- Ashton, P. T., Buhr, D., & Crocker, L. (1984). Teachers' sense of efficacy: A self- or norm-referenced construct? *Florida Journal of Educational Research*, 26(1), 29–41.
- Ashton, P. T., Olejnik, S., Crocker, L., & McAuliffe, M. (1982). Measurement problems in the study of teachers' sense of efficacy. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Bitterman, T. (2010). Teacher perceptions of the impact of professional learning communities on teaching and learning in middle school science. (Doctoral dissertation). Retrieved from Proquest LLC.
- Booth, S. E. (2012). Cultivating knowledge sharing and trust in online communities for educators. *Journal of Educational Computing Research*, 47, 1–31.
- Box, K. (n.d.). *Technology integration phases*. Retrieved July 28, 2014, from <http://tcet.unt.edu/insight/instruments/>.
- Brouwer, P., Brekelmans, M., Nieuwenhuis, L., & Simons, R.-J. (2012). Communities of practice in the school work-place. *Journal of Educational Administration*, 50(3), 346–364.
- Bunker, V. J. (2008). Professional learning communities, teacher collaboration, and student achievement in an era of standards based reform. (Doctoral dissertation). Retrieved from ProQuest LLC.
- Carspecken, F. P. (1996). *Critical ethnography in educational research*. New York: Routledge.
- Cavanagh, R. F., & Dellar, G. B. (1996, April). *The development of an instrument for investigating school culture*. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY, April 8–12.

- Cavanagh, R. F., & Dellar, G. B. (1997, March). *School culture: A quantitative perspective on a subjective phenomenon*. Paper presented at the Annual Meeting of the American Research Association, Chicago, IL, March 24–28.
- Cavanagh, R. F., & Dellar, G. B. (2001). *School improvement: Organisational development or community building?* Paper presented at the Annual Conference of the Australian Association for Research in Education.
- Christensen, R. (1997). *Teachers' views from technology and teaching*. (Doctoral dissertation). Retrieved from University of North Texas.
- Clary, D. M., Styslinger, M. E., & Oglan, V. A. (2012). Literacy learning communities in partnership. *Journal of the National Association for Professional Development*, 5, 28–39.
- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data*. Thousand Oaks, CA: Sage.
- Cortazzi, M. (1994). Narrative analysis. *Language Teaching*, 27(3), 157–170.
- Denmark, V., & Weaver, S. R. (2012). *Technical report: Redesign and psychometric evaluation of the Standards Assessment Inventory*. Retrieved September 8, 2014, from <http://learningforward.org/docs/standards-for-professional-learning/technical-report-redesign-and-psychometric-evaluation-of-the-standards-assessment-inventory.pdf?sfvrsn=0>.
- DuFour, R., Dufour, R., Eaker, R., & Many, T. (2006). *Learning by doing: A handbook for professional learning communities at work*. Bloomington, IN: Solution Tree Press.
- Duran, M., Brunvand, S., & Fossum, P. R. (2009). Preparing science teachers to teach with technology: Exploring a K–16 networked learning community approach. *The Turkish Online Journal of Educational Technology*, 8(4), 22–42.
- Ellett, C. D. (2002). *The Professional Assessment and Comprehensive Evaluation System (PACES)*. Watkinsville, GA: CDE Research Associates, Inc.
- Ellett, C. D., & Monsaas, J. (2007, April). *Cross-sample validation of a measure of teaching and learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Ellett, C. D., & Monsaas, J. (2008, April). *Continued validation of a new measure of teacher perceptions of science and mathematics learning environments*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Ellett, C. D., & Monsaas, J. (2011). Development and validation of a new measure of teacher perceptions of science and mathematics learning environments. *Learning Environments Research*, 14, 91–107.
- Ellett, C. D., Monsaas, J., Payne, D. A., & Pevey, M. (2005, April). *Development of a new measure of reformed teaching in learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

- Ellett, C. D., Monsaas, J., Payne, D. A., & Pevey, M. (2006, April). *Continued development and validation of a measure of reformed teaching and learning environments in science and mathematics*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Enochs, L. G., & Riggs, I. M. (1990). Further development of an elementary science teaching efficacy belief instrument: A preservice elementary scale. *School Science & Mathematics, 90*(8), 694–706.
- Evans, N., & Jarvis, D. (1986). The group attitude scale: A measure of attraction to group. *Small Group Behavior, 17*(2), 203–216.
- Forsyth, P. B., & Hoy, W. K. (1978). Isolation and alienation in educational organizations. *Educational Administration Quarterly, 14*, 80–96.
- Gajda, R., & Koliba, C. J. (2008). Evaluating and improving the quality of teacher collaboration: A field tested framework for secondary school teachers. *National Association of Secondary School Principals, NASSP Bulletin, 92*(2), 133–153.
- Garmston, R. J., & Wellman, B. M. (1999). *The adaptive school: A sourcebook for developing collaborative groups*. Norwood, MA: Christopher-Gordon Publishers, Inc.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569–582.
- Goddard, R.D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Research Journal, 37*, 479–508.
- Guskey, T. R. (1981). Measurement of responsibility teachers assume for academic successes and failures in the classroom. *Journal of Teacher Education, 32*, 44–51.
- Hipp, K. K., Stoll, L., Bolam, R., Wallace, M., McMahon, A., Thomas, S., & Huffman, J. B. (2003). *An international perspective on the development of learning communities*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Hoffman, P., Dahlman, A., & Zierdt, G. (2009). Professional learning communities in partnership: A 3-year journey of action and advocacy to bridge the achievement gap. *School–University Partnerships, 3*, 28–42.
- Hord, S. M. (1996). *School professional staff as learning community* [survey]. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M. (1999). Assessing a school staff as a community of professional learners. *Issues about change, 7* [A series of papers published by Southwest Educational Development Laboratory in Austin, Texas]. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M. (Ed.). (2004). *Learning together: Leading together. Changing schools through PLCs*. New York: Teachers College Press.

- Hord, S. M., Meehan, M. L., Orletsky, S., & Sattes, B. (1999). Assessing a school staff as a community of professional learners. *Issues about Change*, 7, 1–8.
- Hoy, W. K. (2005). Academic optimism of schools. Retrieved July 14, 2014, from <http://www.waynehoy.com/collective-ao.html>.
- Hoy, W. K. (2013). The Omnibus T-scale. Retrieved July 9, 2014, from http://www.waynehoy.com/faculty_trust.html.
- Hoy, W. K., & Miskel, C. G. (2005). *Educational administration: Theory, research, and practice*, 7th ed. New York, NY: McGraw-Hill.
- Hoy, W. K., Tarter, C. J., & Kottkamp, R. B. (1991). *Open schools/healthy schools: Measuring organizational climate*. Beverly Hills, CA: Sage.
- Hoy, W. K., Tarter, C. J., & Woolfolk Hoy, A. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal*, 43(3), 425–446.
- Hoy, W. K., Tarter, C. J., & Woolfolk Hoy, A. (2006). Academic optimism of schools: A second-order confirmatory factor analysis. In W. K. Hoy & C. Miskel (Eds.), *Contemporary issues in educational policy and school outcomes* (pp. 135–156). Greenwich, CT: Information Age.
- Hoy, W. K., & Tschannen-Moran, M. (1999). The five faces of trust: An empirical confirmation in urban elementary schools. *Journal of School Leadership*, 9(3), 184–208.
- Hoy, W. K., & Tschannen-Moran, M. (2003). The conceptualization and measurement of faculty trust in schools: The Omnibus T-scale. In W. K. Hoy & C. G. Miskel (Eds.), *Studies in leading and organizing schools* (pp. 181–208). Greenwich, CT: Information Age Publishing.
- Irwin, J. W. (2000). *Assessing collaborative community*. Unpublished manuscript. University of Connecticut, Storrs, CT.
- Jolly, A. (2004). *A facilitator's guide to professional learning teams: Creating on-the-job opportunities for teachers to continually learn and grow*. Greensboro, NC: SERVE.
- Knezek, G., & Christensen, R. (1997). *The teachers' attitude toward computers questionnaire version 5.1*. Denton, TX: University of North Texas and the Texas Center for Educational Technology.
- LaParo, K. M., Hamre, B. K., & Pianta, R. C. (2012). *Classroom Assessment Scoring System (CLASS) manual, toddler*. Baltimore, MD: Brookes Publishing Company.
- Lee, J.C-K., Zhang, Z., & Yin, H. (2011). A multilevel analysis of the impact of a professional learning community, faculty trust in colleagues and collective efficacy on teacher commitment to students. *Teaching and Teacher Education*, 27, 820–830.
- Leithwood, K., & Louis, K. S. (Eds.). (1998). *Organizational learning in schools*. Lisse, The Netherlands: Swetz & Zeitlinger.

- Levine, T. H. (2005). Teachers' joint work and its influence on classroom practice: Moving beyond just me and my 32 kids. *Dissertation Abstracts International*, 66(8), 2895A.
- Levine, T. H. (2011). Experienced teachers and school reform: Exploring how two different communities facilitated and complicated change. *Improving Schools*, 14, 30–47.
- Louis, K. S., Marks, H. M., & Kruse, S. (1996). Teachers' professional community in restructuring schools. *American Educational Research Journal*, 33, 757–798.
- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousand Oaks, CA: SAGE Publications.
- McGuigan, L., & Hoy, W. K. (2006). Principal leadership: Creating a culture of academic optimism to improve achievement for all students. *Leadership and Policy in Schools*, 5, 203–229.
- McLaughlin, M. W., & Talbert, J. E. (2001). *Professional communities and the work of high school teaching*. Chicago, IL: The University of Chicago Press.
- McLean, R. C. (2012). *Online communities of practice and teachers' perceived sense of efficacy*. (Doctoral dissertation). Retrieved from Rowan Open Access Repository.
- National Council of Teachers of Mathematics. (1989). *Curriculum and Evaluation Standards for School Mathematics*. Reston, VA: Author.
- National Council of Teachers of Mathematics. (1991). *Professional Standards for Teaching Mathematics*. Reston, VA: Author.
- National Council of Teachers of Mathematics. (1995). *Assessment Standards for School Mathematics*. Reston, VA: Author.
- National Council of Teachers of Mathematics. (2000). *Principles and Standards for School Mathematics*. Reston, VA: Author.
- National Research Council. (1996). *National Science Education Standards*. Washington, D.C.: National Academy Press.
- National Research Council. (2000). *Inquiry and the National Science Education Standards*. Washington, D.C.: National Academy Press.
- Norris, C., & Box, K. (2005). *Teachers and technology: A snap-shot survey*. Retrieved November 28, 2014, from <http://tcet.unt.edu/insight/ilib/ttss/>.
- North Cascades and Olympic Science Partnership. (2008). *Professional Learning Community Observation Protocol: Reference Edition*. Supported by NSF under Grant No. DUE-0315060. Retrieved July 31, 2014, from <http://hub.mspnet.org/index.cfm/17753>.
- Olivier, D. F., & Hipp, K. K. (2010). Assessing and analyzing schools as professional learning communities. In K. K. Hipp & J. B. Huffman (Eds.), *Demystifying professional learning communities. School leadership at its best*. Lanham, MD: Rowman & Littlefield Education.

- Olivier, D. F., Hipp, K. K., & Huffman, J. B. (2003). Professional learning community assessment. In J. B. Huffman & K. K. Hipp (Eds.), *Recruiting schools as professional learning communities*. Lanham, MD: Scarecrow Press.
- Padwad, A., & Dixit, K. K. (2008). Impact of professional learning community participation on teachers' thinking about classroom problems. *Teaching English as a Second or Foreign Language, 12*(3), 1–11.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008a). *Classroom Assessment Scoring System (CLASS) manual, infant*. Baltimore, MD: Brookes Publishing Company.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008b). *Classroom Assessment Scoring System (CLASS) manual, Pre-K*. Baltimore, MD: Brookes Publishing Company.
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008c). *Classroom Assessment Scoring System (CLASS) manual, K–3*. Baltimore, MD: Brookes Publishing Company.
- Piburn, M., & Sawada, D. (2000). *Reformed teaching observation protocol (RTOP) reference manual* (Technical Report ACEPT-TR IN00–32). Arlington, VA: National Science Foundation.
- Riggs, I. M., & Enochs, L. G. (1990). Towards the development of an elementary teacher's science teaching efficacy belief instrument. *Science Education, 74*(6), 625–637.
- Riskus, A. M. (2011). The contribution of professional development to a middle-school team's collaboration and instructional learning. (Doctoral dissertation). Retrieved from Arizona State University Digital Repository.
- Rose, J. S., & Medway, F. J. (1981). Measurement of teachers' beliefs in their control over student outcome. *Journal of Educational Research, 74*, 185–190.
- Ruggiero, M. L. (2004). *Assessing collaborative interactions in a teacher professional community: The validity and reliability of a survey instrument*. (Doctoral dissertation). Received from UMI Dissertation Publishing, ProQuest LLC.
- Sawada, D., Pibum, M., Falconer, K., Turley, J., Benford, R., & Bloom, I. (2000). *Reformed Teaching Observation Protocol (RTOP) Training Guide* (ACEPT Technical Reports N0.1NOO-1). Tempe, AZ: Arizona Collaborative for Excellence in the Preparation of Teachers.
- Schechter, C., & Tschannen-Moran, M. (2006). Teachers' sense of collective efficacy: An international view. *International Journal of Educational Management, 20*(6), 480–489.
- Schwarzer, R., & Jerusalem, M. (1993). *General perceived self-efficacy*. Retrieved November 28, 2014, from <http://userpage.fu-berlin.de/~health/selfscal.htm>.
- Schwarzer, R., Schmitz, G. S., & Daytner, G. T. (1999). *Teacher self-efficacy*. Retrieved November 28, 2014, from http://www.strivetgether.org/sites/default/files/images/31%20Teacher%20Self-Efficacy_Schwarzer%20el%20al.pdf.

- Seymour, E., Wiese, D. J., Hunter, A.-B., & Daffinrud, S. M. (2000, March). *Creating a better mousetrap: On-line student assessment of their learning gains*. Paper presented at the National Meeting of the American Chemical Society Symposium, San Francisco, CA.
- Short, P. M., & Rinehart, J. S. (1992). School participant empowerment scale: Assessment of the level of participant empowerment in the school. *Educational and Psychological Measurement, 54*, 951–960.
- Sigurðardóttir, A. K. (2006). *Studying and enhancing the professional learning community for school effectiveness in Iceland*. (Doctoral thesis). Retrieved November 18, 2014, from <https://notendur.hi.is/aks/Anna-Kristin-Sigurdardottir.pdf>.
- Sigurðardóttir, A. K. (2010). Professional learning community in relation to school effectiveness. *Scandinavian Journal of Educational Research, 54*(5), 395–412.
- Smith, P. A., & Hoy, W. K. (2007). Academic optimism and student achievement in urban elementary schools. *Journal of Educational Administration, 45*(5), 556–568.
- Spradley, J. P. (1979). *The ethnographic interview*. Belmont, CA: Wadsworth Group.
- Supovitz, J. (2002). Developing communities of instructional practice. *Teachers College Record, 104*, 1591–1626.
- Thompson, S. C., Gregg, L., & Niska, J. M. (2004). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online, 28*(1). Retrieved November 12, 2014, from <http://www.nmsa.org/Publications/RMLEOnline/tabid/101/Default.aspx>.
- Tschannen-Moran, M., & Barr, M. (2004). Fostering student learning: The relationship of collective teacher efficacy and student achievement. *Leadership and Policy in Schools, 3*, 189–209.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 785–805.
- Tseng, F.-C. (2010). The way we share and learn: An exploratory study of the self-regulatory mechanisms in the professional online learning community. *Computers in Human Behavior, 26*, 1043–1053.
- Vavasseur, C. B. (2006). *How principal participation in an online community of practice impacts the professional development experience of middle school teachers*. (Doctoral dissertation). Retrieved from Louisiana State University Electronic Thesis & Dissertation Collection.
- Watts, A. (2010). The relationship between professional learning communities and school based change. (Doctoral dissertation). Retrieved from ProQuest LLC.
- Wells, C. & Feun, L. (2007). Implementation of learning community principles: A study of six high schools. *NASSP Bulletin, 91*(2), 141–160.
- Wheelan, S. (1994). *The Group Development Questionnaire: A manual for professionals*. Philadelphia, PA: GDQ Associates.
- Wheelan, S., & Hochberger, J. (1996). Validation studies of the Group Development Questionnaire. *Small Group Research, 27*, 143–170.

- Wheelan, S. A., Murphy, D., Tsumura, E., & Kline, S. (1998). Member perceptions of internal group dynamics and productivity. *Small Group Research*, 29, 371–393.
- Wheelan, S. A., & Tilin, F. (1999). The relationship between faculty group effectiveness and school productivity. *Small Group Research*, 30, 59–81.
- Woodland, R., Lee, M. K., & Randall, J. (2013). A validation study of the teacher collaboration assessment survey. *Educational Research and Evaluation: An International Journal on Theory and Practice*, 19(5), 442–460.
- Yarbrough, S. M. (2010). Efficacy of professional learning communities and the impact upon student academic outcome as perceived by local school administrators and teachers. (Doctoral dissertation). Retrieved from Digital Commons@Atlanta University Center Robert W. Woodruff Library.
- Zielinski, A. E., & Hoy, W. K. (1983). Isolation and alienation in elementary schools. *Educational Administration Quarterly*, 19(2), 27–45.

References

- Blitz, C. L. (2013). *Can online learning communities achieve the goals of traditional professional learning communities? What the literature says* (REL 2013–003). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Mid-Atlantic. <http://eric.ed.gov/?id=ED544210>
- Chappuis, S., Chappuis, J., & Stiggins, R. (2009). Supporting teacher learning teams. *Educational Leadership*, 66(5), 56–60.
- DuFour, R., Eaker, R., & DuFour, R. (2005). Recurring themes of professional learning communities and the assumptions they challenge. In R. DuFour, R. Eaker, & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 7–30). Bloomington, IN: National Educational Services.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199.
- Haynes, N. M. (2012). *Group dynamics: Basics and pragmatics for practitioners*. Lanham, MD: University Press of America.
- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Lab.
- Kerr, N. L., & Tindale, R. S. (2014). Methods of small group research. In H. Reis & C. Judd (Eds.), *Research methods in social psychology: A handbook (2nd edition)* (pp. 188–219). New York, NY: Cambridge University Press.
- Lomos, C., Hofman, R. H., & Bosker, R. J. (2011). Professional communities and student achievement: A meta-analysis. *School Effectiveness and School Improvement*, 22(2), 121–148. <http://eric.ed.gov/?id=EJ925055>
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach (7th edition)*. Thousand Oaks, CA: SAGE Publications.
- Stoll, L., & Louis, K. S. (2007). *Professional learning communities: Divergence, depth, and dilemmas*. Berkshire, UK: Open University Press.
- Talbert, J. E. (2010). Professional learning communities at the crossroads: How systems hinder or engender change. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *The second international handbook of educational change* (pp. 555–571). New York, NY: Springer.
- Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, 24(1), 80–91. <http://eric.ed.gov/?id=EJ782410>
- Wood, D. R. (2007). Professional learning communities: Teachers, knowledge, and knowing. *Theory Into Practice*, 46(4), 281–290.

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