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# Professional Development through PLCs: Methods for Measuring PLC Efficacy

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### **Abstract**

This report is a literature review on methods for measuring the efficacy of Professional Learning Communities (PLCs) used in schools as a form of teacher professional development. Research-based characteristics of successful PLCs are identified, and several studies are cited that indicated student achievement gains as a result of PLC implementation. This research contributes to the literature on evaluating effective PLC professional development.

### **Professional Development through PLCs: Methods for Measuring PLC Efficacy**

Certain characteristics are often found in the most effective Professional Learning Communities (PLCs). First, a shared vision for a school and collective responsibility for results by a community are vital to success (Vescio, Ross, & Adams, 2008; DuFour, 2014). A second key component of PLC work is reflective dialogue and inquiry among members of a PLC, which allows for frequent examination and discussion of teacher practice (Darling-Hammond & Richardson, 2009). A third recurring theme in the literature is the importance of teachers using classroom data, both formatively and

summatively, to inform their collaborative work and professional discussions about classroom practice (Strahan, 2003; Vescio et al., 2008; Williams, 2012). Characteristics of successful PLCs include:

- Make connections between adults collaborating and students learning;
- Establish a clear purpose/shared focus that is compelling to the group members;
- Draw on exemplary outside resources relevant to the PLC focus;
- Use a cycle of planning, acting, and reviewing the results tied directly to the PLC focus;
- Provide adequate time to do the work;
- Provide support from building and district administration (Smith, Corbett, & Wilson, 2010, pp. 116-17).

Whitford and Wood (2010) found that PLCs allowed teachers to have collaborative conversations that “spawned possibility, inventiveness, and hope” in the way teachers think about student learning (p. 18). Additionally, PLCs reduced isolation, created better informed and more committed teachers, and increased academic gains for students (Hord, 2004).

One key component to successful PLC implementation that is often overlooked includes measuring both outcomes and fidelity of implementation. The purpose of this research is to investigate: How can a district or school measure the efficacy of PLCs? What tools are tried, tested, and garner information and results? What rubrics can be used to evaluate the efficacy of PLCs?

### **Defining Professional Learning Communities**

Professional Learning Communities (PLCs) can be defined as “small groups of educators meeting regularly to engage in systematic peer critique and support by sharing their own professional practices as well as artifacts of student learning” (Whitford & Smith, 2010, p. 22). Furthermore, PLCs focus on educators’ shared commitment to student learning through collaborative practice and decision-making (Yendol-Hoppey, 2010). PLCs promote reflective practice and help to “cultivat[e] working relationships with other teachers, being responsive to student needs and interests, and investigating the strengths and weaknesses of one’s own practice” (Jones, 2010, p. 151). PLCs often exist within grade or content level teams, but they do not have to be limited to one school; Smith, Corbett, and Wilson (2010) researched a cross-district PLC that included superintendents, curriculum directors, and project coordinators who “shared ideas and strategies, and explored the implications of developing more collaborative cultures in organizations that have long been largely hierarchical” (Smith, Corbett, & Wilson, 2010, p. 111). PLCs may provide benefits at many levels, most notably to improve student achievement.

### **PLCs Increase Student Achievement**

The goals of PLCs vary based on specific school and district needs but broadly focus on improving student learning by focusing on teaching. Dufour (2004) identifies the three main questions PLCs strive to answer:

1. What do we want each student to learn?
2. How will we know when each student has learned it?
3. How will we respond when a student experiences difficulty in learning?

PLCs provide teachers opportunities to collaborate, focus on teaching across the curriculum, plan balanced assessments, and use data to track progress and make adjustments.

Several studies have shown that PLCs can increase student achievement. Strahan (2003), for example, sought to examine how three schools with a large percentage of low income and minority students had made great gains on standardized test scores, and found the answer led back to PLCs. These three schools started with less than 50% student proficiency in reading and math, and grew to over 75% proficiency over the course of five years. To determine how these schools had reached this level of success, researchers collected qualitative data in the form of interviews, lesson observations, and school-wide meetings. The analysis of the results determined that “the central dynamic...was data-driven dialogue, purposeful conversations guided by formal assessment and informal observation” (Strahan, 2003, p. 143). These conversations were part of a supportive school culture that fostered PLCs with a focus on classroom changes to improve instruction.

Another study examined the impact of a five-year, district-wide implementation of PLCs at the elementary, middle, and high school levels (Williams, 2012). Teacher interviews revealed that teachers at all levels “...believed that PLCs provided avenues for them to learn and positively impacted their classroom practices” (p. 35). Analysis of district-wide data on student achievement in reading after the third year of implementation showed statistically significant ( $p < .05$ ) improvements at all levels, with the largest gains at the middle and high school levels. Williams (2012) asserts that the

results of this study give solid evidence that implementation of the collaborative culture provided by PLCs plays an important role in student learning and achievement.

In 2014, DuFour published a study outlining the important elements of PLC implementation, then provided quantitative data from schools using on-going training on the use of the collaborative PLC process. DuFour described a school district with 27 schools with all schools at 75% or less of the students meeting proficiency standards in reading and math. At the end of the five-year initiative, 19 of the schools had reached the goal of 90% proficiency, with several schools at 95% or more. These studies illustrate the potential academic benefits of successful PLC implementation and practice.

Successful PLC implementation is challenging, however. Smith, Corbett, and Wilson (2010) studied PLCs within three large school districts. They found several barriers that inhibited the success of the communities, including: competing demands on time, administrative support, lack of clarity regarding goals, high turnover, extended time between meetings, and difficulty in maintaining a focus on student achievement.

### **Measuring the Effectiveness of PLCs**

Measuring the efficacy of PLCs should occur at various leadership levels within a school district. PLCs can be a valuable practice for schools when there are clear PLC goals that align with school and district goals. A review of the literature indicates five main characteristics of effective PLCs that should be measured, including:

1. Shared values and vision: The PLC community has a continued focus on student learning as its main goal.
2. Collective responsibility: All members of the PLC community advocate for student learning.

3. Reflective professional inquiry: PLC members partake in reflective dialogue to discuss problems of educational practice.
4. Collaboration: PLC members engage in best teaching practices through collaboration.
5. Collective learning: teachers learn from each other and improve teaching practices, also increasing student learning (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

There are various methods that can be utilized to measure PLC efficacy. Lujan and Day (2009) conducted a study on efficacy using surveys, interviews, and field-based observations. Their research focused on how PLCs impacted collaboration among teachers, and if the roadblocks to collaboration were addressed, was collaboration impacted as well. Their main findings were that time constraints, isolation, divergent views, and lack of conflict resolution were the main roadblocks to collaboration. Utilizing Lujan and Day's interview questions to guide research can help clarify PLC strengths and weaknesses.

### **Methods of Measuring PLC Efficacy**

The literature suggests five different options for measuring the efficacy of PLCs. The options are detailed below:

1. **Demographic Informational Survey**

The schools' administrative teams could complete a demographic informational survey about the school, including student attendance and discipline data, student achievement data, and student demographic information.

## 2. **PLC Participant Survey**

PLC effectiveness can also be measured by PLC participants' surveys. All PLC participants could be surveyed via an online survey to discover such things as their views regarding PLC participation, familiarity with the district's mission and vision statements, collaboration with colleagues, and the impact of PLCs on teaching and learning. This survey could be used as a pre-assessment of PLC members and used again at the end of the year to help measure effectiveness based on member perceptions and participation. Data could guide PLC leadership and planning to help garner collective responsibility needed for efficacy. Data could also guide future next steps for this work (i.e., whether the district should proceed with options 3-5 below).

## 3. **Interviews**

Outside researchers could conduct in-person interviews to measure the effectiveness of the PLCs. Interviews offer data that cannot be gathered in a written survey, such as insights into PLC participant perspectives through direct quotations from PLC members (Forman, Creswell, Damschroder, Kowalski, & Krein, 2008). For example, questions similar to the written survey could be asked, focusing on views about PLC collaboration, participation, and efficacy. Conversely, questions could focus on elaborating on answers in participant surveys. Suggestions for improvement could also be collected. Data gathered through interviews would remain confidential. Conducting interviews in addition to a written survey will help provide a well-rounded picture of PLC function and practice.



#### **4. Data Analysis**

Researchers and/or PLC members could analyze student test scores to compare data results from the year prior to PLC implementation to data results post PLC implementation. Data analysis could also be compared between other schools utilizing PLCs and/or schools not using PLCs. Data could be disaggregated by grade level and by school.

#### **5. Observations / Self-Assessment**

Researchers and school personnel could conduct observations of PLCs, using the targeted PLC goals identified by the school. Utilizing multiple forms of research can help triangulate the data to provide a broader picture of PLC efficacy.

### **Summary**

A multiple measures approach that includes surveys, interviews, data analysis of existing data and of data produced by PLC protocols, observations, and self-assessments would give a well-rounded picture of PLC efficacy within a school or district.

Completing the feedback loop by examining student achievement data can help clarify teacher success in relation to their collaborative work. Research indicates that PLCs that utilize best practices of implementation increase student achievement (e.g. Strahan, 2003; Williams, 2012; Dufour, 2014), so it is crucial that schools measure their own PLC efficacy to ensure success.

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