Title registration for a systematic review: Educator Professional Learning Communities (PLCs) for improving academic, social, and behavioral outcomes in K-12 schools: a systematic review
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Educator Professional Learning Communities (PLCs) for improving academic, social, and behavioral outcomes in K-12 schools: a systematic review

Background

Professional learning communities (PLCs) have been gaining considerable attention the past few decades however little empirical evidence has rigorously supported the effectiveness of PLCs on educator and student outcomes. This systematic review attempts to address this gap in the literature by evaluating existing studies.

PLCs were developed within the last half of the century to address the evolving demands placed upon teachers to increase accountability, improve student academic outcomes, enhance professional development, and alleviate stress related to the demand for more dynamic educators (Vescio, Ross, & Adams, 2008). Although there is no definitive definition of what makes a PLC, it is typically comprised of a group of professionals (for the purpose of this proposed title, educators and related service professionals within education) who collaborate, reflect, and appraise their professional work in an effort to create a co-learning environment that enhances their field and builds professional capacity (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Most PLCs share the common characteristics of a shared sense of purpose, collaborative activity, collective focus on student learning, de-privatized practice, and reflective dialog (Zheng, Yin, Liu, & Ke, 2016). Recent calls for more rigorous research on PLCs have also highlighted the need for greater theorization to help generate more robust empirical evidence (Hairon, Goh, Chua, and Wang, 2017). Thus, although PLCs seem like a logical approach for improving a range of professional capacities, supports, and outcomes, more evidence is needed to determine if these communities actually achieve this goal.

Some studies have evaluated the effectiveness of PLCs on teacher self-efficacy with mixed results. One study in China demonstrated that PLCs created a deeper trust in colleagues and leadership skills (Zheng, Yin, Liu, & Ke, 2016) however another study in Germany found little to no difference of PLCs on teacher self-efficacy (Weißenrieder, Roesken-Winter, Schueler, Binner, & Blömeke, 2015). A study in the United States found that teachers who participated in sustained PLCs that allowed direct practice and problem-solving activities had higher self-efficacy than those without the direct exposure to the professional development (Mintzes, Marcum, Messerschmidt-Yates, & Mark, 2012). One reason for the mixed outcomes could be the cultural differences from around the world as well how conducive varying school contexts are to PLCs and the recommendations
they provide. Another could be the lack of clear and consistent operational definitions that studies to date have used to frame the inter-dependent aspects of PLCs when describing their effects or evaluating their impact (Hairon et al, 2017). Indeed creating a deeper understanding of the ways professional learning communities operate will help educators become better, and is part of this proposed title.

PLCs have also aimed to enhance student academic achievement because of the natural collaborative process that the teachers share. The interdisciplinary and interactive nature of the PLCs that teachers participate in would introduce students to complex and diverse perspectives (Zhao & Kuh, 2004). A study that focused on when university students participated in PLCs found their academic performance increased, as well as their social skills, and had an overall more positive experience on their time at college (Zhao & Kuh, 2004). When teachers participate in PLCs, the outcomes have been fairly positive. Gray, Kruse and Tarter (2016) discovered that the academic outcomes from the teachers’ students were significantly attributed to the structure of the school, ones that were more adaptable to PLCs were likely to have higher student achievement. Although this is just one example, there have been a multitude of narrative studies that point to the positive links of PLCs and student achievement, but to date no systematic review of the literature.

Objectives

The aim of this review is to assess the effectiveness of PLCs in K-12 educational environments, specifically related to their effects on educator self-efficacy and other skills, and their impact on student and school-level outcomes (e.g. academic, social, and behavioural).

Primary objectives:

- To assess the effectiveness of PLCs on increasing educator capacity in terms of self-efficacy, decreasing burnout, and increasing skill with learning and applying evidence-based interventions in schools.
- To assess the effectiveness of PLCs on impacting key school-level and student outcomes, specifically: academic (increased academic achievement), social (improved school climate), and behavioral (increased attendance and decreased behavior referrals) outcomes.

Secondary objectives:

- To assess the effectiveness of specific dimensions of PLC delivery (size of PLCs, frequency of meetings, focus and goals of PLC of capacity building efforts, opportunities for educator leadership) in increasing educator competencies.
- To assess how different implementation approaches (in-person PLCs, online PLCs, hybrid versions) influence the effectiveness of PLCs.
To assess how different contextual factors within and outside schools influence the effects and impact of PLCs, specifically: within schools (administrative structure, administrator support, types of schools, school climate, socio-economic differences across educators) and outside schools (district policies, socio-economic differences across districts).

Existing reviews

To date, there are no systematic reviews that have addressed PLC effectiveness. The reviews that exist are largely narrative in nature, and have not been updated in almost 10 years. There is a clear need for a more rigorous, current, and comprehensive review of this literature, given the continued popularity of PLCs as a training model in K-12 education.

Intervention

Professional Learning Communities (PLCs) have been defined as “a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way.” (Stoll et al., 2006). More recently, Hairon et al. (2017) called for a more precise theoretical frame to guide in investigating the empirical base of PLC across three interdependent aspects: the construct of PLCs, the contexts-conditions of PLCs, and the causalities (effects) of PLCs. This review will examine PLCs that have been formed within K-12 schools to address some component of the educational goals of the school (i.e. specific academic content, topical areas related to social or behavioral issues within the school). Most of the PLCs currently underway in schools are teacher-focused, with PLCs being formed by teachers at grade levels or within content areas. That said, the extant PLC models can also be used with school administrative teams, with related service professionals such as school social workers and school psychologists, or with community-based providers and parents.

Key components of PLCs involve gathering educators and/or school stakeholders together with a shared purpose, promoting a collaborative environment of reflection and inquiry, and working towards some identifiable outcome to change their own practice and the overall performance of the school. The PLC is meant to be an ongoing regular meeting where educators share their work, learn new things about the topics identified for the PLC, and collaborate on ways to implement their learning into their own educational contexts (Hairon, et al., 2017; Stoll et al., 2006; Vescio et al., 2008). Because of the relatively undefined nature of PLCs in the literature and within actual practice, this review will attempt to clearly define aspects of PLCs and apply them to the literature that is included in this systematic review.
Population

For this review, studies involving any member of a K-12 education PLC will be eligible for inclusion in this project. These PLC members will include: classroom teachers, administrative team members, related service professionals, community-based providers, and parents. The PLC must originate from the school context, and meet either before, during, or after school time.

Outcomes

Primary outcomes:
• Increased educator self-efficacy
• Increased sense of satisfaction with work (prevention of burnout)
• Enhanced knowledge of skills associated with becoming more evidence-informed and applying evidence-informed practice to their educational context
• Improved school- and student-level outcomes on academic, social, and behavioral goals identified by the PLCs themselves

Secondary outcomes:
• Attitude towards PLCs as a training tool, based on quantitative and qualitative measures
• Enhanced knowledge of the core aspects PLCs most effective to educators of different professional roles, based on quantitative and qualitative measures

Study designs

The following study designs will be reviewed to address the objectives outlined above:
1) Randomized controlled trials (RCT)
2) Quasi-experimental designs (QED)
3) Interrupted time-series studies (ITS)
4) Repeated-measures study
5) Multiple-methods studies (specifically, one of the above study designs combined with a rigorous qualitative methodology)

All of these study designs will be reviewed to address the study objectives.
References


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Potential conflicts of interest

There are no conflicts of interest to declare.

Preliminary timeframe

- Date you plan to submit a draft protocol: December 2017
- Date you plan to submit a draft review: September 2018