Foundations for Supporting Teacher Growth through myTeachstone™:
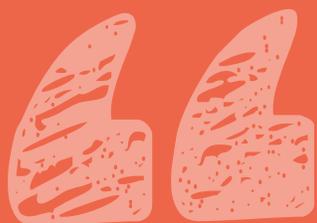
Six Research Principles

myTeachstone Research Principles

Teachstone® has its roots in research conducted in academic settings. In fact, co-founder Bob Pianta has often said that "research is in Teachstone's DNA." The Classroom Assessment Scoring System® (CLASS®) framework was developed through many years of studies and publications, conversations with academic colleagues, and replications across different age levels and different types of classrooms. The result is a strong (and growing) evidence base that shows that the interactions measured by the CLASS observation are key drivers of children's learning and development, that teachers can learn to improve their interactions with children, and that certain professional development strategies are effective at improving those interactions.

Teachstone's role is to make the CLASS framework scalable and bring effective teacher-child interactions to as many classrooms as we can. To achieve this, we have drawn on a wide range of research findings from the University of Virginia and other research institutions—research specific to the CLASS framework as well as research on adult learning, implementation, and effective professional development—to build myTeachstone, a scalable, engaging online system designed to deliver on the promise of CLASS by leveraging observation data to promote professional learning among coaches and teachers.

The myTeachstone online system was built on strong research foundations that emphasize six key principles in supporting teacher growth. Below, we review the evidence that underlies each of these principles and discuss how we have drawn on this evidence to create a program that results in real teacher growth.

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I. Use of Coaching to Support the Transfer to Practice

Over the past 10 to 15 years, there has been a movement away from workshop-style professional development and toward forms of professional development that make stronger links between newly learned material and teachers' actual classroom practices. One sign of this movement is the greatly increased use of coaching and other forms of technical assistance (Young, 2012). Multiple, high-quality studies have now demonstrated that coaching can be an effective means of helping teachers improve their interactions and boost child outcomes.

One example is the Head Start REDI program (Domitrovich, Gest, Gill, Bierman, Welsh, & Jones, 2008). In a randomized controlled trial, researchers provided half of the teachers with intensive training and curricular supports focused on language and literacy and social-emotional development. The training was followed by weekly meetings with mentors who provided feedback, modeled teaching strategies, and introduced new strategies. Results indicated that teachers improved their Emotional Support and Instructional Support (Domitrovich et al., 2008), with some teacher and child effects maintained at a follow-up one year later (Bierman, Nix, Heinrichs, Domitrovich, Gest, Welsh, & Gill, 2014; Bierman, Sanford DeRousie, Heinrichs, Domitrovich, Greenberg, & Gill, 2013).
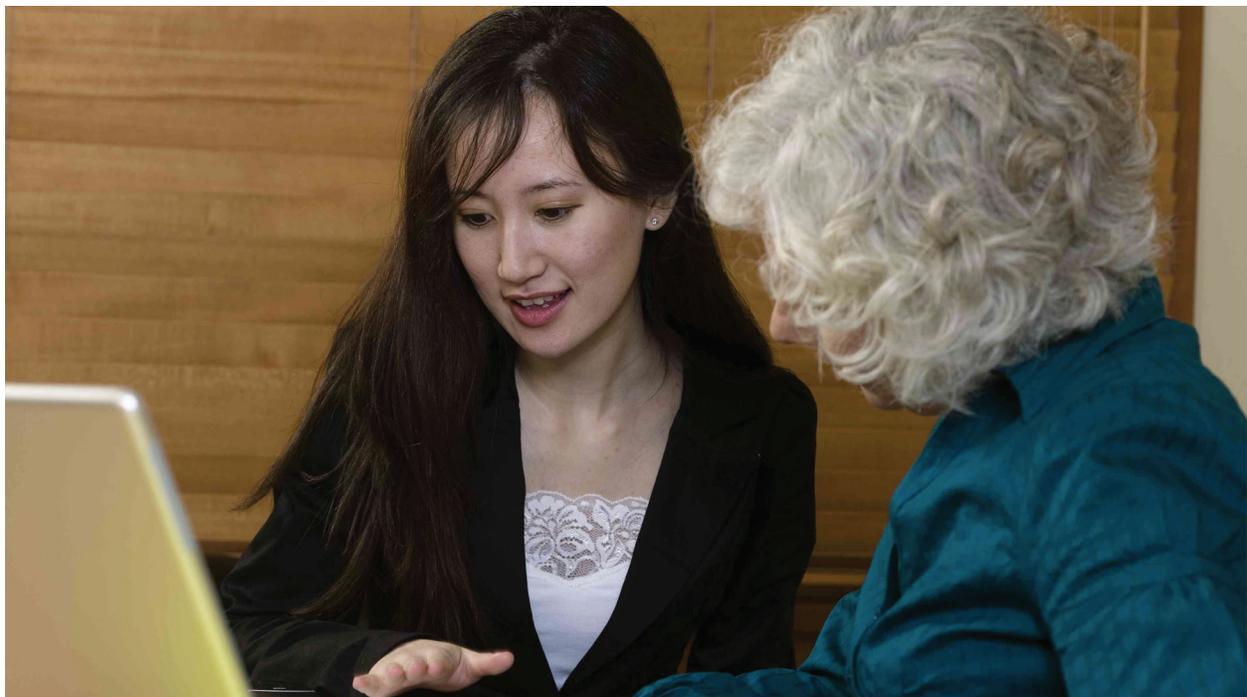
Another example is the Chicago School Readiness Project, which used a randomized controlled trial to test a combination of teacher training and intensive coaching designed to improve classroom management and children's self-regulation (Raver et al., 2008). After teachers attended a series of trainings on behavior management, coaches followed up with weekly support for implementing behavior management strategies and forming positive relationships with children. Results showed that intervention teachers significantly improved their Positive Climate and Teacher Sensitivity, decreased their Negative Climate, and made marginal improvements in Behavior Management (Raver et al., 2008).

Both of these studies show the effects of structured coaching in combination with some kind of teacher training, making it hard to determine whether the training or coaching drove the effects. In tests of MyTeachingPartner™ Coaching, Pianta and colleagues have worked to isolate the effects of coaching on teacher outcomes. To address this question, researchers assigned teachers to one of three conditions: (1) access to web resources only, (2) access to web resources + coaching, and (3) business-as-usual control. Results showed that the web resources + coaching group made significant gains on the CLASS observation above the web resources only group, indicating that coaching added value beyond teachers' having access to new information online (Pianta, Mashburn, Downer, Hamre, & Justice, 2008). This provides strong evidence that coaching is an effective means of improving teacher-child interactions and has effects beyond merely providing teachers with information through trainings or online resources.

Taken together, the research strongly suggests that coaching can be a key means for transferring newly learned skills into practice. MyTeachstone supports this blended model by using online professional development to enhance face-to-face interactions. Coaches combine CLASS data with information about individual teachers to recommend online content that is data-driven and meets teachers where they are in their growth.

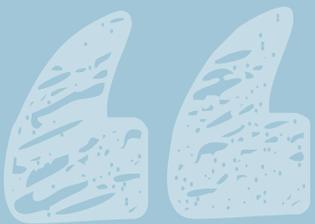# 2. Frequent Contact between Coaches and Teachers

One reason that traditional professional development activities, like workshops, are often ineffective is that they do not provide a large enough "dose" to result in real teacher change (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). In part, this may be because shorter and less intensive professional development leaves little time for teachers to engage in the types of activities that promote teacher change, like opportunities for active learning or focusing in closely on content knowledge (Birman, Desimone, Porter, & Garet, 2000). Existing evidence suggests that more intensive programs and programs of longer duration result in more consistent effects for both teachers and their students. A review of rigorously studied professional development programs found an association between professional development contact hours and effects on student achievement: the programs that involved the least amount of contact (fewer than 15 hours) had no effects on student outcomes at all (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Above the 15 hour mark, more contact was associated with larger effects (Yoon et al., 2007). Likewise, studies asking teachers to report on the perceived usefulness of professional development activities indicated that contact hours were positively associated with self-reported changes in classroom practices (Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet, Porter, Desimone, Birman, & Yoon, 2001).

In an experiment testing the effects of MyTeachingPartner™ Coaching, researchers found that teachers reached their maximum improvement in Instructional Support only after completing an average of 13 coaching cycles, translating to six months or more of focused, collaborative work by teachers and coaches (Pianta et al., 2014). Taken together, existing research suggests that providing ongoing, frequent professional development that focuses on specific teacher learning goals is more valuable to teachers and more likely to produce changes in classroom practices than one-off trainings. Selecting a set of goals for professional development and giving teachers ample opportunities to work toward those goals throughout the year may be the best way to promote more effective teaching.

MyTeachstone supports the frequency and intensity of professional development by encouraging frequent contact between teachers and coaches. Teachers and coaches have visibility into progress across recommended online content, as well as access to an online library of resources that they can explore on their own time. The online library of resources is robust and searchable, so teachers and coaches can regularly engage in content that is relevant to their specific goals and readiness levels. Coaches and administrators can easily view frequency of activity within the system, allowing them to tailor support to individual teacher needs.

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3. Strong Teacher-Coach Relationships
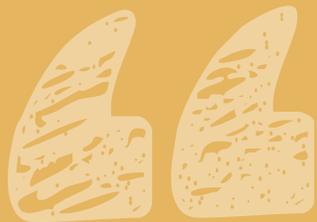
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Common wisdom holds that strong teacher-coach relationships encourage teachers to accept and implement new practices, and research is beginning to bear this out. Coaching models that have been tested and proven to improve practice often emphasize collaboration between coaches and teachers and encourage reflective practice rather than only direction from the coach (Neuman & Wright, 2010; Pianta et al., 2008). Furthermore, research on behavior change suggests that people are more likely to make changes when feedback comes from a trusted and respected source (Delvaux et al., 2013).

Few studies have directly examined how coach-teacher relationships impact the outcomes of professional development, but some have elicited teachers' opinions of their coaches after an intervention. One experiment demonstrated that one-on-one coaching was more effective than coursework at improving children's outcomes (Neuman & Wright, 2010). In a qualitative follow-up analysis, the researchers found that teachers valued the individual attention they received from coaches and made improvements based on a feeling of informal accountability to the coach. In another follow-up to an experiment, researchers found that teachers who reported having a stronger relationship with their coaches were better at implementing new intervention practices (Wehby, Maggin, Moore Partin, & Robertson, 2012). This effect was only significant among teachers with a high degree of burnout, suggesting that strong teacher-coach relationships may be especially important for teachers experiencing high levels of work-related stress.

These studies indicate that positive teacher-coach relationships can provide a foundation for teachers to adopt new practices. MyTeachstone leverages existing coaching and T&TA infrastructure, supports it with new tools and technology, and encourages increased collaboration to strengthen the teacher-coach relationship. Infusing CLASS data with qualitative insights, myTeachstone helps coaches better understand the needs of individual teachers and customize their support accordingly.

4. Group Involvement in Professional Development

Working as a preschool teacher can be stressful and isolating, and this stress can negatively affect the relationships that teachers form with children (Whitaker, Dearth-Wesley, & Gooze, 2015). Preschool teachers also have an alarmingly high turnover rate, with negative consequences for the children in their care (Barnett, 2003). Group participation in program-wide professional development holds a great deal of promise for decreasing social isolation and improving teaching quality. Although the research evidence is still emerging, group participation may help teachers feel more connected to and supported by their colleagues while also promoting better implementation of new teaching practices (Garet et al., 2001).


Studies suggest that professional development that is coherent (i.e., strongly connected to program-wide goals and integrated throughout the program's practices) is more likely to lead to change in teacher practices compared with less coherent, one-off professional development (Garet et al., 2001). In a nationwide study of elementary school teachers, researchers identified "meaningful, ongoing, and coherent professional development experiences" as a significant predictor of the implementation of a new program (Penuel, Fishman, Yamaguchi, & Gallagher, 2007, p. 947).

One method for increasing the coherence of professional development is to encourage teachers to engage in group learning activities, like teacher study groups or professional learning communities. Group learning among teachers is becoming so widespread and is so loosely defined, however, that it risks being ineffective if it is not structured thoughtfully. An extensive review of the research highlighted several characteristics of effective group learning opportunities, including fostering a strong focus on student learning and a sense of collective responsibility for learning among teachers in the group (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Creating group learning opportunities that are intentional and attend to these principles may hold the most promise for improving teaching.

There are few rigorous evaluations of group learning programs, but one randomized controlled trial among first grade teachers tested a structured program that combined informal peer-to-peer discussion with a well-articulated theory of change and a series of discussion topics (Gersten, Dimino, Jayanthi, Kim, & Santoro, 2010). Results showed that it was effective at improving teacher knowledge and classroom teaching practices, and gave some indications of improvements to student outcomes (Gersten et al., 2010).

Although much more research is needed, the broad consensus holds that collective participation in professional development—including a program-wide, coherent focus and opportunities for teachers to engage in learning with their colleagues—is important for ensuring that new skills transfer to practice. Teachstone has incorporated these principles by allowing coaches to create teacher groups, recommend online content for group engagement, and facilitate online discussions related to relevant content. These interactive online discussions are designed to support face-to-face meetings, connect teachers through shared goals and activities, and foster more intentional group learning opportunities.
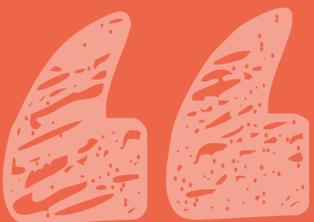
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5. Use of Video to Focus Teachers' Professional Lens

Classrooms are complex places that require teachers to divide their attention among many competing demands: one child arrives late, another needs to clean up after painting, and some children are having a dispute in the block area—all while the teacher is trying to get a small group engaged in a letter-learning activity. Because of this complexity, it is impossible for teachers to give equal focus to everything that occurs. Part of becoming an expert teacher is learning how to focus attention on the truly important demands and to make the most of those moments (Sherin & van Es, 2005).

A key challenge in preschool teacher professional development is how to help teachers develop a professional lens that enables them to identify those important moments, what we have described elsewhere as seeing their practice in the moment (Vitiello, Hadden, & the Teachstone Policy Group, 2014). Video can be a powerful tool in helping teachers to learn to "see" in this way. Qualitative studies have shown that teachers who engage with videos in a structured way—with a facilitator or question guide—learn to make more specific observations and move from describing and evaluating what they see to interpreting the meaning of it (Sherin & van Es, 2005; van Es & Sherin, 2008).

Larger, quantitative studies have also shown positive effects for video usage. In a randomized controlled trial testing MyTeachingPartner™ Coaching, teachers who were given access to web resources only, including an extensive video library of teaching exemplars, showed improvements in their interactions that were correlated with the amount of time spent on the website; in other words, the more time teachers spent, the more their interactions improved (Pianta et al., 2008). In a large follow-up study, results indicated that video watching was especially effective at improving Emotional Support interactions (Pianta et al., 2014).

Video is at the heart of myTeachstone. Our online library of resources contains hundreds of real classroom videos, "look for" guides, and reflective questions. The videos are tagged to help users find the most relevant content, and a commenting feature helps coaches facilitate discussion among individual teachers or group learning.

6. Data-Driven, Individualized Coaching Supports

Finally, there is broad interest in ensuring that coaching is properly individualized to each teacher's needs and that this individualization is based on data about the teacher's strengths and weaknesses. One potential drawback of the rush to provide coaching throughout early childhood systems is a lack of clarity around what coaches should actually do. In conversations with coaches, we hear the full range of involvement with teachers, from acting as an extra pair of hands in the classroom to a more formal coaching relationship. There is a need for balance in coaching, finding the right degree of structure while allowing flexibility so that coaches can individualize based on teachers' needs.

Although few studies have explicitly tested the effectiveness of individualized coaching, studies do show that coaches can learn to individualize their coaching practice effectively. In one study, coaches provided an observation and feedback to all teachers and were trained to individualize their follow-up support (Becker, Darney, Domitrovich, Keperling, & Ialongo, 2013). Results showed that coaches spent more time with lower-performing teachers and used more active, hands-on techniques with them. Low-performing teachers made significant gains in response to their efforts (Becker et al., 2013). In a similar study, coaches were trained to use an observation checklist and then set goals based on what behaviors were observed or not observed (Crawford, Zucker, Williams, Bhavsar, & Landry, 2013). Coaches were more likely to set goals related to behaviors that were not observed, and were highly successful at meeting goals those with teachers.

Taken together, this research indicates that coaches can learn to individualize their support based on observation data, and provides preliminary evidence that individualized approaches can be effective. Through myTeachstone, coaches access CLASS observation data to track teacher progress over time, in relation to the mean, and relative to the goals set by the organization.

Conclusions

In sum, a review of the research on teacher professional development suggests that these six features are effective at promoting teacher change and, ultimately, improving child outcomes. These principles are the foundation of myTeachstone, ensuring that the system supports organization-wide investment in improving interactions. By providing data-driven professional development programs, leveraging and enhancing existing coaching infrastructure, individualizing the teacher experience, and offering visibility into progress and data across the entire organization, myTeachstone delivers on the promise of CLASS.

Contact us to find out how you can deliver on the promise of CLASS with myTeachstone™

866.998.8352
www.myteachstone.com

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