

Impact of Coaching Time and Strategy on T2CI Teacher Outcomes

In the four T2CI districts, district-provided release time for coaching ranged from no release days provided at all to as high as 20 release days per year. The amount of time participants spent in their coaching duties ranged from less than 25 hours to over 100.

The fact that there are so many permutations of how coaching was implemented across the sites provides an opportunity to assess which, if any, of the coaching factors might make a difference in collaborating teacher outcomes. This report is a first attempt to determine to what extent two factors—amount of coaching time and type of coaching strategy—might affect improved teacher outcomes. The analysis relies on Year 2 (2003-04 school year) reports which were completed by 36 coaches and 46 collaborating teachers, representing the four participating school districts and 35 schools.

Background

The Teaching + Technology Coaching Initiative (T2CI) is a professional development model designed to improve the integration of technology into teaching practice. T2CI provides training and ongoing support to faculty members who serve as peer coaches for colleagues in their own schools. T2CI is in its third and final implementation year in four Washington state school districts: Edmonds, Mukilteo, Seattle and Shoreline.

T2CI coaches, in some cases in concert with building leadership, select a limited number of faculty members with whom to work. These partners are known as “collaborating teachers.” Each coach-teacher partnership makes its own decisions regarding ways to work together and how often to meet. In some cases, the principal or the district has also established parameters for the collaboration, but the T2CI model itself has no set requirements. Building and district administrators may provide time and resources to support coaching at their own discretion. At the building level, principals also made individual decisions regarding encouraging coach-teacher collaboration. For example, some principals arranged for the coach and collaborating teachers to have a common planning period, or to team teach. Some principals provided additional release time as well. In sum, on a program-wide basis, there was no uniformity in the type of support provided, prescribed coaching strategy, or requirements regarding how much time teachers and coaches worked together.

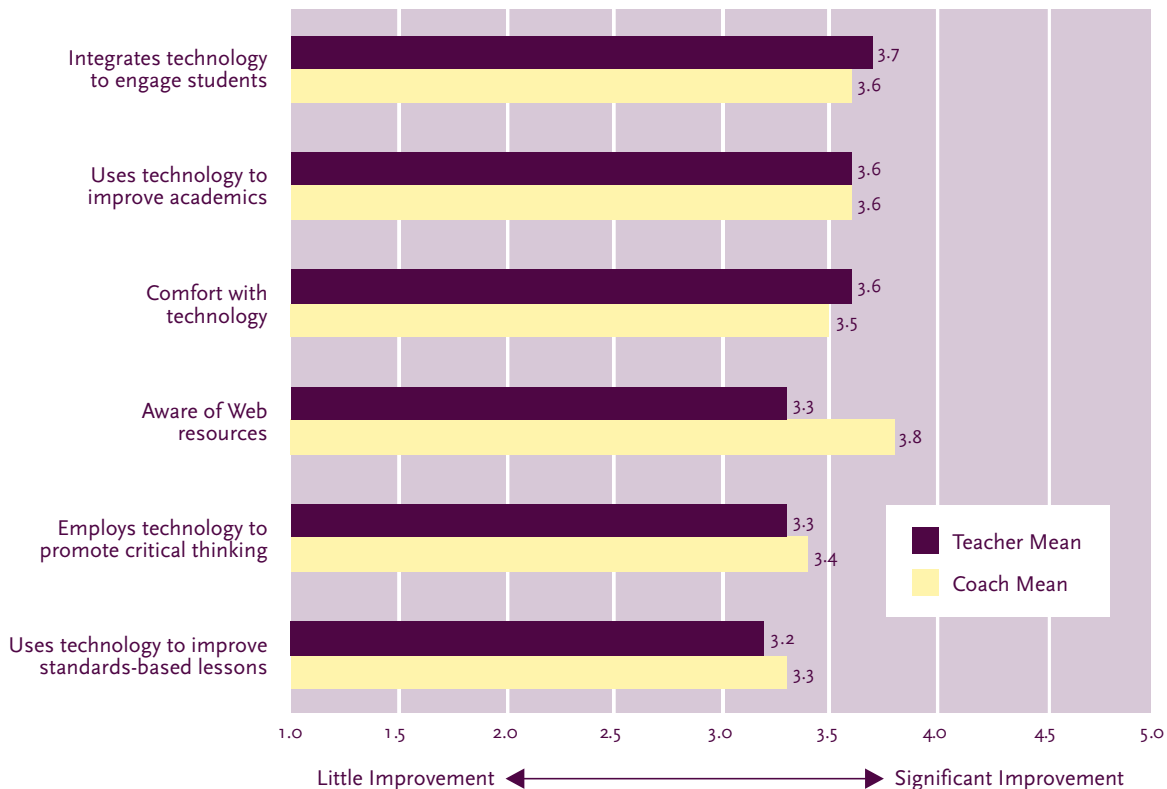
How Impact Was Assessed

At the end of the school year, all coaches and collaborating teachers were asked to complete a confidential progress report. Collaborating teachers rated their own improvement over the course of the year in six technology-related areas. Coaches rated improvement only for the one teacher they worked with the most. They were not asked to identify this teacher by name. As shown below, coach and teacher perceptions of teacher improvement were remarkably parallel.

Measures of Collaborating Teacher Improvement

1. Ability to integrate technology in ways that engage students in learning
2. Comfort using technology in the classroom
3. Understanding of how technology can be used to improve academic curricula
4. Awareness of Web-based resources
5. Expertise in using technology to promote critical thinking/problem-solving skills among students
6. Expertise in improving standards-based lessons through use of technology

Coach and Teacher Ratings of Collaborating Teacher's Improvement During the School Year



Coach Assessment of Teacher Improvement

Overall Effect of Time Provided for Coaching

Time provided for coaching correlated with teacher outcomes in two areas.

1. **Total number of hours spent coaching.**
The number of hours that coaches spent on all of their coaching, including work with one or more collaborating teachers, ranged from 25 or less to over 100. Overall, coaches who spent the highest number of hours on their coaching duties rated most teacher improvement areas as higher (although this correlation was not statistically significant).
2. **Number of hours spent working with the “identified” teacher.** Overall, the amount of time coaches reported working with their identified teacher (i.e., the one teacher they worked with the most) ranged from less than five hours to over fifty. The amount of time coaches reported working with their identified teacher had the strongest impact on teacher improvement, correlating positively with coach assessments in all six areas, and at a statistically significant level in two areas: *Awareness of Web-based resources* and *Comfort with technology*.

Impact of Amount of Coaching Time with Identified Teacher

Our preliminary results suggest that coaching one teacher 20 or more hours seems to be correlated with higher improvement ratings. In particular, this level of coaching time was associated with increased improvement in *Awareness of Web-based resources*, *Comfort with using technology*, and *Using technology to promote critical thinking*. For one of these areas, *Awareness of Web-based resources*, improvement was reported for those teachers who received more than 10 hours of coaching.

Planning together with all of the 3rd and 4th grade teachers in my building helped us to look at our curriculum map for the entire year and decide what technology projects would be appropriate for integration. I was able to provide enough expertise with software and equipment as well as introduction to projects to allow teachers to increase their comfort level in working with kids and technology.

– T2CI Coach

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Coach Assessment of Teacher Improvement

Effect of Coaching Strategies

We looked for differences in the level of teacher improvement according to two factors: when coaches and teachers carved out time to work together, and how coaching was delivered.

- Coaches identified during which of the following times they met with their collaborating teachers: release time, a common planning time, unscheduled as time allows, or during the teacher's regular class time.
- Examples of coaching delivery strategies included the coach modeling teaching a technology-rich lesson to the collaborating teachers' students, or the coach observing the teacher and providing feedback. Selected findings, presented in the chart on page 5, show the differences between teachers who worked with coaches in certain types of ways compared with those who did not.

The teacher that I coached has become more confident in her own abilities with using technology. Whereas before she didn't really think that she would be able to use technology in the classroom, now she sees the benefits that it has had. She approaches lessons differently now than she did, looking for ways to use technology to enhance her lessons. She realizes that it is not replacing anything, but rather trying to make the learning better for her students.

– T2CI Coach

Coaching Outcomes

- The strongest overall effect of being coached is an increase in *Comfort with using technology* in the classroom.
- Being coached in any way seemed to improve *Understanding of how technology can be used to improve academic curricula*, *Awareness of Web-based resources*, and *Ability to integrate technology in ways that engage students in learning*.
- Overall, team teaching and the coach observing the teacher were rated as the stronger strategies.
- There was a statistically significant improvement when coaching took place during either planned meetings or the teacher's class time; or when at least one of the following three coaching strategies were employed:
 - the coach observed the teacher,
 - the teacher observed the coach,
 - the coach and teacher team taught.

I think the teachers are more willing to try things. I have had teachers say that they are either creating lessons on their own or that they look forward to the next lesson they will be doing.

– T2CI Coach

Where Coaching Makes a Difference

This table shows where coaches reported that coaching made the most difference in teacher outcomes. The chart displays coaching strategies in the left-hand column and the six areas of possible improvement across the top. Coaching strategies that resulted in an improvement rating of 3.8 or higher (1 = little improvement, 5 = significant improvement), are in lighter shade. The darker shade boxes represent statistically significant findings.

Effect of Time Provided for Coaching	Comfort using technology in the classroom	Understanding of how technology can be used to improve academic curricula	Awareness of Web-based resources	Expertise in improving standards-based lessons through technology	Expertise in using technology to promote critical thinking and problem-solving skills among students	Ability to integrate technology in ways that engage students in learning
Met unscheduled or "when time allows"						
Met in planned meetings						
Met during teacher's class with students present						
Effect of Ways Coaches and Teachers Worked Together						
Coach observed teacher, provided feedback						
Taught class or small group while teacher observed						
Team taught a lesson(s) with the teacher						

Collaborating Teacher Self-Assessment

Overall, teachers were highly positive about the usefulness of most types of coaching assistance. Teachers who received one or more of the following five types of coaching assistance reported improvement in every one of the six areas. This may reflect their overall positive feeling about coaching.

- Integrating technology into class
- Finding resources
- Learning new technical or software skills
- Developing assessment tools
- Receiving tech support

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I have learned how valuable technology is as an information resource as well as a tool for my students and me. Additionally my coach modeled ways in which I can facilitate project based learning with the use of technology across the curriculum and as a management tool.

– Collaborating Teacher

Working with the coach has given me the confidence to try new ways of implementing technology in the classroom. I knew that if I was stuck for an idea or had a problem with the technology I had someone ready and willing to help me figure it out.

– Collaborating Teacher

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Impact of Additional Support Provided to Collaborating Teachers

Teachers were asked to identify which of the following types of technology support they received in addition to coaching: courses offered through their district, courses offered through their school, support from teachers besides the T2CI coach, and support from school or district technology specialist.

- Teachers who received support from a school or district-level technology specialist reported significant progress in *Ability to integrate technology in ways that engage students in learning*, and *Understanding of how technology can be used to improve academic curricula*.
- To a lesser extent, teacher participation in building-based courses or initiatives correlated with an improvement in *Awareness of Web-based resources*.

I have always considered myself to be an innovative teacher, but I did not have the experience, equipment, or support to incorporate technology in a meaningful way, before entering this program. Having a "partner" in my coach empowered me to take risks, stretch myself, and create new and exciting curriculum.

– Collaborating Teacher

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Areas for Consideration

- Because of several limitations in these analyses, the results must be interpreted with caution. First, though each district implemented peer coaching in unique ways, the small sample size prevented comparison of differences between the districts. Second, the response rates of 67% for coaches and 40% for collaborating teachers mean that the results may not represent the experiences of all coaches and teachers. Third, our conclusions based on these self ratings and coach ratings of teachers would be strengthened with external and objective measures of improvement. Fourth, these results should be confirmed with a larger sample, which might reveal more definitive patterns of statistically significant findings. Finally, we chose to emphasize statistically significant findings and patterns related to the highest levels of improvement, but the larger picture to bear in mind is that coaches and teachers overall saw improvement in every area assessed.
- Overall, this analysis did not find a strong connection between the interventions mentioned and a reported increase in *“expertise in improving standards-based lessons through use of technology.”* Since each coach and collaborating teacher team decided independently how to work together, coaching was not uniformly standards-based. It may be that we would see a stronger impact in the cases where coaching teams are composed of teachers from the same grade level or subject area, and have a set of curricular standards in common; or when the district or principal provide expectations about the coaching focus. Year 3 findings may well yield a different result, as in some districts and buildings there was a more focused emphasis on ensuring that coaching was tied to identified academic goals.

Next Steps

The Year 3 evaluation will sharpen its focus on assessing the impacts of amount of coaching time and type of coaching strategy. For example, the Year 3 coach and teacher progress reports incorporate results from the “T2CI Skill and Practice” survey which is a pre-post measure of specific changes in classroom skills and practices. We have also added a comparison group study in order to capture exactly which effects are due to peer coaching. As the program is replicated, new instruments relying on measures other than participant report may be developed and will contribute to a more objective assessment of outcomes.

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Further Resources

Reports in the Peer Coaching Evaluation Series

- T2CI Year One Evaluation Report Summary
- Changes in Technology Integration Skills and Classroom Practices
- Best Practices to Support Peer Coaching: What Districts and Schools Can Do
http://www.pugetsoundcenter.org/t2ci/evaluation_b.html

Information on T2CI and Coaching Resources

- Teaching + Technology Coaching Initiative: <http://www.pugetsoundcenter.org/t2ci>
- Microsoft Peer Coaching: <http://pc.innovativeteachers.com>