Microsoft

Building collaborative teaching communities:

Measuring CEWA's digital transformation

Microsoft Education

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The job of a teacher has never been more complex[1]

Learning environments have deepened and expanded to encompass academic, noncognitive, digital, and social–emotional capabilities. Schools are also serving increasingly diverse communities in which more families are struggling with poverty, while needing to shift their approaches to leverage the potential of digital tools and resources to improve learning outcomes.

In response to these changes, teachers are being asked to dramatically improve and expand their pedagogical strategies. Initial teacher preparation and induction programs have evolved, but expectations have grown for practicing teachers to learn more. Research demonstrates that one of the most effective means of improving teaching within and across schools is greater teacher collaboration.[2] When teachers share their learning during the adoption of pedagogical shifts, they can better meet the needs of today's students and improve their learning experience.

Microsoft Teams is a new technology specifically designed to facilitate collaborative work and learning. As part of Office 365, it can provide an easy-to-use digital foundation for teachers' and schools' collaboration. In this paper we explore how one large Australian system, Catholic Education Western Australia (CEWA), successfully implemented Teams as the digital foundation for system-wide leadership and teacher collaborative learning. We summarize data from the first year of this "LEADing Lights" program that demonstrates teachers' widespread adoption and sustained use of Teams for collaborative learning. The paper provides links to resources from Microsoft and CEWA for schools and districts interested in implementing similar approaches.

Schools as learning organizations

The Organization for Economic Cooperation and Development (OECD) defines learning organizations as those that have "the capacity to change and adapt routinely to new environments and circumstances as its members, individually and together, learn their way to realizing their vision."[3] A learning organization practices continuous embedded learning that includes team learning and collaboration among staff in a culture of inquiry, innovation, and exploration with and from the external environment. This means that building, sustaining, and scaling a school as a learning organization is only possible using networked professional learning approaches. Schools' lack of financial resources and the practical realities of classroom teaching often make it difficult for teachers to network with each other face-to-face during the school day, so powerful digital learning environments, such as Microsoft Teams, create new opportunities for teachers to participate in professional learning. Digital environments like Teams are also used in modern organizations for project-based teamwork, so schools and teachers using such tools help equip their students with experiences needed for employability.

Effective professional learning among teachers significantly improves student learning.[4] Cycles of professional learning are more likely to be effective when they are collaborative with peers and include practice-embedded strategies like teacher feedback and observing exemplary teaching and leadership.[5]

Education Transformation Framework

Microsoft Education Transformation Framework is the result of decades of work around digital transformation with education systems around the world. The Education Transformation Framework provides a guide for system and school leaders as they think through all the elements needed to implement technology in ways that build teachers' capacities and improve learning outcomes. Building leadership and teacher capacity through professional learning programs is a foundational element of this framework.

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Communities of practice in schools

Research on the key practices that influence student achievement repeatedly shows that teacher professional learning should focus on creating communities of practice (CoPs) that are job embedded, are regularly occurring, and include professional dialogue and examination of student work.[6,7] As an organizational structure, CoPs share a collective responsibility for the growth and development of all members of the school and the school system. This structure provides a means for bringing together and supporting all educational stakeholders—families,

policy makers, administrators, teachers, students, school systems, and supporting staff members—with the shared goal of increasing effective learning and teaching.[8] Successful CoPs should be designed to help members systematically reflect on and improve their practice, and they should develop around the ideas and activities that matter most in any given school. As a community takes on an identity, they develop a need to share and document activities, resources, collective knowledge, skills, and impacts.

Professional learning communities

Given that CoPs develop around the ideas and activities that matter most in any given school, they tend to have a primary focus on aspects of student learning and growth. Professional learning communities (PLCs) share many commonalities with CoPs, but their distinguishing characteristic is that PLCs focus more explicitly on teacher learning and growth. As practice-embedded groups, PLCs provide the collaborative experience teachers need to learn how to be most effective in their craft.[9,10,11] Digitally networked PLCs connect every teacher to high-impact, personalized, and peer facilitated learning that happens in iterative cycles; these cycles should involve inquiry, action research, data analysis, planning, implementation, reflection, and evaluation.[12] Thus, a PLC must provide teachers with access to meaningful and applicable materials and experiences for the community to have an impact on student learning. More specifically, teachers in PLCs need to experience meetings, conversations, projects, content, access to experts, relationships, individual participation, community cultivation, and serving a context.[13] Schools that wish to maximize the benefits of implementing PLCs should consider using a scalable, sustainable, and effective digital network to support these activities.[14]

Catholic Education Western Australia's LEADing Lights Program

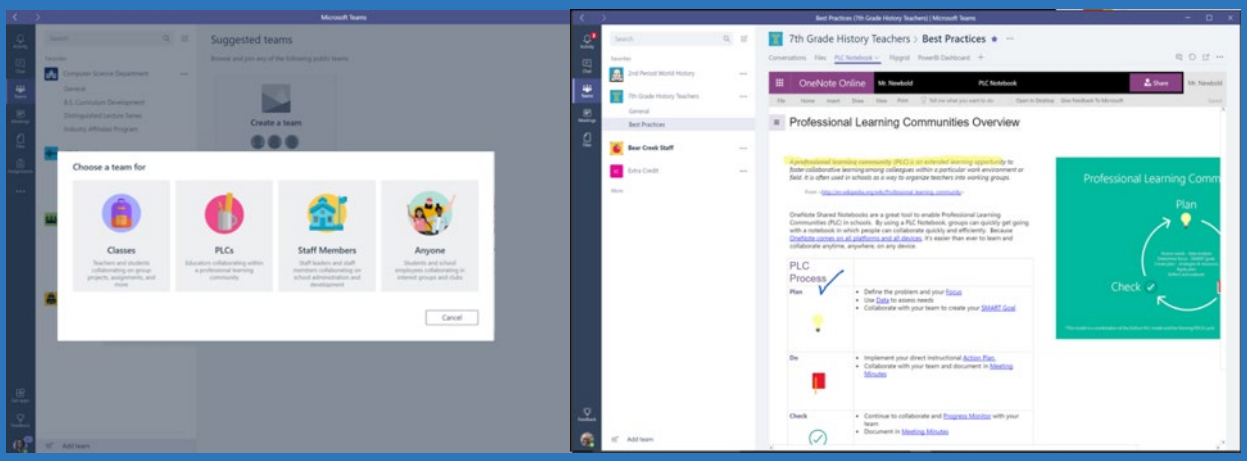
Catholic Education Western Australia (CEWA) serves 77,000 students in 162 schools in a geographic area of over 1 million square miles. The schools range from city schools of over 1,800 students to remote desert schools with fewer than 10 students. The average school size is about 500 students, and 25 percent of schools have 200 or fewer students. In 2017, CEWA began the process of creating a single digital ecosystem for all CEWA schools, early learning care centres, and central and regional offices. This landmark digital transformation initiative, called **LEADing Lights**, aims to improve learning through collaboration and shared knowledge; it also delivers unprecedented connectivity among its students, educators, and families.

As part of LEADing Lights, schools across CEWA have formed communities of practice, and teachers within those schools have joined professional learning communities. Microsoft Teams plays a significant role in supporting these activities. Teams was chosen by CEWA's leadership as the foundational digital platform for this learning because it provides a unique set of features and focuses on enabling rich and continuous conversations between team participants.

For example, CEWA teachers have formed Teams PLCs focused on the national Digital Technology curriculum, on using Minecraft: Education Edition to support student problem solving, and on Reading Recovery. These Teams PLCs include teachers that are both within one school and across many schools collaborating and sharing ideas, resources, and classroom practice on these topics. By using Teams, CEWA teachers in the PLCs have professional dialogues; have online calls and meetings; and share documents, plans, and student work samples all within a single learning environment.

How teachers use Teams

Teams is a digital hub that brings conversations, content, assignments, and apps together in one place. It provides teachers with a platform to create collaborative classrooms, connect in professional learning communities, manage classroom assignments, and communicate with other teachers and school leaders using chat and video—all from a single experience in Office 365 Education. Teams can be a powerful platform that CoPs and PLCs can use to facilitate collaborative learning.



To start using Teams, a school leader or teacher just needs to create a Team and then invite other members of the school community to join it. Once members of the community are connected through the Team, they can easily communicate with each other through threaded and persistent chats. Individual members can initiate private or group chats and use a search feature to scan across chats for specific words or topics of interest. Team members can also use a suite of integrated Office 365 apps to create and share files and content through Teams. These integrated apps include OneNote, Planner, Edge, and Forms among others.

Implementation strategy: 5 stages

Asking teaching staff across 162 schools to adopt a new collaboration platform in 6 months was a huge digital transformation challenge. In order to ensure the effective adoption of Teams, the LEADing Lights leadership team developed an implementation plan and roadmap. This plan includes five components:

- **Explore** - Build initial awareness of what Teams is and how it enables school/system strategic priorities.
- **Envision** - Provide and co-construct examples of how Teams supports the system, specific groups, and initiatives.
- **Experience** - Offer opportunities for scaffolded, facilitated use of Teams in relevant communities.
- **Empower** - Create tools and supports for users to implement and adopt Teams in their work and in situated contexts.
- **Evaluate to celebrate** - Share stories of exemplary and innovative Teams use and measures of progress such as usage over time, surveys, and research.

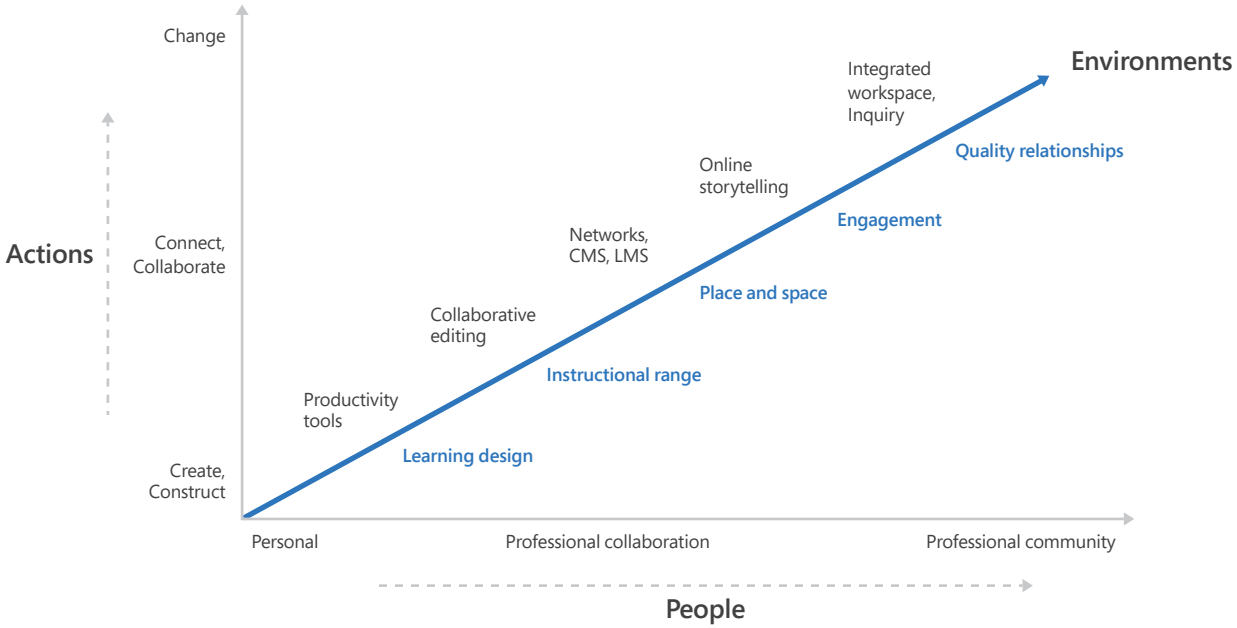
During the 2017 academic year, the leadership team designed and implemented specific activities for each phase of the plan.

CEWA 5Es of Teams timeline

Explore

First, system leaders wanted to align Teams with CEWA system priorities. These included increasing system coherence and becoming a learning organization.[3] They also articulated key attributes of their professional learning environment that aligned to CEWA's newly formed Vision for Learning. To align system priorities with a change management process, the leadership team created the People–Environment–Action model. The model prioritized change through professional community and proposed the digital environment for supporting such change—Microsoft Teams.

People–Environment–Action model



As an initial practical step, CEWA launched a few key Teams for PLCs to engage the community, including an Early Adopters Team and a Digital Transformation Champions Team, where leading-edge teachers and leaders could come together to learn Teams, share ideas, and support their colleagues. CEWA identified a central office staff member who would be the Teams expert and facilitator of the Early Adopters Team so schools had a main point of contact.

Envision

In this stage, a broader network of teachers and leaders needed to imagine how their classrooms and schools would benefit from Teams and how Teams would fit into their workflow. CEWA leaders created a set of resources to introduce school leaders and teachers to the Teams ecosystem and show them how it could be used for teaching and learning purposes. Resources included posters that showed scenarios from a student's day and a teacher's day, Class Teams with model lessons, and flow diagrams showing Teams as part of the new learning environment. Many are shared at **https://leadinglights.cewa.edu.au/**.

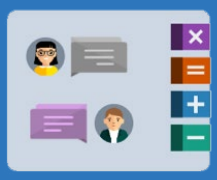
Use OneNote and Teams to empower planning and teaching, share policies, communicate best practices, and collaborate effectively

Head of learning area

Gabrielle, the head of the Mathematics Department, creates a Maths Staff Team using Teams. She invites all of her maths teachers to the team.

The Team helps Gabrielle and her teachers create a single space to store and share learning resources, communicate, and collaborate around practice.

The team spends less time searching for emails and more time collaborating together.



Experienced teachers

Bill and Caitlin, two year 7 maths teachers, like to meet in person to lesson plan and continue their collaboration virtually. They use the Maths Staff Team OneNote to plan activities for each unit they will be teaching in their classes.

Since Gabrielle created a department-wide staff Team, all the other teachers in the department can use the activities Bill and Caitlin created and edit them to fit their class needs.

First-year teachers

Brendan and Phoebe, first-year teachers, love the content Bill and Caitlin created and decide to use it for their classes. They copy the content from the Maths Staff Team into their own Class Team Notebook and modify the content for their specific students. Since Brendan and Phoebe use Teams with their students, they can easily distribute the content to each student's Notebook.

Experience

In this stage, more teachers were aware of Teams, its potential contribution to professional learning, and how it fits into the workday. Now they were ready to dive in and experience Teams in ways that were relevant to them and added value to their work—with guidance. The Digital Transformation Team, the Teams Early Adopters, and the Digital Transformation Champions modeled Teams in their work at their schools. During face-to-face professional development (PD) sessions, Teams was taught and used. Specialized Teams were launched for interest groups and initiatives including micro:bit, Minecraft: Education Edition, Project-Based Learning, Reading Recovery, STEM, and new national Digital Technologies curricula. Targeted Teams were also created for school IT teams and for office IT development projects. Public Teams that any educator in CEWA could join were provided for all large professional learning digital learning events. In addition, Teams became the center of the learning environment for CEWA's new virtual school, a fully online secondary course program for students in remote schools and students needing an alternative to courses offered in their schools.

Empower

In this stage, CEWA provided resources for teachers and schools to use on their own to learn and do more with Teams. A Teams Quickstart video channel was developed in **Microsoft Stream**, and Teams resources were collected in CEWA's content management system (Claned); this enabled everyone to find the Teams resources in familiar places by searching for "Teams." Posters, infographics, and Teams planning guides were also created to help schools better understand the different types of Teams that can be used in school settings. Teachers and staff

hosted live Skype webinars showing key Teams features and the recordings were added to the Stream channel. Full PD courses were also offered to teachers in Class Teams. Lastly, a public "Teams" team was created as a space where teachers, leaders, and staff could share ideas, troubleshoot issues, and provide feedback on useful enhancements.

Evaluate to celebrate

By this stage, teachers and school leaders had been collaborating and learning in Teams for several months, and they had stories to share. CEWA shared these stories through system newsletters, social media, websites, video, case studies, and events. These communications helped embed the approach and tools in the culture of the system and provided a mechanism to enthuse teachers who may have been initially hesitant in exploring Teams.

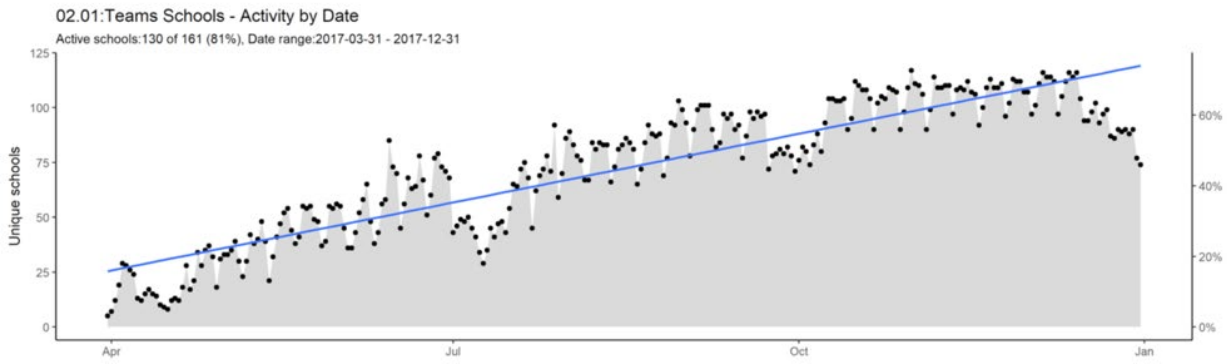
Equally important was providing clear and measurable data on the overall implementation of the LEADing Lights program. These measures make transformation progress visible to all stakeholders in system change. CEWA partnered with Microsoft Education to develop analytics on the adoption and usage of Teams to inform this stage of the work.

Digital transformation implementation transparency

One of the biggest challenges with any type of adoption of technology in any school and/or system is how to engage teachers in the effective use of the technology. Having a clear and measurable objective for the technology is one of the key elements of effective implementation, and in the case of CEWA's use of Teams, the objective was to increase teacher collaborative learning. Working with Microsoft Education, CEWA's leaders were able to capture Teams adoption and usage data among teachers, and to see how it was increasing teacher collaboration.

School adoption

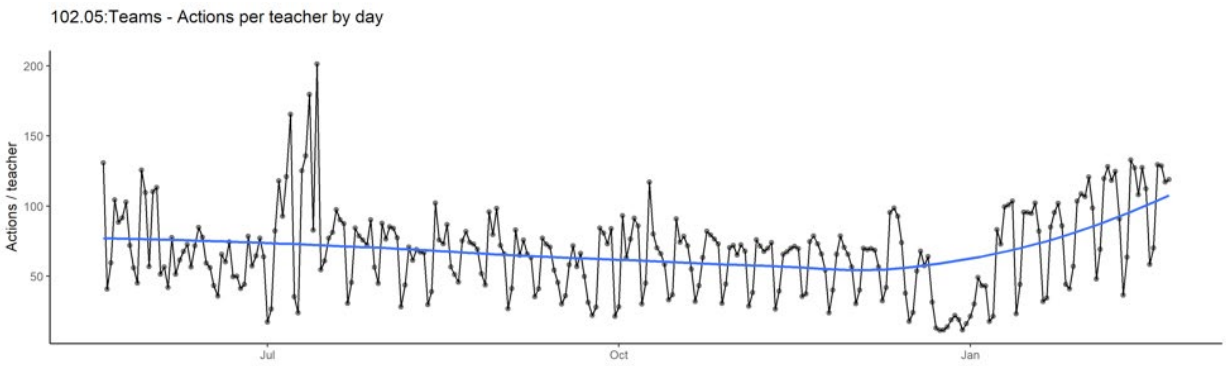
Only 81 percent of schools had access to Office 365 and the Teams application by the end of 2017, as not all schools had migrated to these tools. Analytics showed that CEWA schools' use of Teams consistently increased from the beginning of the implementation period (launched in April of 2017). As more schools onboarded the platform, teachers began to use it consistently, with over 60 percent of all schools using it weekly by December of 2017. Dips in usage patterns map directly to school holidays in July, October, and December through January.



Consistent and engaged teacher use

Of the teachers who were introduced to Teams, they had both initial and sustained use of the tools over time. Very few used it once during a professional learning session and then never tried it again. This means Teams was being used consistently not only by the "innovative" or tech forward teachers, but by most teachers across CEWA who had access to the app. Aboriginal Teaching Assistants (ATAs) were among some of these teachers, and they even took on Teams as a way to learn from one another despite the challenge of being so far apart geographically.

The data shows that CEWA teachers were using Teams actively, with many clicks in the app per day. When the first groups of teachers were onboarded to Teams, the activity on Teams per teacher per day was very high. This is not surprising since teachers who are early adopters of new technologies are often the most enthusiastic. However, as the percentage of teachers using Teams increased, the Teams activity per teacher per day remained consistent, and even began to increase at the beginning of the new school year in February. Teachers were more active on Teams on weekdays than weekends, but there was still a significant amount of Teams actions on weekends.



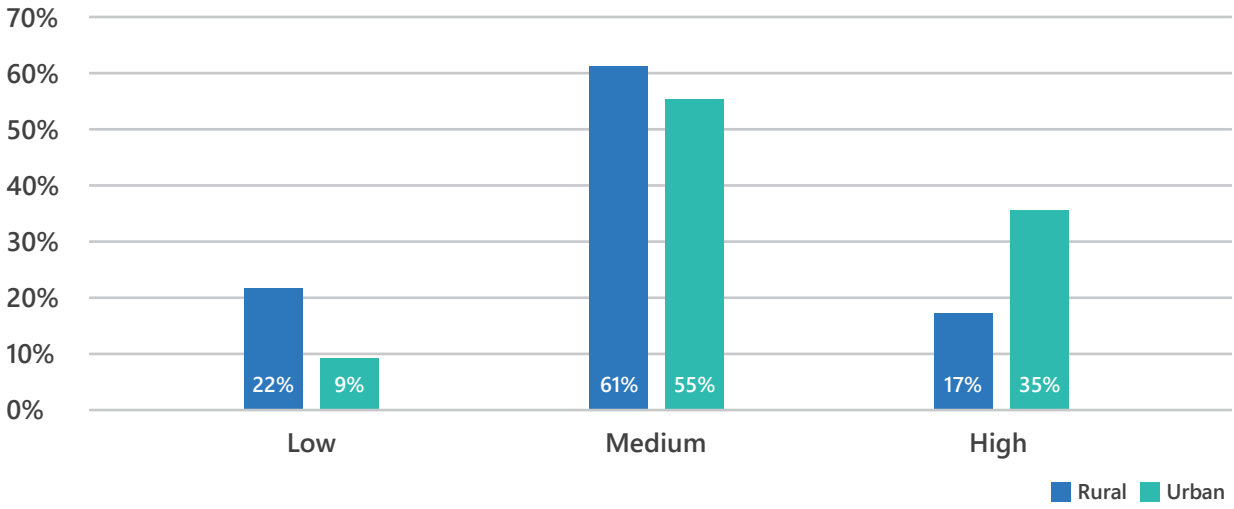
CEWA's LEADing Lights initiative of 1) intentionally designed communities of practice and professional learning communities; 2) supporting those with the collaboration app of Microsoft Teams; and 3) implementing a learning-focused adoption strategy has led to a successful initiative with unambiguous evidence of its sustainability.

Finally, analytics on Teams usage were able to show interesting patterns of adoption related to core equity goals of the LEADing Lights strategy. Historically, rural schools in Western Australia had little access to technology, and teachers in those schools had reduced opportunities for teacher collaboration and professional learning compared to their urban counterparts. CEWA's Office 365 and Teams implementation combined with targeted programs for training rural teachers led to virtually closing these opportunity gaps. Teams usage data with geographic data showed that the schools that adopted earliest tended to be more rural, and that the large urban secondary schools were the last to adopt. The greater access to technology and teacher

collaboration enabled virtual schools and online courses, which were initially designed to serve the needs of traditionally underserved communities in remote rural areas (though usage of these courses was high in urban areas too).

Average Microsoft Teams weekly use by rural and urban schools

(by low, medium, and high usage levels)



Teams is the main connection for teachers, school leaders, and teacher assistants in remote schools where there may be fewer than 10 total staff. Teams enables these educators to be a continual part of the CEWA community and to join virtual PD experiences, saving the time and money previously required for travel.

More about CEWA

Discover how CEWA uses digital platforms to support remote schools ➔

Learn about CEWA's virtual school ➔

Next steps for CEWA and other school systems

Providing visibility into teacher collaborative learning on the Teams platform is one step on a multi-stage journey.

CEWA and Microsoft will continue to analyze how increased collaborative teacher learning impacts students' learning outcomes, which is the core objective of the LEADing Lights program. CEWA plans to expand its use of Teams for PLCs and CoPs, launch student use of Class Teams in 2018, and develop more virtual courses, including a program specifically to support transition of remote students who are becoming new city boarding school students.

In Western Australia, schools and teachers are using Teams as an integral support for expanding school leader and teacher capacity amid changes and challenges in schooling. This summary of CEWA's experiences provides a roadmap for other schools and districts interested in new technologies for collaboration to support teacher learning.

Endnotes

1 Bryk, A. 2015. "Accelerating how we learn to improve." *Educational Researcher* 44 (9): 467–477.

2 Ronfeldt, M., S. O. Farmer, K. McQueen, and J. A. Grissom. June 1, 2015. "Teacher collaboration in instructional teams and student achievement." *American Educational Research Journal* 52 (3): 475–514.

3 Kools, M., and L. Stoll. 2016. "What Makes a School a Learning Organisation?" *OECD Education Working Papers*, 137. OECD Publishing: Paris. *https://doi.org/10.1787/5jlwm62b3bvh-en*

4 Timperley, H., A. Wilson, H. Barrar, and A. Fung. December 2007. *Teacher professional learning and development: Best evidence synthesis iteration* (BES). Auckland: New Zealand Ministry of Education. *https://www.educationcounts.govt.nz/publications/series/2515/15341*

5 Hattie, J. 2009. *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Oxford: Routledge.

6 Hitt, D., and P. Tucker. 2016. "Systematic review of key leader practices found to influence student achievement: A unified framework." *Review of Educational Research* 86 (2): 531–569.

7 Jensen, B., J. Sonnemann, K. Roberts-Hull, and A. Hunter. 2016. *Beyond PD: Teacher Professional Learning in High-Performing Systems, Australian Edition*. Washington, DC: National Center on Education and the Economy. *https://static1.squarespace.com/static/531fd05ee4b00a4fbb7b1c67/t/56c286121d07c0be02c0a6f7/1455588894495/Beyond+PD.pdf* [PDF]

8 Sessums, C. 2015. "Learning communities and support." Redmond, WA: Microsoft Corporation.

9 Van der Klink, M., Q. Kools, G. Avissar, S. White, and T. Sakata. 2017. "Professional development of teacher educators: what do they do? Findings from an explorative international study." *Professional Development in Education* 43 (2): 163–178. *http://dx.doi.org/10.1080/19415257.2015.1114506*

10 Tondeur, J., A. Forkosh-Baruch, S. Prestridge, P. Albion, and S. Edirishinghe. 2016. "Responding to challenges in teacher professional development for ICT integration in education." *Educational Technology & Society* 19 (3): 110–120.

11 Wells, M. 2014. "Elements of effective and sustainable professional learning." *Professional Development in Education*, 40 (3): 488–504. *https://www.tandfonline.com/doi/abs/10.1080/19415257.2013.838691*

12 Dawson, K., C. Cavanaugh, and A. D. Ritzhaupt. 2012. "ARTI: An online tool to support teacher action research for technology integration." In C. Hartshorne, T. Heafner, and T. Petty (Eds.), *Teacher education programs and online learning tools: Innovations in teacher preparation*. Hershey, PA: IGI Global. 375–391.

13 Wenger, E., N. White, and J. Smith. 2009. *Digital habitats: Stewarding technology for communities*. Portland, OR: CP Square.

14 Cavanaugh, C. June 2014. "ePLC: Potential and design of professional learning communities in the cloud." Proceedings of ED-MEDIA: *Conference on Educational Multimedia, Hypermedia & Telecommunications*. Waynesville, NC: Association for the Advancement of Computing in Education (AACE). *http://www.learntechlib.org/noaccess/147725/*