

PDSA as a Buildingwide Tool for Improving Student Outcomes

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When it comes to improving student achievement and growth, there are many questions to consider. What resources will help? What professional learning needs to be in place? How can we cultivate and maintain professional buy-in to allow time for initiatives to demonstrate efficacy of student achievement? How can we increase student ownership in the process? Dual Immersion Academy took a stab at some of these perplexing questions by dusting off an “oldie but goodie” and utilized it to answer these questions. The Plan, Do, Study, Act (PDSA) cycle ended up quantitatively and qualitatively proving worthy of reexamination.

Implementing the PDSA cycle at both a schoolwide and classroom level in our dual language program proved powerful. It took time and careful planning and gave teachers an additional researched-based tool while providing a sense of collective efficacy amongst the entire staff, fostering student agency and rendering solid results.

School Background and Professional Learning Journey

Dual Immersion Academy (DIA) in District 51 in Grand Junction, CO began as a charter school in 1996 but has existed as a typically funded public K-5 school since 2004 and grew to a K-8 model in 2008. Since that time, the staff has participated in professional learning in accordance with the Guiding Principles of Dual Language and has implemented many refinements and adjustments based on student growth and achievement data. We have been fortunate to have high levels of staff

retention that builds both social and professional capital to support continuous improvement of our pedagogical skill set.

In 2017, a few mathematics teachers from DIA@BMS (6-8 grade portion of the DL program housed in Bookcliff Middle School) participated in Achievement Inspired Mathematics for Scaffolding Student Success (AIM4S^{3™}) training offered by Dual Language Education of New Mexico and began to implement the framework. Their work, enthusiasm, and best practices spread like a virus (sorry for the timing of that idiom). Since then, all teachers in all content

areas in both DIA and DIA@BMS have been trained and have implemented the framework within their grade-level and content area.

Even after years of gradual implementation and professional development around the instructional framework, we still had areas in need of refinement. When planning for professional learning for the 2020-2021 school year, our leadership team wanted to maintain alignment across the nine grade levels and to make educated decisions about how and where to focus our energies. We decided to focus our professional development attention on data analysis. Student data revealed that we had quantifiable challenges with our bilingual and biliteracy data. Overall, our students were doing well, but there was a substantial percentage of students that was not meeting the growth or achievement benchmarks



Teachers at DIA discuss how the PDSA cycle might work in their classroom.

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in their second language—the data indicated an over-arching and consistent need for oral and written language support across content areas. As we analyzed and discussed this data, we realized that we had just effectively completed the Study (S) portion of a Plan (P), Do (D), Study (S), Act (A) cycle! Our next step would be to figure out what we all need to do, what Act (A) would shift the script for our bilingual learners. Together with our principal, Monica Heptner, we designed professional learning that would help foster this focus, including quarterly check points and scheduled professional learning from DLeNM. The staff decided that the PDSA cycle was worth implementing, and that our schoolwide PDSA and professional plan would create simplicity and a focus on a high-leverage tool for improvement.

One of our first steps was to begin differentiating the PDSA concept so that the strategy would be applicable to every teacher. Because each grade level is so different in terms of cognitive and human development, content area, and linguistic complexity, we wanted each teacher to be autonomous, but provide “guardrails” to support schoolwide implementation. The decision was made that the Act (A) would include a focus on completing a Plan, Do, Study, Act (PDSA) cycle in each of our classrooms. We recognized that the PDSA would look different in the different grades and in each language and began by developing a Spanish version of the cycle because the acronym PDSA does not pertain to the Spanish language classes. The Spanish teachers collaborated and developed “*El ciclo para el éxito*”, which consisted of *Plan, Hacer, Analizar, y Reflexionar*.

The staff decided that the PDSA cycle (“*El ciclo para el éxito*”) with a predetermined focus on oral and written language domains would serve

as our “guardrails”. Each teacher would complete a quarterly PDSA cycle with their students on the content of their choice with special focus on oral and written language development, and as a building we would complete a PDSA cycle around the use and success of the classroom-level PDSA cycles. Simply put, we would do a PDSA cycle about PDSA cycles.

PDSA as an Improvement-Science Tool From the Perspectives of Different Stakeholders Students' Perspective

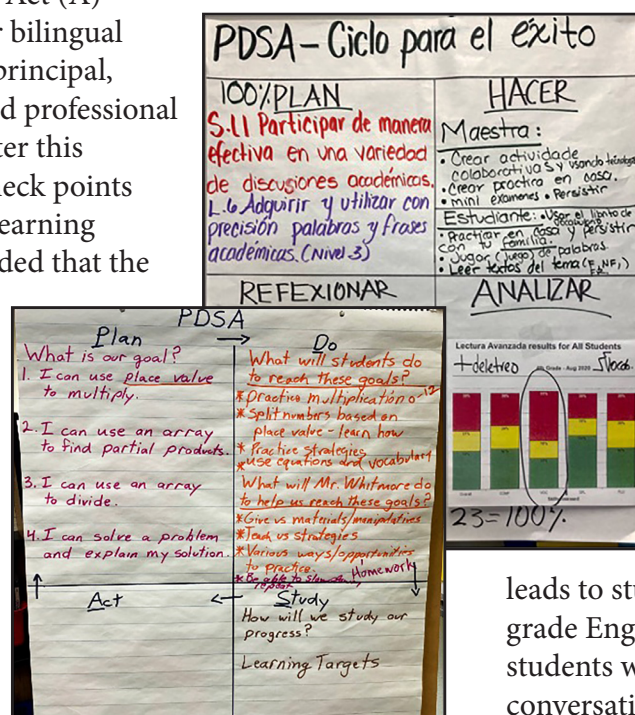
When students are involved in the PDSA cycle, they develop metacognition regarding their own learning. They also develop a sense of ownership which

leads to student agency. In a second grade English class, for example, the students were immediately involved in conversation and reflection regarding their use of sentence frames during partner mathematics “workplaces” (games reinforcing mathematical concepts), and how the use of sentence

structures directly impacted both their improved understanding of how to play the game and their improved understanding and application of the mathematical concept the game was intended to reinforce. One student said, “I like being a part of what is helping us as a class go for our goal, and I also get better at the same time.”

Classroom Teachers' Perspective

The teachers at DIA were able to take the schoolwide focus of oral and written language development and differentiate for the specific developmental and linguistic needs of the students in their grade levels and within their content and language of instruction. For example, in the older grades, students have a better developed ability for reflection around specific content. For younger



One of the first steps DIA took was to begin differentiating the PDSA so that the strategy would be applicable to every teacher.

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grades, the process had to be much more guided and substantially more concrete in terms of behaviors and actions that the students and teachers took to help them with their classroom-level goal. It was inspiring to watch our seasoned veteran teachers take on the PDSA and tailor it to the needs of their students.

Interventionists' Perspective

Having a school-wide goal that is specific enough to create change but broad enough to pertain to all staff roles is a challenge. DIA's intervention staff had an open mind for how they would apply this strategy to individual student goals and designed and implemented their own cycle. They were able to successfully utilize the PDSA regarding sight words and fluency with plans to continue a PDSA cycle this year regarding sight words and fluency in both languages.



Data was gathered at both the school and classroom levels and analyzed as part of the PDSA process.

Specials Teachers' Perspective

Specials teachers frequently get overlooked when it comes to designing schoolwide professional development for systemic change. The Specials teachers were able to creatively design their own classroom-level PDSAs by focusing on vocabulary development for their respective subjects. They too met their classroom-level goals and found that the language-focused PDSA reinforced the teaching of their subjects much more than they had anticipated.

La perspectiva de Sra. Barnes - 4o grado

Aunque todos participaron en implementar el “ciclo para el éxito” (PDSA) con sus alumnos en su propio contexto, y tomando en cuenta que era un año retador por la pandemia, la perspectiva de una maestra intermedia quien

enseña lectoescritura, estudios sociales, y ciencias en español en cuarto grado muestra como esta herramienta puede tener logros grandes y obvios.

Sra. Barnes hizo su “ciclo para el éxito” (PDSA) basado en el data de vocabulario según I-station (una plataforma para el asesoreamiento y enseñanza del idioma). Al principio del año,

después de que los alumnos tomaron su prueba inicial, Sra. Barnes se dio cuenta de que sus alumnos necesitaban enseñanza específica y abundante de vocabulario. En el área de vocabulario en agosto 2020, 30% de sus alumnos lograron un nivel proficiente (verde), 18% salieron parcialmente proficiente (amarillo), y 51% mostraron un nivel insatisfactorio (rojo). Cada mes, tomaron una prueba breve, estudiaron los resultados, hicieron el “ciclo para el éxito” (PDSA), y determinaron exactamente qué haría la maestra (preparar lecciones

y recursos) y qué harían los alumnos (practicar diariamente usando juegos y tecnología, y mejorar su aplicación del vocabulario en su lectura y escritura) para mejorar sus habilidades. También, usaron Flipgrid para grabar el uso del vocabulario en forma oral. En mayo 2021, usando la misma plataforma de asesoreamiento (I-station), en el área de vocabulario, 71% de los alumnos aprobaron un nivel proficiente (un aumento de 41% agosto-mayo), 10% salieron parcialmente proficiente (disminución de 8% agosto-mayo), y solo 20% mostraron un nivel insuficiente (disminución de 31%). Con logros tan impresionantes, el “ciclo para el éxito” (PDSA) va a continuar como otra herramienta clave para la Sra. Barnes.

Principal's perspective

From the Principal's perspective, Ms. Heptner

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felt that she was able to organize a method of measuring student outcomes irrespective of the content, language of instruction, or grade level. “It was truly powerful to have an aligned process for all teachers, regardless of which content they teach, or in which language. We even had the Specials teachers and interventionists participating. It is really powerful to create a focus to build collective efficacy. Especially when the focus is one that empowers the students to take ownership of their learning in a cyclical and consistent fashion. Even though it was a challenging year, we will definitely continue using the PDSA cycle because it was a very robust, vertically aligned addition to our dual language program. It has fostered student agency and allowed us to use improvement science to target an issue and get everyone on board.”

Coach's Perspective

There are many different coaching cycles I have had the opportunity to be a part of that are both unique and highly effective in terms of refining and building capacity of dual language pedagogy. Building a culture of collaboration and having a sense of collective efficacy became the goal for schoolwide implementation of best practices bundled within the AIM4S³ framework. Throughout the previous two years, we spent time in smaller cohorts becoming trained in this framework. As teachers became trained, there were abundant opportunities for individual and small group coaching cycles. This continuous professional learning focus on the implementation of AIM4S³ and the PDSA cycle created a deeper understanding, implementation, and level of commitment to the work.

Having a schoolwide PDSA alignment led to more consistency during coaching cycles despite a wide variety of content and behavior objectives. AIM4S³

developers, Lisa Meyer and Erin Mayer provided tailored professional learning and our staff spent time in their PLCs researching, collaborating, and planning for the progress and execution of each teacher's specific PDSA focus. Each teacher studied student data under the schoolwide focus of oral and written language development. Then they would guide their students in a reflective conversation about how they were going to Act (or adjust) their current practices. Together, they would develop a Plan of what goal they wanted to accomplish and collaboratively decide what they (the students and the teacher) were going to Do

to accomplish the goal. Most teachers were able to move the needle on their students' achievement and growth data and appreciated how the PDSA helped foster student agency and ownership of the work, growth, and achievement.

Obstacles and Complications

The PDSA cycle implementation was

not without its challenges. Between constraints on the metacognitive abilities of younger students and frequent absences and scheduling challenges due to COVID, there were plenty of instances where the PDSA was not the “silver bullet” we all hoped for. Although we were proud that our district was the largest in the state to continue face-to-face instruction with strict COVID protocols in place, there were some groups of students who were quarantined too frequently to have the PDSA focus have much of an impact—this was especially true for the primary grades that stipulated instruction in each language once every other day. Additionally, the younger students had increased linguistic challenges while working in their second language because their classmates and teachers wore facemasks. The teachers reported that this inconsistent contact with the youngest of our



Erin Mayer and Lisa Meyer, co-developers of the AIM4S³™ framework, lead a virtual professional development session with a focus on the PDSA cycle.

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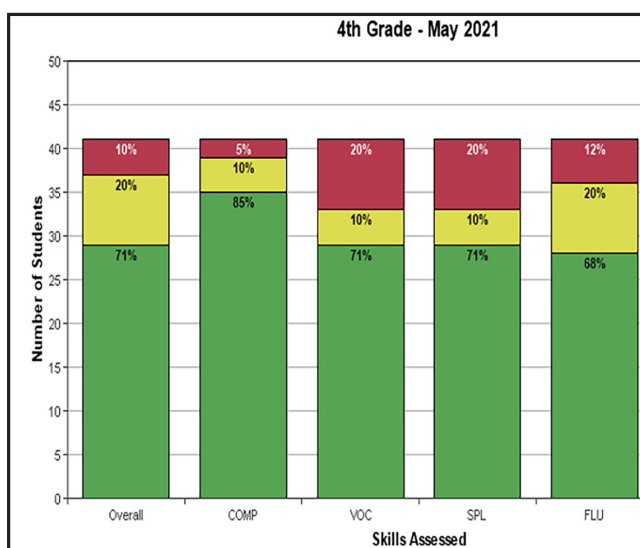
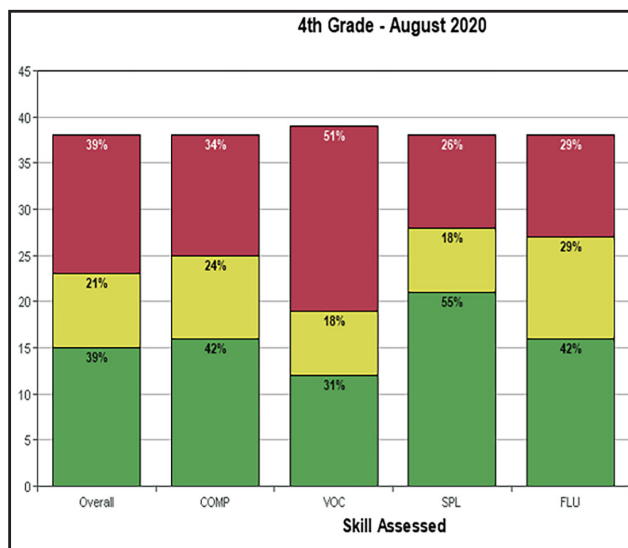
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learners presented a real challenge, but that there was value in the PDSA moving forward.

Reflections

There is power in alignment and collective efficacy. In the plan (P) portion of our schoolwide PDSA, our goal was: **“80% of K-5 students will meet their classroom outcome/goal in the area of language development.”** The Do (D) portion had the teachers designing classroom-level PDSA cycles specific to the linguistic needs of their students and within the context of their language and content area. The administration conducted a quarterly, building-level PDSA, and the coach supported the planning, implementation, and data collection of classroom-level PDSA cycles. Upon Studying (S) the progress at the end of the year, we found that we had accomplished

our school-level goal. Although the process was not perfect and had to be adjusted to the wide range of classroom scenarios, most classrooms achieved the goals set in their original Plan. While Acting (A), the consensus was that when it came to designing professional learning and shaping momentum for a building, simplicity is the greatest sophistication. We also reflected on how we might include more stakeholders in the “DO” portion of the cycle, increasing the power of the tool by including families. That is an action (A) we will certainly consider in the future to broaden the support for our schoolwide goals. The PDSA cycle offered us a common, powerful tool that fostered student agency while honoring the differences among teacher, their language of instruction, and the development of their students.



Comparing 4th grade data gathered at the beginning of the school year with data gathered at the end showcases the positive effect the school's commitment to using the PDSA has had on students' language development.

For more information about
Achievement Inspired Mathematics for Scaffolding
Student Success (AIM4S3™), please visit
aim4scubed.dlenm.org

