

Lessons Learned from the NGSS Early Implementer Districts: Methodology

The *California NGSS K–8 Early Implementation Initiative* is a project with the goal of building local education agency capacity to fully implement the Next Generation Science Standards (NGSS). Eight districts and two charter management organizations were selected to participate in the initiative, becoming the first in California to begin implementing the state’s new science standards. The participants in the Initiative include Galt Joint Union Elementary, Kings Canyon Joint Unified, Lakeside Union, Oakland Unified, Palm Springs Unified, San Diego Unified, Tracy Joint Unified, Vista Unified, Aspire, and High Tech High.

The Process

To more closely examine some early successes and challenges experienced by California’s early implementers, Achieve collected data from eight districts and one charter management organization and compiled that information into two distinct case studies: one focused on instructional materials and the other focused on professional learning. Achieve worked with nine of the 10 Early Implementation Initiative participants, including Galt Joint Union Elementary, Kings Canyon Joint Unified, Lakeside Union, Oakland Unified, Palm Springs Unified, San Diego Unified, Tracy Joint Unified, Vista Unified, and High Tech High. For simplicity, the eight districts and charter management organization are referred to as nine school districts throughout the case studies.

Phone interviews were conducted with seven of the nine districts. Two districts were not available for phone interviews but one provided feedback to a questionnaire and the other was provided an early draft of the case studies to modify based on its experiences. Throughout the process, Achieve engaged a range of perspectives in order to examine how their experiences with NGSS implementation may be shaped by their role in the process. Whenever possible, phone interviews included at least one classroom teacher, one school leader, and one district-level science person. Interview questions were semi-structured, focusing on what their experience with NGSS implementation has been like in three main areas: professional learning, communications, and instructional materials. Feedback from all the interviews was then compiled so that common themes could be identified. Various resources from the field, including the National Research Council’s *Guide to Implementing the Next Generation Science Standards*, were referenced throughout the case studies when appropriate.

Background on the Districts

In addition to demographic differences, California’s early implementer districts have different norms, capacities, and existing structures. For example, some districts have a history of centralized professional learning in which the district has a great deal of oversight on identifying and/or providing the professional learning opportunities. Alternatively, other districts take the role of providing guidance to schools while empowering individual school leaders to identify professional learning opportunities. The table below provides some basic data about the eight traditional public school districts that were interviewed for the case studies. It is important to note that this information was not available for the one charter network that Achieve interviewed, High Tech High.

District Demographics

District	Number of Schools	Enrollment	African American not Hispanic	American Indian or Alaska Native	Asian
Galt Joint Union Elementary	7	3,693	48 (1.3%)	10 (0.3%)	74 (2.0%)
Kings Canyon Joint Unified	21	9,775	17 (0.2%)	29 (0.3%)	111 (1.1%)
Lakeside Union	2	1,274	74 (5.8%)	7 (0.5%)	69 (5.4%)
Oakland Unified	126	48,077	12,839 (26.7%)	159 (0.3%)	6,239 (13.0%)
Palm Springs Unified	29	23,332	1,233 (5.3%)	133 (0.6%)	226 (1.0%)
San Diego Unified	228	129,779	12,085 (9.3%)	355 (0.3%)	10,944 (8.4%)
Tracy Joint Unified	23	16,935	1,110 (6.6%)	72 (0.4%)	1,733 (10.2%)
Vista Unified	34	25,377	789 (3.1%)	102 (0.4%)	609 (2.4%)
State Totals	9,997	6,235,520	373,280 (6.0%)	36,755 (0.6%)	545,720 (8.8%)

District	Filipino	Hispanic or Latino	White not Hispanic	Two or More Races
Galt Joint Union Elementary	34 (0.9%)	2,143 (58.0%)	1,243 (33.7%)	72 (1.9%)
Kings Canyon Joint Unified	47 (0.5%)	8,486 (86.8%)	949 (9.7%)	103 (1.1%)
Lakeside Union	15 (1.2%)	697 (54.7%)	356 (27.9%)	43 (3.4%)
Oakland Unified	447 (0.9%)	21,039 (43.8%)	4,692 (9.8%)	1,318 (2.7%)
Palm Springs Unified	544 (2.3%)	17,635 (75.6%)	3,149 (13.5%)	362 (1.6%)
San Diego Unified	6,851 (5.3%)	60,884 (46.9%)	30,036 (23.1%)	7,515 (5.8%)
Tracy Joint Unified	907 (5.4%)	8,367 (49.4%)	3,927 (23.2%)	658 (3.9%)
Vista Unified	377 (1.5%)	15,789 (62.2%)	6,464 (25.5%)	1,008 (4.0%)
State Totals	158,224 (2.5%)	3,344,431 (53.6%)	1,531,088 (24.6%)	175,700 (2.8%)

District	English Learners	Fluent-English-Proficient Students	Pupil Teacher Ratio	Avg. Class Size	Free or Reduced Price Meals
Galt Joint Union Elementary	794 (21.5%)	645 (17.5%)	18.9	21.8	2,302 (62.3%)
Kings Canyon Joint Unified	3,362 (34.4%)	2,802 (28.7%)	21.5	26.7	8,333 (85.2%)
Lakeside Union	174 (13.7%)	157 (12.3%)	22.1	23.7	828 (65.0%)
Oakland Unified	15,543 (32.3%)	9,360 (19.5%)	18.6	23.6	35,829 (74.5%)
Palm Springs Unified	7,815 (33.5%)	4,934 (21.1%)	22.9	27.3	20,437 (87.6%)
San Diego Unified	32,471 (25.0%)	26,996 (20.8%)	20.2	25.8	78,788 (60.7%)
Tracy Joint Unified	4,188 (24.7%)	2,914 (17.2%)	22.5	26.1	7,514 (44.4%)
Vista Unified	6,080 (24.0%)	5,480 (21.6%)	21.9	25.3	15,792 (62.2%)
State Totals	1,392,263 (22.3%)	1,279,865 (20.5%)	21.7	24.3	3,655,624 (58.6%)

Data are from [California Department of Education](http://www.cde.ca.gov)

Interview Topics and Questions

The interview questions used to gather information for the case studies are below. Notes in *italics* represent the information the interviewer listened for in the respondent's answers and guided any prompts the interviewer provided.

COMMUNICATION (Internal Audiences) — 15 minutes

Will you describe your district's internal communication strategy regarding its transition to the NGSS?

Listen for:

- *Transition plan and multiyear timeline;*
- *Changes in instructional materials;*
- *Assessment;*
- *How communities can support local implementation efforts;*
- *Changes in course scope and sequence for science courses; and*
- *Professional development opportunities for school leaders and educators.*

Will you describe the flow of information from the state to the district and then to the school, including both school leaders and teachers? (*Listen for ALL leaders and educators*)

Have there been opportunities to give or gather input from school leaders and educators to inform 1) transition plans and 2) how the transition is going?

What have you learned about internal communications (e.g., successes, challenges, things to do differently, what was most important)? What are your plans for addressing internal communications going forward?

COMMUNICATION (External Audiences) — 15 minutes

Will you describe your district's communication with the community about the transition to the NGSS?

Listen for:

- *Regularity of communications;*
- *Vision of the NGSS:*
 - *How science classrooms will look different, and*
 - *How students will learn science differently, and how this will prepare them for their next steps;*
- *Multiyear timeline;*
- *Assessment;*
- *How communities can support local implementation efforts; and*
- *Community engagement opportunities for local stakeholders to provide feedback to inform refinement of implementation transition plans (e.g., participating in a dialogue at a parent and student science night).*

What have you learned about external communications (e.g., successes, challenges, things to do differently, what was most important)? What are your plans for communication going forward?

PROFESSIONAL DEVELOPMENT — 25 minutes

Has there been professional development for both educators and school leaders/administrators? Has it been the same or different or some of both?

Is there a system to track participation (of school leaders and educators) in professional development?

Are there any criteria for selecting appropriate professional development opportunities?

Will you describe the professional development opportunities you've had since beginning to transition to the NGSS? Please distinguish between professional development that was offered through being part of the Early Implementation Initiative with WestEd and professional development offered outside that initiative.

Listen for:

- *Multiyear;*
- *All educators and school leaders, accessible to range of educators (including grades and content areas) and school leaders;*
- *Throughout the school year;*
- *Includes observation of educators and individualized feedback on teaching the NGSS;*
- *Includes educators and school leaders in the planning process;*
- *Built-in feedback mechanisms and adjustments made; and*
- *Focus on content and instructional needs to support transition:*
 - *Strategies and specific supports to help educators meet the diverse needs of students,*
 - *Examples of ways school leaders can support their teachers and students,*
 - *Engaging educators and school leaders in examples of three-dimensional learning,*
 - *Planning opportunities that engage educators and school leaders in active reflection and analysis to understand the shifts of the NGSS,*
 - *Modeling instructional approaches, and*
 - *Illustrating what the NGSS look like in the classroom to an observer.*

What have you learned about professional development (e.g., successes, challenges, things to do differently, what was most important)? What are your plans for professional development going forward?

INSTRUCTIONAL MATERIALS — 15 minutes

Will you describe your experiences with instructional materials since you began transitioning to the NGSS?

Listen for:

- *Accommodating immediate needs for instructional materials while readily available materials may be difficult to find or are still in the development process; and*
- *An explicit focus on supporting diverse learners through the supports inherent to the standards (e.g., engaging phenomenon, problem-driven supports).*

Is there a plan for developing or adopting and maintaining instructional materials going forward?

Listen for:

- *Using objective criteria (including research- and practitioner-informed criteria) to evaluate instructional materials for alignment with the NGSS and for their support of diverse students;*
- *Training educators involved in the instructional materials adoption process to evaluate existing and new instructional materials for alignment with the NGSS;*
- *Recommending NGSS-aligned instructional materials for K–12 science courses;*
- *Evaluating and addressing the space and refurbishment needs of high-quality materials; and*
- *Whether the plan includes a focus on materials that include supports that can engage diverse learners and are accessible to all students and include effective classroom strategies for engaging students.*

What have you learned about transitioning your instructional materials from your early work in implementing the NGSS (e.g., successes, challenges, things to do differently, what was most important)?

ADDITIONAL CONSIDERATIONS — 15 minutes

Will you describe the role that *equity* has played in implementation?

What role do you see student work, student voice, and evidence of student learning playing in the NGSS? Has your view of these things changed with implementation of the NGSS?

Are there things students were not able to access before but can access now with the NGSS?

What influence has implementing the science standards had on other subjects like English/language arts?

Listen for:

- *Particularly curious about the perspective of principals; and*
- *The importance of integration.*

Will you describe the role leadership has played in implementation?

Will you describe the role networks, collaboration, and support from outside have played in implementation?

What would you have done without the K-8 Early Implementation Initiative? If you didn't have help, what would you have done? What are you doing outside the initiative? How has this initiative helped us in ways that we wouldn't have done without it?

What lessons did you learn from Common Core that have influenced implementation of the NGSS?

What are the most important things you've learned from your early work in implementing the NGSS (e.g., successes, challenges, things to do differently, what was most important)? What are your most important plans for implementation going forward?

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