

EXECUTIVE SUMMARY

Administrators Matter in NGSS Implementation

How School and District Leaders Are Making Science Happen



NGSS Early Implementers Initiative: Bringing science to life as a core subject in K–8 classrooms

A diverse group of eight California school districts and two charter management organizations is actively implementing Next Generation Science Standards in grades K–8. These NGSS Early Implementers are supported by the K–12 Alliance at WestEd, and work in partnership with the California Department of Education, the California State Board of Education, and Achieve. The S. D. Bechtel, Jr. Foundation commissions WestEd’s STEM Evaluation Unit independently of the K–12 Alliance to evaluate the initiative in the eight public school districts. This document summarizes the content and findings of the third evaluation report in the initiative series, published in November 2017. Access the complete series and learn more at K12alliance.org.

The vital role of administrators

The K–8 NGSS Early Implementers Initiative has consistently enlisted and empowered administrators in eight participating California districts and two charter management organizations. Over time, the Initiative has increased administrator involvement and professional learning related to implementing the Next Generation Science Standards (NGSS). Indeed, administrators need learning opportunities if they are to adequately understand the substantial shifts of the NGSS and support teachers’ implementation of these changes.

This third evaluation report in a series is intended for site and district administrators and state leaders. The report findings highlight:

- How administrators are advancing NGSS implementation in their schools and districts.
- How teachers are benefitting from administrators’ support.
- How the Initiative is empowering administrators’ efforts.

Findings

Impressively, over half of the Initiative’s dozens of core administrator participants report spending over 20 percent of their work time on supporting science instruction. Administrators are spurring NGSS implementation most often in the following ways:

Communicating science as a priority

Many administrators are communicating that science is a priority subject, as described by this elementary school principal:

The district has told principals, “We want your teachers teaching science, and they’re saying verbally and out loud, “Science is core!” They have given release time for teachers to do PD, and said that administrators should watch NGSS lessons.

Providing flexibility for teachers to practice the substantial instructional shifts of the NGSS

Because the phenomenon-based, practices-oriented science instruction called for by the NGSS is a substantial change for many teachers, it is critical for administrators to allow them flexibility to try new approaches. One middle school principal remarked:

As an administrator, I know that this is the biggest fear of teachers. They’re thinking, “If my principal walks in and the kids are giving these crazy answers that aren’t right, then what will happen?” My teachers know it’s okay to take risks, it’s okay to fail, it’s all part of the process of being a good science student or a scientist.

Another kind of flexibility is the latitude to integrate science with other school subjects. Many interviews with teachers revealed that unless administrators endorse integrating science with English language arts (ELA) and other subjects, some teachers will not address NGSS science in their classrooms in any significant way. (The means and mutual benefits of science–ELA integration at both elementary and middle school levels is described in evaluation report #2, *The Synergy of Science and English Language Arts*, found at http://k12alliance.org/docs/NGSS-EI_Synergy-Report_2_FINAL.PDF.)

Increasing teacher–teacher and administrator–teacher collaboration

Teachers also need time to plan and share ideas about NGSS implementation. Collaboration opportunities are on the rise in every Early Implementer jurisdiction, both among teachers and between administrators and teachers:

- Two-thirds of the 20 administrators interviewed in 2017 cited that providing time for collaboration in science was a major way they support implementing the NGSS.
- Core administrator participants reported that they “frequently” discussed with teachers the “instructional philosophies, strategies, and/or ideas related to the NGSS” and “challenges associated with NGSS implementation.”
- Administrators signaled the importance of science teacher professional learning by being present at district or site events; further, administrators often made presentations and/or engaged in science learning activities along with the teachers.

Providing resources for science instruction

Administrators are making available vital resources for science investigations, such as converting an unused elementary school classroom into a science resource room for the use of all teachers and students. In 2017, 75 percent of teacher leaders in the Initiative felt that their principals made sure they had the materials and supplies needed for teaching NGSS science.

The above findings and examples are arising in part due to the NGSS Early Implementers Initiative’s learning opportunities and supports for administrators:

- The Initiative annually convenes superintendents and their deputies to strengthen support for administrators’ NGSS implementation activities.
- In each district, a District Project Director, aided by a WestEd K–12 Alliance expert, leads monthly meetings of a Core Leadership Team of teachers and administrators to shepherd district NGSS implementation.

- In most districts, core administrator participants have made NGSS presentations to their peers during their district’s regular administrator meetings.
- Across the Initiative, WestEd’s K–12 Alliance annually convenes all districts’ Core Leadership Teams, including their administrator members, for two three-day professional learning sessions; the Core Leadership Team members subsequently help facilitate week-long summer institutes for the Initiative’s over 500 Teacher Leaders.

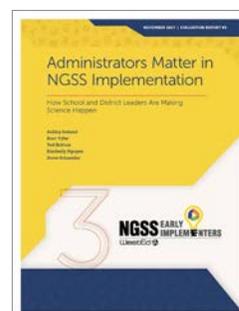
The Initiative added an Administrator Academy, required for every site administrator who has one or more Teacher Leaders in their school. In addition to attending 1–2 days of the 2017 summer institute, administrators are guided in observing NGSS lesson studies conducted by Teacher Leaders in their districts, and they receive 2–3 days of technical assistance customized for NGSS implementation issues at their school.

The evaluation findings suggest that if administrators are provided with professional learning and assistance, many of them will advocate and actively support their teachers’ NGSS implementation.

Recommendations

The report concludes with a set of brief NGSS implementation recommendations, including:

- **District administrators** should provide school administrators with NGSS-aligned protocols for classroom observations and include a regular focus on science in districtwide meetings of site administrators.
- **Site administrators** must convey that it is beneficial for teachers to teach science at the elementary level, encourage experimentation by all science teachers in shifting to NGSS science, support teachers in getting needed science supplies, and develop the ability to observe effective NGSS instruction in the classroom.



Read the full report, access other evaluation reports and resources, and learn from NGSS Early Implementers at K12alliance.org.