
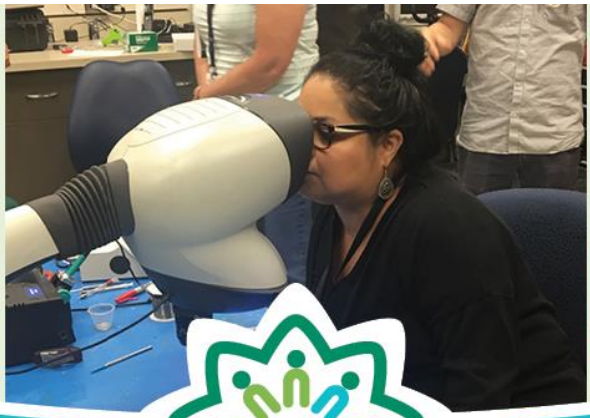


Climate Science Proviso

2020-21 Interim Survey Report

January 2021

Washington Office of Superintendent of PUBLIC INSTRUCTION

AESD ASSOCIATION OF EDUCATIONAL SERVICE DISTRICTS
Nine ESDs. One Network.
Supporting Washington's Schools and Communities.

CLIME TIME

Kauffman & Associates INCORPORATED

Table of Contents

List of Tables

Climate Science Proviso Interim Survey Report

Executive Summary

ClimeTime is facilitated by the Office of Superintendent of Public Instruction (OSPI) through a Washington State legislative proviso. Governor Jay Inslee originally requested an annual $4 million investment for the proviso in 2018-19, which has continued as a $3 million investment in 2019-20 and 2020-21. Proviso grant funding flows through all nine Educational Service Districts (ESDs) and six community-based organizations (CBOs) in Washington. With this funding, the ESDs and CBOs have launched programs for science teacher training, linking the Next Generation Science Standards (NGSS) and climate science. In addition to teacher professional development, the project supports the 15 grantees to develop instructional materials, design related assessment tasks and evaluation strategies, and facilitate student events. This Interim Survey Report discusses data from a survey about ClimeTime professional development of science teachers between August 15, 2020, and December 30, 2020. The questionnaire addressed trainings open to educators across the state related to the Washington state budget proviso.

The school closures that began in March due to the COVID-19 pandemic led to rapid adjustments in the ClimeTime initiative. Each project adopted innovative ways to support teacher learning because experiential and field-based learning about climate science was not possible. Students and teachers were unable to take field trips, and lab investigations shifted to virtual platforms. Partnerships between ESD Regional Science Coordinators (RSC) and community-based organizations were challenged by the shift to online collaboration spaces. The survey data in this report indicates that RSCs maintained a high quality of professional learning experiences prior to late winter 2020.

Survey Findings

Overall, participants in **Climate Science Professional Development** rated the trainings very highly, with more than 93% stating that aspects of the session were good or very good. More than nine in ten participants reported that they were introduced to useful resources and were motivated to recommend these types of sessions to colleagues. Most participants (98%) shared that they have broadened or deepened their knowledge of topics related to research-based instructional practices. Practically every participant (99%) agreed or strongly agreed that their participation prepared them with the necessary skills to try something new or different in their professional practice.

Participants reported on the frequency of their instructional practices in science and STEM teaching. While close to two out of three (63%) respondents provide opportunities for students to use data in their thinking, a smaller proportion (53%) engaged students in science-based computational thinking. Of the participants, 69% claimed that they prompted students to

explain and revisit their understandings. More than two-thirds (69%) reported engaging students in conversations around science and engineering findings.

Climate Science Survey: Open-ended Responses

The 2020-21 Climate Science Survey included two options for participants to share open-ended responses. These responses provided insights into how teachers envisioned they would implement professional learning and how they valued tools shared by the RSCs and partners.

What aspect of your learning today are you most likely to use in your classroom in the near future?

Most participants were excited to use the tools, strategies, and resources shared during the training in their own classrooms. Specific tools included Flipgrid, Loopy, Jamboard, and Padlet. Teaching strategies included close reading and systems modeling. Resources included those for lesson planning. Many survey respondents appreciated resources that could be used for lesson planning and learning about how to incorporate anchoring phenomena and systems thinking into their curriculum.

- "I am already starting this story lines with birds! The 'chat bomb' is something we've already used, as well. Being in a workshop where these virtual strategies are used is very helpful. Thanks!"
- "Getting to see new ways to deliver information remotely — specifically tools like Jamboards; Peardeck; and See, Think, Wonder format. These teaching tools really make a big impact that I can apply to any content area."
- "I am in the process of making sure our curriculum is more 3-D, and we are specifically working on elevating anchoring phenomena and storylines. I am going to check out more resources at OpenSciEd to help me do this. The anchoring phenomena tracker is a great resource."
- "I'm thrilled with the new perspectives offered by this training. It has stretched my thinking, and I will incorporate some of the videos and articles in the current FOSS kits provided to me by [my] school district."

What suggestions do you have to make this professional learning experience better?

Participants suggested that adding time to professional learning experiences (PLEs) would improve their experience. A few participants noted that they would appreciate more examples of the content, particularly of how to implement it in the classroom. Additionally, comments referenced content and strategies geared toward working with students with disabilities and early elementary school students. Rather than offering feedback, one in five of the respondents used this opportunity to praise the training.

- "Time was an issue. I would have loved a longer PD session, if possible, to process the information and have more tools to implement."
- "I wish it had included two more sessions. It was really a bit too fast paced to help teachers new to these units understand how the strategies work and how the unit flows from one thing to the next."
- "Include more examples of how we can include this content in our classrooms."
- "I would like to see more lower-level ideas of this in action. Fifth graders have so much more writing ability than K. If it's a K-2 example, the example is end of 2nd grade learning. We need more examples for PK and K to get this started early."
- "I honestly can't think of anything. The amount of time felt just right. The variety of activities kept things different and moving. It was an awesome balance of content and practice. I just loved it."
- "I felt it was done very well. I appreciated having guest speakers and the opportunity to collaborate with other teachers (breakout rooms)."

Climate Science Surveys

This section provides the Survey Tables 1 through 6.

Table 1: Thinking about your professional learning session, how would you rate it for the following?

Thinking about your professional learning session, how would you rate it for the following?	Very Good	Good	Fair	Poor	Very Poor	Does Not Apply	Total
Meeting the stated learning objectives of the session.	178 (73%)	60 (25%)	5 (2%)	0 (0%)	0 (0%)	0 (0%)	**243 (100%)**
Use of engaging and useful activities to facilitate your learning.	176 (72%)	59 (24%)	8 (3%)	0 (0%)	0 (0%)	0 (0%)	**243 (100%)**
Introducing you to useful resources, such as curriculum materials, research articles, and practice information.	179 (74%)	53 (22%)	11 (5%)	0 (0%)	0 (0%)	0 (0%)	**243 (100%)**
Providing timely, relevant information that you will be able to apply in your work setting.	166 (68%)	65 (27%)	11 (5%)	0 (0%)	0 (0%)	1 (0%)	**243 (100%)**
Engaging you in discussion with other participants in ways to facilitate your learning.	163 (67%)	62 (26%)	16 (7%)	1 (0%)	0 (0%)	1 (0%)	**243 (100%)**

Thinking about your professional learning session, how would you rate it for the following?	Very Good	Good	Fair	Poor	Very Poor	Does Not Apply	Total
Providing sufficient time for you to process the information collaboratively with colleagues.	156 (64%)	70 (29%)	15 (6%)	0 (0%)	0 (0%)	2 (1%)	**243 (100%)**
Motivating you to recommend these types of sessions to your work colleagues.	161 (66%)	65 (27%)	13 (5%)	2 (1%)	0 (0%)	2 (1%)	**243 (100%)**

Table 2: As a result of participating in this professional learning experience, I have broadened/deepened my existing knowledge of:

As a result of participating in this professional learning experience, I have broadened/deepened my existing knowledge of:	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Addressed	Total
Three-dimensional learning and teaching.	109 (45%)	122 (50%)	3 (1%)	0 (0%)	9 (4%)	243 (100%)
Research-based instructional practices.	131 (54%)	107 (44%)	0 (0%)	0 (0%)	5 (2%)	243 (100%)
Instructional practices to make learning experiences more inclusive for diverse student populations (e.g., special education, highly capable, migrants, students of color).	121 (50%)	96 (40%)	9 (4%)	0 (0%)	17 (7%)	243 (100%)
Instructional practices to make learning experiences more inclusive for English language learners.	98 (40%)	102 (42%)	10 (4%)	0 (0%)	33 (14%)	243 (100%)
Instructional practices to make learning experiences more inclusive for students with disabilities.	85 (35%)	105 (43%)	11 (5%)	0 (0%)	42 (17%)	243 (100%)
A range of assessments and/or resources across the educational system, such as state, local, and/or classroom assessments.	83 (34%)	108 (44%)	15 (6%)	0 (0%)	37 (15%)	243 (100%)
How to share the session information with others (teachers, administrators, parents).	101 (42%)	116 (48%)	7 (3%)	0 (0%)	19 (8%)	243 (100%)

Table 3: How frequently do you implement the below instructional practices in your science or STEM teaching?

How frequently do you implement the below instructional practices in your science or STEM teaching?	All of the time	Most of the time	Sometimes	Never or hardly ever	Not applicable	Total
Provide opportunities for students to use data to inform their thinking.	35 (15%)	110 (48%)	60 (26%)	9 (4%)	17 (7%)	**231 (100%)**
Test the ability of students to apply key science ideas to new situations.	34 (15%)	104 (45%)	58 (25%)	13 (6%)	21 (9%)	**230 (100%)**
Engage in conversations around science findings or engineering solutions.	41 (18%)	103 (45%)	59 (26%)	7 (3%)	17 (7%)	**227 (100%)**
Engage students in science-related computational thinking.	24 (11%)	95 (42%)	71 (31%)	15 (7%)	21 (9%)	**226 (100%)**
Ask students to explain their partial understandings and potentially incorrect ideas.	82 (36%)	91 (40%)	38 (17%)	4 (2%)	14 (6%)	**229 (100%)**
Have students make explanations and revise them in response to new evidence.	62 (27%)	96 (42%)	47 (20%)	9 (4%)	16 (7%)	**230 (100%)**

Table 4: Participating in this professional learning experience prepared me with the necessary skills to try something new or different in my professional practice?

Question	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Addressed	Total
Participating in this professional learning experience prepared me with the necessary skills to try something new or different in my professional practice?	146 (60%)	96 (40%)	0 (0%)	1 (0%)	0 (0%)	**243 (100%)**

Table 5: How frequently do you engage in the instructional practices in science and STEM teaching below?

How frequently do you engage in the instructional practices in science and STEM teaching below?	All of the time	Most of the time	Sometimes	Never or hardly ever	Not applicable	Total
I plan for multiple ways for my students to access learning.	84 (37%)	95 (42%)	30 (13%)	6 (3%)	13 (6%)	**228 (100%)**
I encourage students to consider possible barriers to implementing a solution.	47 (21%)	103 (45%)	52 (23%)	10 (4%)	17 (7%)	**229 (100%)**
I survey students about their interests and experiences relevant to science ideas/solutions.	44 (19%)	78 (34%)	69 (30%)	18 (8%)	20 (9%)	**229 (100%)**

Table 6: How confident are you about teaching the NGSS climate science-related topics at your current level?

Question	Very Confident	Confident	Somewhat Confident	Not Confident	Total
How confident are you about teaching the NGSS climate science-related topics at your current level?	57 (24%)	104 (45%)	55 (24%)	17 (7%)	**233 (100%)**