Examining High Leverage Instructional Practices that Support Equitable Use of Performance Assessment at Summit Public Schools

Stanford Center for Assessment, Learning, and Equity

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The use of performance-based assessment engages students to utilize higher order thinking skills in order to produce work that demonstrates what they are learning towards realistic, meaningful problems related to a discipline and/or the real world (Darling-Hammond, L. & Adamson, F., 2010; Wei, R., Pechone, R., & Wilczak, K., 2015). As more and more public schools adopt performance assessments in order to prepare their students for college and career, as well as summative Common Core assessments, there is a growing need to look more closely at how performance assessments impact the learning of students, and in particular, how they create equitable learning opportunities for students who are struggle academically.

Summit Public Schools utilizes a self-directed model of learning that incorporates blended learning, project-based learning, and the use of performance assessment. Since 2003, their work has been based on their mission to prepare a heterogeneous student population for success in four-year college and to be thoughtful, contributing members in society. Summit’s commitment to nurturing student agency and ownership in the learning process has prompted much internal development and inquiry over the years to understand the necessary teacher skills and dispositions required to more effectively manifest their mission.

Since 2013, Summit Public Schools has partnered with the Stanford Center for Assessment, Learning, & Equity (SCALE) to develop performance assessment tools and systems that support and build teachers' capacity to build better performance assessments and to implement performance assessment effectively and equitably. SCALE, the author of this report, works to improve instruction and learning through the design and development of innovative, educative, state-of-the-art performance assessments and by influencing public policy and building the capacity of schools to use these assessments in thoughtful ways to promote student, teacher, and organizational learning. Researchers and educators know that engaging students in rigorous, authentic performance assessments leads to deeper engagement in learning for students, and ultimately, better learning outcomes and higher achievement for all students. But how teachers
implement performance assessment matters a great deal to the student outcomes, particularly those who struggle academically. ThroughoutSCALE and Summit’s partnership, and in this research study in particular, we have sought to deepen our shared understanding of what "effective" use of performance assessment with academically struggling students looks like. The practical goal of this exploration is to increase teacher capacity to use performance assessment in effective and equitable ways. To enable this exploration, Summit Public Schools selected four of their more experienced teachers and invited SCALE to examine their instructional practices and uses of performance assessment. Understanding how these teachers implement performance assessment can illuminate specific practices that are associated with more equitable and successful outcomes for all students.

The following research questions were used to guide this study:

1. Can engaging with performance assessment provide greater access to rigorous content for all students and build their academic language?

2. What are the specific instructional practices associated with implementing performance assessments that support students’ academic engagement and learning?

3. What are the practices that are most effective in supporting the engagement and learning of academically struggling students as they work on performance assessments?

PURPOSE OF THIS BRIEF

This research brief provides an executive summary of the initial findings. This document is not intended to represent a full empirical research study, nor is it a guide for professional development. It distills the work gathered over a 2-month data collection period by presenting an overview of the research methodology, summary and discussion of the initial findings, and recommended next steps for disseminating the findings throughout Summit Public Schools.

OVERVIEW OF RESEARCH METHODOLOGY

The purpose of this study is to identify effective instructional and assessment practices associated with the use of performance assessments, particularly to support English language learners, students with learning disabilities, and students who academically struggle.

PARTICIPANTS:

Four teachers representing different content areas were selected by Summit Public Schools to participate in the study. Each teacher selected a project-based curricular unit to be observed. The selected teachers are listed in the below chart.

<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TEACHER NAME</th>
<th>GRADE</th>
<th>SCHOOL</th>
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<tr>
<td>Math</td>
<td>Hai Tran</td>
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<td>Everest</td>
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To examine support for English language learners, students with learning disabilities, and/or students who academically struggle, each of the above teachers selected three focal students for the study. For confidentiality purposes, the students’ names will not be revealed in this brief. Teacher and parent consent forms as well as student assent forms were distributed and collected prior to the study. All students and their parent/guardian in the focal classes were required to complete an assent/consent form.

DATA COLLECTION:
To achieve the purposes of this study, the following components comprised the data collected over a 2-month period during the final semester of the 2014-2015 school year:

☑ INTERVIEWS:
  o A filmed pre-observation interview with each of the focal teachers
  o A filmed post-observation interview with each of the focal teachers after the performance assessments were completed and student work was evaluated
  o An audio recorded interview with each of the focal students after they had completed and submitted at least one revision of the performance assessment

☑ ARTIFACTS:
  o Curriculum plans and instructional artifacts from the curricular unit involving a performance assessment

☑ OBSERVATIONS:
  o Up to 5 filmed observations and observation field notes of each teacher that included digital audio recorders placed with each focal student

Teacher Pre-Observation Interview. These interviews were conducted with each of the four focal teachers. Questions were asked in a semi-structured format and focused around the following topics:

☑ Teaching background
☑ Understanding of performance assessments and their use
☑ The unit plan and performance assessment to be observed
☑ The teacher’s students
☑ The classroom culture and structures

Teacher Post-Observation Interview. These interviews were conducted after the student work on the performance assessments was evaluated by the teacher. Questions were asked in a semi-structured format and focused around the following topics:

☑ Student engagement and performance
☑ Pedagogical decisions made to support students
☑ The performance task
**Student Post-Observation Interview.** These interviews were audio-recorded with each of the focal students individually. Questions were asked in a semi-structured format and focused around the following topics:

- General experience with learning within the class
- Understanding of the performance task
- Reflection on their performance on the assigned task
- Reflection on performance assessments in general

**Curriculum Plans and Instructional Artifacts.** Teachers were asked to provide any materials related to curriculum and instruction. Examples include but are not limited to unit plans, lesson plans, graphic organizers, models, readings, and PowerPoint slides.

**Teaching Observations.** Up to five teaching observations were scheduled so as to target lessons that directly supported the work required for students to successfully complete the focal performance tasks. Observations were both filmed and scripted using a SCALE-developed selective scripting tool. Lead researchers were responsible for doing the selective scripting, which focused on capturing teacher moves, student moves, and the researcher’s initial thoughts and reflections from that day. Extra attention was placed on capturing the moves and discourse coming from the three focal students.

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**SUMMARY OF FINDINGS**

What practices were observed and identified from Summit teachers that contributed to successful outcomes? Paul Black and Dylan Wiliam (1998) synthesized a range of studies that examined the interactions between classroom assessment and classroom learning. Their hope was that improvements in classroom assessment could improve the instructional practices associated with learning. Using this seminal research on assessment for learning by Black and Wiliam as a guiding framework, we found six key ways that Summit teachers supported their students in successful completion of performance assessment. These six domains capture important instructional and interdisciplinary practices that others can learn from. The actual practices observed from Summit teachers are shown in Figure 1. In the discussion of findings that follows, we will elaborate these six domains with examples of some, but not all, of the practices listed in Figure 1.

“The performance tasks in a project provide a much richer experience for the students. Trying to connect it to various real world applications whether it’s like here’s what it’s like to be a historical fiction author, here’s what it’s like to be a film critic, present opportunities to students to get a lot more choice and a lot more buy in, but also authenticity.”

– Laura Crowe, English Teacher
Domains of Practice

**CONDITIONS AND EXPECTATIONS TO SUCCEED**
Teachers expect students to succeed and create the conditions for success.

**LEARNING GOALS**
Teachers make learning goals transparent and share creation of goals and roadmap to those goals with students.

**STANDARDS OF QUALITY**
Teachers make transparent and explicit the standards of quality and provide opportunities to develop toward those standards.

**REVIEW OF DATA**
Teachers and students review and reflect upon assessment data.

**FEEDBACK**
Teachers create the conditions for students to receive formative feedback and know their next steps as well as how to take them.

**SELF ASSESSMENT**
Teachers provide the opportunities for students to self assess in order to improve.
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<th>CONDITIONS AND EXPECTATIONS TO SUCCEED</th>
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<td>Provides opportunities for sense-making discourse in a safe learning environment</td>
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<tr>
<td>Provides opportunities for student choice in process as well as product</td>
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<td>Allows students to struggle with work/new knowledge before accessing additional scaffolds and resources</td>
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<td>Helps student link prior knowledge to new content</td>
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<tr>
<td>Frames the objective, purpose, and/or importance of the activity</td>
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<tr>
<td>Provides structured opportunities for students to develop and manage individual and whole class work and/or learning goals</td>
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<tr>
<th>STANDARDS OF QUALITY</th>
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<td>Uses and/or refers to rubrics to guide student learning and increase self awareness, engagement, and ownership</td>
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<td>Models thinking and work processes/protocols</td>
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<td>Equips students with learning and using the language of the discipline</td>
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<tr>
<td>Provides multiple options for using additional resources, examples/models, and tools to support successful completion of the task</td>
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<td>Monitors student learning using online tools, data, and observation practices in order to guide learning</td>
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<tr>
<td>Adjusts teaching plans based on student responses and work</td>
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<td>Students review data in order to guide their own learning and work productivity.</td>
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<td>Provides structured opportunities for students to construct and communicate understandings and ideas</td>
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<td>Conferences with individual students or small groups of students to guide learning and/or work production</td>
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<td>Provides structured opportunities for students to evaluate their work and others’ work.</td>
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<tr>
<td>Provides opportunities for reflection in order for students to build self awareness of effective and productive behaviors</td>
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FIGURE 1: High Leverage Instructional Practices Observed
DISCUSSION OF FINDINGS

CONDITIONS AND EXPECTATIONS TO SUCCEED

teachers expect students to succeed and create the conditions for success.

- Frames activities in terms of learning opportunities
- Provides opportunities for sense-making discourse in a safe learning environment
- Provides opportunities for student choice in process as well as product
- Allows students to struggle with work/new knowledge before accessing additional scaffolds and resources
- Helps students link prior knowledge to new content
- Breaks content into smaller steps and/or chunks of information for more accessible processing

Black and Wiliam (1998b) assert that cultivating a culture of success, which must be backed by a resolute belief and expectation that all students can achieve, is critical. Students do not have a fixed intelligence, impervious to schooling. Teachers must believe that students have potential, and this must be manifested daily in the way that a teacher nurtures learning. Teachers then must create the cultural and structural conditions for students to succeed. These expectations and actions are both necessary to create a supportive and equitable learning environment.

Summit teachers in this study created a variety of conditions for students to succeed in ways that prioritized learning rather than mere completion of activities and assignments. Performance tasks, for instance, were made accessible through scaffolding and structured classroom discourse. Tasks were not merely assigned for students to complete with no support. Teachers like Laura Crowe, English, demonstrated chunking and scaffolding by priming and engaging students in mini tasks that led towards the larger task of writing an expository essay around multicultural literature themes and author perspectives. Ms. Crowe chunked the work in manageable phases, through which she guided her students to learn and use the various skills needed for reading, researching background context, taking a position, and then writing the parts of an essay. She created structures for students to work with peers at times and independently at other times. Ms. Crowe also interacted with small groups and individuals to support their unique needs and evoke thoughtful and reflective understanding. Ms. Crowe acted as a facilitator of learning rather than as an authority.

“Projects give me opportunities to apply what I have learned. You get more opportunities to talk with others, show what you know, get feedback from Dr. Beans, and make your product better. This helps me to do my best work. I’m able to show a number of different skills that I have learned instead of just taking a test.”

– 11th grade student
who deposits knowledge into empty vessels. This structure positions students as the drivers of learning, demonstrating high expectations of the students’ ability to learn and supporting students’ development of agency as learners.

Mr. Hai Tran, Math Teacher at Everest, cultivated conditions and expectations for students to succeed with a range of instructional moves, including carefully framing what he asked students to do. For example, before turning over the floor to students invited up to the front of the class to present, he said, “This is for the benefit of the class. It does not have to be perfect.” This kind of framing helps students understand that sometimes the purpose of their work is to help each other learn, rather than to ‘get the right answer.’ During another lesson, a student presented a solution to a problem that included a common misconception. Mr. Tran facilitated an extended discussion of the solution by taking the spotlight off the student who presented it, and by treating the work on the board as worthy of the class’s attention. As students began to comment on the work, he facilitated the discussion with prompts like, “Can someone build on what Alex* said?” and then, to another student, “Tell me why you are convinced.” This discussion provided many students in the class (including the original presenter) with opportunities to articulate, and critique, the reasoning behind an approach to the problem that did not work, but offered important insights into the new content they were studying. This instructional approach simultaneously supported students in building important cognitive skills (e.g., critiquing the reasoning of others, justifying and constructing explanations) and developed a safe classroom culture for active learning, including learning from mistakes.

Dr. Liz Beans, Chemistry Teacher, introduced a materials design performance task for which students worked in teams to select and recommend the best-suited material to a client designing a product with a particular function. In introducing the project, she engaged students first in the adhesion properties found in geckos. This hook allowed Dr. Beans to connect this unique characteristic of geckos to a research study that investigated how to make a robot that could climb walls. Dr. Beans used this example to frame the importance of materials selection in meeting the functional design needs of a product. Through engaging in the project this way, students were provided with the conditions to become authentically interested in applying their learning of chemistry into a real world situation. Dr. Beans then presented a timeline and sequence of key milestones for the project. This set a tone of clarity and accessibility for students, and it set the expectations that they would be supported along the way through performing smaller steps that built towards success.

*All student names in this report are pseudonyms
“When anyone is trying to learn, feedback about the effort has three elements: recognition of the desired goal, evidence about present position, and some understanding of a way to close the gap between the two. All three must be understood to some degree by anyone before he or she can take action to improve learning” (p. 143, emphasis added).

Throughout the study, we found Summit teachers sharing and making learning goals transparent with students. Teachers did not appear to have a hidden agenda or unknown destination. Teachers provided students with a clear roadmap in order to motivate action for improvement in their learning.

Many teachers enacted this focus on goals in relation to cognitive skill development and classroom management. We saw teachers begin a class or an independent practice session by identifying what students should be working towards given factors such as the project timeline, the focus of the day, work progress to date, and what was coming on the horizon. Laura Crowe from Shasta grounded students in prior lessons and work, had students review and reflect upon what they could already understand and do, previewed the upcoming focus of the day, and then had students write down a learning and work goal on their Warm Up Google Doc. Students then shared their goal with a peer to support a culture of action and accountability.

One teacher enacted this focus on goals in relation to content learning, as well. At the outset of the materials design performance task, Dr. Liz Beans performed an activity that stood out in comparison to the other teacher participants in this study. She took time to explicitly establish the necessity of being on track with the chemistry content provided via students’ playlists, a Summit-specific blended learning tool, in order to successfully perform on the performance task:

If you have not passed Periodic Table, Intramolecular Forces, and Intermolecular Forces, that'll catch up [to you]. You should know that content for the project moving forward and you absolutely need to know that content for next Monday. We will be using that to apply towards our project.

Dr. Beans stressed the urgency of mastering the content provided on the playlists by certain dates in order to access upcoming mini lessons. Drawing students’ attention to the importance of mastering the content of the playlists prior to when it was absolutely necessary helped to provide the conditions needed for eventual success not only in the upcoming lesson, but also in the
project as a whole. While playlists are used Summit-wide, the researchers did not observe other examples of this practice in action. This could be simply a result of the nature of the other content area tasks and/or the timing of this study in the school year. This could also point towards an area of opportunity for Summit’s growth in more closely integrating the playlist content with projects and skills.

In addition to supporting students with staying on track with their playlists to empower their self-directed learning, Dr. Beans also provided tools for her students to help them manage their productivity. One 11th grade student reflected,

> You see this slide [refers to the project organizer]? I really like it because it tells you what should be done to be on track so I don’t get lost…it helps me to create a goal to finish each part of the project and to not to fall behind…so we can understand what’s happening.

This tool and practice is both a structured and structural way that Dr. Beans works to provide equitable access for her students to develop independence and ownership over their learning by setting goals for their own learning process. Her students are not left to “sink or swim,” but are rather provided with transparent and frequent opportunities to learn how to manage and organize their work and resources in order to successfully complete their performance tasks.
STANDARDS OF QUALITY
Teachers make transparent and explicit the standards of quality and provide opportunities to develop toward those standards.

- Uses and/or refers to rubrics to guide student learning and increase self awareness, engagement, and ownership
- Provides and explicitly examines examples of skills and work/products
- Models thinking and work processes/protocols
- Equips students with learning and using the language of the discipline
- Provides multiple options for using additional resources, examples/models, and tools to support successful completion of the task

Black and Wiliam (1998b) assert that students can become more committed and more effective as learners if they assess themselves against a clear picture of the targets that their learning is meant to reach. Summit teachers in this study worked in a variety of ways to provide clear standards of quality in order to be explicit about what students should know and be able to do.

Science teacher Dr. Liz Beans employed a practice we have observed to be common at Summit; as students prepared for a presentation, she created an opportunity for her students to examine two specific dimensions from the Cognitive Skills Rubric in order to understand the assignment’s evaluative criteria. Dr. Beans prompted students to read the criteria aloud then talk with a peer to interpret them. To check for understanding, Dr. Beans asked a few students to articulate their interpretation of the criteria aloud. She ensured accuracy by further narrating some students’ explanation and reconciling any discrepancies. After a common understanding of the criteria was established, Dr. Beans provided an opportunity to apply the rubric by asking students to evaluate a presentation she made to the whole class on a topic unrelated to the project, to increase focus on understanding the evaluative criteria rather than the content of the presentation. She gave students a graphic organizer to complete while they listened to the presentation then facilitated an evidence-based discussion of how students would score her presentation using the rubric dimensions.

Such explicit attention to examining, discussing, and applying the Cognitive Skills Rubric worked to help students understand the criteria through concrete examples while also building towards self-awareness of skills they needed to develop and monitor for progress.

“She makes us review the rubric before each project so we know what is expected of us and so we can do the best job possible. Sometimes she shows us samples of student work so that we can see an example of what it means to be proficient when writing or she shows us an example of what she expects for a presentation.”

-11th grade student
World History teacher Katie Goddard from Rainier provides opportunities for students to develop toward standards of quality set by the rubric by explicitly modeling thinking, processes, uses of skills, and products. In one observation, she used “skill cards” in student-centered workshops to make explicit the standards of quality related to the various skills needed to write an effective analysis paper. Ms. Goddard first worked with her students on identifying and isolating specific skills in their own work in order to know where and how to improve. She modeled this process first, emphasizing to students that “When we look at our own work, we need to be able to isolate the skill we’re trying to develop and make sure we’re taking it one layer at a time.” After supporting students in examining their own work using the rubric, Ms. Goddard’s students moved into “skill card” workshops designed to support them in improving their work with regard to areas of need they identified by looking at their own work.

A “making analysis clear” skill card, for instance, provided 1) a definition of the skill, 2) points for how to perform the skill, 3) examples for practice and improving the skill, 4) pitfalls to avoid, 5) and steps for using the skill for an actual writing task. Students chose a workshop station with a given skill card to work on with a small group. This structure served as a tool to build student agency and self-direction in the learning process. In this example and many others, Summit teachers layered several related practices from across the domains identified in this report, including goal setting and self-assessment.
REVIEW OF DATA

Teachers and students review and reflect upon assessment data.

- Monitors student learning using online tools, data, and observation practices in order to guide learning
- Adjusts teaching plans based on student responses and work
- Students review data in order to guide their own learning and work productivity.

Black and Wiliam (1998a) identify that students and teachers need data about where students are in relation to a targeted learning goal in order to address gaps in understanding and performance. Summit’s self-directed, blended learning model involves an infrastructure of web-accessible tools to manage information and progress. From Personalized Learning Plans to Playlists to Google Drive, Summit teachers in this study regularly utilized such tools and created opportunities for students to utilize such tools in order to guide the learning process.

Teachers in the study utilized data to evaluate what skills needed more or less attention, including direct instruction and review. Students used data to monitor their progress towards demonstrating mastery of specific content and skills and to create self-directed learning goals and plans for making further progress.

“There are times when he teaches a playlist in class. He observes the students and how they react to the playlist. And from that he can tell from that playlist whether you need afterschool support or if he has to teach it. If you see maybe 4 students struggling with the playlists. You don't create another lesson for that playlist specifically, because maybe all the other students already know it. You would give them a note and say come to office hours where you could get one on one tutoring.”

- 10th grade student

History teacher, Katie Goddard uses data to plan check-ins with specific students during class. Before class starts, she reviews data from her gradebook or work students submitted the day before in order to determine who may need more attention that period. Ms. Goddard’s check-ins with student might be academic or behavioral—e.g., about the misuse of a skill or about focus during class time.

Additionally, she uses her knowledge of any particular student’s needs and approach to learning to determine the best way to support that student when she recognizes that they need additional support. The data she gathers allows her to be to be intentional and targeted with her plans to effectively support any particular student. Using this data-driven approach allows Ms. Goddard to meet each student where she is and help her reach an expected goal.

On a macro level, Ms. Goddard uses data with other World History teachers in order to plan common units. For instance, a unit on whether reparations should be made as a result of
Imperialism prompted Ms. Goddard and her teaching partner to use data to determine students’ reading levels in order to gather appropriate sources that could provide the content needed to argue a position about reparations:

We looked up their reading M.A.P. test scores from December and talked to some of their other teachers and figured out what reading level each kid was and then we designed sources that were readable for someone who's reading on a level 5-7, from 7-9, and then 9-12, and made sure the packet of sources that students got was tailored to every level. And for so many kids, that was a make or break situation because now they could access what the project was about, they could read the sources and understand them, and once you could read and understand the sources it's a lot easier to craft an argument using those sources.

Utilizing a school-wide adaptive test, the Measures of Academic Progress (Northwest Education Association), to determine reading levels allowed Ms. Goddard and her colleague to provide equitable access to the history content, in order to focus the task more on developing and demonstrating the skills necessary for formulating an argument in an essay rather than on reading comprehension.

While most of the use of data we observed was around cognitive skills, some teachers are using data around content learning as well. Chemistry teacher Liz Beans utilizes playlists, a Summit-specific tool for personalizing learning needs, as a source of data to support students. She regularly monitors students’ progress on playlists. In one instance, Ms. Beans identified a student who was behind on completing the playlist. She met with the student to understand the source of the incompletion and then explained the intention behind how the student’s playlist both supports his learning needs as well as interests. This use of data by Ms. Beans allows her to have a dialogue with a student in order to develop an appropriate solution.
Black and Wiliam (1998b) maintain that students should have opportunities to express their understanding during the teaching process to enable formative assessment and feedback that will support further learning. Black and Wiliam add that feedback should be about the particular qualities of a student’s work and how he or she could improve rather than making comparisons to other students. Summit teachers in this study demonstrated this practice in a variety of ways. Teachers observed provided both formal and informal feedback to students on their learning and work habits. Notably, Summit teachers in this study also provided opportunities for students to provide feedback to each other’s work as well as feedback on how they are processing their learning. Enabling students to give and receive peer feedback depends upon a supportive, low-risk classroom environment and the use of specific structures to help students develop their capacity to give feedback that is effective and actionable.

Math teacher Hai Tran, from Everest, provided many structures to support students in giving each other feedback, helping students recognize that giving effective and actionable feedback is a skill that takes practice. During one lesson, Mr. Tran framed the challenge of giving effective feedback in this way: “I want to acknowledge how hard it is to give constructive feedback. It is easy to give praise.” He devoted more than 20 minutes during another lesson to a modeling exercise on peer feedback. He invited a pair of students up in front of the class to have a conversation about one of the students’ work on a task, using a peer feedback form and a rubric.

Mr. Tran also provided tools to activate and support the practice among students who were not up in front of the class. He asked students in the audience to take notes during the presentation using two prompts: “I noticed……” and “I wondered…..,” and then to share their noticing and wonderings aloud after the presentation. These prompts provided a structure to guide students’ attention and engagement in other students’ work, which in turn supported the practice of purposeful and effective feedback. Mr. Tran pointed out that the fact that students can give each other constructive feedback shows that they feel safe.

"He emails me 24/7 talking about, 'oh you need to pass this content assessment, come to my office hours.' And he always asks me during class, 'are you coming to my office hours.' And he always emails me after office hours asking me what I accomplished and I tell him what I accomplished."

- 10th grade student
Laura Crowe demonstrated a similar concern for students’ perception of feedback and its purpose, but enacted it differently. In an interview, she explained that she starts out the school year preparing to guide individual student learning by engaging in a process to problematize each student’s unique challenges. She treats her interactions with students as inquiry to discover how she can best support each student and develop her students’ self-awareness about factors that may be interfering with their learning:

I think the thing for me is understanding what the barrier to entry is, and for each kid it's different, and it could be related to what's going on in class or not related to what's going on in class. The faster I could figure that out, the better I could help them....and go into it letting them tell me like 'where are you getting stuck? What's holding you up?' And trying to make it productive as possible and non-accusatory as possible. So less of 'why aren't you here' and more like "what's getting in the way’ and trying to help them find out those things without even me there.

Here we see how Ms. Crowe connects with individual students to tailor, using their own voice and perspective, the way she will interact with them and provide feedback. She thus empowers students to become a part of the process to improve their own learning. This practice aligns with the belief that all students can achieve if teachers help in the process of removing barriers. Such a perspective differs from the practice of placing blame on students when they do not understand something or are not successful. Ms. Crowe authentically seeks to understand students in order to understand how and where to help them. She then uses this knowledge of students to shape her ongoing feedback and support to be as constructive as possible.
Black and Wiliam (1998b) conclude, “if formative assessment is to be productive, pupils should be trained in self-assessment so that they can understand the main purposes of their learning and thereby grasp what they need to do to achieve” (p. 143). The Summit teachers in this study provided structured opportunities for students to self assess their work, their progress, and their work habits.

Laura Crowe often utilized Google Drive technology to share living documents with students and for students to share among themselves. As part of a writing task that focused on theme and author perspective, Ms. Crowe had students first self assess their own in-process work using the cognitive skills rubric, then share their work with each other to give and receive feedback, and finally write a brief reflection on what their next steps should be and why.

Ms. Crowe also created structured opportunities during class time for students to check their Personal Learning Plans (PLP) to see which milestones they have reached and which they have not. Creating these opportunities during class time provides equitable access and opportunities for students to be empowered with managing their learning and progress.

Mr. Hai Tran, in creating the previously described opportunity for the class to observe two students providing feedback to each other, established the tone needed for students to recognize and honor the risks associated with the featured students making their work public, which assisted in normalizing peer feedback as an important part of learning and in helping that process to feel safe. One of the students commented later,
You're expected to know the content in the class and to know where you are with that content and the teachers are really there for you not to give you success but to set you up for it. They're here to set up the project and say I'll let you do it but along the way I'll always be there for you. There's not going to be this constant reminder...it's more like if you need help, I'll set you up. I'll set you up to help yourself. Then if you still need help, I'll be here.

This 10th grade student internalized the culture of Mr. Tran’s class, which placed ownership of learning within students. The routines that Mr. Tran established for self- and peer-assessment set students up to monitor their own work and build self-awareness of their learning through regular reflection.
There is no quick fix for challenges associated with assessment for learning. Black and Wiliam (1998b) argue that any lasting improvements must take place through sustained programs of professional development and support. This three-point scheme for professional development is in alignment with their recommendations:

1. Systemic opportunities for focused teacher learning and sharing of practices should be created.
2. Focused teacher learning should include gathering of more data and consideration of the evolution of the school year.
3. A culture and practice of teacher-led research and inquiry should be instituted to further understand not just the practices themselves, but also the challenges to implementing these best practices.

Systemic opportunities for focused teacher learning and sharing of practices should be created.

Teachers need to see examples of what these strategies look like in daily practices. Teachers need to have model teachers with whom they identify and from whom they can derive the confidence to improve as teachers. Rather than large scale training for all, a systematic professional learning community should be developed and implemented where the identified practices could be better explicated and detailed over a longer period of inquiry and examination.

Focused teacher learning should include gathering of more data and consideration of the evolution of the school year.

While this 2-month study has been able to identify high-leverage practices for all students in general, a longer study must be conducted at least through the duration of a full school year in order to identify 1) what practices look like at different points in the school year, 2) which practices best support struggling students specifically, and 3) specific pedagogical content knowledge and practices related to the successful completion of performance assessments. Additionally this 2-month study, conducted at the end of the school year, was not able to observe and name effective practices that were more appropriately conducted in the beginning of the school year.

A culture and practice of teacher-led research and inquiry should be conducted in order to further understand not just the practices themselves, but also the challenges to implementation.

The practices observed and identified in this study were obtained from a very small sample size of teachers in a short timeframe. As such, there are research-based effective practices that do not appear in this current framework. Implementing a teacher research model into the professional learning communities to further this work should seek to identify not only what other effective practices are being used at Summit, but also which practices are not being performed well or much at all. Teacher research is needed to truly be able to answer the question “how do we know that these practices lead to equitable use of performance assessments and ultimately, successful outcomes?”

