CONTENTS

2026 Issue: Call for Manuscripts
Adapting to the Future: Navigating Change & Embracing Innovation in Education

Innovation and change are constant forces in education policy and practice. When educators and institutions create change through innovative practices, educational spaces can be transformed into dynamic and engaging learning opportunities for students, educators, and community members. Educators navigating change and embracing innovation engage in professional learning, exploring ways to improve pedagogy and strengthen connections with school, family, and community partners.

For this issue, we encourage educators from all levels of education in the Pacific Northwest to share their experiences adapting to the future, navigating change, and embracing innovation in educational contexts. We welcome a variety of submissions, including:
- Research studies on collaborative work
- Practitioner pieces describing collaboration concepts and ideas in practice
- Essays providing perspective on issues of collaboration

In addition to the collaboration theme, *WEJ* is a collection of academic papers, professional reports, book reviews, and other articles and summaries of general significance and interest to the Pacific Northwest education research and practitioner community. Topics in *WEJ* cover a wide range of areas of educational research and related disciplines. These include but are not limited to issues related to the topics listed below:

- Early childhood education
- Curriculum and instruction
- State and national standards
- Professional development
- Special populations (e.g., gifted, ELLs, students with disabilities)
- Assessments and their relationship with other variables
- Early warning indicators
- Social and emotional issues
- School and district effectiveness
- Teacher and principal evaluation
- Education finance and policy
- Educational technology
- Educational leadership
- Remote learning

We encourage the submission of condensed versions of dissertations and theses that are reader friendly. School and district practitioners are encouraged to write for *WEJ*. Manuscripts for the 2025 issue are due August 1, 2025. For information about the *WEJ* and its submissions, see the Submission Guidelines posted on the WERA website. If you have questions about the process or about possible submissions, email smithant@uw.edu.

Antony T. Smith, Ph.D.
Editor, *WERA Educational Journal*
Associate Professor, School of Educational Studies, University of Washington Bothell

Social-Emotional Learning Through Universal Design: A Framework

Wendie Lappin Castillo and Lidia Sedano

Abstract

With limited classroom and social opportunities during pandemic years, teachers now work to facilitate avenues that allow students to reengage their social emotional health within an equitable learning environment. This article focuses on the integration of social emotional learning into content learning blocks or academic classes. Social Emotional Learning standards aide students in reaching social and life-skill goals outlined in the Individual Education Plan. Incorporating such standards universally into all classrooms is key. This article gives teachers and teacher educators a framework, tools, and resources to support social emotional learning through the platform of Universal Design for Learning.

Social Emotional Learning is defined as "the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (CASEL, 2024). With the recent charge toward teachers to embed Social Emotional Learning standards with curricular content, it is imperative that all learners have access. *The Collaborative for Academic, Social, and Emotional Learning* (CASEL) addresses key components of Social Emotional Learning through the development of five (5) components which make up the foci of the framework (CASEL, 2024). The five components include: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Access for all types of learners, including learners with learning disabilities, can be provided with the Universal Design for Learning Guidelines (UDL) (CAST, 2018). UDL provides three areas of consideration for access when developing lesson plans: Engagement, Representation, Action and Expression (CAST, 2018).

This article provides a step-by-step design for implementation of standards through use of the CASEL framework (2024) intersected with the three areas of access through UDL. An example of this framework cross sectioning *The CASEL 5* with UDL is shared. A sample of the framework with resources included is provided (Figure 6), as well as the framework template for educators to use to organize accessible activities for all learners within all types of classrooms.

Understanding Target Areas of Social Emotional Learning

Teacher training involves candidates understanding the scope, sequence, and often the unwrapping of standards (Morgan et al., 2013). Special education teachers are trained to address the acquisition of standards through Individual Education Program (IEP) goals built around specific needs of individual students (EHA, 1975). Depending on the learner, IEP goals may be written to address academic, transition, social, or life skills. In the current day, many social skill goals can now be addressed through Social Emotional Learning (SEL) Standards. Multiple states

have developed their own set of SEL Standards (Table 1). *The Collaborative for Academic, Social, and Emotional Learning* (CASEL) has designed a set of five focus areas which address key components of Social Emotional Learning along with four domains in which Social Emotional Learning standards should be implemented (2024). The focus categories for CASEL (2024) include: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The four domains in which CASEL (2024) suggests addressing these foci include: classrooms, through SEL instruction and classroom climate; schools, through schoolwide culture, practices, and policies; families and caregivers, through authentic partnerships; and communities, through aligned learning opportunities. These target areas contribute to a national framework, of sorts, in which state standards are designed. The scope of this article uses the CASEL Framework (2024) as part of a newly developed framework for use as a graphic organizer to address SEL Standards within the parameters of Universal Design for Learning (CAST, 2024).

Table 1
Sample List of a few State SEL Standards

State	URL
Arizona	https://www.azed.gov/sel-competencies-and-framework
California	T-SEL Competencies and Conditions for Thriving
Nevada	Nevada SEAD
New York	NYSED SEL Documents and Resources
Washington	Washington Social Emotional Learning Standards
West Virginia	DOE Standards for Student Success

Working through Universal Design for Learning
Universal Design for Learning (UDL) (CAST, 2024) is structured to allow all individuals access to learning. The three focus areas of UDL include engagement; representation; and action and expression (CAST, 2024). Multiple means of access within these three areas must be provided. When considering multiple means of engagement, the affective networks of the brain are considered, more commonly known as the 'why' of learning. Providing multiple means of representation considers the recognition networks of the brain, or the 'what' of learning. Multiple means of action and expression address the strategic networks of the brain, or what we recognize as the 'how' of learning (CAST, 2024). Teachers can access the tool *Key Questions to Consider When Planning Lessons* (CAST, 2022) to find questions to consider when planning lessons with UDL in mind.

Social Emotional Learning through Universal Design
The authors of this publication merged the domains of the CASEL framework (2024) with the three focus areas of the Universal Design for Learning guidelines (CAST, 2024). A graphic organizer was developed to assist teachers in planning activities to address Social Emotional Learning standards across domains while considering the guidelines of Universal Design (CAST, 2024). A sample of the graphic organizer is provided in Figure 1. The intent is for teachers to use the graphic organizer as a planning tool to map out activities which address social emotional learning standards within designated domains and considering Universal Design for Learning (CAST, 2024). Using this mapping tool (Figure 1) as a planner also reinforces teachers in the

realization that some of what has already been implemented may be addressing social emotional learning across domains. This graphic organizer plays out as a visual guide to activities as well as an organizer of activities to assure all domains are considered, along with all levels of universal design being addressed. The steps to using the graphic organizer follow.

Figure 1
Graphic Organizer

Standard:_____

CASEL Domains

UDL Guidelines	Classroom	School	Family	Community
Engagement:				
Representation:				
Action/Expression:				

Choosing a Standard
It is important to investigate the designated organization that manages state education resources and guidelines. Table 1 shares examples of websites with this information. In many states, this is the state's Department of Education website. Start with this website to search for state-developed social emotional learning standards. For example, the state of Washington's entity, the Office of the Superintendent of Public Instruction (OSPI) houses the Washington State Social Emotional Learning Standards (Nolan et al., 2019). Once the state standards have been located, it is suggested to bookmark or download and save the document. If this is the initial teaching of SEL in the classroom, starting with the area of self-awareness is ideal. Look for standards within this category and choose one. Using the graphic organizer in Figure 1, fill out the 'Standard' information at the top of the page. It is best practice to label the standard with the coordinating standard number (example provided in Figure 2). As viewed in the example in Figure 3, the standard used can be unwrapped, allowing the teacher to focus on one concept at a time (Morgan et al., 2014).

Filling in the Graphic Organizer

The graphic organizer is now ready to be filled in with activities. When choosing activities, the teacher will consider certain factors. First, the age and grade level of the learners are considered. Again, you are addressing the SEL standard filled in at the top of the Graphic Organizer (Figure 2).

Figure 2
Standard added to Graphic Organizer

Standard: Demonstrates knowledge of personal strengths, areas for growth, culture, linguistic assets, and aspirations (1B)

CASEL Domains

		Classroom	School	Family	Community
UDL Guidelines	Engagement:				
	Representation:				
	Action/Expression:				

Consider Domains and Guidelines

Now it is time to explore activities to address each domain listed across the top of the graphic organizer (see Figure 3), with consideration of the guidelines listed down the left side of the graphic (see Figure 4). With these in mind, the teacher will begin filling in each box with the guidance of each domain and guideline. See Figure 5 for an example of the first box filled in with an activity.

Figure 3
CASEL Domains in Graphic Organizer

Standard: Demonstrates knowledge of personal strengths, areas for growth, culture, linguistic assets, and aspirations (1B)

CASEL Domains

		Classroom	School	Family	Community
UDL Guidelines	Engagement:				
	Representation:				
	Action/Expression:				

Figure 4
UDL Guidelines in Graphic Organizer

Standard: Demonstrates knowledge of personal strengths, areas for growth, culture, linguistic assets, and aspirations (1B)

CASEL Domains

		Classroom	School	Family	Community
UDL Guidelines	Engagement:				
	Representation:				
	Action/Expression:				

Figure 5
Sample Activity

Standard: Demonstrates knowledge of personal strengths, areas for growth, culture, linguistic assets, and aspirations (1B)

CASEL Domains

		Classroom	School	Family	Community
UDL Guidelines	Engagement:	Students bring in books and items from home that represent themselves to share with class.			
	Representation:				
	Action/Expression:				

Vary Activities and Materials

It is important for teachers to remember that they may have activities they have facilitated in previous lessons which address social emotional learning. Many teachers have facilitated social emotional learning without necessarily addressing it as such. Such activities may include objectives focusing on topics such as students' family and culture, allowing students to bring items from home representative of their culture. Other activities related to family culture could include a food festival day where students and members of their family bring in food to share with the class during this time. More activities may include taking trips into the community as a class to experience celebrations connected to different cultures. Teachers would use the graphic organizer to consider accessibility for each student in their class when planning these activities across the classroom, school, family, and community domains. Teachers should draw on previous materials and activities they may have implemented in the past. It is good practice to continue to explore research-based materials, curriculum, and activities to add to the graphic organizer (see Table 2 for examples) (Mercer et al., 2011). Good practice also involves students in the planning (Mercer et al., 2011). Allowing students to participate in the planning of activities

gives students a sense of ownership and supports better classroom behavior (Wheeler & Richey, 2019).

Table 2

Sample List of SEL Materials and Resources

Resource	Description
www.fwillismusic.com	Materials teaching self-awareness through music.
MyLearningTools.Org	Collection of videos and materials designed to develop self-awareness.
Texas Education Agency Resources	A collection of resources supporting multiple domains of social emotional development.
www.pacer.org	A website filled with resources for families, schools, and individuals to support multiple areas of development of individuals with exceptionalities.
The Elementals: Actions for the Practice of Life	Materials designed to be incorporated into the teaching day to foster relationship building.
Darlene Mannix Social Skills Materials	A collection of lesson plans and materials supporting social, life, and transition skills.
Why CBI? Video	Video explaining the importance and relevance of Community Based Instruction
Edutopia	A collection of articles and resources supporting the integration of social emotional learning into the learning day.

Implement SEL Activities

Once activities have been created, it is time to include them in lesson planning. Figure 6 provides an example of a completed graphic organizer. Sequencing the activities to address domains, one at a time, is the best plan of implementation (CASEL, 2024). Begin with the activities developed for the classroom. This allows teachers to focus on students understanding the standard of focus in a comfortable, concentrated learning environment. Then, begin to work through the remaining CASEL domains. After the classroom, the teacher should take the activities to the school environment. Think of the school environment as the next level of implementation, allowing students to take what they have learned in the classroom and apply it to peers other than their classmates. This could include environments such as the lunchroom or playground, etc. The next domain of implementation is family. Students are taking the skills learned in the classroom and practiced at school into the family environment. The activities within this domain should be focused on engaging nuclear and extended family in activities that support social emotional learning. Getting families involved in any type of learning is good practice (Epstein & Sheldon, 2022). The final domain is community. Students can be engaged in community activities through school trips and family outings (Epstein & Sheldon, 2022).

Figure 6

Sample of a Completed Graphic Organizer

Standard: **Demonstrates knowledge of personal strengths, areas for growth, culture, linguistic assets, and aspirations (1B)**

CASEL Domains

UDL Guidelines	Classroom	School	Family	Community
Engagement:	Students bring in books and items from home that represent themselves to share with class.	Posters, music, and other media on display around and in school such as Kelso's Choices ©; CASEL graphic ©; Onion Head ©; etc.	Reach out to families of your classroom to make aware of activities they can assist their child with, in the coming weeks, related to their child' strengths, family culture, etc.	Take a survey of student interests of activities happening in the community.
Representation:	Teacher allows students to share their cultural representations to the class in chosen formats such as physical items, books, video clips, music, art, etc.	After school movie and performance nights.	Have students create a poster, graphic, piece of art, digital representation, or any other form of media in representation of their family and culture. This is something to be worked on at home with their family members then brought to class.	Allow students to choose places to visit as a field trip; such as a university, culinary schools, museums, theater, music festivals, food festivals, etc.
Action/Expression:	Create a multimedia representation of yourself and your family (e.g., magazine clippings on a poster board; drawings in a journal; computer graphic, iMovie, etc.)	Before school and lunchtime activities shared by students such as music, art, performances, food, etc.	Allow students to share their piece of media they created with their family. Open the classroom to family members to visit and share relics or other items with the class.	Students will construct a reflection of their experience during the community trip. This reflection can be in any form of media and will be shared with their class.

Consider Phases of Learning

One more process to consider when lesson planning is which stage of learning students will be in when beginning implementation of Social Emotional Learning Standards. Evidence supports the practice of teaching students through phases of learning (Mercer et al., 2011). Typically, four or five phases are recommended (Mercer et al., 2011). Basically, the phases of learning begin with acquisition and then scaffold through fluency, guided practice, generalization, and maintenance (Mercer et al., 2011). Whichever sequence of phases is used to develop lesson planning, it is important to consider the phase when developing lessons and including SEL activities. This can also be a key consideration when filling in the graphic organizer with activities. Best practice includes teaching the acquisition and fluency phases in the classroom domain. Then, moving guided practice, generalization, and maintenance to the school, family, and community domains (Mercer et al., 2011).

Conclusion

Social emotional learning (SEL) is more critical than ever in all classroom settings and grade levels. The integration of SEL standards in the inclusive classroom continues to be a need of focus. Historically, special education teachers have integrated many facets of SEL through social skill, life skill, and transition skill implementation. The tools and resources provided in this article support the integration of social emotional learning in any classroom. The steps to designing and building SEL-focused activities with the integration of Universal Design are outlined in this article. A reproducible graphic organizer, along with step-by-step details of how to use the graphic organizer, are provided. Samples of resources are also included.

References

Arizona Department of Education. (2020). *Arizona's social emotional competencies and framework: Welcome to social emotional learning.* Retrieved August 19, 2022, from *https://www.azed.gov/SEL/sel-competencies-and-framework*

Bold Leaders. (2022). *The elementals: Actions for the practice of life.* https://www.boldleaders.org/elementals/?gclid=Cj0KCQjwwY-LBhD6ARIsACvT72MbsbJ2QoYxTKBK_5a0q09Amvsp7nPfQt4P7L14k6BfG6KZa4pKSisaAmRWEALw_wcB

California Department of Education. (2017). *California's social and emotional learning guiding principles.* Retrieved August 19, 2022, from *https://www.cde.ca.gov/eo/in/documents/selguidingprincipleswb.pdf*

CAST. (2024). *Universal design for learning guidelines version 3.0.* Retrieved October 3, 2024, from https://udlguidelines.cast.org/

CAST. (2022). *Key questions to consider when planning lessons.* Retrieved August 19, 2022, from https://www.cast.org/binaries/content/assets/common/publications/articles/cast-udl-planningq-a11y.pdf

Collaborative for Academic, Social, and Emotional Learning. (CASEL)(2024). *What is the CASEL Framework?* Retrieved October 3, 2024, from http://casel.org/fundamentals-of-sel/what-is-the-casel-framework/

Education for All Children Act, P. L. 94-142. (1975). https://www.govinfo.gov/content/pkg/STATUTE-89/pdf/STATUTE-89-Pg773.pdf

Epstein, J. & Sheldon, S. (2022). *School, Family, and Community Partnerships: Preparing Educators and Improving Schools*, 3rd ed., Routledge.

F. Willis Music: Reimagining Music Education. (2022). *Building meaningful music experience for teachers and students. Maximizing their talent, skill, practice, and performance.* *https://www.fwillismusic.com/*

George Lucas Educational Foundation. (2022). *Social and emotional learning.* Edutopia. https://www.edutopia.org/social-emotional-learning

Mannix, D. (2021). *Life skills activities for secondary students with special needs* (3rd ed.). Jossey-Bass.

Mercer, C. D., Mercer, A. R., Pullen, P. C. (2011). *Teaching students with learning problems* (8th ed.). Pearson.

Morgan, J. J., Brown, N. B., Hsiao, Y., Howerter, C., Juniel, P., Sedano, L., Castillo, W. L. (2014). Unwrapping standards to increase the achievement of students with disabilities. *Intervention in School and Clinic*, 49(3), 131-141.

Move this world. (2022). *Texas: TEKS & SEL standards.* Retrieved August 19, 2022, from *https://www.movethisworld.com/category-sel-state-standards/2020-2-10-texas-teks-amp-sel/*

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards.* Washington, DC: Authors.

Nolan, E., Berg, J., Theodore, K., & Chauvin, R. (2019). *Washington social emotional learning*

standards: Annotated Bibliography WA state standards and benchmarks. app.leg.wa.gov. Retrieved August 19, 2022, from https://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=Appendix%20O%20Washington%20SEL%20Standards%20Annotated%20Bibliography%20WA%20Standards%20and%20Benchmarks_f85b7676-1ff3-466d-be8d-6e2c18873de1.pdf

NYSED. (2018). *New York state social emotional learning benchmarks.* https://www.p12.nysed.gov/sss/selbenchmarks.html

Rainbow Video of New Jersey. (2014). *Why CBI?* [Video]. YouTube. https://www.youtube.com/watch?v=i__gP3ZzQDA

Pacer Center. (2022). *Champions for children with disabilities.* https://www.pacer.org/

Resilience, Inc. (2022). *Self-awareness: Do you believe that you can achieve?* https://mylearningtools.org/self-awareness/?gclid=Cj0KCQjwwY-LBhD6ARIsACvT72Np9ksv4GEheq3RD3m_3wQidrqGlK9TRZAzyBb4SZXEJxmLQtr2bX0aAhCdEALw_wcB

State of Nevada Department of Education. (2017). *SEAD.* Retrieved August 19, 2022, from *https://doe.nv.gov/SafeRespectfulLearning/SEAD/#:~:text=Social%20Emotional%20Learning%20(SEL)%20is,and%20show%20empathy%20for%20others*

Texas Education Agency. (2022). *Building skills related to managing emotions, establishing and maintaining positive relationships, and responsible decision-making.* https://tea.texas.gov/about-tea/other-services/mental-health/building-skills-related-to-managing-emotions-establishing-and-maintaining-positive-relationships-and-responsible-decision-making

West Virginia Department of Education. (2022). *Student support and well-being: WV school counselors: Social and emotional.* Retrieved August 19, 2022, from *https://wvde.us/student-support-well-being/wv-school-counselors/social-and-emotional/*

Wheeler, J. J. & Richey, D. D. (2019). *Behavior management: Principles and practices of positive behavior supports* (4th ed.). Pearson.

About the Authors

Wendie Lappin Castillo, PhD, is an associate professor of Special Education in the Department of Education, Development, Teaching, and Learning at Central Washington University.

Lidia Sedano, PhD, is an education program professional for the Nevada State Public Charter Authority.

Appendix A
Reproducible Graphic Organizer

Standard:_____

CASEL Domains

	Classroom	School	Family	Community
Engagement:				
Representation:				
Action/Expression:				

UDL Guidelines

Using the Syllabus to Foster a Supportive Campus Environment:
An Exercise in Collaboration

Naomi Jeffery Petersen

Abstract

Committed to providing an inclusive campus environment, an instructor at a regional comprehensive institution prompted the collaboration of support agencies across campus to generate a syllabus statement appropriate for engaging online students. Reported is the informal research method of surveying the agencies, the resulting syllabus statement promoting students to contact support agencies, and the strategy for faculty to use a similar statement in their own syllabi. Student, agency, and faculty feedback and reflection is reported.

The syllabus is the first and most fundamental communication from faculty to students, and an opportunity to establish a student-centered learning experience (Eberly, Newton, & Wiggins, 2001). In addition to an outline of objectives, resources, and activities, the college syllabus will emphasize the standard of academic rigor expected as criteria for success (Doolittle & Siudzinski, 2010). It may also mention skills assumed to have been mastered in prerequisite courses, placing the responsibility on students to use them. Most syllabi will mention academic support services, clarifying the role of the instructor who will not coach writing skills or troubleshoot technological problems. There are other factors that may explain student struggles. Let's consider the role of the faculty to contribute to the larger context of a university-wide learning environment by acknowledging that students are multidimensional: There is life outside of the classroom which may compete for the student's attention and undermine a sincere commitment to academic success. The syllabus may support students' engagement, or it may not (Pham & Halpin, 2022).

Universities certainly acknowledge that students must juggle many demands, and they invest considerably in student support for dealing with them. Following the Higher Education Act of 1965 (Public Law 89-329), federal funds have been available for student support services (SSS) to help students from low-income families, students demonstrating academic need, first-generation college students, and students with disabilities. There is considerable emphasis on equity (Artze-Vega et al., 2023; Fuentes, 2021; Hoffman et al., 2018) and inclusion (Jacob & Fertleman, 2017) across many fields (Kobeissi et al., 2024; Meadows et al., 2024). Student participation in such services results in greater persistence to stay in school and complete degrees (Zeiser, 2019). In any case, the quality of the learning environment comes down to the personal interactions we have across faculty, students, and staff.

The faculty participate in these interactions both directly and indirectly, beginning with the hallmark communication of the syllabus. The tone of the syllabus is traditionally dry, a contract of sorts wherein the instructor promises to deliver particular course outcomes as a result of specified activities by certain times, and the achievement of these outcomes will be measured by certain criteria for success. The instructor's policies for attendance and late work are included and become the benchmark for determining fairness if the student challenges a grade. The university policy may be mentioned, and appropriate points of contact. But the tone has

undergone some change as higher education institutions adopt a more student-centered approach (Bernardi, 2024; Hogan, 2022; Kumar & Refaei, 2021). The syllabus reads more like a contract between parties responsible for different aspects of producing an agreed outcome. Universities may require syllabi to not only agencies provided on campus to support their success, especially Disability Services, but to encourage students to use them.

However, faculty are rarely involved in student support services, and they may overlook or even undermine the opportunity to help students use such resources by failing to acknowledge the need for them as normal, or with subtle disdain for anyone who does need help. First generation students are especially vulnerable to imposter syndrome, that is, fears that they should not be at the university in the first place. In this essay, the opportunity to contribute to a supportive learning environment is demonstrated in the steps toward developing a boilerplate insert for any course syllabus.

The National Survey of Student Engagement
The effort to help create a supportive learning environment and foster greater student engagement began with data from the National Surveys of Student (NSSE) and Faculty (NSFE) Engagement and continued with an informal survey of our institution's support services staff. It is supported by the findings and challenges of (Gin et al., 2021). Our university, like hundreds of others, participates in the biannual National Survey of Student Engagement (NSSE). This survey is administered to a sample of freshmen and a sample of seniors every two years. The cohorts' responses are interpreted for the students' beliefs about their learning context. The last round was in 2018, with the pandemic pre-empting the 2020 effort.

The survey measures students' perceptions of four themes found to be influential on student success: 1) *Academic challenge; 2) Learning with peers; 3) Experiences with faculty*; and 4) *Campus Environment* (Table 1). The first three occur within the classroom and are informed by such landmark insights as Kuh's (2008) "high impact practices." A syllabus will reveal whether the course expects projects to be practical, authentic, and meaningful, and whether the instructor expects students to participate in discussion and group projects as well as rigorous scholarly investigation. The instructor provides contact information and office hours and may point out the student's responsibility to respond to and initiate communication.

Table 1
National Survey of Student Engagement Themes and Indicators

NSSE Theme	NSSE Engagement Indicator
Academic Challenge	Higher-Order Learning
	Reflective & Integrative Learning
	Learning Strategies
	Quantitative Reasoning
Learning with Peers	Collaborative Learning
	Discussions with Diverse Others
Experiences with Faculty	Student-Faculty Interaction
	Effective Teaching Practices
Campus Environment	Quality of Interactions
	Supportive Environment

Academic challenge focuses on the student's thinking prompted by lectures and lessons encouraging higher level thinking, e.g. analysis, synthesis, and evaluation, as opposed to simple facts and definitions or skill demonstration. Reflective and integrative learning refers to the student making connections between prior learning and personal experience with the new concepts, and the metacognition of being aware of one's own change in understanding. *Experiences with faculty* refers to the instructional methods that foster a trusting relationship between the student and faculty, found to be influential in student learning. The second theme, *learning with peers* is indicated by two very different dimensions. Collaborative learning refers to an interactive problem-solving task requiring students to make decisions and share responsibility, a process well-documented to help students learn and think on higher levels. Having *discussions with diverse others* assumes that the instructor uses interactive methods but also that the university population is in fact diverse. The fourth theme, the *campus environment*, overlaps with the classroom experience. Items on the survey that measure it concern a) quality of interactions, b) problem-based support services, and c) systemic inclusion. Classroom experience includes quality of interactions as well as systemic inclusion, so student responses to these items probably reflect both the classroom and the general campus environment. Problem-based support services, however, are a particular focus of this investigation because of the disconnect between academics and services which the syllabus can help bridge.

Data For Institutional Reflection
The findings for our institution in 2018 are instructive regarding the students' perception of the campus as nurturing as well as challenging. Comparing the samples of first year students and seniors surveyed, more seniors rated their *interactions* across the board—with students, academic advisors, faculty, student services staff, and other administrative staff – as higher quality than first year students. Regarding *academic challenge*, students were asked whether they perceived the institution "providing support to help students succeed academically" and "using learning support services (tutoring services, writing center, etc.)". Nearly three fourths of the freshmen thought "very much" or "quite a bit"; the seniors were only slightly less positive.

The 2018 findings were sobering in that there was a decline in their perception of the institution as "encouraging contact among students from different backgrounds" or "attending events that address important social, economic, or political issues." The freshmen tended to respond "very much" or "quite a bit" to both, but seniors had a far less positive view. This suggests the cumulative experience of the classroom as well as the campus is one of provincial isolation. Ours is considered a rural campus, located in a small town associated with agriculture, dominated by a rodeo theme. The findings of Campus Climate survey of faculty and staff in 2019 and 2022, while generally positive, confirmed that members of traditionally underrepresented groups (TUG) perceive the campus climate differently that those that identify as white, male, and straight (Cleary, 2022). Diversity and inclusion initiatives have been actively promoted since then, but up to a third of faculty and staff are resistant to further emphasis on diversity.

When asked by NSSE to "rate the quality of your interactions" on a scale from 1 (poor) to 7 (excellent) most seniors considered their interactions with students and faculty much more positively than freshmen, which is understandable given they have had more years of experience

and in upper-division courses they are probably experiencing smaller classes and more personal interaction (Table 3). But it was disappointing that their perception of academic advisors was not much higher than freshmen. It must be noted that the institution took these findings to heart and currently there is a major re-organization of the advising model to be college and department based instead of centralized and generic advisors.

Table 2
Comparison of Freshmen and Seniors Rating Their University Interactions

Item	Interaction Focus	Freshmen	Seniors
13a.	Students	40	57
13b.	Academic advisors	52	56
13c.	Faculty	42	60
13d.	Student services staff (career services, student activities, housing, etc.)	41	42
13e.	Other administrative staff and offices (registrar, financial aid, etc.)	36	47

Note. This table shows the percentage of students responding with high rating (6 or 7 on a scale from 1 = poor to 7 = excellent) of their interactions with different university roles.

The downward trend continued regarding student services staff (career services, student activities, housing, etc.) and other administrative staff (registrar, financial aid, etc.), with less than half of both freshmen and seniors rating these interactions at a level of trust (6 or 7 out of 7). In fact, only a third of the freshmen rated those interactions that high.

Table 3
Comparison of Freshmen and Seniors Perception of Institutional Emphasis on Support

Item	Supportive Environment Focus	Freshmen	Seniors
14b.	Providing support to help students succeed academically	74	70
14c.	Using learning support services (tutoring services, writing center, etc.)	73	66
14f.	Providing support for your overall well-being (recreation, health care, counseling, etc.)	68	59
14g.	Helping you manage your non-academic responsibilities (work, family, etc.)	44	30

Note. This table shows the percentage of students responding with high ratings ("Very much" or "Quite a bit") for each indicator of a supportive learning environment.

Given that these services are certainly present and observed to be proactive, the question remains whether students actually used them. All incoming freshmen and transfer students are required to take an orientation course that introduces them, so either the instruction was ineffective, or the resistance is too strong. The source of that resistance can be seen in such comments as the following, revealed informally and therefore must be treated anecdotally (although they confirm what has been reported regarding vulnerable student populations): "I don't want to ask for help." "I'm not sure how." "I feel stupid/embarrassed." "I don't really understand what they do." "I'm not sure I would qualify." "If I can't cope, then they are right that I don't belong here." It is

important to note that about 40% of our students are transferring in as juniors from community colleges with an average age of 26, suggesting they are already working adults with responsibilities and accustomed to independent living without support.

Context

With a strong commitment to student-centered pedagogy and the positive effects of metacognition, autonomy, and affiliation, I have been including a "pep talk" about the very common need for support, along with contact information to encourage students to seek out help. This is especially important at our regional public comprehensive university of 10,000 students in a western state, about two hours from a large metropolitan area, with multiple satellite campuses. About half the students are transferring from community colleges, and over a third are first-generation university students. Our tuition is considered low, even for nonresident students. In addition, our student population tends to have a high percentage of English Learners and working parents. Approximately 10% enroll in Disability Services; 10% use Counseling Services.

The Pandemic, Zoom, and Increased Vulnerability

The need for a supportive learning environment has become more urgent with the pandemic that forced us to shift from traditional face-to-face classes to online and hybrid models (that we may not yet be skilled in using), plus the students' home situations may be more volatile as they help their families navigate illness and unstable employment. The concern is not just humanitarian: The decline in enrollment is alarming to the institution's hopes of sustainability. Nationwide, campuses are scrambling to recruit and retain students who feel vulnerable to infection. By 2024, our enrollment appears to have stabilized but at a much lower level, and there the shift to online instruction appears to be irreversible. There is also a novel phenomenon in employment with far fewer workers available, creating demand for students to work more—often at the expense of their study time. Finally, there is a sharp increase in mental health problems as people try to cope with the uncertainty of the virus and its new strains as well as alarm about climate change and continued social unrest. These are troubling times, and as instructors we need strategies to calm and focus our students as well as ourselves.

Thus, we have a vulnerable student population plus our faculty may be less resilient with the volatility and isolation of the pandemic. Furthermore, faculty are not expected to explicitly address the campus environment. All faculty use feedback from the Student Evaluation of Instruction (SEOI), but the items focus only on the learning environment and instructional activities within the classroom. Only a few faculty are actively engaged in any committees related to student support.

But there is another factor: the online learning environment. I have been teaching online for many years in order to serve satellite campuses and have managed to develop tools to promote a community of learners who interact during synchronous meetings as well as through written discussions. This is not true of all courses depending on faculty proficiency with technology, e.g. video conferencing tools like Zoom and online learning platforms like Blackboard or Canvas, if not student-centered pedagogy. Many students experience disengagement—from the course, from each other, and from the university. Again, there is hope, given that the university has invested so much in support agencies for students, but there may not be a coordinated effort to

---

facilitate awareness beyond student orientations and ad hoc competing announcements. In addition, the agencies themselves have experienced considerable transformation in response to the pandemic, so contact information that assumes on-site visits to brick-and-mortar offices is not helpful.

This prompted me to investigate what was currently true about student support agencies across campus so I could include a succinct statement in the syllabus that promotes their use. Given my purpose, the stakeholder agencies were asked what they wished students knew. Then, I shared the statements with colleagues to modify as they will for their own syllabi.

Investigation: Surveying the Stakeholders

Student Support Agents
Across the campus there are many different services, all administered under the Dean of Student Success, who "provides students educationally purposeful programs, events, services and activities that promote academic, personal, and professional growth within and beyond the classroom." This obviously aligns with the mission of the university and its accreditation. However, at the time of this exercise, the university had just begun a mapping of Academic and Student Life services with a goal of enhancing support for "student persistence and degree completion." Furthermore, their contact information was greatly variable in accuracy and accessibility given the pivot during the pandemic to online platforms.

Informal Survey
After combing the university website for mention of any such services, I distributed an informal survey to staff requesting their information. See Appendix A for the message sent to over 30 offices across campus. Not only did every agency respond to the emailed message, nearly all expressed effusive thanks for simply being consulted. Most were quite eager to participate and provided extensive background information and helpful guidelines, such as any criteria for qualifying for their help. Several redirected me in the process of explaining their organizational structure. I followed up with phone conversations with the primary administrators and learned a great deal about different funding. I discovered that some were specifically supported by federal and state grants; others were line items in the university budget. Some served an administrative role of coordinating benefits that students may qualify to receive from outside agencies. It is clear that the configuration of services is not as stable as academic entities that undergo extensive peer approval for any change. However, across the board, every agency was keen to be accurately represented. In follow-up conversations, several mentioned their awareness of the need to inform faculty of changes. In some cases, as I formatted the information and confirmed it, a brief collaboration occurred as I helped them prioritize contact information from student and faculty perspectives.

Collaboration: Engaging the Faculty

As a professor, I'm involved in many committees and task forces across campus, and I serve as a curriculum consultant. For instance, I developed a syllabus template that included accessibility features, which has since been adopted and continuously refined by the Multi-modal Learning Center. Through these personal connections I could share this as my own innovation, but broader

collaboration could improve it, and it would more likely result in broader implementation if more people were invested in its development.

One committee I served on was the Diversity and Equity committee of the School of Education, which focused not on curriculum or evaluation so much as on policy and engagement. It was a promising context for promoting this syllabus innovation school-wide if not campus-wide because its members included representatives from three out of the four colleges on campus. Their shared interest in teacher candidates meant a predisposition to understanding the importance of classroom culture and student empowerment. The committee also works with campus-wide Diversity and Equity efforts. It was the most promising venue to engage other faculty in the development and dissemination of a syllabus statement.

I thus proposed a task force to draft a possible statement appropriate for its faculty, using the information I had gathered from the agencies. There was considerable caution before this was agreed upon. Discussed were issues of academic autonomy, that is, respecting the right of the individual faculty to teach the course as they see fit. Syllabi are examined as part of the review process, and there was a hesitation to appear to impose a mandate faculty must follow. It was clear that syllabi are regarded as very personally generated documents. Another concern was conservation of labor available for the work, given the commitment of the committee to community-level events. However, support developed, and another faculty volunteered to help.

We synthesized the information into as succinct and clearly readable a document as possible to include along with other policy statements. For instance, there are some approved statements from Disability Services and the Diversity and Equity Center that all faculty are already expected to include in their syllabi. These have become more specific since the time of this initiative, now including language about sexual misconduct and use of artificial intelligence. Our main concerns were accuracy, brevity, and clarity.

We presented the statement to the committee at large for discussion and refined it further based on feedback. The discussion prompted another suggestion that the Student Success division provide a "one stop shopping" page with current contact information for all support services across campus that can be included as a link with course materials. It was then shared with the dean in order for it to be officially approved and disseminated to departments as well as shared with other colleges. The cross-college interdisciplinary programs meant that it was further distributed. I am unaware of whether any other entities formally adopted it, but I do know that the website for student services has been redesigned and appears to be more helpful—no doubt part of an ongoing effort to improve, but I have been told informally that our survey exercise contributed to the momentum.

Boilerplate Statement
Appendix B shows the statement as used in my own syllabi and as a resource page in Canvas, our online learning platform. The title emphasizes that this is the context of their whole university experience and therefore applies to all courses. In our template, the agency websites are hot-linked to the online addresses suggested by the survey responses, indicated here with an underline. Web references for university policies are also hot-linked. Current phone numbers are

added where indicated. The tone is intended to be informative and engaging. Additional statements address student conduct and acknowledgement of tribal land occupation.

The statement was distributed informally to faculty, inviting them to include it as they saw fit. Several mentioned that they now include this information as a resource within Canvas online learning platforms if not in the syllabus. They expressed appreciation for the current contact information, and several admitted they had not been familiar with the specific services. Some preferred to include a simple list of contacts and not the explanatory narrative. The statement was also shared with the agencies featured, and several mentioned that they had updated their contact information online. In the meantime, the university has reorganized some of the services and its website overall in an effort to facilitate student access to the services.

Within my classes, the syllabus is a topic of the first week assignment wherein they are asked if they are familiar with the services and know how to contact them. The services are mentioned again as midterms approach and again when registration for the next quarter begins and when students are struggling. But what do students think?

Here are a couple recent responses from undergraduates when they were asked what they thought of the syllabus and whether anything could be revised to be more helpful: "When I first read through the syllabus, I was a bit overwhelmed, but I also really liked the priorities and values of this course." "I think that I often have issues finding the value in work and experiences, but this course feels worthwhile." "For a long time, I have struggled with mental illness, and while reading the syllabus (for this course), I felt like it was very human." "Most syllabi are glorified calendars with lists of required materials and expectations that are the bare minimum, but this syllabus is welcoming and explicitly supportive of students and our endeavors."

Limitations and Future Research
This exercise followed standard protocols of survey research but was not intended to investigate a phenomenon for generalization across institutions. It was an "action research" for a small-scale innovation to improve instruction using an established communication strategy. The procedure for collecting information in a collaborative way and the model for including engaging information suggested by each agency could be useful for other institutions, but each will be organized in its own way. It would be interesting to sample the presence and qualities of such statements in syllabi for different types of courses and populations and to conduct follow up surveys to see if usage has increased for the various services highlighted in the statement (e.g. Quang Việt et al., 2015; Rich, 2023). It would be further valuable to survey students regarding their disposition toward using such services based on their backgrounds and personal circumstance. However, the existing National Student Survey of Student Engagement (NSSE) might reveal some significant changes that could be attributed to the combination of increased promotion and redesigned online access.

Task forces and committees are continuously reconfigured. In this case there is now a college-level Equity, Diversity, Inclusivity, and Belonging (EDIB) Committee tasked with helping implement such as the following:
- Attract and support diverse student populations using curricula, modalities, and policies that support a variety needs.

- Expand a sense of belonging and community throughout the college.
- Develop and implement programs that support current students from minoritized populations.

Providing an updated syllabus statement of services every year is one simple tool to support these efforts. It would be very interesting to monitor whether the statements are included in syllabi and to study the variations of such statements across syllabi in different disciplines. Because students view dozens of different course syllabi, the cumulative effect is of interest. A survey of students who use the support services could ask where they learned about the agency, and the syllabi could be included along with other media.

Conclusion

Every class every quarter requires a fresh syllabus; often the contact information for support agencies will change, especially any individuals. Thus, I avoid identifying anyone by name. Every August, I distribute my current boilerplate statement to a few administrators responsible for all the agencies and ask for updates as well extend an open invitation to refine the language. They seem to appreciate this gesture, but I am noticing that more are sharing such guidance university wide in a more pre-emptive fashion. I make a point of adding this information to my working copy. Within my own department, my colleagues reach out and ask if I have an update ready; I don't mind sharing, but the truth is, now that we are increasingly using shared data sites such as TEAMS files, it is easier to do so and to make it accessible. Updating (and wordsmithing) this part of the syllabus has become a new normal.

In the aftermath of the pandemic, online student engagement is also the new normal, including those who choose to live on campus. In the meantime, the university has completely overhauled its web presence and the agencies themselves appear to have become better aligned and transparent. The tremendous emphasis on retention has increased the awareness among faculty of the need to provide support for nonacademic reasons that cause students to struggle. I will admit that the intention was simply to revise my own syllabus statement, but in the process, there was meaningful collaboration with support staff and other faculty, resulting in a far superior statement than I had drafted plus greater engagement by my colleagues.

References

Artze-Vega, I., Darby, F., Dewsbury, B., & Imad, M. (2023). *The Norton guide to equity-minded teaching*. W.W. Norton and Company.

Bernardi, F., Brown, C., Davis, L., Ephraim, M., Moody, R., & Trubko, R. (2024). Cultivating inclusivity in introductory undergraduate STEM course syllabi. *Humanities & Social Sciences Communications*, *11*(1), 784–13. https://doi.org/10.1057/s41599-024-03276-y

Cleary, K. (2022). CWU University Climate Survey. Available Dec 10, 2024: https://www.cwu.edu/about/diversity/_documents/summary-2022-climate-survey.pdf

Doolittle, P. E., & R. A. Siudzinski. (2010). Recommended syllabus components: What do higher education faculty include in their syllabi? *Journal of Excellence in College Teaching* 20 (3): 29–61.

Eberly, M. B., S. E. Newton, & R. A. Wiggins. 2001. "The Syllabus as a Tool for Student-Centered Learning." The Journal of General Education 50 (1): 56–74.

Fuentes, M. A., Zelaya, D. G., & Madsen, J. W. (2021). Rethinking the Course Syllabus: Considerations for Promoting Equity, Diversity, and Inclusion. *Teaching of Psychology*, *48*(1), 69–79. https://doi.org/10.1177/0098628320959979

Gin, L. E., Scott, R. A., Pfeiffer, L. D., Zheng, Y., Cooper, K. M., & Brownell, S. E. (2021). It's in the syllabus ... or is it? How biology syllabi can serve as communication tools for creating inclusive classrooms at a large-enrollment research institution. *Advances in Physiology Education*, *45*(2), 224–240. https://doi.org/10.1152/advan.00119.2020

Hoffman, J., Blessinger, P., & Makhanya, M. (Eds.). (2018). *Strategies for fostering inclusive classrooms in higher education: international perspectives on equity and inclusion* (1st ed.). Emerald Publishing.

Hogan, K. A., & Sathy, V. (2022). *Inclusive teaching: strategies for promoting equity in the college classroom* (First edition). West Virginia University Press.

Jacob, H., & Fertleman, C. (2017). An inclusive approach to developing an undergraduate syllabus. *Medical Education*, *51*(5), 537–538. https://doi.org/10.1111/medu.13309

Kobeissi, M. M., Kearney, K., Christopherson, K., & Ramirez, E. G. (2024). The syllabus: A commitment to diversity, equity, and inclusion in nursing education. *The Journal of Nursing Education*, *63*(9), 1–637. https://doi.org/10.3928/01484834-20240321-01

Kuh, G. (2008). *High impact practices.* Association of American Colleges and Universities.

Kumar, R., & Refaei, B. (Eds.). (2021). *Equity and inclusion in higher education: strategies for teaching*. University of Cincinnati Press.

Meadows, L. A., Bernard, M., Clabaugh-Howell, K., Duke, J., Irvin, L., Mayo, L., & Holt, E. A. (2024). Inclusive-equity rubric and its evaluation of introductory biology course Syllabi. *College Teaching*, *72*(4), 292–311. https://doi.org/10.1080/87567555.2023.2201670

Pham, A., & Halpin, P. A. (2022). The disconnect in the use and purpose of the syllabus between faculty and students is REAL. *The FASEB Journal*, *36*(S1). https://doi.org/10.1096/fasebj.2022.36.S1.R3931

Quang Việt, Đ., Thị Thu Hà, N., Phương Hiền, N., Xuân Hải, N., & Thị Nho, H. (2015). A study on the implementation of an inclusive education syllabus in teacher training institutions. *Journal of Science, Educational Science*, *60*(6BC), 31–37. https://doi.org/10.18173/2354-1075.2015-0107

Rich, B. L. (2023). How are culturally inclusive teaching practices integrated into business school's curriculum? An analysis of syllabi from the United States. *International Journal of Inclusive Education*, *27*(4), 435–458. https://doi.org/10.1080/13603116.2020.1846798

Zeiser, K., Heuer, R., & Cominole, M. (2019). *Comparing student outcomes between student support services participants and non-participants in the 2004/09 Beginning Postsecondary Students Longitudinal Study.* U.S. Department of Education Office of Postsecondary Education.

About the Author

Naomi Jeffery Petersen is a professor of teacher education at Central Washington University in the Department of Curriculum, Supervision, and Educational Leadership. She is the founder and director of CWU Accessibility and Disability Studies programs.

Appendix A
Survey of Student Success Agencies Inviting Suggestions for Syllabus Statement

Hello to the folks working at [support office]

I'm refining my syllabus information about student services in general now that we are in pandemic mode and asking people across campus some general questions. You of course are already quite active reaching out to students and providing information online, but I hope you have a minute to answer them:

I'm a faculty member who has mentioned you to students on an ad hoc basis, but now I would like to include more specific information about support services in my syllabus. Many of my students simply don't know how to navigate all that is available and, to be honest, I am not really as familiar as I could be.

So I would like to check with you first. I hope you have a minute to answer a few questions:

1. What should I as faculty know about what you do and who you serve?
2. What would you like <u>all</u> students to know about your office (e.g. a brief statement for the syllabus)?
3. What is the best way for students who can be served by you to *contact a real person* in your office while we work at a distance?
4. With the shift to online and hybrid learning in the pandemic, have you noticed any change in students' needs?
5. Is there anything faculty can do (or stop doing) that would be helpful?

Central Washington University Policies for a Supportive Learning Environment

Academic Career Decisions

Advisors are provided on several levels, depending on whether you have declared a major or minor. They help you focus on degree goals, but they are also a resource if you are struggling. For instance, in some circumstances, students are not able to complete a term successfully. There are several options, but these have specific time limits. It is important to know

- the last date to withdraw and still be able to retrieve 50% of the tuition you have paid, and
- the last date to simply withdraw, and
- the procedure if you must make a hardship withdrawal. It is also important to know how to take a leave of absence.

You must not simply disappear! Please let your instructor and your advisor know if you are contemplating such a decision. They can help you figure out your options so there are minimal consequences to your record.

- The **Learning Commons** offers writing tutoring, math tutoring, academic coaching, and Peer-Assisted Learning (PALs) group tutoring support. Academic Coaches support students 1:1 in implementing strategies that lead to academic success such as optimizing time management and effectively transitioning back to an in-person learning environment."

Technology

Your competence navigating Word documents and Canvas is assumed, given that this is a 200-level course. Consult one of the resources below if you are struggling.

- CWU Multimedia Education Center
- CWU Library
- Service Desk (phone #) for help with computer / connection issues.
- Canvas Helpdesk (phone #) for help with the course website.

Accessibility and Accommodations

An estimated 20% of the population experience some sort of challenge requiring intervention in order to be successful. Perhaps you, too, have circumstances or conditions that make typical academic activities inaccessible. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations. Please register with the Disability Services as soon as possible. Then we can meet to discuss how the approved adjustments will be implemented in this class.

Medical and Mental Health Supports

We support your health and wellbeing through in-person services at the CWU Campus and through CWUwildcatcare – a virtual platform offering 24/7/365 on-demand access to medical care and professional mental health support. Services are covered by the student health and counseling fee and open to ALL students regardless of campus enrollment.

- Student Counseling (phone).
- Student Health (phone).

Diversity

CWU University expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events (see CWU Policies.)

To support this commitment to goals of equity, social justice, and anti-racism, participants in this class are encouraged to bring their own life experiences and viewpoints. Along with the freedom to express one's own view comes the responsibility to respect the views of others as well as the commitment to non-discrimination on the basis of race, ethnicity, age, creed, religion, gender, sexual orientation/identity, mental or physical ability, marital status, or political ideology.

- **Diversity & Equity Center** located in CWU Hall cultivates a sense of belonging and community on campus through programs and initiatives that encourage students to explore their identities, challenge barriers and empower themselves and their communities. There is an open door and many activities.

There are other circumstances that combine with these identities to make success at university coursework challenging, such as poverty, family obligations, employment obligations, traumatic circumstances, being the first of your family to go to college, or a learning disability. Thus, if you are struggling, it is important to look to a variety of resources:

- **TRIO** is a federally funded program for students struggling academically who also have some specific characteristics, such as being the first generation in your family to go to college, or having a disability, or experiencing poverty. Apply online:
- **Financial Aid Counselors** are available.
- Contact the **Dean of Student Success** online or at (phone) for further information or questions.

Academic Honesty, including Plagiarism.

Academic dishonesty is defined in the CWU Student Conduct Code. If academic dishonesty is confirmed, the instructor may issue a failing grade for the specific assignment and/or for the course. Withdrawing from a course does not excuse academic dishonesty. In circumstances when academic dishonesty is confirmed, a W can be replaced by a letter grade. That said, because this course encourages collaboration, please clarify what is appropriate regarding particular projects. Don't risk a problem situation because of ambiguity.

Grade Grievance.

Any disagreement about grades should first be discussed with the instructor based on evidence from both instructor in terms of syllabus and written instructions and the student in terms of work submitted in the format requested in the context of university and course policies.

- Grievance regarding grades can be expressed to the Department Chair, or see how-appeal-grade-grievance.

Teacher and Student Ethnicity Perceptions' Influence on ADHD Diagnosis

Hannah Sahrblom, Heidi Perez, and Sandra Gomez

Abstract

Research regarding students with an ADHD diagnosis is extensive. However, there are mixed findings in the research on the influences of teacher and student racial or ethnic group on perceptions of ADHD symptoms and behaviors. The purpose of this research was to explore if the racial group of the teacher or student influenced the teachers' perceptions of student behavior. Results indicated that teachers rated having more willingness to put time and effort into interventions or supports for Hispanic students. In addition, teachers who reported having taken ADHD training rated the seriousness of student behavior as less on average than those who had not taken training. Implications of these results are discussed.

ADHD "is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with function or development" (American Psychiatric Association, 2013, p. 59). Teachers' perception of ADHD symptoms is critical because it influences the level of support and attention a student receives in the classroom. Research suggests that teachers' perceptions may be influenced by a student's diagnosis of ADHD, which can be problematic. In one study, teachers were less likely to rate students with an ADHD diagnosis as academically capable in comparison with students who did not have a diagnosis, despite evidence of their academic mastery (Metzger & Hamilton, 2020). Students internalizing teachers' negative perceptions may result in the student's reinforcing those faulty judgements. For example, students may produce less work as a result of teacher expectations, creating a cycle in which their assumptions are continually confirmed about students, and students respond to those biases (Guyll et al., 2010). These expectations and perceptions might also impact the goals teachers set for them and the likelihood that students will achieve them. In addition, teachers who believe students will make academic gains in their classroom often saw students who fulfilled that expectation *(*López, 2017*)*.

To examine educator perception, preservice teachers' implicit and explicit attitudes towards students with special education services were explored by Markova et al. (2015). While the majority of preservice teachers rated themselves as having positive implicit attitudes towards inclusion of students with special education eligibilities, including having ADHD, more positive explicit attitudes were demonstrated for preservice teachers when they had been exposed to training on inclusive practices. Training made a difference in that teachers who participated in more specialized ADHD trainings were more likely to address barriers for students and to provide an inclusive and effective environment in their classroom for children with ADHD in comparison to those teachers who reported attending fewer trainings (Szép et al., 2021).

Demographics and Perception of ADHD Symptomology

There are concerning systemic factors that impact whether youth are assigned ADHD diagnoses. Hispanic American and African American students are less likely to receive a referral by a school professional and are more likely to disengage from treatment altogether, in part because of socioeconomic status playing a large role in accessing ADHD care (Fadus et al., 2020). Socio-

economic status has an inverse relationship with ADHD risk, which indicates that social environment has a role in the etiology of ADHD (Rowland et al., 2017). In addition, there may be strong stigma among certain communities regarding mental health diagnoses, including ADHD (Fadus et al., 2020).

Owens and Cao (2024) explored differences among racial groups in the relationship between being diagnosed with ADHD in childhood and subsequent childhood well-being. In this study, Hispanic American children were less likely than either European American or African American children to receive a diagnosis of ADHD. Another large-scale study supported that racial and ethnic disparities were present in ADHD diagnosis and provision of treatment in that European American children were more likely to receive a diagnosis of ADHD in comparison to Asian American, African American, and Hispanic American children. It was also noted that European American children were more likely than other children to receive treatment (Shi et al., 2021).

In contrast, DuPaul et al. (2016) found that teacher ratings of ADHD symptoms were mostly consistent for students of varying racial-ethnic backgrounds. Teacher ratings of inattentiveness were not significantly different when examining teacher race-ethnicity. Similarly, Morgan et al. (2014) found that Hispanic American students were less likely than European American students to be diagnosed with ADHD despite performing similarly on developmental assessments that were conducted in-person. Importantly, when controlling for primary language, the differences in ratings were not significant. Analyses of teacher-reported behavior indicated that all students identified by racial group displayed a similar level of ADHD-related behaviors in the classroom (Morgan et al., 2014).

Significant differences in parent ratings of ADHD symptomology as a function of student demographics can impact outcomes for students. In one study, Hispanic American parents rated their children's symptoms as occurring less frequently than non-Hispanic children's symptomology (DuPaul et al., 2016). Hispanic American children having a diagnosis of ADHD was associated with lower academic expectations by their parents, more so than other racial groups in the study, regardless of medication treatment status. Researchers hypothesized that Hispanic American parents may have less access to guidance that provides strategies for overcoming systemic barriers such as in accessing related educational services for students with ADHD. Mental health stigmas and language barriers may also play a role (Owens et al., 2024).

Purpose of Study
This study is meant to build on previous research by Ohan et al. (2011) who authored the vignettes to study the impact on teacher and parent perception when the vignettes included an ADHD diagnosis and when the student had an assigned label of male or female. In the current study, the vignettes were used to explore whether the racial group of the student and teacher had a relationship with teachers' reported perceptions of ADHD symptoms. Many studies address the racial group or ethnicities of students diagnosed with ADHD. However, many do not include the variable of the racial group of the teacher raters in their research. In addition, the current study included an analysis of the relationship of years of teaching experience and amount of training teachers received on ADHD symptoms. Specifically, research questions included:

1. Is there a difference in teachers' ratings of evaluations of social/behavioral problems depending on the racial group of the teacher and/or racial group of students?
2. Is there a difference in teachers' ratings of students on their emotional reactions to the student depending on the racial group of the teacher and/or racial group of the student?
3. Is there a difference in teachers' ratings of behavior toward the student depending on the racial group of the teacher and/or racial group of the student?
4. Is there a difference between teachers' ratings of the evaluations of social/behavioral problems depending on whether they report having participated in ADHD trainings?

Method

Participants
Study participants included certificated high school teachers from a school district located in Washington State. Data from 34 high school educators that included demographic information and their responses to a survey about an assigned vignette was analyzed. Teachers had an average of 8.2 years of teaching experience, with a range of 1-28 years. Teacher participants self-identified as either Hispanic or Non-Hispanic. There were 14 Hispanic teachers and 20 non-Hispanic teachers that participated in the study. Twelve teachers reported having attended ADHD trainings ($n=12$) in comparison to those who did not report taking any training on ADHD ($n=22$).

Measures
Researcher permission to use the vignettes for this study was granted by the original researchers. Each vignette was a paragraph that described a student with ADHD symptoms, including reduced concentration, less ability to sustain attention, difficulties completing assignments, and less general self-control. The paragraph described ADHD-related symptoms but did not include a statement about a diagnosis. The current researchers added a statement about the presence of the behaviors over time to align with the DSM 5, changed the names to be gender-neutral by removing any gendered pronouns, and added a statement about ethnicity and the removal of gender pronouns to each vignette.

Consistent with Ohan et al. (2011), the 11 questions in the survey reflected four content areas related to ADHD. Three questions assessed evaluations of social/behavioral problems or perceived seriousness of the behavior problems, disruption of the classroom, and disruption of friendships. Three questions assessed willingness to aid in treatment or participants' willingness to help in the areas of learning assistance, medication, or classroom-based behavioral supports. Three questions assessed emotional reactions to the student or how bothered or upset, confident and stressed participants would perceive themselves to be in response to the student's behaviors. Lastly, two questions assessed behavior toward the student or how likely the participants would be to intervene with the student's behavior and put in extra time and effort to support them. Ohan et al. (2011) reported internal consistency coefficients for each question across vignettes ranging from very good to excellent (α range=.82 to .93) and for the content groupings of items at evaluations of social/behavioral problems, $\alpha = .79$, willingness to aid in treatment, $\alpha = .57$, emotional reactions to the student, $\alpha = .59$, and behavior toward the student, $\alpha = .28$.

Survey items were treated in accordance with the research by Ohan et al. (2011) in that several items were reversed scored. Participants rated each question on a scale of one to nine. Higher scores indicated higher ratings of serious behavior or more willingness to provide interventions. Lower scores indicated lower ratings of how impactful the behavior would be in a classroom setting or less willingness to provide interventions.

Procedures
Prior to this investigation, approval was obtained from the Human Subjects Review Council (HSRC) at a regional university. The primary researcher obtained district approval to conduct the study and participant consent was obtained. The study was conducted in-person at the selected school using paper-pencil packets that consisted of a consent document, a demographic questionnaire that included: questions about years of teaching experience, a yes/no box if they have had training in ADHD, and a box to check if they identify as Hispanic or non-Hispanic. The packet also included a randomly selected vignette (see Appendix A) and survey (see Appendix B). The survey included questions about how disruptive they perceived the student behaviors would be in different settings, what interventions they believe would be the most helpful, and the time and effort they would be willing to put into helping the student. The survey consisted of eleven questions total on a nine-point Likert scale. Based on a coding system, participants received one of two randomly assigned vignettes to read and answer associated questions. A debriefing form was given upon submission of the entire packet.

Data were screened prior to analysis. Results of screening procedures indicated that assumptive tests were met. Two survey responses were excluded from the study due to incomplete demographic information. Fourteen Hispanic teachers and 20 non-Hispanic teachers participated in the study (see Table 1). Fourteen participants received the vignette representing a White student and 20 received the vignette that represented a Hispanic student. Before analysis began, teacher responses on individual items were combined into dependent variables to create mean scores for each content area presented in the survey questions. Cronbach's alphas for the content areas including evaluations of social/behavioral problems (α = .57), emotional reactions to the student (α = .61), willingness to aid in treatment (α = .42), and behavior toward the student (α = .75). The three content areas used in the current study included: evaluations of social/behavioral problems, emotional reactions to the student, and behavior toward the student.

Table 1
Participant Demographic Information

Teacher Racial Group	Years of Teaching		Trainings		Student Racial Group	
	M	*SD*	Yes	No	Hispanic	White
Hispanic	6.17	5.67	2	12	6	8
Non-Hispanic	10.24	9.19	10	10	14	6

Results

An independent samples t-test was used to compare teachers' rating of students on behavior toward the student depending on the racial group of the teacher. There was not a significant

difference in being willing to offer extra time and effort to students between Hispanic teachers (M = 6.14, SD = 1.57) and non-Hispanic teachers (M =6.05, SD = 1.54); $t(32)$= -.171, p = .865.

A two-sample t-test was used to compare teachers' rating of students on behavior toward the student depending on the ethnicity of the student. There was a significant difference in teachers' ratings when the student's assigned racial group was Hispanic (M = 6.53, SD = 1.42) in comparison to when the assigned student racial group was White (M = 5.45, SD = 1.50); $t(32)$ = -2.128, p = .041.

An independent samples t-test was used to compare teachers' ratings of emotional reactions to the student depending on the racial group of the teacher. There was not a significant difference in emotional reactions to the student between Hispanic teachers (M = 5.19, SD = .77) and non-Hispanic teachers (M = 5.38, SD = 1.19); $t(32)$= .532, p = .599.

A two-sample t-test was used to compare teachers' rating of students on emotional reactions to the student depending on the ethnicity of the student. There was not a significant difference in teachers' ratings of the behavior of students when the assigned student racial group was Hispanic (M = 5.26, SD = 1.04) in comparison to when the assigned student racial group was White (M = 5.35, SD = 1.04); $t(32)$ = .249, p = .805.

A two-sample t-test was used to compare teachers who had taken ADHD training and those who reported not taking this training on their evaluations of social/behavioral problems of ADHD symptoms of the student. There was a significant difference in teachers' ratings of their evaluations of social/behavioral problems when they had taken ADHD training (M = 5.16, SD = 1.59) in comparison to when the teacher reported having taken no ADHD training (M = 6.28, SD = 1.20); $t(32)$ = -2.304, p = .028.

Discussion

Researchers predicted that significant differences would exist in teachers' ratings based on whether the teachers indicated that they were Hispanic or Non-Hispanic, the assigned racial group of the student, their evaluations of the social and behavioral challenges that student behavior may potentially involve, their own reactions to the ADHD symptoms, including their emotional and behavioral response to the symptoms indicated in the vignettes, and whether they had attended trainings on ADHD symptoms. However, teacher participants did not vary by racial group on their emotional reactions to the behavior. They also did not rate a perception of being more or less emotionally reactive when the student's racial group was considered.

There was a significant difference in the content area of behavior toward the student. Teachers rated being more willing to take the time and effort to implement interventions and treatments for Hispanic students compared to non-Hispanic students. Specifically, teachers rated being more willing to put time and effort for Hispanic students than non-Hispanic students in terms of taking extra time and effort and intervening for the student. The reasons for this finding need to be explored further. Fadus et al. (2020) iterated that diagnoses can impact the type of intervention available for youth, youth self-perception, and the perception of the adults around them. Therefore, addressing bias and systematic barriers could be helpful to address willingness to

implement interventions for all students. To extend this recommendation, educators should review evidence-based practices and culture-specific guidance for best practices in implementing ADHD interventions.

One finding was that having taken ADHD training seemed to have a relationship with the evaluations of social/behavioral problems or perceived seriousness and impact of students' ADHD behaviors. Specifically, teachers without any reported ADHD training rated their evaluations of the behavior of the student as higher on average than those teachers who reported having completed ADHD training. Teachers' mean ratings on the content area of social/behavioral problems was assessed. This included questions about perceptions of the seriousness of the problems, potential disruption to class and disruption to friendships. The group of teachers that reported having completed trainings seemed to perceive the presentation of challenges from students as less than their counterparts who had not yet undertaken any training in ADHD-related topics. This may indicate that more knowledge about ADHD impacts the perception of the seriousness and impact of the behavior. This finding supports previous research by Szép et al. (2021) in which teachers with more trainings focused on ADHD were more likely to reduce academic barriers and to provide inclusive classroom environments for students than teachers who reported attending less trainings. Teachers should be informed about the importance of targeted interventions on ADHD behaviors because of the association between the frequency of use of recommended effective classroom management strategies and individual instructors' knowledge and training (Szép et al., 2021). Based on work by Markova et al. (2015), and findings in the current study, training programs feature explicit inclusive instructional approaches, classroom methods, and support structures for educators to foster this inclusivity in classroom settings.

Limitations
The results of the current study provide some interesting findings. However, there are some limitations to the study. One limitation is the sample size of the study, and due to limited sample sizes, the generalizability of the results is limited. One primary and impactful limitation that will be addressed in future studies is the limited way in which racial group was addressed instead of ethnicity. Teacher participants only identified as Hispanic or non-Hispanic, and therefore, interpretation of the results specifically related to ethnicity is limited. It would have been clearer and fit better with the original intention of the study to have expanded the demographics survey to gain a better sense of the identified ethnicity of the participants.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

DuPaul, G. J., Reid, R., Anastopoulos, A. D., Lambert, M. C., Watkins, M. W., & Power, T. J. (2016). Parent and teacher ratings of attention-deficit/hyperactivity disorder symptoms: Factor structure and normative data. *Psychological Assessment*, 28(2), 214-225. https://doi.org/10.1037/pas0000166.

Guyll, M., Madon, S., Prieto, L., & Scherr, K. C. (2010). The potential roles of self-fulfilling prophecies, stigma consciousness, and stereotype threat in linking Latino/a ethnicity and educational outcomes. *Journal of Social Issues, 66*(1), 113-130. https://doi.org/10.1111/j.15404560.2009.01636.x

López, F. A. (2017). Altering the trajectory of the self-fulfilling prophecy. *Journal of Teacher Education, 68*(2), 193-212. https://doi.org/10.1177/0022487116685751

Markova, M., Pit-Ten Cate, I., Krolak-Schwerdt, S., & Glock, S. (2015). Preservice teachers' attitudes toward inclusion and toward students with special educational needs from different ethnic backgrounds. *Journal of Experimental Education, 84*(3), 554-578. https://doi.org/10.1080/00220973.2015.1055317

Metzger, A. N., & Hamilton, L. T. (2021) The stigma of ADHD: Teacher ratings of labeled students. *Sociological Perspectives, 64*(2), 258-279. https://doi.org/10.1177/0731121420937739

Morgan, P. L., Hillemeier, M. M., Farkas, G., & Maczuga, S. (2014). Racial/ethnic disparities in ADHD diagnosis by kindergarten entry. *Journal of Child Psychology and Psychiatry, 55*(8), 905-913. https://doi: 10.1111/jcpp.12204

Ohan, J. L., Visser, T. A. W., Strain, M. C., & Allen, L. (2011). Teachers' and education students' perceptions of and reactions to children with and without the diagnostic label "ADHD." *Journal of School Psychology, 49*(1), 81-105. https://doi.org/10.1016/j.jsp.2010.10.001

Owen, J. & Cao, X. (2024). Racial-ethnic heterogeneity in the relationship between an early elementary school ADHD diagnosis and later child well-being. *RSF: The Russell Sage Foundation Journal of the Social Sciences, 10*(1) 205-228. https://doi.org/10.7758/RSF.2024.10.1.09

Rowland, A. S., Skipper, B. J., Rabiner, D. L., Qeadan, F., Campbell, R. A., Naftel, A. J., & Umbach, D. M. (2017). Attention-Deficit/Hyperactivity Disorder (ADHD): Interaction between socioeconomic status and parental history of ADHD determines prevalence. *The Journal of Child Psychology and Psychiatry, 59*(3), 213-222. https://doi.org/10.1111/jcpp.12775

Shi, Y., Hunter Guevara. L.R., Dykhoff, H.J., Sangaralingham, L.R., Phelan, S., Zaccariello, M.J., Warner, D.O. (2021). Racial disparities in diagnosis of Attention-Deficit/Hyperactivity Disorder in a US national birth cohort. *JAMA Network Open, 4*(3). https://doi:10.1001/jamanetworkopen.2021.0321.

Szép, A., Dantchev, S., Zemp, M., Schwinger, M., Chavanon, M.L., & Christiansen, H. (2021). Facilitators and barriers of teachers' use of effective classroom management strategies for students with ADHD: A model analysis based on teachers' perspectives. *Sustainability, 13*(22), 128-143. https://doi.org/10.3390/su132212843

About the Authors

Hannah Sahrblom* is a school psychologist in the Richland School District.

Heidi Perez* is an associate professor of psychology at Central Washington University.

Sandra Gomez is currently a graduate student in the school psychology program at Central Washington University.

*Contributed equally to this work and are listed as co-first authors.

Appendix A
Vignette

Jamie is a [Hispanic or White] student in primary school. Jamie is described as always moving, constantly squirming when sitting, wandering around the classroom, and chattering endlessly instead of doing class work. Their teacher says, despite her constant instructions that Jamie doesn't follow instructions, such as when it is time to clean out desks. Jamie starts work late because what is needed is often misplaced. Jamie gets side-tracked into doing something else and hands in work without checking it. Jamie's parents say Jamie never seems to focus on what they say or ask, even when they repeat themselves. Jamie displays similar behavior when playing with other children. Jamie often intrudes on what they are doing and doesn't take turns or concentrate on what's happening in the games. The presence of Jamie's symptoms has occurred from early elementary.

Appendix B
Survey

1. *How serious are Jamie's behavior problems?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Not at all serious   Moderately Serious   Extremely Serious

2. *How likely is Jamie to disrupt or interfere with your classroom?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Extremely   Somewhat   Not at all

3. *How much would Jamie's behavior disrupt their friendships?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Not at all   Somewhat   Extremely

4. *How much would you be willing to take the time and effort needed to help implement the following types of treatment for Jamie:*

   a. *Learning Assistance/Educational Support (extra resources for Jamie?)*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Definitely   Somewhat   Not at all

   b. *Medication for ADHD for Jamie*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Definitely   Somewhat   Not at all

   c. *Changes to the classroom environment, (e.g., rewards, daily reports, sticker chart for Jamie?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Definitely   Somewhat   Not at all

5. *How confident are you that you could handle Jamie's problems without assistance?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Not at all   Moderately   Extremely

6. *How stressed would you be with Jamie's behavior?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Very Stressful   Moderately Stressful   Not at all stressful

7. *To what extent would you be upset or bothered by Jamie's behavior?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Very Upset   Moderately   Not Bothered

8. *How likely would you be to intervene with versus not taking action for Jamie's behavior problems?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Consistently Intervene   Consistently not take action

9. *How much time and effort would you put in for Jamie?*
   1----------2----------3----------4----------5----------6----------7----------8----------9
   Far less than average   Average   Far more than average

(Ohan et al., 2011)

Appendix C
Tables of Results

Table 2
Ratings by Teacher Ethnicity

Content Area	Hispanic Teacher		Non-Hispanic Teacher	
	M	*SD*	*M*	*SD*
Behavior toward the student	6.14	1.57	6.05	1.54
Emotional reactions to the student	5.19	0.77	5.38	1.19

Table 3
Ratings by Student Ethnicity

Content Area	Hispanic Student		Non-Hispanic Student	
	M	*SD*	*M*	*SD*
Behavior toward the student	6.53	1.42	5.54	1.50
Emotional reactions to the student	5.26	1.04	5.35	1.04

Table 4
Ratings by ADHD Training

Content Area	ADHD Training		No ADHD Training	
	M	*SD*	*M*	*SD*
Evaluation of social/behavioral problems	5.16	6.28	6.28	1.20

Fostering Collaborative Science Education: Partnerships Supporting Phenomenon-Based Learning of Science Topics

Andy Boyd, Cari Haug, and Chad Gotch

The *Next Generation Science Standards* (*NGSS*) have been slow to fully integrate into educational systems across our country. Teacher preparation courses, science instructional materials, and current teacher practices have been considering these standards-driven shifts since the 2013 publication. Embedded within the NGSS is a pedagogical framework highlighting practices and instructional designs needed to support teaching and learning within this new era of science education. Collaborative efforts between school districts, state-level agencies, and higher education institutions have been taking place for many years. This essay provides the story of a professional learning community in North Central Washington that began a journey of implementing University of Washington's *Ambitious Science Teaching* practices (Windschitl et al., 2018) in a high school science system. Multiple layers of our state-wide education system are learning together and contributing to the innovative tools needed to support the current educational system.

The work represents significant strides in providing educators with the resources necessary to foster inquiry-based, student-centered science instruction (OER Commons, 2020). This work led to a partnership with Washington State University (WSU) to evaluate the effectiveness of the OER units (Tippett & Gotch, 2019) which led to a National Science Foundation-sponsored development of a tool that supports student sensemaking through visual modeling and use of the crosscutting concepts in high school life sciences (VMC3 Resource Center, n.d.).

NGSS High School Science Course Project (Open Educational Resource)

North Central Educational Service District (NCESD) and multiple high school educators across Washington designed and developed resources that promote ambitious teaching practices. Aligned with NGSS and prioritizing hands-on, inquiry-driven learning experiences, these resources help teachers cultivate a classroom environment in which students are encouraged to explore, ask questions, and engage in scientific reasoning.

Ambitious Science Teaching, the pedagogical approach underlying the NCESD OER, emphasizes the importance of creating a classroom culture where students actively participate in the construction of scientific knowledge (Windschitl et al., 2018). This approach aligns closely with the phenomenon-based learning championed by the NGSS, as it encourages students to investigate scientific phenomena and to develop their own explanations for what they observe (NGSS, 2013). To support teachers in this endeavor, the NCESD OER offers a range of instructional materials, including lesson plans, assessment tools, and professional development resources, all of which are freely available to educators on the OER Commons.

The development of these Ambitious Science Teaching units involved a highly collaborative process and external funding from the ClimeTime proviso in Washington state (ClimeTime, 2024). Educators, members of the Washington Science Teachers Association, and the NCESD worked together to create instructional materials that meet the needs of diverse student

populations and respond to the evolving demands of science education. The primary focus was on building units that integrate disciplinary core ideas, scientific practices, and crosscutting concepts, the three dimensions emphasized by the NGSS. Table 1 describes the core components supporting both teachers and students in engaging with scientific phenomena through inquiry-based learning (WERA, 2019). Students engage in scientific practices such as developing models, analyzing data, constructing explanations, and engaging in argument from evidence. The assessments are aligned with NGSS performance expectations, ensuring that they measure students' ability to apply what they have learned in meaningful ways.

Table 1
Core Components of the NCESD High School Science OER Units

Phenomenon-Based Learning	Three-Dimensional Learning
Units center around real-world scientific phenomena that are relevant and interesting to students. The use of phenomena as the anchor for instruction encourages students to ask questions, explore concepts, and engage in the scientific process. This approach aligns with the NGSS, which emphasizes the importance of connecting science education to real-world contexts to make learning more meaningful for students.	Units are designed to integrate the three dimensions of NGSS—disciplinary core ideas, scientific and engineering practices, and crosscutting concepts (C3). By weaving these elements together, the materials help students not only gain content knowledge but also develop the skills and habits of mind necessary for scientific inquiry.
Formative and Summative Assessments	**Teacher Supports**
Units include both formative and summative assessment tools that allow teachers to gauge student understanding throughout the learning process. Formative assessments are embedded in the instructional activities, providing teachers with real-time feedback on student progress. Summative assessments are included at the end of each unit to evaluate students' overall mastery of the concepts and practices addressed in the unit.	Resources offer guidance on how to support inquiry-based learning, manage classroom discussions, and assess student understanding. The teacher materials also provide suggestions for differentiating instruction to meet the needs of all learners, including English language learners and students with special needs.

Collaborative Development of NCESD High School OER

The development of the NCESD OER was a highly collaborative process, involving multiple Washington state science teachers, state agencies, educators, and researchers from WSU. This collaboration was essential to ensuring that the OER met the needs of local school districts while also aligning with the broader goals of NGSS implementation. Educators from local districts played a crucial role in piloting the materials and providing feedback, which allowed the development team to refine the resources based on real-world classroom experiences. The teachers reported zero "Fs" in the grading period and received student requests for more science

course opportunities (Haug et al., 2019). The effectiveness of the NCESD High School Science OER units was evaluated by researchers at Washington State University, funded through Washington State Leadership and Assistance for Science Education Reform (LASER). The evaluation focused on the alignment of the units with NGSS, the quality of the instructional materials, and their impact on student learning. WSU's involvement was instrumental in evaluating the effectiveness of the OER, performing an evaluation that examined the impact of the resources on both teachers and students. This evaluation focused on how well the OER supported ambitious teaching practices and whether they helped students achieve deeper understanding of scientific concepts. The results of this evaluation informed further revisions to the materials, ensuring that they were both pedagogically sound and useful for teachers. The evaluation process involved several key steps:

- **Alignment with NGSS**: The evaluation confirmed that the units were well-aligned with the NGSS, particularly in their emphasis on three-dimensional learning. The materials effectively integrated disciplinary core ideas, scientific practices, and crosscutting concepts, making them a valuable resource for teachers looking to implement NGSS in their classrooms.

- **Instructional Quality**: The evaluation also assessed the overall quality of the instructional materials, focusing on their clarity, coherence, and ease of use. The evaluation found that the units were well-organized and user-friendly, making them accessible to both experienced and novice teachers. The materials provided clear guidance on how to support student inquiry and the development of deeper understanding.

- **Impact on Student Learning**: Teachers who implemented the units reported that students were more engaged in the learning process and showed a deeper understanding of scientific concepts. Students were able to apply scientific practices, construct explanations based on evidence and engage in meaningful discourse with their peers. The use of phenomena-based learning and inquiry-driven instruction helped students make connections between scientific concepts and real-world phenomena, enhancing their overall understanding of science.

The VMC3 Resource Center: Supporting Phenomenon-Based Instruction
The findings from the evaluation of the NCESD High School Science OER units underscored the importance of well-designed instructional materials that align with the NGSS and foster inquiry-based learning. In response, an expanded team of researchers from WSU and Utah Valley University continued work with teachers in NCESD and NCESD specialists to further understand instructional needs and extend the OER units to more purposeful use of the crosscutting concepts. The result of this collaborative work is the VMC3 Resource Center, an online suite of adaptable tools and illustrations designed to deepen students' understanding and engagement with scientific concepts through visual modeling (VM) and crosscutting concepts (C3) in high school life sciences. Explore further at VMC3 (https://vmc3.org/).

Like the OER units, the VMC3 tools provide teachers with adaptable, NGSS-aligned materials, but they go a step further by specifically focusing on helping students visualize and explore

---

complex scientific phenomena. Together, these resources not only support the continued evolution of science education but also empower educators to create active, student-centered learning environments that promote critical thinking and scientific inquiry.

The VMC3 Resource Center offers a suite of integrative tools to encourage deeper student and teacher engagement and understanding. Modeling Snapshots provide quick suggestions for anchoring phenomena; a Visual Library of common modeling elements can get students over the "I don't know how to draw that" hurdle; Formative Assessment Quick Prompts connect modeling elements to the crosscutting concepts through targeted questions, self-assessment checks, and feedback stems; and Vignettes (Appendix A) offer concrete examples of how these tools can be integrated into teacher's lesson plans. Table 2 includes some examples of the resource center. As science education continues to evolve, the VMC3 Resource Center serves as a valuable resource for teachers aiming to implement the NGSS and promote deeper understanding through phenomenon-based learning.
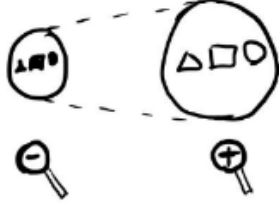
Connections Made Through Collaboration
One of the distinguishing features of the VMC3 Resource Center is its collaborative foundation. Developed by a consortium of science educators, North Central Educational Service District, and researchers from across the United States, the project was partially funded by a National Science Foundation Discovery Research PreK-12 grant (DRK-12 award #2100822). This support allowed the project team to collaborate with partner teachers over a three-year timespan and consider the barriers to implementing phenomenon-based learning. By collaborating directly with teachers during the pilot testing and feedback stages, the VMC3 project team ensured that the tools were not only aligned to NGSS but also grounded in lived experiences of science classrooms.

While the VMC3 Resource Center and NCESD High School Science OER are distinct projects, they share a common goal of supporting educators to implement NGSS-aligned, phenomenon-based science instruction. Both projects prioritize collaboration as a means of ensuring that the tools and resources developed are relevant, adaptable, and effective in real-world classroom settings. By working closely with teachers, state agencies, and researchers, these projects have created resources that address the challenges teachers face in implementing complex, standards-based instruction.

Table 2

Information from the VMC3 Resource Center

The VMC3 Resource Center offers educators integrative tools designed to enhance phenomenon-based science teaching in high school life sciences. It focuses on the interplay of visual modeling (VM) and the crosscutting concepts (C3) from the Next Generation Science Standards (NGSS). These customizable tools promote critical thinking and scientific inquiry. Explore further at **VMC3** (https://vmc3.org/)	**Key resources include:** • **Visual Library:** Scaffolds the transition of student thinking to visual representation. • **Formative Assessment Quick Prompts:** Deepen thinking using C3. • **Modeling Snapshots:** Guide phenomenon-based activities, supporting C3 integration and customization. • **Vignettes:** Narrative examples integrating resources.

Example of Visual Library: Encourages students to create models.

What is going on in the model?	How could it be drawn?	Why is this representation appropriate?
Flow of Energy		Directional movement of energy (light, heat, etc.) Squiggly to differentiate flow of energy from flow of matter or motion arrow
Flow of Matter		Matter moves from particle to particle/object to object/thing to thing through physical interactions
Zoom In/Out (Levels)		Use zoom in (+) and zoom out (-) magnifying glasses to indicate scale of model.

VMC3 Resource Center. (n.d.). About the VMC3 Resource Center. Washington State University. **https://vmc3.org/about/**

The NCESD High School Science OER units share several key similarities with the tools and resources provided by the VMC3 Resource Center. Both projects are grounded in the principles of NGSS and emphasize inquiry-based, phenomenon-driven learning. They aim to provide teachers with practical tools to engage students in deep, meaningful scientific inquiry. Table 3 shares some of the connections.

Table 3
VMC3 and NCESD OER Units Connections

Focus on Phenomena-Based Learning	Three-Dimensional Learning
The use of real-world phenomena as a starting point for student inquiry appears in both projects. This approach encourages students to explore scientific concepts by investigating phenomena that are relevant to their lives, fostering curiosity and engagement.	Alignment to the NGSS's three-dimensional learning framework, integrating disciplinary core ideas, scientific practices, and crosscutting concepts is central to these support tools and curriculum. Resources are included that help students visualize and model scientific phenomena, as well as inquiry-based activities that promote the development of scientific practices.
Technology Integration	**Teacher Support and Flexibility**
The use of visual modeling tools, such as the Visual Library, reflects a broader trend in science education toward leveraging technology to support student learning. Similarly, the NCESD OER units incorporate resources to enhance instruction and engage students in hands-on learning.	The project teams recognize the importance of supporting teachers in implementing Ambitious Science Teaching and the *NGSS* learning framework that teachers can adapt to their specific instructional needs.

The VMC3 Resource Center and NCESD High School Science OER units emphasize the importance of visual modeling and inquiry-driven learning as central components of science education. The VMC3 Resource Center's focus on visual tools complements the NCESD High School Science OER's emphasis on ambitious teaching practices, which encourage students to actively engage with scientific phenomena and develop their own explanations through modeling practices. Together, these projects provide tools to support student engagement and understanding. Finally, over the past decade, these projects have been presented as content sessions at both state and national teaching and learning conferences. (Boyd & LaLanne, 2018; Gotch et al., 2024; Haug et al., 2019; Boyd et al., 2019). The feedback and conversations during these events, and the reflection after the events, continued to move the work forward to the teaching and learning materials available today.

Conclusions

The collaborative efforts behind the VMC3 Resource Center and NCESD High School OER highlight the importance of partnership in advancing science education. By bringing together educational institutions, state agencies, and local school districts, these projects have created resources that align with NGSS and support teachers in fostering inquiry-based, phenomenon-driven learning in their classrooms. The involvement of WSU in evaluating the NCESD High School Science OER units highlights the critical role that research plays in ensuring the effectiveness of educational resources, while the feedback from teachers has ensured that both projects remain practical and adaptable to diverse classroom settings. The VMC3 Resource Center and NCESD High School Science OER represent considerable progress in supporting high school science educators as they work to implement ambitious, standards-based instruction that engages students in meaningful scientific inquiry.

Both the NCESD High School OER units and the VMC3 Resource Center are valuable resources for teachers looking to implement ambitious science teaching in their classrooms. A valuable next step would be to explore how visual modeling tools, like those in the VMC3 Resource Center, can be further integrated in various science curricula to enhance student understanding of complex phenomena. Conducting classroom-based research or professional learning focused on visual learning strategies could provide insights into best practices when considering these tools in real-world teaching environments. Additionally, it would be beneficial to investigate how different visual tools support diverse learning styles and deepen scientific inquiry, particularly for students who may struggle with abstract concepts.

By providing inquiry-based, NGSS-aligned tools and resources, these projects help teachers create a more engaging, student-centered learning environment that fosters deep understanding of scientific concepts. The collaborative nature of both projects, combined with their emphasis on supporting teachers and students, focuses on the importances of promoting meaningful science education across diverse classroom settings.

References

Boyd, A. & LaLanne, M. (2018, March). *Experience a high school curriculum that meets the NGSS. This important work is shared as an Open Education Resource (OER) so all districts can benefit.* Annual National Science Teaching Association Conference, Atlanta, GA.

Boyd, A., Haug, C., & McKay, L. (2019, December). *3-Dimensional High School Science OER Course Project.* Annual Washington Educational Research Association Conference, Seattle-Tacoma WA.

ClimeTime. (2024). *ClimeTime: Climate science learning*. Office of Superintendent of Public Instruction. https://www.climetime.org/

Gotch, C., Premo, J., McMain, E., Dydasco, C., & Jiang, K. (2024, October). *Supporting student sense-making with the VMC3 Resource Center*. Washington Science Teachers Association Conference, Liberty Lake, WA.

Haug, C., Boyd, A., & McKay, L. (2019, December). *Experience a high school curriculum that is three-dimensional and centered around phenomena. This important work is shared as*

an Open Education Resource (OER) so all districts can benefit. Annual Regional National Science Teaching Association Conference, Seattle, WA.

National Science Teaching Association (NSTA). (n.d.). NSTA conference presentations. Retrieved from https://www.nsta.org/conferences

NGSS Lead States. (2013). *Next Generation Science Standards: For states, by states*. The National Academies Press. https://www.nextgenscience.org/

OER Commons. (2020). *High school integrated physics and chemistry course*. Retrieved October 16, 2024, from https://oercommons.org/courseware/lesson/67850

Office of Superintendent of Public Instruction. (2019). *Leadership assistance for science education reform (LASER) program: Program overview and impact report.* Washington State OSPI. https://www.k12.wa.us

Tippett, K. and Gotch, C., (2019). *Integrated conceptual science program (ICSP): Report of Initial Evaluation,* December 11, 2019.

VMC3 Resource Center. (n.d.). *About the VMC3 Resource Center*. Washington State University. https://vmc3.org/about/

Washington Science Teachers Association (WSTA). (n.d.). WSTA conference presentations. Retrieved from www.wsta.net.

Windschitl, M., Thompson, J. J., & Braaten, M. L. (2018). *Ambitious science teaching.* Cambridge, Massachusetts, Harvard Education Press.

About the Authors

Andy Boyd is Regional Math Coordinator at North Central ESD 171 in Wenatchee, WA.

Cari Haug is Regional Science Coordinator at North Central ESD 171 in Wenatchee, WA.

Chad Gotch is an associate professor at Washington State University, Pullman, WA.

How could you encourage students to identify **Natural Selection** through the crosscutting concept of **Patterns**?

Mr. Johnson teaches Biology at a large urban High School in the north of New York state. He has just begun teaching and is entering his second year. The prior year he had some students that did not endorse evolution and were resistant throughout this unit. He thinks that a more student-centered approach, where students identify evolutionary processes themselves through examining patterns in how life can change over time, will be more effective. He recently came across a news article in the local paper about an outbreak of Methicillin-resistant Staphylococcus aureus (MRSA). He is planning on having this phenomenon a focus of the lesson to address the following NGSS standard:

> What do the students know so far?
> His students are entering the current lesson having already learned about cells and different cell types earlier in the year. They have also already been exposed to the function of antibiotics as part of class conversations, but not formally assessed on this. This lesson is situated in his curriculum at the very beginning of the class's evolution unit.

HS-LS4-3: Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

Introducing the Phenomenon

Mr. Johnson begins the lesson by handing out copies of a local news article about cases of MRSA in the county. He asks students to read the article individually and then talk to their in-class partners about the main idea of the article and how it connects to biology and medicine. As students talk, Mr. Johnson walks around and prompts them with formative feedback to get them to think deeper about what the article is implying about medicine and medical treatment in general. For example, while walking around Sonia tells him, *"The article says that people are getting sick"* and Mr. Johnson provides the formative prompt *"Why exactly are they getting sick? Is there a specific cause?"*.

> How will students be engaged in the lesson?
> The anchoring phenomena for this lesson is antibiotic resistance. While some students have heard of this concept before, students very rarely have conceptualized it in term of evolution. The teacher specifically chose this topic to introduce evolution in this way because it bypasses some of students' initial resistance to evolution-related ideas. Using this phenomenon also has a greater chance to be relevant and meaningful to students in comparisons to other evolution related phenomena that do not connect to society as easily.
>
> It is recommended that a teacher bring in term "evolution" later in the lesson or the next lesson to allow the ideas to be considered prior to the addition of political and/or religious associations.

Once students have finished this discussion, they share their ideas about the article and Mr. Johnson writes down student ideas about the potential impact of MRSA on medicine on the board for future reference. Their ideas tend to focus on the difficulties of treatment, impacts of MRSA on people, and where MRSA is found. During the conversation some of Mr. Johnson's students bring up questions about how widespread the problem is and where it came from. For example, Jon asks, *"Is this something that doesn't normally happen? Is this a new thing?"* (For classes that do not bring up these ideas, Mr. Johnson prompts them in this direction through questioning). Many of the students' questions are already built into the lessons and those that aren't Mr. Johnson notes to make sure they will be addressed. At the end of the conversation, Mr. Johnson tells his class that their lessons for the next few days will focus on what MRSA is, how it occurs, how widespread it is, and how we can combat it through understanding biology.

> What prompts is Mr. Johnson using to encourage student thinking?
> - How often have you heard of an antibiotic not working in the past?
> - Why might we be seeing this trend today and not in the past?
> - Why might this trend be dangerous?
> - What might be some differences in bacteria that could result in resistance?
> - Can an organism choose to change to gain a property like resistance? (To combat Lamarckian misconceptions of evolution, it is recommended that the teacher follow up with the question of whether or not the students could choose to change part of their body/biochemistry.)

How could you encourage students to identify **Natural Selection** through the crosscutting concept of **Patterns**?

Initial Examination of Patterns in Data

"*Let's start by broadening our perspective on how widespread antibiotic resistance, like MRSA, is in the current world. I am going to hand out some data on this. Make sure to take your time and try and identify what they are showing*" Mr. Johnson tell his class. Then hands out data sets on antibiotic resistance (Olesen et al., 2018, Figure 4, is an example that could be used or modified for the classroom) to show how widespread this phenomenon is and encourage students to connect antibiotic use to increased instances of drug resistance. Students work in either pairs or small groups of three to examine the graphs and get a better understanding of what could be going on. As they do so, Mr. Johnson walks around to provide formative feedback on the graphs. At this point Mr. Johnson can go right to asking students to model how antibiotic resistance is occurring or provide an additional support where students can hypothesize how quickly antibiotic resistance can develop before seeing it occur (in a video like this).

Initial Models of Antibiotic Resistance

Once students have identified antibiotic use as a factor driving resistance (a **pattern** in the data), Mr. Johnson has them develop initial models at the cellular level that may account for this change. He hands out a modeling worksheet that is organized to include two bacterial environments (high and no antibiotic presence) and spaces to draw three generations of bacteria (as can be seen in the **Visual Library**). Students are provided data/direction on what the first generation of bacteria are (each environment has one resistant individual), how to tell resistant and non-resistant bacteria (so these can be tracked), the percentage chance of survival for each type (resistant and non-resistant) per generation, and the number of new cells produced each generation. Inheritance is simplified so no random mutations are occurring, and offspring have the same resistance level as parents. This scaffolding allows students to be guided in their modeling while still processing most of the cognitive load by reflecting throughout.

As students generate their initial model Mr. Johnson walks around and provides formative feedback to students. The goal isn't for students to model perfectly, but instead to have a contrast between the two scenarios which allows them to reflect on patterns of

---

How is modeling included in class?
Students should model at least once a week in the class to build expectations around this exercise. As part of this, asking them to focus on the meaning of what they are drawing and adding annotation to their models are great ways to explore the cognitive underpinnings of their models.

Best Practice: Justification of ideas via evidence is not only a core science practice, but also has been found to be a critical component of student talk that promotes learning. Prompting this during modeling can increase student learning.

Don't forget that models are only as valuable as the ideas behind them

---

Students don't learn from just drawing itself, but from thinking about their drawing. General examples from the **Quick Prompts** that can push student thought include:
- Based on your observations of change, what patterns do you see? How can you use those patterns to predict the future change?
- Do you notice any factors that seem to coincide with patterns of change? Do you think these factors cause the change, are caused by the change, or both? What other factors could be at play?

Application of these prompts to the current lesson might include the following prompts:
- What is different between the two environments that the bacteria are living in?
- How many times are the bacteria going to reproduce?
- What do you hypothesize will happen in each scenario?
- Based on the data you examined, what would you expect to happen with the bacterial population over time?
- What determines the likelihood of bacteria survival in your model?
- Can you remember why the survival rates are differing between the two different types of bacteria?
-How does your final population compare to your initial population?
-What would you expect to happen if each population were to infect a person? To what extent would they have the same impact on the person's life?
-"To what extent do your modeling results align with the data we looked at together in class?"

How could you encourage students to identify **Natural Selection** through the crosscutting concept of **Patterns**?

evolutionary change under each condition/environment. Mr. Johnson focuses his feedback on two areas: first he provides reminders about the rules of the modeling where needed and secondly, he encourages students to contrast the patterns seen over the three generations and reflect on why change was present in one environment and not the second.

Lesson Conclusion

The lesson ends with Mr. Johnson asking students to write a three-sentence reason for why antibiotics resistance occurs using their initial models. As students finish this, Mr. Johnson closes the lesson with the future directions of the class which will involve students examining similar phenomena in both insects and weeds which are having negative impacts on food production worldwide.

Works Referenced

Olesen, S. W., Barnett, M. L., MacFadden, D. R., Brownstein, J. S., Hernández-Díaz, S., Lipsitch, M., & Grad, Y. H. (2018). The distribution of antibiotic use and its association with antibiotic resistance. *Elife*, *7*, e39435.

The conclusion of a lesson is a great place for student to reflect on their learning via self-assessment. Here are some **Quick Prompts** that can be used for this.

- Have I looked for patterns of change across short and long time periods?

- Have I considered the relationship between patterns I can observe directly and how this might be observed through mathematical calculations?

- Have I applied my observations of patterns of change to explain or predict what caused antibiotic resistance and how ti occurs?

Next Lesson?

This lesson can be reinforced by a subsequent lesson that looks at the evolution of resistance on a more macro scale for example with crop pest insects/ insecticides and crop weeks/ herbicides. Students' ability to abstract concepts is directly tied to the number of examples they have seen of a given concept. Thus, it is recommended that students experience as many discrete examples of evolution as they can before transitioning to more abstract components situated over millions of years.

Collaboration Across the Pacific Northwest:
Moving the *Thinking Classrooms* Conversation Forward

Andy Boyd and Peter Liljedahl

For years in the Pacific Northwest, educational systems have been striving to enhance mathematics. Implementing research-based practices and evaluating current innovative strategies have always been topics of conversation. Scaling up the work shifts the conversation from ideas to connections around a state-wide educational system. Recently, a project introducing the fourteen practices of Building Thinking Classrooms is moving through the Washington state educational system (Liljedahl, 2021). This project began as a localized effort, spanning both the east and west sides of the state, aimed at addressing the needs of the learners of mathematics through instructional strategies.

The development of this project responded to increasing demands from districts seeking ways to meet diverse student needs, not just in mathematics but also in other content areas. Commitment to meet diverse student needs includes collaborative efforts to incorporate innovative strategies and Building Thinking Classroom practices across the state.

This essay examines the influence of Building Thinking Classrooms on educational strategies across the Pacific Northwest, connecting educators, state-level agencies, and higher education institutions in a collaborative effort to reshape teaching and learning. Through professional development, workshops, and multilayered collaboration, the Building Thinking Classrooms practices have become a model for classroom level instructional transformation. A commitment to shared learning goals and a willingness to adapt pedagogy to foster critical thinking and engagement are moving student thinking forward.

Collaborative Learning in a Building Thinking Classrooms Model

A Building Thinking Classrooms mindset emphasizes the need to transform classrooms into spaces where student thinking drives learning. Traditional mathematics instruction often follows a teacher-centered approach, where teachers demonstrate methods and allocate instructional time for students to practice and replicate these techniques to complete sets of problems or tasks. In contrast, a Building Thinking Classrooms model promotes an active, student-centered approach, using tasks that encourage students to think first collaboratively and then independently (Liljedahl, 2021). The fourteen practices of Building Thinking Classrooms provide a roadmap for creating a collaborative learning environment, incorporating strategies such as random grouping, vertical non-permanent surfaces, and carefully designed tasks that scaffold student learning. Table A lists the fourteen practices of the Building Thinking Classroom framework (Liljedahl, 2021; Liljedahl & Giroux, 2024).

Since its publication, educators across Washington have been exploring how Building Thinking Classrooms can improve learning outcomes in mathematics, science, and other STEM classroom settings. By adopting Building Thinking Classrooms practices, educators can help a classroom culture that values student-driven exploration and critical thinking. This shift requires a departure from traditional methods, moving toward collaborative problem-solving tasks that accommodate

various levels of student understanding. A cornerstone of the Building Thinking Classrooms framework is the intentional design of tasks that promote active engagement and critical thinking. In a Thinking Classroom, tasks for the students are presented in a way to encourage multiple levels of engagement, allowing students to approach problems from different angles. For example, tasks such as open-ended questions or puzzles provide students with opportunities to explore mathematical concepts collaboratively, fostering a deeper understanding of the material.

Table 1
The Building Thinking Classroom Framework

Toolkit 1:	Toolkit 2:
1) Use thinking tasks 2) Frequently form random groupings 3) Use vertical non-permanent surfaces	4) Defront the classroom 5) Only answer keep-thinking questions 6) Give task early, standing, and verbally 7) Give check-your-understanding questions
Toolkit 3:	Toolkit 4:
8) Be intentionally less helpful 9) Create and manage flow 10) Consolidate from the bottom 11) Use meaningful notes	12) Evaluate what you value 13) Communicate to students where they are and where they are going 14) Report out based on data (not points)

Washington educators have recognized the importance of task design in fostering collaborative learning. By creating tasks that support diverse student needs, educators can ensure that all students can engage with the material, regardless of their initial level of understanding. This emphasis on task-based learning aligns with Washington state's mathematics projects, such as the adoption of the *Mathematics K-12 Learning Standards*, which stress the importance of developing critical thinking and problem-solving skills. (OSPI, n.d.). Within these standards is a description of the mathematical habits of mind that educators at all levels should aim to develop in their students (OSPI, n.d.). Additionally, incorporating task-based learning complements educators' commitment to equity in education by encouraging instructional practices that are inclusive, culturally responsive, and designed to meet the needs of every learner.

Statewide Collaboration and Professional Learning Communities
Learning the Building Thinking Classrooms practices in Washington State is possible through extensive collaboration among educational leaders, state agencies, and higher education institutions. Early on, regional math leaders started a book study for *Building thinking classrooms in mathematics: 14 teaching practices for enhancing learning, grades K-12*. This virtual, online community connected participants across the state and laid the foundation for a state-wide professional learning community (Liljedahl et al., 2024). The book study fostered dialogue around the Building Thinking Classrooms practices and connections to the Washington State educational system. Monthly virtual workshops provide opportunities for educators to reflect on the application of the Building Thinking Classrooms framework and share insights on

transforming traditional classroom environments. Members of the Office of the Superintendent of Public Instruction Mathematics Fellows Network have been thinking about the practices within the state-wide Fellows program. Some are incorporating these practices into their own personal action plan in supporting their local district learning plans (Math Fellows, 2024). Figure 1 shares images from workshops and classrooms.

Figure 1
Student and educator work samples from workshops and classrooms
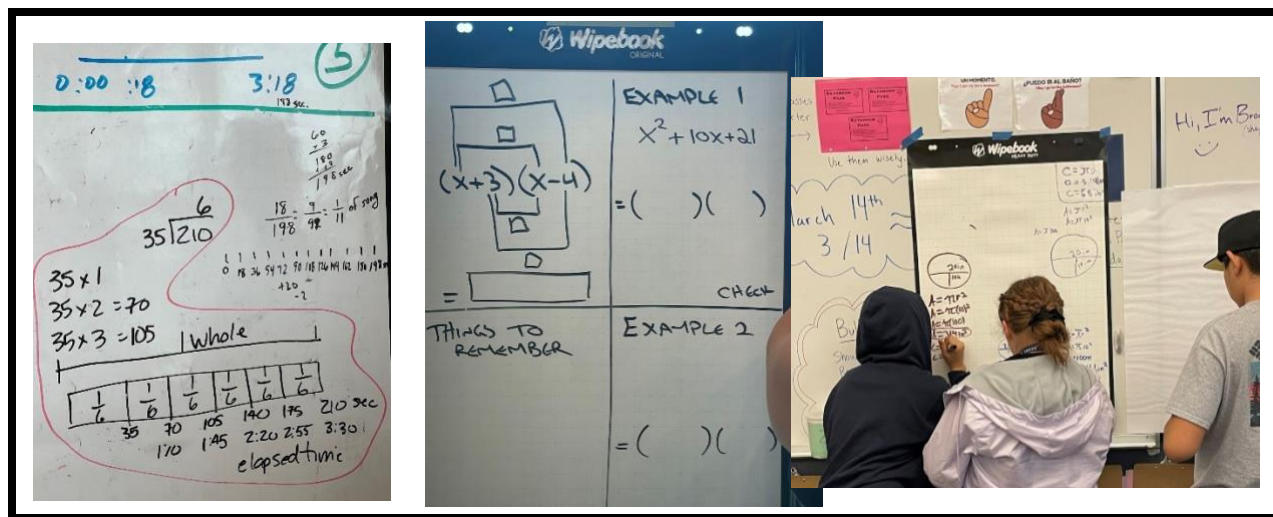
Through these workshops and convenings, educators and administrators have gained a deeper understanding of how the Building Thinking Classrooms practices could be used in classrooms by teachers to meet the diverse needs of students. These sessions encouraged participants to engage actively with any of the components of the Building Thinking Classrooms toolkits and reflect on how the practices support students in various contexts. As regions across the state became more familiar with tenants of a Thinking Classroom, coordination around the workshops has shifted to progressive, multiple-day training sessions. Content has included a deeper dive into the practices highlighted in the book studies and earlier workshops. More learning and exposure to educators created an avenue for district and state leaders to provide guidance for exploring more and thinking about implementation. Appendix A includes summer 2025 opportunities to engage in a Building Thinking Classroom workshop.

In addition to the monthly workshops, Washington State hosted a series of Building Thinking Classrooms events aimed at deepening educators' understanding and impact on student learning. For example, the 2023 NCESD STEM Summit featured sessions on implementing Building Thinking Classrooms strategies in other STEM classrooms (Boyd & Haug, 2023). Such events gave an opportunity for educators to engage with practices, exploring the benefits of task design and the importance of fostering collaborative learning spaces. On June 30 and July 1, 2025, Renton, Washington will be hosting the 3rd Annual Building Thinking Classrooms Conference. The planning, designing, and execution of a large-scale event, such as a 1200+ attendee gathering, serves as a profound illustration of the power of collaboration. Each phase of the process requires diverse skills and perspectives, highlighting how collective effort can transform a vision into reality. Additionally, collaboration extends beyond the immediate team. Engaging multiple partners including vendors, sponsors, and community businesses elevates the event.

This interaction cultivates a sense of shared ownership among all parties involved, fostering a deeper commitment to the event's success. Figure 2 shares more information about the collaborative effort in Washington State.

Figure 2
Professional Learning, OSPI/AESD Fellows Network, Graduate Students Reflection, AESD/OSPI All Content Conversation 2024, International BTC Conference Seattle 2025

The responsibilities shared among collaborators also highlight the importance of communication and trust. Regular updates and open dialogues ensure that everyone is aligned with the vision and goals, enabling a smooth workflow. The successful realization of a large event is not just a logistical achievement; it is a celebration. It underscores how collaboration can bring people together, turning ambitious dreams into realities, and leaving a lasting impact on both participants and organizers alike.

Reflections and Implications for Future Collaboration

The work surrounding Building Thinking Classrooms in Washington State has offered valuable insights into the power of collaboration in educational reform. By focusing on student-centered learning and task-based instruction, the Building Thinking Classrooms practices offer a promising model for fostering critical thinking and collaboration in education. One of the key takeaways from the reflection around this project is the need for ongoing professional development and support for educators implementing. Implementation requires a shift in instructional methods and lesson design. Educators need opportunities to engage in dialogue and reflection as they integrate Thinking Classrooms practices into teaching. Through Professional Learning Communities and statewide events, Washington has shown the importance of creating

a supportive learning community where educators can share their experiences and learn from one another.

A graduate seminar at Washington State University provided a unique platform for discussing Building Thinking Classrooms practices and a way to reflect on lesson design (Washington State University, 2024). These graduate students engaged in non-curricular and curricular tasks facilitated with some of the practices within a Thinking Classroom. As part of the time together, graduate students were encouraged to reflect on their own K-12 experiences and consider how the Thinking Classroom practices might connect to the approaches they met as learners and educators. Responses from the graduate students centered around impacts pedagogy has on a learner, including considerations on scaffolding and engagement.

Table 2

Connections and Comments from a Graduate Student Seminar around the Building Thinking Classroom Experience

Using scaffolding (thin-slicing) and wondering about the impact on intrinsic motivation	Thin-slicing created more confidence to participate in group discussion
Switching learning contexts frequently may increase primacy effects	Encouraging the leaders to let their classmates take the lead
Listening to others and not shaming when making mistakes while sharing own thinking	More engaged while getting to hear other's different approaches
Being very hands off as the instructor with a lot of back and forth between the students	Help with students' academic self-concept by challenging and making it safe to make mistakes and ask questions

One of the practices explored in these seminars was the *thin-slicing* strategy, which involves breaking down tasks into manageable steps to help gradual learning (Liljedahl, 2021). By engaging with *thin-slicing* tasks, graduate students experienced firsthand the importance of the order of task engagement. These participants reflected on their experience, making lesson design connections and the learning the importance of allowing students to tackle tasks at their own pace. This strategy resonated with graduate students from diverse educational backgrounds, as they found that thin slicing could be applied by the participants across a range of learning levels and subject areas. Looking forward, the Building Thinking Classrooms project offers a foundation for exploring how collaborative learning can be integrated into other areas of teaching and learning. By fostering a culture of collaboration and critical thinking, Building Thinking Classrooms has the potential to transform educational systems, promoting student engagement and achievement across subjects. Table 2 includes some of the connections made by the graduate students.

As Washington continues to grow in the understanding of the Building Thinking Classrooms practices, the leaders can provide valuable insights for educators and policymakers looking to create more inclusive, student-centered learning environments. By prioritizing collaboration and

critical thinking, Building Thinking Classrooms offers a framework for fostering meaningful change in education, providing students with the skills and knowledge they need to succeed in an ever-changing world. Building Thinking Classrooms offers an alternative model, promoting smaller, community-based groups where students of different ages and abilities can engage with the same task at their own level.

This approach mirrors multi-age, single-room schoolhouse educational practices seen in Indigenous school systems, rural school systems, and private school systems across Washington. Figure 3 shows a rural K-12 educational system modeling Building Thinking Classroom practices as well students from a one-room schoolhouse engaging in a non-curricular task. In these settings, students of various ages learn alongside one another, supported by a cohesive community rather than a rigid, age-based structure. Such models may offer valuable insights into how we can foster a more inclusive and collaborative learning environment.

Figure 3
Rural K-12 Educational System and Students from a One-room Schoolhouse Engaged in Building Thinking Classroom Practices

Conclusion

Building Thinking Classrooms is one of the most significant educational frameworks in recent years. The set of fourteen practices designed to foster deeper mathematical thinking and collaboration among students is beginning to find a place in the K-12 educational system of Washington State. The Building Thinking Classrooms framework encourages a student-centered approach to teaching mathematics while also creating a common, statewide language for discussing math instruction in Washington. This shared language helps connect various groups, such as educators, administrators, and policymakers, as they work together to implement strategies for improving math education. The collaborative efforts surrounding BTC in Washington State have underscored the transformative potential of student-centered learning and task-based instruction. By engaging educators, administrators, and higher education institutions

in a shared commitment to improving education, Washington has created a model for collaborative reform that holds promise for other educational systems. The Building Thinking Classrooms project has not only strengthened mathematics instruction but has also fostered a culture of collaboration that extends to all levels of the teaching and learning systems.

The work being done by leadership and team members in Washington State around Building Thinking Classrooms is a significant step forward in rethinking how mathematics and other subjects are taught. By fostering collaboration between educators, districts, and higher education institutions, this project has sparked critical discussions around lesson design, pedagogy, and systems of support. The focus on tasks, differentiation, and multi-level engagement offers a promising model for creating more inclusive, responsive educational environments that meet the diverse needs of all students. Over time, the system will support lasting changes in the classroom, while promoting equity and innovation in teaching practices. As more districts and institutions reflect on these practices, the potential for meaningful change in education continues to grow.

References

Boyd, A., & Haug, C. (2023, August 15). *Implementing Tool Kit 1 of Building Thinking Classrooms - What we're trying.* Presentation at the 2023 NCESD STEM Summit, Wenatchee, WA, United States.

Liljedahl, P., Kent, D., Boyd, A., Mott, T., & Cabellon, M. (2024, September 30–2025, May 12). *Building thinking classrooms in mathematics book study: 14 teaching practices for enhancing learning.* Virtual series.

Liljedahl, P., & Kent, D. (2024, June 26). *Building Thinking Classrooms Day 1 - Live with Peter Liljedahl.* Capital Region ESD 113, Tumwater, WA, United States.

Liljedahl, P. (2021). *Building thinking classrooms in mathematics: 14 teaching practices for enhancing learning, grades K-12.* Corwin Press.

Liljedahl, P., & Giroux, M. (2024). *Mathematics Tasks for the thinking classrooms: Grades K – 5.* Corwin Press.

Math Fellows (OSPI Fellows Network). (2024). *Agenda for Math Fellows (2024-2025)* [Agenda]. Presented by OSPI Regional Math Coordinators.

Office of Superintendent of Public Instruction. (n.d.). *Mathematics K–12 learning standards.* Washington Office of Superintendent of Public Instruction. Retrieved November 20, 2024, from https://ospi.k12.wa.us/

Washington State University. (2024). EDPSYCH 574 Seminar. Fall Semester.

About the Authors

Andy Boyd is Regional Math Coordinator at NCESD in Wenatchee, WA.

Peter Liljedahl is a professor of education at Simon Fraser University.

Appendix A
## Opportunities to Engage in a Building Thinking Classroom Workshop

Stuck in the Middle: The Superintendent's Dilemma

John Steach

In the wake of the McCleary decision, teacher salaries in Washington (WA) have surged from 21st to 4th highest in the U.S. (National Education Association, 2024), but at what cost? Many school districts now face severe financial strain, seven districts are projected to have negative fund balances, and three have already requested state apportionment advances to stave off insolvency. Over this same period, WA has experienced the most teacher strikes in over 30 years, resulting in deteriorated labor-management relations and significant superintendent turnover. This paper examines how legislative actions have placed school administration in the untenable position of negotiating contracts without control over resources needed to meet community expectations.

Labor negotiations are often viewed as a tug-of-war between teachers, who seek fair compensation and quality learning environments, and the Board/Superintendent, who must safeguard the district's long-term financial health. This narrow view incorrectly pits superintendents against increasing teacher compensation and student well-being, despite most superintendents' alignment with both goals. In reality, the true tug-of-war is between the state legislature and teacher representatives, with the superintendent caught in the middle, struggling to balance financial realities with educational demands. Superintendents pull against the legislature for more resources, while at the same time, they must negotiate fairly with teachers—both sides pulling on a rope that leaves them stretched to the limit. See Figure 1.

Figure 1
Superintendent in the Middle
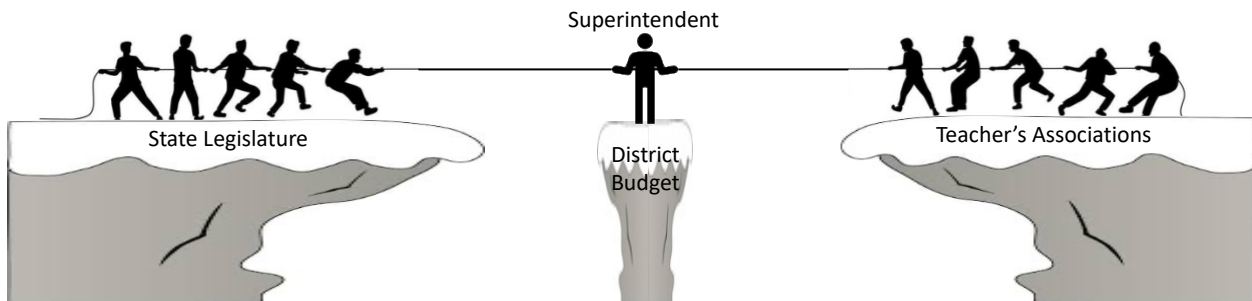
What follows is a roadmap of how we got to this point and hopefully how to fix this situation so that superintendents can better serve their roles as instructional leaders and collaborators with teachers in providing the best education possible for the students in WA.

Historical Path to McCleary

The Paramount Duty Clause in WA's state constitution has required "ample provision for the education of all children" since its adoption in 1889, but it wasn't until the 1970s that this mandate was challenged in court. Following the first teacher strike in 1972, and a series of levy failures in 65 districts, the Seattle School District sued the state, arguing that the funding system was neither "ample" nor "stable" (Appendix A).

In 1977, Judge Robert Doran ruled in favor of the Seattle School District, directing the state legislature to define "basic education." The legislature responded with the Basic Education Act (1977), which introduced a uniform funding formula and a state salary schedule for teachers. However, the formula still relied heavily on local levy revenue to fund parts of what had now been defined as basic education.

This continued reliance on local levies led Seattle to sue the state again. In 1983, Judge Doran once more sided with the district, ordering the legislature to remove local levy dependence for basic education funding. As a result, the legislature capped local school levies at 10% of state revenue and increased state funding to replace the lost local contributions—a "levy swap" designed to shift the financial burden from local taxpayers to the state.

In defining "basic education" the legislature had enacted a statewide salary schedule for teachers that included both longevity and education level to determine both funding amounts and subsequent teacher pay. By mandating teacher pay rates at a state level, this created unrest in the mid-80's, as a time of high inflation was not met with commensurate legislative adjustments to the pay schedule. To preempt a third lawsuit, the legislature took two significant actions during the 1987 session. The first was to double the local levy lid to 20% and the second was to allow for additional teacher pay through what was identified as Time, Responsibility, and Incentive (TRI) pay (Washington State Legislature, 1987). To ensure all districts could benefit similarly, the legislature included levy equalization or Local Effort Assistance (LEA) funds that matched local levy revenues for what were defined as property-poor districts where their overall average land value was below state average. This helped the property-poor districts keep their levy rates lower when trying to collect similar total funds ($/students) as more wealthy districts.

While TRI was intended to be in addition to "basic education," in practice, these acts allowed districts to supplement the state salary schedule and provide teachers net pay increases without the legislature making any long-term financial commitments. Facing similar pressure in 1999, the legislature again raised the levy lid to 24%.

The astute reader has likely noted that legislative actions in 1987 and 1999 violated the laws from Judge Doran's second ruling in both spirit and letter. The stage was set for yet another lawsuit which was filed in 2007 by a family in the Chimacum school district. This case would take five years to matriculate through the courts before a final WA State Supreme Court verdict and five more years for the legislature put a solution into a law that would lay the foundation for today's financial crisis.

The McCleary "Fix"

The McCleary lawsuit was brought by the McCleary family with support from a coalition of parents, school districts, and education advocacy groups, including the Network for Excellence in Washington Schools (NEWS). The suit argued that WA's reliance on local property taxes for school funding created significant inequities, particularly harming property-poor districts. In 2010, Judge John Erlick of King County Superior Court ruled in favor of the plaintiffs (John P Erlick, 2010), and the state subsequently appealed the decision to the WA State Supreme Court.

In 2012, the Supreme Court upheld Erlick's ruling (Washington State Supreme Court, 2012) highlighting two key issues:

1) The state's overreliance on local property taxes violated the Paramount Duty Clause, as it failed to provide ample and stable state funding for basic education.
2) The heavy reliance on local taxes caused funding disparities between wealthy and property-poor districts, leading to inequitable access to education.

The court directed the legislature to shift the financial burden from local property taxes to state funding, ensuring that basic education was fully funded by the state.

After years of legislative inaction, on August 13, 2015, the WA State Supreme Court imposed a $100,000 daily fine to compel the legislature to act. By the time a resolution was passed, the fines had accumulated to $105.2 million.

In response, a bipartisan group known as the "McCleary 8," consisting of four Democrats and four Republicans from the House and Senate, was formed to craft a solution. Their work culminated in the passage of EHB 2242 (Washington State Legislature, 2018) during the 2017 legislative session, which introduced significant changes to the state's school funding model. These changes included but are not limited to:

- Eliminating the state salary schedule while
    - Establishing a minimum starting teacher salary and
    - Establishing a maximum teacher salary,
- Setting a standard "average" teacher salary as a funding baseline,
- Identifying regional adjustments to salary funding,
- Eliminating TRI pay and defining a new "enrichment pay" as duties beyond basic education,
- Increasing state property taxes (from $1.89/$1,000 value to $2.70/$1,000 value) to pay for the increased percentage the state would now provide of total school funding for schools,
- Reducing local property tax levy rates (from 24% of state provided revenue to $1.50/$1,000 value or a maximum of $2,500 per student) to eliminate the portion that had been used to pay for "basic education," and
- Limiting the total increase in employee (teachers, administrators, and classified staff) total compensation to no more than the annual increase (3.1% for 2018) in the consumer price index for the transition from the 2017-18 to the 2018-19 school years (Appendix B).

Like 1983, the combined reduction in local tax rates and the increase in state tax rates were designed to be a "swap" of funding responsibility from local to state to satisfy the court directive. From a district financial perspective, on the average, there were no additional funds being provided to districts beyond an annual cost of living adjustment. The last bullet above was intended to protect districts from overextending themselves when they negotiated new district-specific salary schedules in the absence of a state mandated salary schedule. This interpretation was supported by OSPI in an October communication to all 295 district superintendents (Washington Association of School Administrators, 2017) (Appendix C).

McCleary On "OR" Off the Rails

As districts across the state prepared to negotiate 295 independent salary schedules under the new limits of EHB 2242, further legislative adjustments were made. In early 2018, the legislature introduced SB6362 (Washington State Legislature, 2018) (Appendix D) which aimed to clarify and adjust the funding changes. Key provisions included:

1. A hold harmless provision to ensure no districts received less total revenue from the "swap,"
2. Removed a limitation on administration salaries for enrichment programs,
3. Clarified professional learning days, and
4. Most importantly, clarified that the total compensation increase did not include "additional days or hours of service, additional responsibilities, step increases, and expansions of academic programs that require additional personnel or increased service provided by current personnel."

This initial bill merely clarified the one-year limit applied specifically to the continuation of existing services during the transition. However, on the House cutoff date of February 14th, an Engrossed Second Substitute bill (Appendix E) was introduced and passed just before the deadline along a partisan vote of 25-22. The bill now replaced the previously clear section limiting compensation increases with a series of bulleted items using the conjunction "or." The House bill analysis (Appendix F) prepared for the Senate hearing committee did not indicate this change as significant to the intent of the total compensation increase limit or restrictions on enrichment levy funds.

SB6263 passed the Senate on March 8th and was subsequently signed into law on March 27th by Governor Jay Inslee, with an emergency implementation date of June 7th, 2018. However, as a new law, it lacked legal interpretation and implementation guidance from the implementing agency, the Office of Superintendent of Public Instruction (OSPI). In this absence, an argument surfaced from the Washington Education Association (WEA) (This Week in Olympia, 2018) that the word "or" implied an option to comply with at least one of the criteria rather than if "and" was used which would have required all seven criteria be satisfied. As this interpretation was shared with districts across the 295 bargaining tables, superintendents and boards reached out to their organizations, state representatives, and OSPI for guidance and support.

Initially, some members of the McCleary 8 indicated that a clarification memo would be issued to ensure all seven criteria for salary increases were met (Evergreen Public Schools, 2018). However, no such memo was released, and the legislature remained silent throughout the implementation phase. The only official guidance came from the Office of Superintendent of Public Instruction (OSPI), which affirmed the WEA's interpretation of the law.

In June 2018, Superintendent Chris Reykdal sent a memo to superintendents, stating that there were "allowable salary increases in six additional categories above inflation." Reykdal added, "In short, I believe the legislature adopted a wide-open collective bargaining framework, even for 2018–19," undermining the limits on salary negotiations. (Appendix G).

With the perceived elimination of the 3.1% increase cap, no additional revenue was provided to support overall compensation increases beyond 3.1%. Superintendents were thrust into a situation where public perception—fueled by union leadership—viewed the state's increased funding as a windfall, while in reality, it was simply a shift in funding sources with little additional revenue to support the heightened salary expectations (This Week in Olympia, 2018). Public recognition of the local levy reduction impact had been replaced by collective amnesia of the funding "swap."

Over the summer and fall of 2018, districts across the state were pressured by WEA, local unions, parents, and general communities to pass through the believed "backpay and pay increases" (This Week in Olympia, 2018) provided by the state legislature. Superintendents and school boards who pushed back on the WEA and OSPI interpretation, were publicly accused of "Wage theft" by WEA leadership (This Week in Olympia, 2018). During one negotiation session, a financial analysis was presented supporting the "swap" and clearly showing the union proposal would bankrupt the district. Local union leadership acknowledged the analysis accuracy, then indicated it was not their problem, and they would "rely on the legislature to bail the district out" (Evergreen Public Schools, 2018).

Once all 295 districts succumbed to the pressure and strikes, ratified contracts contained salary schedules costing up to 20% above provided state revenue (Evergreen Public Schools, 2018). These contracts often lacked the enrichment provisions of E2SSB 6362 to justify the difference being made up from recently renamed local "enrichment levies." In response to eminent district deficits, the 2019 legislature passed ESSB 5313 (Washington State Legislature, 2019), which rose the local levy lid by 67% to $2.50/$1,000, allowing districts to pay their new contractual obligations. Before the ink had dried on the McCleary "Fix," local funds were again paying for "basic education."

The Hidden McCleary "Fix" Cost

Beyond the financial toll, the aftermath of the McCleary Fix severely strained relationships between district leadership and labor unions. The contentious negotiations and multiple strikes across the state eroded the trust that had once existed between many superintendents and their staff. Some superintendents, who had previously stood alongside teachers advocating for better funding, now found themselves vilified as adversaries, accused of "attempted wage theft" (This Week in Olympia, 2018).

Unlike in 1983 when the state salary scheduled was created, the legislature had made a one-time decision, granted an apparent blank check to WEA, left the superintendents to fill in the amount and sign, and washed their hands of McCleary. Superintendents do not create or even control district revenues needed to pay for this check.

If the 2017-18 legislature had acted with the same foresight as their 1983 predecessors, the dynamics between teachers and administrators would likely be markedly different today. Instead of seeing each other as adversaries across the bargaining table, district leaders, staff and unions could have collaborated on how to best allocate local enrichment levy funds to improve student learning. Placing teacher salary determination at the legislative level where the revenues are

controlled would place the funding tug-of-war where it belongs, between the legislature and the unified efforts of all state education organizations.

Figure 2
Funding Tug-of-War
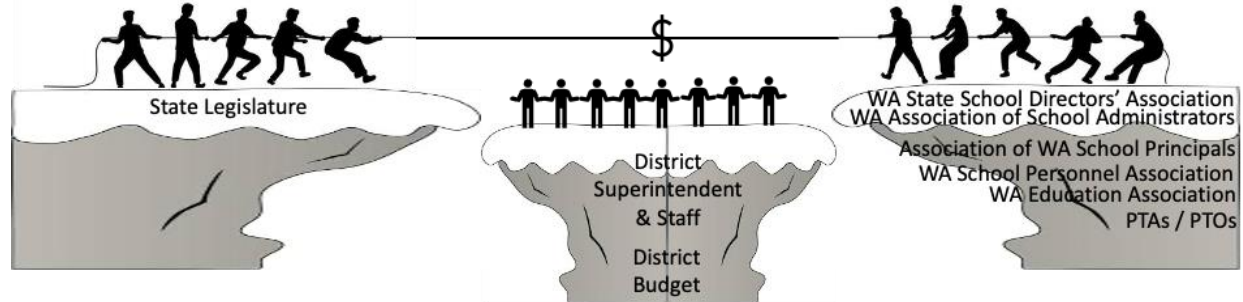
When teachers decide to become principals and administrators, they do so not to isolate themselves from students and teachers in classrooms, but rather to use their experience and knowledge to facilitate collaboration and learning across classrooms. Likewise, most superintendents believe in servant leadership and would prefer to focus on collaborating with all stakeholders to inform required decisions and best meet the needs of students, staff, families and the community rather than fight a financial battle they cannot control or win.

Getting the District Out of the "Fix" They are In

The hope for a legislative bailout to fix the financial crisis created by the McCleary implementation was short-lived. While ESSB 5313 raised the local enrichment levy cap, the legislature has since signaled that the McCleary decision "fixed" education funding and had largely moved on from the issue. The pandemic temporarily masked the looming budget deficits through federal stimulus funds, but now, with declining enrollment and inflationary salary increases, the financial situation has become untenable for many districts.

Heading into the 2025 legislative session, there is interest in addressing funding shortfalls in Special Education, transportation, and materials/supplies/operating costs (MSOC). However, there has been little discussion of the core problem—unsustainable "basic education" salaries paid with local funds.

The financial struggles of the Marysville School District have become a bellwether for the broader crisis. While media coverage has focused on budget cuts and proposals, the core issue remains under discussed: in 2022-23, state funding for teachers was $99,632, but the average teacher salary was $115,804 (Appendix H). When accounting for benefits and leave, the actual cost per teacher rises to nearly $156,000, leaving a shortfall of $36,000 per teacher, which must be covered by local levy funds. To compensate, Marysville employs 47 fewer certificated staff than the prototypical funding model and still is in financial hardship.

What will it take to balance the Marysville School District's budget—and by extension, prevent further crises in other districts? The first step is acknowledging the root causes of the problem: inadequate state funding, exacerbated by the increased financial burden of teacher salaries. Only by recognizing this imbalance can a meaningful solution be found.

Going forward, a broad strategy must be agreed upon. Since 85% of district budgets are spent on personnel, districts face three options: reduce staff, lower salaries, or secure additional revenue. Cutting staffing below the levels outlined in the prototypical funding formula, however, is not a feasible solution without compromising basic education.

Lastly, we must determine who has the power and resources to resolve the issue. Unfortunately, it is not the people working in our schools every day who understand the impact this situation is having on students and staff and have the motivation for change. Rather, it rests with our collective representatives in Olympia who defined the field and rules for the game in which we play.

References

Evergreen Public Schools. (2018, August 8). *August Bargaining Documents*. (J. Steach, Producer) Retrieved from Negotiations History: https://cee2249.egnyte.com/dl/NPRDuG5APO

Evergreen Public Schools. (2018, September 5). *Bargaining Information*. Retrieved from Evergreen Public Schools: https://cee2249.egnyte.com/dl/An6LKFm94t

Evergreen Public Schools. (2018, May). Email Exchange with Legislators through Lobbyist. *McCleary Fix Clarification*. Vancouver, WA, USA: John Steach.

John P Erlick, J. (2010, February 4). *Court Rulings*. Retrieved October 2018, from King County Superior Court: https://cee2249.egnyte.com/dl/KbZZiAJraZ

National Education Association. (2024, August 1). *Education funding and statistics in Washington state*. Retrieved October 2024, from Washington Education Association: https://www.washingtonea.org/file_viewer.php?id=62247

This Week in Olympia. (2018, September). *Past Episodes*. Retrieved November 2018, from This Week in Olympia: https://cee2249.egnyte.com/dl/lhKEjCQ3LF

Washington Association of School Administrators. (2017, October 25). *Government Relations*. Retrieved October 2024, from Washington Association of School Administrators: https://wasa-oly.org/WASA/images/WASA/4.0%20Government%20Relations/4.3%20Current%20Issues/Download_Files/EHB%202242/Supt%20Chris%20Reykdal%20Oct%2025%202017%20Enrichment%20Levy%20Guidance.pdf

Washington State Legislature. (1987). *Historical Session Laws*. Retrieved October 2024, from Washington State Legislature: https://leg.wa.gov/codereviser/documents/sessionlaw/1987pam2.pdf

Washington State Legislature. (2018, June 1). *Bill Summary*. Retrieved October 2024, from Washington State Legislature: https://app.leg.wa.gov/billsummary?Year=2017&BillNumber=2242

Washington State Legislature. (2018, June 1). *Bill Summary*. Retrieved October 2024, from Washington State Legislature: https://app.leg.wa.gov/billsummary/?BillNumber=6362&Year=2018&Initiative=false

Washington State Legislature. (2019, April 28). *ESSB 5351*. Retrieved October 2024, from Washington State Legislature: https://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Passed%20Legislature/5313-S.PL.pdf?q=20241016122403

Washington State Supreme Court. (2012, January 5). *Washington State Supreme Court.* Retrieved October 2024, from Court Rulings: https://www.courts.wa.gov/opinions/pdf/843627.opn.pdf
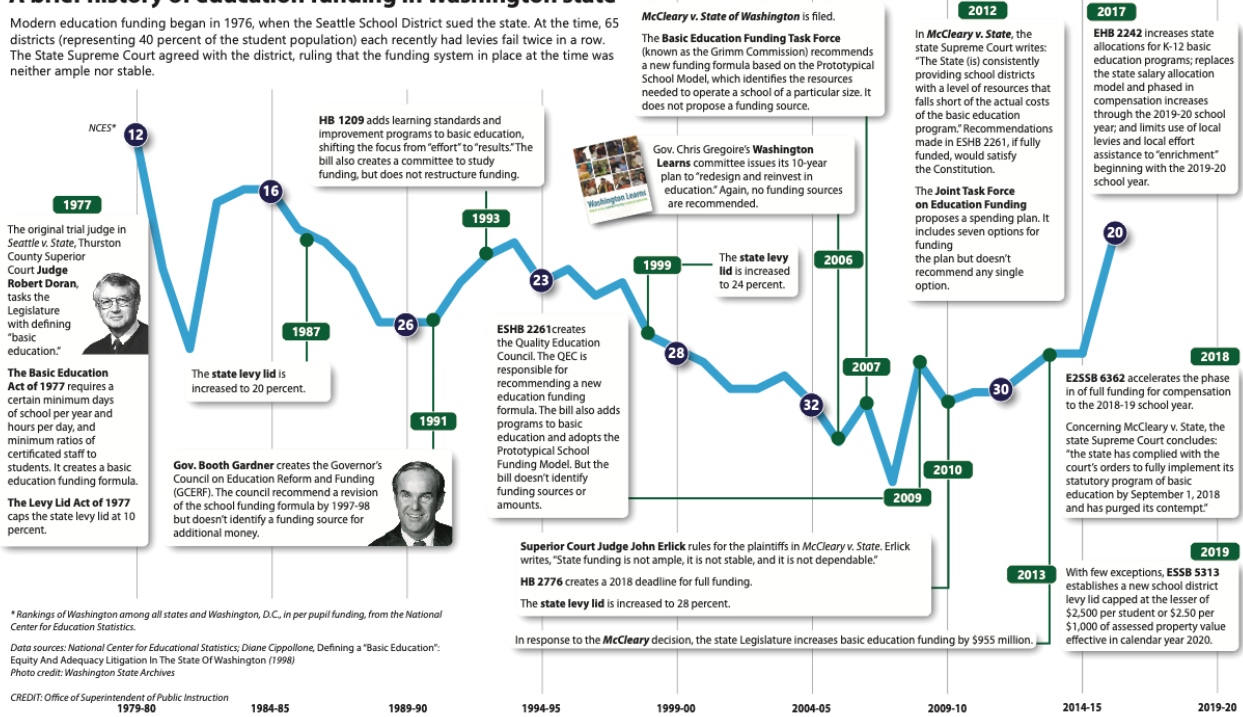
About the Author

John Steach, EdD., is Chief Executive Officer of the Center for Educational Effectiveness. Past experiences include former superintendent in Evergreen (Vancouver), WA, and Canby, OR, and adjunct faculty teaching school finance at Washington State University (Tri-Cities).

Appendix A
OSPI Overview of Washington State Education Funding History

A brief history of education funding in Washington state

Modern education funding began in 1976, when the Seattle School District sued the state. At the time, 65 districts (representing 40 percent of the student population) each recently had levies fail twice in a row. The State Supreme Court agreed with the district, ruling that the funding system in place at the time was neither ample nor stable.

*NCES**

1977

The original trial judge in *Seattle v. State*, Thurston County Superior Court **Judge Robert Doran**, tasks the Legislature with defining "basic education."

The Basic Education Act of 1977 requires a certain minimum days of school per year and hours per day, and minimum ratios of certificated staff to students. It creates a basic education funding formula.

The Levy Lid Act of 1977 caps the state levy lid at 10 percent.

1987

The **state levy lid** is increased to 20 percent.

1991

Gov. Booth Gardner creates the Governor's Council on Education Reform and Funding (GCERF). The council recommend a revision of the school funding formula by 1997-98 but doesn't identify a funding source for additional money.

HB 1209 adds learning standards and improvement programs to basic education, shifting the focus from "effort" to "results." The bill also creates a committee to study funding, but does not restructure funding.

1993

ESHB 2261 creates the Quality Education Council. The QEC is responsible for recommending a new education funding formula. The bill also adds programs to basic education and adopts the Prototypical School Funding Model. But the bill doesn't identify funding sources or amounts.

Superior Court Judge John Erlick rules for the plaintiffs in *McCleary v. State*. Erlick writes, "State funding is not ample, it is not stable, and it is not dependable."

HB 2776 creates a 2018 deadline for full funding.

The **state levy lid** is increased to 28 percent.

In response to the *McCleary* decision, the state Legislature increases basic education funding by $955 million.

McCleary v. State of Washington is filed.

The **Basic Education Funding Task Force** (known as the Grimm Commission) recommends a new funding formula based on the Prototypical School Model, which identifies the resources needed to operate a school of a particular size. It does not propose a funding source.

Gov. Chris Gregoire's **Washington Learns** committee issues its 10-year plan to "redesign and reinvest in education." Again, no funding sources are recommended.

1999

The **state levy lid** is increased to 24 percent.

2006

2007

2009

2010

2013

2012

In *McCleary v. State*, the state Supreme Court writes: "The State (is) consistently providing school districts with a level of resources that falls short of the actual costs of the basic education program." Recommendations made in ESHB 2261, if fully funded, would satisfy the Constitution.

The **Joint Task Force on Education Funding** proposes a spending plan. It includes seven options for funding the plan but doesn't recommend any single option.

2017

EHB 2242 increases state allocations for K-12 basic education programs; replaces the state salary allocation model and phased in compensation increases through the 2019-20 school year; and limits use of local levies and local effort assistance to "enrichment" beginning with the 2019-20 school year.

2018

E2SSB 6362 accelerates the phase in of full funding for compensation to the 2018-19 school year.

Concerning McCleary v. State, the state Supreme Court concludes: "the state has complied with the court's orders to fully implement its statutory program of basic education by September 1, 2018 and has purged its contempt."

2019

With few exceptions, **ESSB 5313** establishes a new school district levy lid capped at the lesser of $2,500 per student or $2.50 per $1,000 of assessed property value effective in calendar year 2020.

Data point labels: 12, 16, 26, 23, 28, 32, 30, 20

* Rankings of Washington among all states and Washington, D.C., in per pupil funding, from the National Center for Education Statistics.

Data sources: National Center for Educational Statistics; Diane Cippollone, Defining a "Basic Education": Equity And Adequacy Litigation In The State Of Washington *(1998)*
Photo credit: Washington State Archives

CREDIT: Office of Superintendent of Public Instruction

1979-80   1984-85   1989-90   1994-95   1999-00   2004-05   2009-10   2014-15   2019-20

Appendix B
2017 EHB-2242 Passed Legislation (Excerpt)

```
29      NEW SECTION.  Sec. 702.  A new section is added to chapter 41.59
30   RCW to read as follows:
31      RESTRICTIONS  ON  CIS  SALARY  INCREASES  DURING  THE  TRANSITION
32   PERIOD. (1) A school district collective bargaining agreement that is
33   executed  or  modified  after  the  effective  date  of  this  section  and
34   that is in effect for the 2018-19 school year may not provide school
35   district certificated instructional staff with a percentage increase
                                    p. 74                    EHB 2242.PL
```

```
 1   to total salary for the 2018-19 school year, including supplemental
 2   contracts, that exceeds the previous calendar year's annual average
 3   consumer price index, using the official current base compiled by the
 4   bureau of labor statistics, United States department of labor, for
 5   the city of Seattle. However, if a district's average certificated
 6   instructional  staff  salary  is  less  than  the  average  certificated
 7   instructional staff salary allocated by the state for that year, the
 8   district  may  increase  salaries  not  to  exceed  the  point  where  the
 9   district's average certificated instructional staff salary equals the
10   average  certificated  instructional  staff  salary  allocated  by  the
11   state.
12      (2) This section expires August 31, 2019.
```

Appendix C
Email from OSPI Superintendent Chris Reykdal to Superintendents, Oct. 17ᵗʰ, 2017
(Excerpt)

Flexible Use of Local Levy Money

I will begin with the critical language of Section 501(2)(a):

"Enrichment activities are permitted under this section if they provide supplementation beyond the state" program of basic education.

This allows districts to use local levy dollars with substantial flexibility (I will discuss one new limiting factor contained in Section 103 later in this message). The Legislature goes on to specifically detail examples of the allowable uses:

1) Hours beyond the minimum instructional offerings;
2) Additional staff for class-size reduction beyond the class-size allocated in the prototypical model;
3) Additional program offerings;
4) Professional learning for staff;
5) Extracurricular activities, extended school days, or any extended school year;
6) Additional course offerings beyond the minimum instructional program;
7) Early learning activities;

8) Any additional salary costs attributable to the activities listed above; and
9) "Additional activities or enhancements that the office of the superintendent of public instruction determines to be a documented and demonstrated enrichment of the State's statutory program of basic education…"

The Bottom Line

Districts will need to start calculating the actual basic education salary paid to each certificated staff member. Any additional compensation provided to that staff member in local bargaining for TRI must be for additional time, responsibilities, and incentives. You will need to establish clear procedures for documenting additional time so that the supplemental contract paid to staff does not exceed the hourly rate paid in the base contract. The effect of this is to eliminate supplemental contracts that provide additional pay without the corresponding additional work associated with that pay. Not all incentives and responsibilities can be easily quantified using a time basis. My office will work with business officers and other stakeholders on additional guidance that is consistent with the intent of the statute.

I do not anticipate court guidance that would specifically impact this new legislative requirement because it relates to supplemental contracts above basic education. This preliminary guidance I am providing you today is the result of the plain language adopted by the Legislature. At OSPI, it is our responsibility to follow that language and give you as much constructive guidance as we can so you can remain in compliance with the law and still exercise the flexibility provided to you within the constraints of the law. We will develop additional guidance as we learn more about the legislative intent, the specific interests of districts, and of course any changes that may arise from actions in the 2018 Legislative Session.

34   **Sec. 13.**   RCW 41.59.800 and 2017 3rd sp.s. c 13 s 702 are each
35   amended to read as follows:
36   (1) A school district collective bargaining agreement that is
37   executed or modified after July 6, 2017, and that is in effect for
38   the 2018-19 school year may not ((provide)) increase total school

p. 22   SB 6362

---

1   district expenditures for certificated instructional staff ((with a
2   percentage increase to total salary)) salaries for the 2018-19 school
3   year((, including supplemental contracts, that exceeds)) by more than
4   the previous calendar year's annual average consumer price index,
5   using the official current base compiled by the bureau of labor
6   statistics, United States department of labor, for the city of
7   Seattle. However, if a district's average certificated instructional
8   staff salary is less than the average certificated instructional
9   staff salary allocated by the state for that year, the district may
10   increase salaries not to exceed the point where the district's
11   average certificated instructional staff salary equals the average
12   certificated instructional staff salary allocated by the state.
13   (2) Nothing in this section prohibits individuals from receiving
14   additional compensation for service including, but not limited to,
15   additional days or hours of service, additional responsibilities,
16   step increases, and expansions of academic programs that require
17   additional personnel or increased service provided by current
18   personnel.
19   (3) This section expires August 31, 2019.

Appendix E
2018 SB-6362 Engrossed Second Substitute Bill as Passed (Excerpt)

```
34      Sec. 208.   RCW 41.59.800 and 2017 3rd sp.s. c 13 s 702 are each
35   amended to read as follows:
36      (1)  A  school  district  collective  bargaining  agreement  for
37   certificated instructional staff that is executed or modified after
38   July 6, 2017, and that is in effect for the 2018-19 school year may
39   not ((provide school district certificated instructional staff with a
```
<center>p. 24   E2SSB 6362.PL</center>

```
1    percentage)) increase ((to)) average total salary for the 2018-19
2    school year, including supplemental contracts, ((that exceeds the
3    previous calendar year's annual average consumer price index, using
4    the official current base compiled by the bureau of labor statistics,
5    United States department of labor, for the city of Seattle. However,
6    if a district's average certificated instructional staff salary is
7    less  than  the  average  certificated  instructional  staff  salary
8    allocated by the state for that year, the district may increase
9    salaries  not  to  exceed  the  point  where  the  district's  average
10   certificated  instructional  staff  salary  equals  the  average
11   certificated instructional staff salary allocated by the state)) in
12   excess of the following:
13      (a) Annual salary inflationary adjustments based on the rate of
14   the yearly increase of the previous calendar year's annual average
15   consumer price index, using the official current base compiled by the
16   bureau of labor statistics, United States department of labor, for
17   the city of Seattle;
18      (b)  Annual  experience  and  education  salary  step  increases
19   according to the salary schedule specified in the agreement;
20      (c)  Salary  changes  for  staffing  increases  due  to  enrollment
21   growth or state-funded increases under RCW 28A.150.260;
22      (d)  Salary  changes  to  provide  professional  learning  under  RCW
23   28A.415.430;
24      (e) Increases related to bonuses for attaining certification from
25   the national board for professional teaching standards;
26      (f)  School  districts  with  an  average  total  certificated
27   instructional  staff  salary  less  than  the  statewide  average
28   certificated instructional staff salary allocation used to distribute
29   funds  for  basic  education  as  estimated  by  the  office  of  the
30   superintendent of public instruction for the 2018-19 school year may
31   provide salary increases up to the statewide average allocation; or
32      (g)  Salaries  for  new  certificated  instructional  staff  hired  in
33   the 2018-19 school year.
34      (2)  Changes  to  any  terms  of  an  employment  contract  for
35   nonrepresented  employees  must  comply  with  the  same  requirements
36   established in this section.
37      (3) This section expires August 31, 2019.
```

Appendix F
2018 Washington State House of Representatives Office of Program Research Appropriations Committee E2SSB 6362 BILL ANALYSIS Prepared for 2/24/18 Hearing Date (Excerpts)

Engrossed House Bill 2242 placed restrictions on school districts' collective bargaining agreements with CIS or CLS. During the 2018-19 transitional period for the new salary allocations, a school district's collective bargaining agreement with CIS or CLS may not provide for a total salary increase, including supplemental contracts, with a percentage increase that exceeds the CPI. This restriction applies to collective bargaining agreements that are in effect for the 2018-19 school year and that are entered into or modified after the restriction becomes law. A similar limit applies to salaries for CAS.

CIS Supplemental Contracts. Districts may pay CIS salaries that exceed the specified amounts only by separate contract for additional time, responsibility, or incentive. Beginning with the 2019-20 school year, a district may enter supplemental contracts only for activities that meet the new definition of enrichment, and the hourly rate under a supplemental contract may not exceed the CIS employee's hourly basic education salary.

Enrichment Limitations. Beginning with the 2019-20 school year, districts may spend enrichment levies (including transportation vehicle enrichment levies), LEA, and other local revenues only for documented and demonstrated enrichment of the state's program of basic education. To constitute enrichment, a school district expenditure must supplement state minimum instructional offerings, staffing ratios, program components, or professional learning allocations. Permitted forms of enrichment consist of extracurricular activities, extended school days or school years, additional course offerings, early learning, administration of enrichment activities, and additional

House Bill Analysis   - 4 -   E2SSB 6362

activities approved by the Superintendent of Public Instruction (SPI) through the pre-ballot review process. The SPI may report to the Legislature on expanding the list of specifically permitted enrichment activities. There are also limitations on the portion of CAS salaries that can be funded by enrichment levies.

Beginning with enrichment levies for collection in calendar year 2020, a district must receive approval by the Office of the Superintendent of Public Instruction (OSPI) of an enrichment expenditure plan before it may submit an enrichment levy proposition to the voters. Processes are established for the OSPI pre-ballot review of proposed enrichment expenditures, including limitations on changes to pre-approved uses.

📅 07/31/2018   Share: f 🐦

← Back to Blog

Check out the new WEA Pay Raise Map!

The Legislature has increased funding for K-12 public schools by billions of dollars because of the McCleary decision – including $2 billion to increase educator salaries in the 2018-19 school years.

Supt. Chris Reykdal: "wide-open collective bargaining" on educator pay this year.

"The Legislature's intent, related to fully funding education, is putting the money toward that which the court has said it needs to go, and that is salaries," said Rep. Mike Pellicciotti. "I would expect school districts are going to be honoring that requirement."

The money is there, yet some superintendents are blocking pay raises for teachers and support staff. They continue to claim there's a cap on salary increases for certificated and classified employees this year. But Superintendent of Public Instruction Chris Reykdal shot down that idea in a memo last week.

There is no cap on the size of pay raises that can be negotiated for certificated and classified staff this year, Reykdal said.

"(There are) allowable salary increases in six additional categories above inflation," Reykdal wrote. "In short, I believe (legislators) adopted a wide-open collective bargaining framework, even in 2018–19..."

Proving Reykdal's point, some WEA locals have negotiated significant pay raises in the last month. The best settlements range anywhere from 15 percent to 34 percent for the school year that starts Sept. 1

Here's the map that shows districts where WEA members have won significant pay raises.

More than 200 WEA locals across the state continue to negotiate pay raises.

Rep. Mike Pellicciotti says he expects school districts to invest state funding increases in educator pay.

WEA's message to school administrators and school boards is simple: You have the money. It's intended for educator salaries. Now negotiate the competitive, professional salaries needed to attract and keep caring, qualified teachers and support professionals for your students.

Don't accept excuses from your school board or superintendent – or anyone else. Thanks to McCleary, the money is there. $2 billion for classified and certificated pay raises – this year. That is money legislators earmarked for salaries. Don't let your district administrators squander it on something less important.

Competitive, professional pay is needed to attract – and keep – quality teachers and support professionals for our students. That's true in every district.

Posted in: Education funding I Professional pay I Bargaining rights I Local control I Legislative Issues

← Back to Blog

Marysville K-12 Average Salary for Full-Time Teachers
(with a Single Assignment) Compared to Statewide Average

Source: OSPI S275, compiled by LEAP.
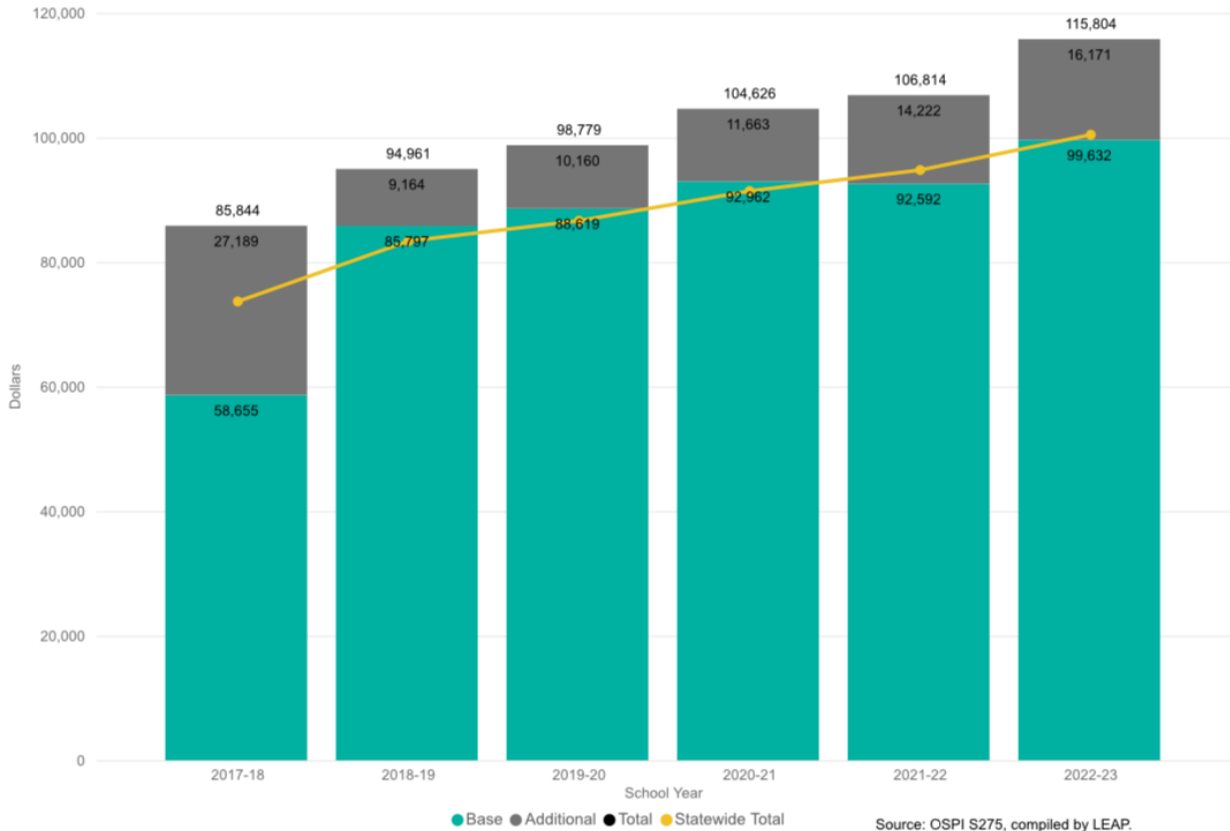
Educational Associations in Washington State: Advocating for Opportunity and Excellence

James Crawford

Abstract

In Washington State, teacher associations play a crucial role in advocating for equitable resources, fair working conditions, and policies that promote educational excellence. This article examines the roles, challenges, and potential for partnerships that associations offer within the educational landscape, with a focus on how various stakeholders can work effectively to improve outcomes for students and educators.

In the dynamic landscape of education in Washington State, teacher associations play a critical role in shaping the environment for teachers, staff, and students. They serve as advocates for fair working conditions, equitable resources, and policies that promote educational excellence. These organizations negotiate collective bargaining agreements, advocate for policies that impact educational ecosystems, and support legislative actions that influence state funding and resource allocation. While research suggests that teacher associations can have a positive impact on student achievement, the relationship between associations and educational quality is complex (Cowen & Strunk, 2015; Eberts, 2007).

Despite their contributions, teacher associations are sometimes misunderstood or misrepresented, which can lead to conflicts and missed opportunities for collaboration with school administration, community organizations and legislators. Recognizing the potential of associations as partners in education is essential to building a collaborative environment focused on providing high-quality education for every student.

The Role of Teacher Associations

Teacher associations, including the Washington Education Association (WEA) and the American Federation of Teachers Washington (AFT Washington), are fundamental in negotiating collective bargaining agreements, which set the terms for salaries, benefits, and working conditions for educators and classified staff. These agreements are about more than compensation—they are about ensuring that educators receive the support, resources, and professional respect they need to perform their roles effectively.

Moreover, associations advocate for policies that extend beyond the classroom, such as reduced class sizes, professional development, and safer working conditions. Their lobbying efforts for state funding and legislative action directly influence educational quality, with recent state policies on technology integration reflecting examples of advocacy efforts. Studies have shown that formal partnerships between teachers' unions and school management can contribute to improved student achievement (Rubinstein & McCarthy, 2014).

Challenges and Misconceptions
Despite their contributions, associations often face criticism for allegedly protecting underperforming teachers or resisting necessary reforms. While associations can indeed play a

---

supportive role in enhancing educational quality, some studies argue that unionization may have adverse effects on students' long-term outcomes, highlighting the complex nature of their influence (Johnson, 2020). This criticism can create friction between associations and school administrators or boards. However, it is essential to approach these challenges with a balanced perspective. Research suggests that many conflicts stem from misunderstandings about the associations' role in protecting teachers' professional integrity and rights (Mand et al., 2018).

Addressing these misconceptions requires open communication, attentive listening, and a commitment to shared goals. When association leaders and district administrators engage in authentic dialogue, it can lead to innovative solutions that serve both educators and students.

Navigating Conflicts of Interest
A significant challenge arises when various interests within the educational ecosystem clash, pitting stakeholders against one another and hampering collaboration. Limited funding often exacerbates these "us versus them" tensions, as different groups compete for the same finite resources. Even in states where collective bargaining is prohibited, teacher associations play a role in engaging educators and impacting student achievement, showing adaptability in advocating for educational quality (Keefe, 2020).

Below are examples of common conflicts:
- **Backbone Organizations vs. School Districts:** Organizations that support specific initiatives may push for funding directed toward item-specific projects. Meanwhile, school districts may need to prioritize immediate needs, such as hiring staff or maintaining facilities. These differing priorities can create friction.
- **Parents vs. Associations:** Parents may advocate for changes in school policies or staffing decisions that associations oppose due to contract provisions or job-security concerns. These conflicts can become highly charged, particularly when parents feel that their children's educational experiences are being compromised by association actions or when associations feel that parent demands are undermining the professionalism and rights of educators.
- **Legislators vs. Educators:** Legislators may prioritize politically popular reforms, such as performance-based pay or charter-school expansion, which associations and educators might view as threats to public education or their professional integrity. This dynamic creates a polarized environment where compromise becomes difficult, and trust erodes between policymakers and those working in the schools.
- **District Attorneys and Legal Counsel:** District attorneys and legal counsel add another layer of complexity, often intervening in union negotiations, grievances, or disputes involving school policies. Their role is to protect the district's legal interests, which can sometimes create friction with associations that advocate for changes in working conditions or policies. Legal counsel may also be involved in interpreting laws and regulations that impact association activities, such as collective bargaining rights or due process protections. When legal interpretations conflict with association objectives, it can lead to prolonged disputes and complicate efforts to reach a resolution.

By understanding these conflicts, stakeholders can work toward solutions that consider diverse perspectives.

The Politics that Hurt Children
Navigating the political landscape of association support can be a complex and sometimes contradictory endeavor. In the realm of education, it is not uncommon for individuals—whether they are school board members, administrators, legislators, community organizations—to be perceived as either supporting or opposing associations, depending on the context and their audience. This dual positioning is often a strategic maneuver to align with shifting political winds or to gain favor with influential groups.

- **Perception vs. Reality:** One might publicly advocate for teacher pay raises and improved working conditions to appear supportive of associations while simultaneously endorsing policies that limit collective bargaining rights or weaken association influence. This creates a dichotomy where an individual's public stance may not align with their private actions or beliefs. Such contradictions can fuel mistrust and contribute to the perception that some leaders are playing political games rather than genuinely supporting educators and students.
- **The Game of Politics:** This strategic ambiguity is a form of political maneuvering that allows leaders to navigate the complex web of stakeholders in education. For example, a board member might show support for association initiatives during election campaigns but adopt a more critical stance when negotiating contracts. Similarly, a superintendent might be seen as an association advocate when promoting teacher-friendly policies but is later accused of being anti-association when enforcing accountability measures. These shifts in positioning often reflect a desire to maintain political capital and balance competing interests rather than a commitment to a consistent set of principles.

Ultimately, these politics hurt children.

The Importance of Unified Leadership
School boards and superintendents have a critical role in ensuring that political divisions do not undermine educational progress. Their role is pivotal in establishing a unified vision for the district and ensuring that divisive politics do not create factions that undermine educational progress.

Effective leadership requires:
1. **Setting a Clear Vision and Purpose:** Leaders must articulate a shared vision that focuses on the success and well-being of students. This vision should be communicated clearly and consistently to all stakeholders, emphasizing that every decision must be made in the best interest of students and the community.
2. **Fostering Collaboration and Open Communication:** Leaders must create spaces for honest, respectful dialogue where diverse perspectives are valued. This includes regularly meeting with association representatives, parent groups, and other stakeholders to discuss concerns and work collaboratively toward solutions. This also includes expecting district leaders and principals to positively collaborate with associations. By doing so, they can prevent misunderstandings and build trust.

3. **Maintaining a Neutral Stance:** It is crucial for school boards and superintendents to act as mediators, balancing the needs of all parties and making data-driven decisions in the best interest of students, research, and law.
4. **Addressing Factionalism:** Leaders must stand against any efforts by external or internal groups to pit stakeholders against each other. By addressing these challenges, school boards and superintendents can cultivate a culture of unity and shared responsibility.

Strategies for Building a More Unified Team

Creating a collaborative environment requires intentional strategies. Here are some approaches to navigate these complexities:

1. **Facilitated Dialogue:** Bring together representatives from associations, parent organizations, backbone groups, legislators, and district attorneys for structured, facilitated discussions to surface underlying issues and build understanding. Neutral facilitators can guide these conversations to ensure all voices are heard and focus remains on shared goals.
2. **Shared Data and Transparency:** Establish a common set of data that all parties can agree upon to shift the conversation from anecdotal disagreements to a fact-based dialogue. For instance, using student performance data or budget analysis can shift discussions from anecdotes to evidence, enabling a more informed decision-making process.
3. **Collaborative Problem-Solving:** Develop joint task forces or working groups where representatives work together to solve specific problems to foster collaboration. For example, a task force on improving teacher recruitment and retention could include association leaders, district administrators, parents, and representatives from backbone organizations and legal counsel, each contributing their expertise to develop practical solutions and ownership of outcomes.
4. **Clear Communication of Trade-offs:** Remain transparent about the constraints and trade-offs involved in funding decisions to help manage expectations.

Associations as Partners in Educational Reform

When effectively engaged, associations can be powerful allies in educational reforms. Addressing educational access is a key goal of teacher associations, as they strive to improve educator effectiveness and advocate for policies that bridge gaps (Best & Winslow, 2014). When leveraged effectively, they can support initiatives aimed at closing achievement gaps, improving graduation rates, and implementing culturally responsive teaching practices. By harnessing their organizing power and influence, associations can help build consensus and drive the successful implementation of district and state initiatives.

In Washington State, successful partnerships between associations and school districts have led to improvements in professional learning communities and teacher evaluation systems, proving that collaboration can drive meaningful change.

Looking Forward: A Call to Action

Teacher associations in Washington State continue to advocate for educators and play an essential role in shaping public education. By embracing their role as reform partners, school

boards, superintendents, district leaders, principals, district attorneys, legislators, and communities can work together to ensure that every student can succeed. Moving forward, collective efforts are essential to address challenges we face on the road ahead.
Let us reinforce these partnerships and maintain a unified commitment to opportunity, excellence, and the promise of public education for all.

References

Best, J., & Winslow, E. (2014). *Educational equity: Challenges for educator effectiveness* [Policy Brief]. Center on Great Teachers & Leaders at American Institutes for Research. https://files.eric.ed.gov/fulltext/ED557602.pdf

Cowen, J. M., & Strunk, K. O. (2015). *The impact of teachers' unions on educational outcomes: What we know and what we need to learn*. Academia. https://www.academia.edu/23664363/The_impact_of_teachers_unions_on_educational_outcomes_What_we_know_and_what_we_need_to_learn

Eberts, R. W. (2007). Teachers unions and student performance: Help or hindrance? *The Future of Children*, 17(1), 175-196. https://files.eric.ed.gov/fulltext/EJ795878.pdf

Johnson, M. (2020, August 24). *The negative effects of teacher unionization on long-term student outcomes*. Chicago Policy Review. https://chicagopolicyreview.org/2020/08/24/the-negative-effects- of-teacher-unionization-on-long-term-student-outcomes/

Keefe, J. H. (2020). *Teachers' unions: Engaging teachers and improving student achievement in states that prohibit collective bargaining*. Research Gate. https://www.researchgate.net/publication/338851527_Teachers'_Unions_Engaging_Teachers_and_Improving_Student_Achievement_in_States_That_Prohibit_Collective_Bargaining

Mand, R., Muhammad, N., & Khan, N. (2018). Exploring the role of teachers' associations as the protectors of teachers' rights. *Global Social Sciences Review* (GSSR), 3(1), 71-82. https://doi.org/10.31703/gssr.2018(III-I).05

Rubinstein, S. A., & McCarthy, J. E. (2014). *Teachers unions and management partnerships: How working together improves student achievement*. American Progress. https://www.americanprogress.org/wp-content/uploads/sites/2/2014/03/Rubinstein-EduReform-report.pdf

About the Author

James Crawford, EdD, has served as a K-12 superintendent, central office leader, school principal, and classroom teacher in the Pacific Northwest.

Advancing Literacy Education: Assessing the Efficacy of an Instructional Support System for Differentiated Reading

David M. Besterci

Abstract

This mixed-methods study examined the implementation and effectiveness of a systematic approach to differentiated reading instruction across two elementary schools. The intervention enhanced teacher-to-student ratios through strategic resource allocation and structured collaboration. Analysis of Northwest Evaluation Association (NWEA) Measurement of Academic Progress (MAP) Reading assessments revealed moderate to substantial effects (d = 0.31-0.59) for non-IEP/RTI students across two years. Qualitative findings highlighted three key implementation factors: creative problem-solving, professional growth, and student engagement. Results suggest that systematic organization of evidence-based practices effectively supports differentiated instruction, particularly in addressing post-pandemic learning challenges.

Keywords: differentiated instruction, reading intervention, systems thinking, professional learning communities, mixed methods

The implementation of differentiated instruction in K-4 classrooms presents significant challenges for educators, particularly in addressing diverse student reading needs. The disparity in reading skills grows significantly as students advance through grades. While age differences within a grade typically span 12 months, reading proficiency can vary by more than four years in first grade and over ten years by fifth grade. This vast range places tremendous strain on classroom teachers attempting to effectively differentiate instruction (Hargis, 2006).

National data reveals the diverse learning needs in contemporary American classrooms. Approximately 10.6% of public-school students are English learners (ELs), while 15% receive special education services through Individualized Education Programs (IEPs). Additionally, about 6% of students meet criteria for gifted education services (U.S. Department of Education, 2024). These statistics underscore the multifaceted nature of American classrooms, where educators must address a wide spectrum of learning needs, abilities, and linguistic backgrounds through differentiated instructional approaches.

Given this complex educational landscape, a crucial understanding has emerged: differentiated instruction must serve all students, not just those struggling or those identified for specific services. Every student, from those requiring additional support to those exceeding grade-level expectations, deserves instruction tailored to their needs. However, the expectation that individual classroom teachers can effectively differentiate instruction for such diverse needs without systematic support is both unrealistic and unsustainable. The complexity and range of student needs demand a comprehensive, systematic approach to support both teachers and students.

The COVID-19 pandemic exacerbated existing educational challenges across the country. This impact was particularly evident at Alpine Elementary School (pseudonym), where approximately

90% of second-grade students began the 2021-2022 academic year reading below grade level. These concerning statistics highlighted the limitations of traditional instructional approaches and motivated our search for more effective differentiated reading instruction methods.

To address this challenge, our school—which serves 313 students with a staff of 17 teachers—developed an innovative approach based on collaborative inquiry and systems thinking. The conceptual framework that emerged integrates differentiated instruction theory (Tomlinson, 2005, 2014, 2023; Subban, 2006; Tomlinson & Imbeau, 2012; Eun, 2019) with systems thinking (Meadows, 2008; Senge, 2012; Clear, 2018) and was grounded in three guiding principles:
- Authentic activities involving research-based curriculum
- Small group instruction enabling differentiated teaching
- Intensive immersion supported by ongoing instructional assistance

This framework was further strengthened by incorporating Clear's (2018) approach, which emphasizes that effective systems, rather than just ambitious goals, are essential for achieving significant outcomes. As Clear notes, "Results have very little to do with goals and nearly everything to do with systems."

This study examines the implementation and effectiveness of an instructional support system designed to address these challenges, explicitly connecting systematic implementation structures with instructional effectiveness. Research questions for the study were:

1. How was the instructional support system for differentiated reading instruction implemented and refined over time?
2. To what extent were the goals of the instructional support system for differentiated reading instruction achieved?
3. How can general education teachers be effectively trained and supported in the use of the instructional support system for differentiated reading instruction?
4. How do general education teachers and school administrators perceive the benefits and challenges of using an instructional support system to implement differentiated reading instruction?

Intervention

The intervention was implemented in two distinct phases, beginning with second-grade classrooms in the 2021-2022 academic year and expanding to include third and fourth grades in 2022-2023. While this expansion broadened the program's reach, it also introduced new challenges as personnel resources were stretched to accommodate additional grade levels alongside existing building requirements.

In response to post-pandemic challenges and guided by our conceptual framework integrating differentiated instruction with systems thinking, we began by forming a professional learning community (PLC). This team was designed to transform traditional classroom structures and address the pressing need for accelerated reading progress among our second-grade students.

The intervention's foundation centered on enhancing teacher-to-student ratios during reading sessions by establishing a collaborative workshop model that transformed the traditional single-teacher classroom into a dynamic learning environment staffed by three educators. This enhanced staffing model enabled daily small group instruction where students rotated between stations, each focused on one of the essential literacy components (phonemic awareness, phonics, vocabulary, fluency, and comprehension). During each 60-minute session, these rotations maximized student engagement by allowing each group to work directly with a different educator, effectively tripling learning opportunities.

Unlike traditional pull-out models, our approach delivered all differentiated instruction within the regular classroom setting, eliminating transition time and ensuring continuous learning engagement. The intervention implemented a dynamic grouping system where student placements were fluid, with transitions to higher-level groups occurring as soon as students demonstrated skill mastery. These grouping adjustments, often implemented weekly based on ongoing assessment data, ensured instruction consistently matched student needs while maintaining appropriate challenges for all learners.

The intervention fostered a culture of continuous collaborative inquiry that extended beyond formal meeting structures. The team engaged in ongoing conversations throughout the school day, during preparation periods, and in brief hallway exchanges, creating a dynamic feedback loop where student progress data, instructional approaches, and effective practices were constantly analyzed and refined. This organic approach to professional dialogue enabled responsive adjustments to both grouping strategies and teaching methods.

The intervention operationalized our conceptual framework's three guiding principles through specific practices: research-based curriculum materials formed the foundation of authentic learning activities, the enhanced staffing model facilitated consistent small-group instruction, and the restructured format provided sustained instructional assistance.

This systematic approach to implementation aligned with Clear's (2018) emphasis on building robust support structures rather than pursuing goals in isolation. By focusing on creating sustainable and scalable practices, the intervention established a foundation for long-term educational improvement that could be maintained and adapted beyond the initial implementation period.

Methods

Study Design and Participants

This mixed-methods study employed a convergent design to evaluate the effectiveness of a systematic approach to differentiated reading instruction across two elementary schools within the same district. The schools were matched on key demographics including student socioeconomic status, historical achievement patterns, teacher experience levels, and district resource allocation. This matching process aimed to isolate the impact of the intervention while acknowledging the limitations of non-random assignment. All schools and locations are referred to by pseudonyms throughout this study to ensure participant confidentiality.

The student sample comprised 184 second-grade students across the 2021-2022 and 2022-2023 academic years, with 87 students in the treatment group and 97 in the control group. The treatment group attended Alpine Elementary School, where the instructional support system was implemented, while the control group attended another elementary school within the same district maintaining traditional instructional methods.

To examine the system's effectiveness, analysis focused on three distinct student populations: the whole class population, students without individualized education plans or specific interventions (non-IEP/RTI), and students with individualized education plans or receiving interventions (IEP/RTI). This segmentation allowed for a nuanced understanding of the system's effectiveness across diverse learning needs.

The educator participants represented various roles and experience levels within the school system. The core participant group included two second-grade classroom teachers with 23 and 34 years of experience respectively, an interventionist with 18 years of experience, and an administrator with 14 years of experience. Additional participants included third and fourth-grade teaching teams who implemented the system during the 2022-2023 school year, providing broader perspective on the system's scalability and effectiveness across grade levels.

Data Collection and Analysis
The study utilized a comprehensive data collection approach combining quantitative achievement measures with qualitative implementation insights. Quantitative data comprised Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) English Language Arts assessment scores, collected during fall and spring testing periods across two academic years through Achievement Status and Growth Summary Reports.

Qualitative data collection employed multiple methods to enhance validity through triangulation. Semi-structured interviews (see Appendix A) with second-grade teams and building administrators followed a protocol designed to elicit detailed insights about implementation experiences. These interviews were supplemented by online surveys (see Appendix B) administered to third and fourth-grade teams, which included both Likert-scale items and open-ended response options.

The analysis followed an integrated mixed-methods approach. Quantitative analysis began with descriptive statistics to identify patterns, followed by calculations of observed growth through Rasch Unit (RIT) score differentials between fall and spring assessments. Cohen's d effect sizes were computed for each student group to measure intervention impact.

For qualitative data, analysis employed a sequential coding process (Miles et al., 2020) to ensure trustworthiness and rigor. Initial in vivo coding preserved participants' direct language and experiences, capturing authentic perspectives on implementation. This was followed by values coding to examine underlying beliefs about the instructional support system. To enhance analytical depth and efficiency, OpenAI's ChatGPT was utilized as a supplementary tool in refining the coding framework and facilitating thematic analysis. The coding process involved multiple rounds of review and refinement to ensure consistency and accuracy (Kriukow, 2023), with ChatGPT serving as an analytical aid to identify emerging patterns and connections.

Thematic analysis then revealed patterns across data sources, which were integrated with quantitative findings to provide comprehensive insights into system effectiveness. This hybrid approach to qualitative analysis, combining traditional coding methods with AI-assisted analysis, enriched the interpretation of the data while maintaining methodological rigor.

Results

Analysis of both quantitative and qualitative data revealed significant impacts of the instructional support system on student achievement and teaching practices. The following sections present detailed findings from both the initial implementation year (2021-2022) and the expansion year (2022-2023).

Student Achievement Outcomes

Table 1 presents comparative data on student growth as measured by NWEA MAP Reading assessments. The data is disaggregated by academic year, treatment condition, and student subgroup (whole class, non-IEP/RTI, and IEP/RTI). Growth is reported in RIT units. For each group, the table shows sample size (n), mean RIT scores for fall and spring testing windows, standard deviations (SD RIT), and observed growth (calculated as spring minus fall RIT scores).

Table 1

Observed Growth of Comparison and Treatment Groups

Year Tested	Student Group	Data	Fall	Spring	Observed Growth
2021-2022	Comparison (whole class)	n	46	46	11.9
		Average RIT	166.8	178.7	
		SD RIT	12.8	12.9	
	Comparison (non-IEP/RTI)	n	33	33	12.4
		Average RIT	170.8	183.2	
		SD RIT	11.1	10.4	
	Comparison (IEP/RTI)	n	13	13	10.7
		Average RIT	156.7	167.4	
		SD RIT	11.5	11.8	
2021-2022	Treatment (whole class)	n	41	41	15.9
		Average RIT	165.6	181.5	
		SD RIT	14.7	15.6	
	Treatment (non-IEP/RTI)	n	30	30	17.1
		Average RIT	170.6	187.7	
		SD RIT	11.9	9.4	
	Treatment (IEP/RTI)	n	11	11	12.9
		Average RIT	151.8	164.7	
		SD RIT	12.9	17.2	
2022-2023	Comparison (whole class)	n	51	51	12.6
		Average RIT	168.4	181.0	
		SD RIT	13.4	13.2	
	Comparison (non-IEP/RTI)	n	36	36	14.3
		Average RIT	172.6	186.9	
		SD RIT	12.6	9.8	
	Comparison (IEP/RTI)	n	15	15	8.4
		Average RIT	158.3	166.7	
		SD RIT	9.4	8.8	
2022-2023	Treatment (whole class)	n	46	46	14.3
		Average RIT	166.3	180.6	
		SD RIT	12.0	14.8	
	Treatment (non-IEP/RTI)	n	32	32	16.9
		Average RIT	169.1	186.0	
		SD RIT	11.9	13.2	
	Treatment (IEP/RTI)	n	14	14	8.0
		Average RIT	160.1	168.1	
		SD RIT	10.0	10.1	

Whole Class Performance

The treatment group demonstrated consistently higher growth than the control group across both academic years, with effects moderating during program expansion. During the 2021-2022 academic year (see Figure 1), the treatment group showed a mean growth of 15.9 RIT points compared to 11.9 in the control group, yielding an effect size of 0.48. According to Coe's (2002) interpretation, this effect size indicates that 69% of the students in the treatment group showed higher growth scores than students in the comparison group, representing a moderate to substantial impact.

The 2022-2023 academic year (see Figure 2) showed continued positive effects during program expansion, with the treatment group's mean growth at 14.3 RIT points compared to 12.6 in the control group, yielding an effect size of 0.18. This moderated effect indicates that 58% of the treatment group students showed higher growth than the comparison group (Coe, 2002).

Figure 1
Whole Class Growth for 2021-2022 Academic Year
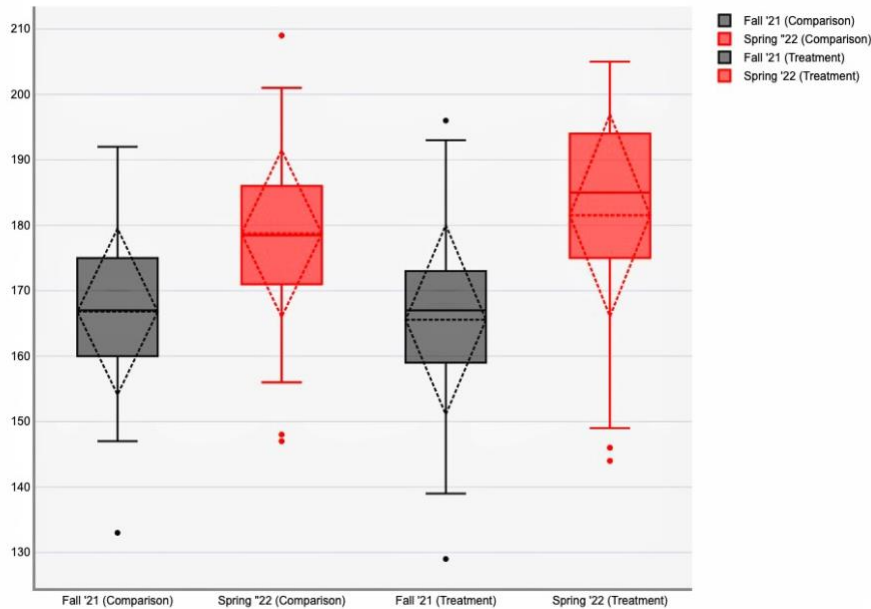
Figure 2
Whole Class Growth for 2022-2023 Academic Year
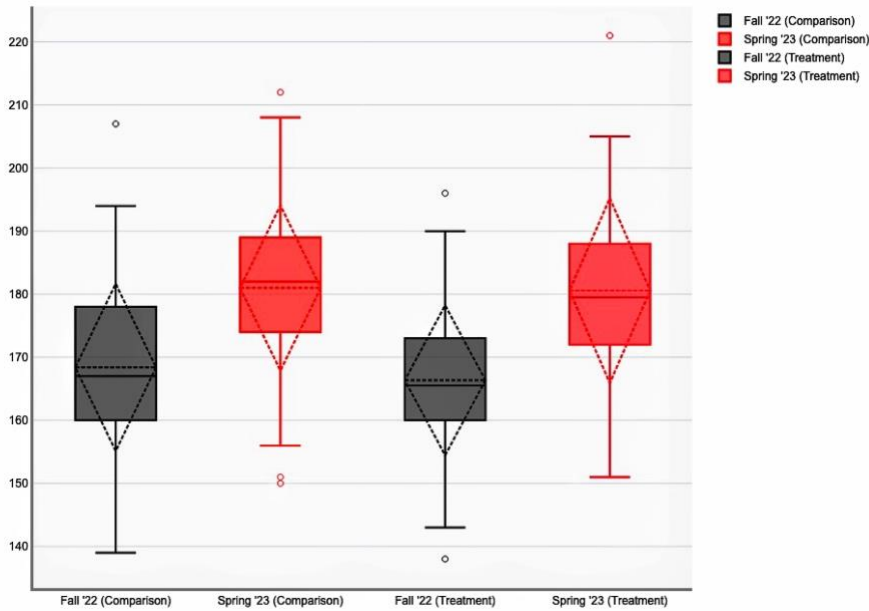
Non-IEP/RTI Student Performance

The most pronounced effects emerged in the non-IEP/RTI subgroup analysis. During the 2021-2022 academic year (see Figure 3), this subgroup achieved an effect size of 0.59, indicating that approximately 73% of students in the treatment group demonstrated higher growth than their peers in the control group (Coe, 2002). This substantial effect size suggests that the instructional support system was particularly effective for students without specialized learning plans.

The 2022-2023 academic year (see Figure 4) maintained positive outcomes for this subgroup, with an effect size of 0.31, with 62% of treatment group students showing higher growth than the control group (Coe, 2002). The reduction in effect size coincided with system expansion to additional grade levels, suggesting important considerations for resource allocation during scaling.
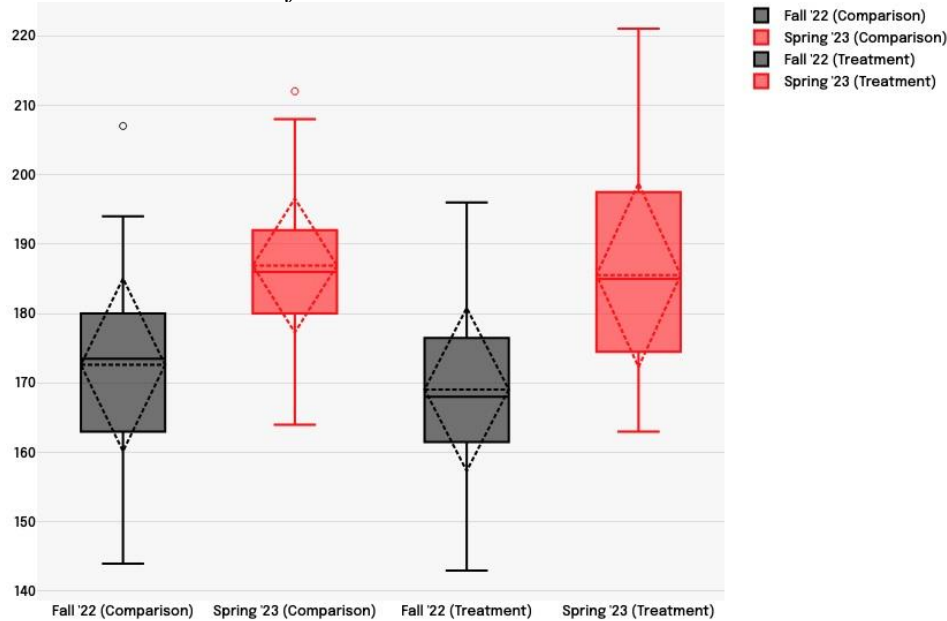
Figure 3
Non-IEP/RTI Growth for 2021-2022 Academic Year
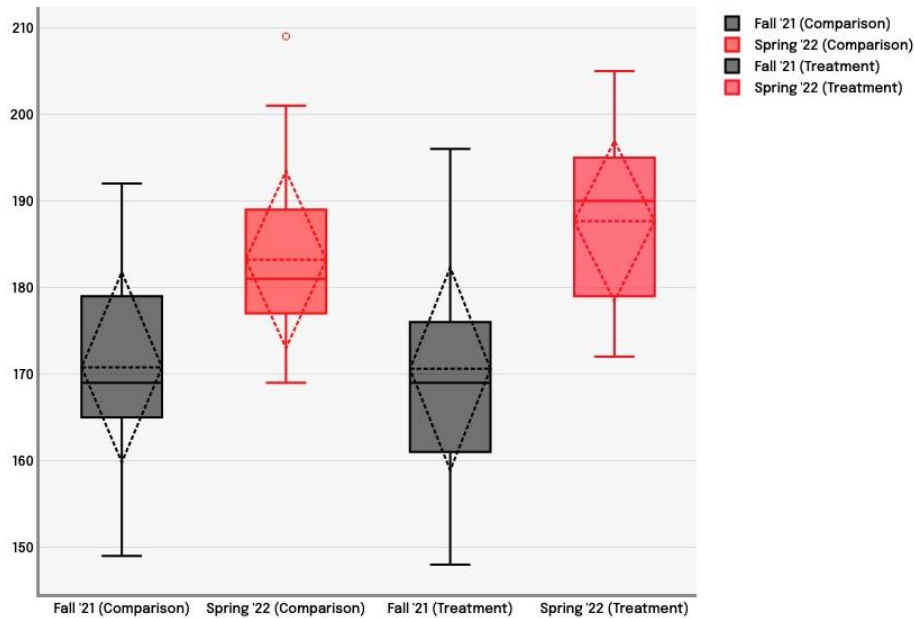
Figure 4
Non-IEP/RTI Growth for 2022-2023 Academic Year

IEP/RTI Student Performance

The analysis of the IEP/RTI subgroup presented unique challenges due to its relatively small sample size, making the results more susceptible to outlier influence and potentially less generalizable. Initial baseline differences between treatment and control groups (4.9 points in 2021-2022, narrowing to 1.8 points in 2022-2023) and small sample sizes necessitate cautious interpretation. While the treatment group showed stronger growth in 2021-2022 (12.9 vs. 10.7

RIT points), this pattern reversed in 2022-2023 (8.0 vs. 8.5 points). These mixed results suggest that factors beyond the differentiated reading instruction may influence outcomes for students with specialized learning needs.

These varying outcomes suggest that factors beyond the differentiated reading instruction may influence student performance, indicating a need for deeper investigation into both the reading instruction components and additional support systems. The significant difference in starting mean RIT scores between groups, combined with the small sample size, made it difficult to definitively assess the program's effectiveness. Consequently, effect-size calculations for the observed growth were not performed.

Implementation Experiences
Qualitative analysis revealed three interconnected themes that illuminate both the system's implementation process and impact. These themes emerged consistently across data sources, providing insight into both challenges and successes.

Theme 1: Creative Problem-Solving in Implementation
Educators demonstrated remarkable adaptability in addressing implementation challenges. One particularly successful strategy, termed "double-dipping," (intensive immersion) emerged as a creative solution to time constraints. A second-grade teacher explained: "We came up with something called dipping or double-dipping kids, where they would get their grade-level work and then get extra intervention. This meant they were not just getting support but also being challenged at their grade level."

Theme 2: Professional Growth and Confidence
Teachers reported significant professional development through systematic collaboration. Regular team meetings focused on student data analysis and strategy refinement fostered what one participant described, "I felt more like a reading teacher than I've ever felt before. This experience really deepened my understanding of how to teach reading effectively." This collaborative approach supported continuous improvement, with structured weekly meetings enabling responsive adjustments to student needs.

Theme 3: Student Engagement and Celebration
The system fostered a culture of celebration and recognition that enhanced student motivation. Recognition of student achievement occurred at multiple levels, from classroom celebrations to school-wide announcements. One teacher described their approach: "Every time a child was given an assessment and moved to the next level, it was a huge celebration. [The principal] announced it over the intercom, and we celebrated in the classroom. It was a big deal, a huge deal."

Discussion

This study demonstrates the impact of systematic differentiated instruction support on K-4 reading achievement within the post-pandemic context. The findings reveal important insights about implementing and scaling educational innovations while addressing urgent learning recovery needs.

Student Achievement Outcomes

The effectiveness of the instructional support system manifested most clearly in the non-IEP/RTI student population, where effect sizes ranged from 0.31 to 0.59 across the two-year implementation period. The first year's effect size (0.59) represents substantial impact, where approximately three-quarters of students in the treatment group demonstrated higher growth than their peers in the control group. This effect exceeds Hattie's (2009) "hinge point" of 0.40 for desired educational outcomes, suggesting meaningful educational impact.

The moderation in effect sizes during the second year (0.31) coincided with the system's expansion to additional grade levels. Rather than indicating decreased effectiveness, this moderation aligns with implementation science literature suggesting resource dilution during scaling phases (Fixsen et al., 2019). This finding highlights the importance of carefully managing resource allocation during program expansion.

The mixed results observed in the IEP/RTI population suggest that while the system shows promise for general education students, modifications may be necessary to better serve students with specialized learning needs. This finding contributes to ongoing discussions about differentiation within already differentiated systems and suggests the need for targeted research on supporting diverse learner populations.

Implementation Factors

The study identified three critical elements essential for sustainable implementation of differentiated instruction support, extending current theoretical understanding of how systems thinking can enhance educational practice:

1. **Strategic Resource Allocation**: Schools achieved enhanced teacher-to-student ratios through innovative scheduling and resource allocation rather than additional staffing, demonstrating how existing resources can be optimized for maximum impact. This finding aligns with Clear's (2018) emphasis on systematic approaches to improvement.
2. **Structured Collaborative Practice**: Weekly collaborative sessions focused on data analysis and strategy refinement fostered what Fullan (2000) describes as collective capacity building. The regular collaboration created conditions for continuous improvement and innovative problem-solving, as evidenced by the development of the intensive immersion strategy.
3. **Systematic Assessment and Adjustment**: Regular data collection and analysis enabled responsive adjustments to student needs while providing evidence of program effectiveness. This systematic approach to assessment created a feedback loop that enhanced both instructional decision-making and program evaluation.

Implications

The findings of this study have implications across multiple levels of educational practice:

Classroom Level
- Data-informed flexible grouping strategies
- Systematic collaboration around student progress

- Creative approaches to maximizing instructional time
- Integration of celebration and recognition into instructional routines

School Leadership Level
- Strategic allocation of existing personnel to optimize teacher-to-student ratios
- Protection of structured collaborative time for teacher teams
- Development and maintenance of systematic assessment procedures
- Careful attention to resource allocation during program expansion

District Level
- Development of sustainable support systems
- Creation of clear scaling strategies that anticipate and address resource demands
- Regular evaluation using multiple measures
- Support for ongoing professional development

Limitations and Future Research
Several important limitations warrant consideration when interpreting these findings. The sample size variations across student groups, particularly in the IEP/RTI population (n = 11-15), limit our ability to draw firm conclusions about the system's effectiveness for all student populations. The configuration of treatment and control groups, with different class sizes, introduces potential confounding variables that future research should address through more controlled designs.

Future research should address these limitations through:
- Longitudinal studies examining sustained impact across multiple years
- Investigation of specific factors contributing to successful scaling, particularly resource allocation strategies
- Focused examination of effective support strategies for IEP/RTI students
- Analysis of cost-effectiveness across various implementation models
- Comparative studies across diverse school contexts and student populations

Conclusion

This study validates the effectiveness of systematic instructional support in facilitating differentiated reading instruction, particularly in addressing post-pandemic learning challenges. The findings suggest that success depends more on the systematic organization and support of evidence-based practices than on the introduction of novel methodologies. Key success factors include enhanced teacher-to-student ratios through creative staffing, structured collaborative planning, systematic assessment procedures, and a culture of celebration and recognition.

For schools addressing post-pandemic learning gaps, this study provides a practical model for systematic intervention that emphasizes robust support structures over ambitious goals. The findings demonstrate that coordinated efforts across administrative levels can create sustainable approaches to meeting diverse student needs in reading instruction, even within existing resource constraints.

References

Clear, J. (2018). *Atomic habits: Tiny changes, remarkable results*. Avery.

Coe, R. (2002, September 12-14). *It's the effect size, stupid: What effect size is and why it is important*. Paper presented at the British Educational Research Association annual conference, Exeter. School of Education, University of Durham.

Eun, B. (2019). The zone of proximal development as an overarching concept: A framework for synthesizing Vygotsky's theories. *Educational Philosophy and Theory*, *51*(1), 18–30. https://doi-org.gonzaga.idm.oclc.org/10.1080/00131857.2017.1421941

Fixsen, D. L., Van Dyke, M., & Blase, K. A. (2019). *Implementation science: Fidelity predictions and outcomes*. Chapel Hill, NC: Active Implementation Research Network.

Fullan, M. (2000). The three stories of education reform. *Phi Delta Kappan*, *81*(8), 581–584.

Hargis, C. H. (2006). Setting standards: An exercise in futility? *Phi Delta Kappan*, *87*(5), 393–395.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Taylor & Francis Ltd.

Kriukow, J. (2023, May 19). *Thematic analysis with ChatGPT | PART 1- Coding qualitative data with ChatGPT* [Video]. YouTube. https://www.youtube.com/watch?v=8dTs7D42ge0&list=PLYZ5akYlbLhnfGUP5nJPvPQKZqCRjvZv&index=8

Meadows, D. H. (2008). *Thinking in systems: A primer* (D. Wright, Ed.). Chelsea Green Publishing.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative Data Analysis: A methods sourcebook*. SAGE.

Senge, P. M. (2012). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. Crown Business.

Subban, P. (2006). Differentiated instruction: A research basis. *International Education Journal*, *7*(7), 935–947.

Tomlinson, C. A. (2005). Grading and differentiation: Paradox or good practice? *Theory Into Practice*, *44*(3), 262–269. https://doi-org.gonzaga.idm.oclc.org/10.1207/s15430421tip4403_11

Tomlinson, C. A. (2014). *The differentiated classroom responding to the needs of all learners* (2nd edition.). ASCD.

Tomlinson, C. A. (2023). Teach up for equity and excellence. *Educational Leadership*, *80*(8), 28–34.

Tomlinson, C. A., & Imbeau, M. B. (2012). Common sticking points about differentiation. *School Administrator*, *69*(5), 18–22.

U.S. Department of Education, National Center for Education Statistics. (2024). *Condition of Education*. Retrieved June 3, 2024, from https://nces.ed.gov/programs/coe/

About the Author

David M. Besterci, Ed.D., (he/him) is an instructional coach and interventionist at a rural school district in eastern Washington.

Appendix A
Semi-Structured Interview Questions

Interview Protocol for Staff Members:
- Introduction and Purpose:
  - Begin the interview by introducing myself and explaining the purpose of the interview as part of the program evaluation.
  - Assure confidentiality and emphasize the voluntary nature of participation.
  - To facilitate notetaking, I would like to record our conversations. I will be the only person who will have access to the recordings, and they will be deleted after transcription.
  - Obtain informed consent from the interviewees.
  - This interview is scheduled to last one hour. I have several lines of questions that I would like to cover. If time begins to run short, it may be necessary to push ahead and complete the line of questioning. Another option is to schedule another interview to finish the line of questioning.
  - This study aims to evaluate the effectiveness of an instructional support system designed to assist general education teachers in implementing differentiated reading instruction.
- Background Information:
  - Gather general demographic information about the interviewee (e.g., role, years of experience, years in current role, etc.).

Interview Questions:
1. Program Implementation:
   - Can you provide an overview of how the program was implemented, including the strategies, activities, and resources that were utilized?
   - During the implementation of the program, were there any challenges or barriers encountered? If so, could you describe those challenges and explain how they were addressed or overcome?
   - Were there any modifications or adaptations made to the program during its implementation? If yes, could you please provide examples and discuss the reasons behind those changes?
2. Program Outcomes and Impact:
   - From your perspective, what are the outcomes and impact of the program? How would you describe the overall effects or results?
   - How has the program specifically affected the participants or the target population? Can you provide examples or share any insights into the changes or improvements you have observed?
   - Have there been any noticeable changes in behavior, knowledge, skills, or attitudes among the participants because of the program? If so, could you elaborate on those changes and explain how they have been beneficial?
3. Program Strengths and Weaknesses:
   - In your opinion, what are the strengths and weaknesses of the program? From your perspective, what aspects of the program have been particularly effective or successful, and what areas do you think could be improved upon?

- Can you share any positive aspects or successes that have been achieved through the program? Are there any specific outcomes or accomplishments that you consider noteworthy?
- Could you describe any challenges or limitations encountered during the implementation of the program or in achieving the desired outcomes? How were these challenges addressed, and were there any lessons learned from overcoming them?

4. Stakeholder Involvement and Collaboration:
- Can you provide insights into the involvement of stakeholders, such as staff, participants, and community members, in the program? How were they engaged, and what roles did they play in the program's implementation and outcomes?
- Could you share information about any collaboration efforts or partnership initiatives related to the program? How did these collaborations contribute to the program's success or effectiveness?
- From your perspective, how effective was the involvement of stakeholders and collaboration among different parties in achieving the program's goals?

5. Program Improvement and Recommendations:
- What recommendations do you have for improving the program? Are there any specific areas or aspects that you believe could be enhanced?
- Do you have any suggestions or insights on how to enhance the program's effectiveness?
- Let's explore potential strategies for addressing any identified weaknesses or challenges in the program. Based on your experience and knowledge, what approaches or actions could be taken to overcome these obstacles and improve the program?

Conclusion:
- Thank the interviewee for their participation and valuable insights.
- Address any additional questions or concerns they may have.
- Reiterate the confidentiality and anonymity of their responses.
- Provide contact information in case they wish to follow up or have further questions.

Appendix B
Survey Questions

Welcome to the Instructional Support Program Evaluation Survey! I appreciate your participation in this critical assessment, which seeks to understand the impact of our support system for general education teachers implementing differentiated reading instruction. Your insights hold immense significance in shaping the program's future trajectory, strengthening its effectiveness, and ensuring its alignment with the intended goals. By sharing your personal experiences and observations, you play a vital role in the ongoing refinement of the support system, ultimately empowering teachers and students. Thank you for considering this request.

NOTE: by submitting responses to this survey, participants agree to let me include them in my program evaluation.

Program Implementation:
1. I understand the program's goal of helping me customize reading instruction to meet our students' individual needs from the start?
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
2. When the program was introduced, I felt supported.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
3. Over the course of the year, the program's support enabled me to adapt my reading instructions to cater to diverse student needs.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
4. There were challenges or barriers encountered during the implementation of the program.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
5. If challenges or barriers were encountered, they were adequately addressed.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | N/A |
6. Modifications were made to the program during its implementation.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
7. Please provide examples of any modifications or adaptations made to the program during its implementation and briefly discuss the reasons behind those changes.
   - Open-ended response

Program Outcomes and Impact:
1. The program has contributed to improved academic performance of students.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
2. The program has led to noticeable improvements in behavior or attitudes among the students.
   - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
3. Please describe in your own words the outcomes and impact of the program from your perspective. How would you describe the overall effects or results based on your experience or observations?
   - Open-ended response

Program Strengths and Weaknesses:
1. The program has notable strengths that contribute to its effectiveness.

- Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
2. There are areas in the program that need improvement to enhance its overall impact.
    - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
3. From your perspective, which aspects of the program have demonstrated effectiveness and success, and which areas do you believe could benefit from improvement?
    - Open-ended response
4. Are there specific outcomes or accomplishments that you consider noteworthy?
    - Open-ended response

Stakeholder Involvement and Collaboration:
1. Collaboration occurred frequently with the instructional support member assigned to your grade level.
    - Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree
2. From your perspective, how effective was the involvement of stakeholders in achieving the program's goals?
    - Open-ended response
3. From your perspective, how effective was the collaboration among different parties in achieving the program's goals?
    - Open-ended response

Program Improvement and Recommendations:
1. What recommendations do you have for improving the program? Are there any specific areas or aspects that you believe could be enhanced?
    - Open-ended response
2. Do you have any suggestions or insights on how to enhance the program's effectiveness?
    - Open-ended response

The Washington Educational Research Association (WERA) is the state affiliate of the American Educational Research Association (AERA). It was established in 1973 as a non-profit organization and is governed by members of an Executive Board who serve a 3-year term.

WERA's mission is to support professionals working at all levels of education in order to:

- Promote, maintain, and improve the quality and effectiveness of educational research, evaluation, assessment, and related services;

- Identify and define educational issues and provide a forum for their discussion;

- Assist in the dissemination of research and evaluation findings; and

- Promote in-service experiences for those who engage in educational research, evaluation, assessment, instruction, and related activities.

WERA produces various publications and white papers, provides grants and awards, and provides professional development through conferences and other focused training activities.