Learning and Leadership through Sustainability Education: School-University Partnerships Supporting Collaboration and Student Voice

William L. Sterrett
University of North Carolina Wilmington
Kat Pohlman
University of North Carolina Wilmington
Sabrina Hill-Black
D.C. Virgo Preparatory Academy
Somer Lewis
University of North Carolina Wilmington
Laura Jennings
D.C. Virgo Preparatory Academy
Jodi Hebert
D.C. Virgo Preparatory Academy
Kemeka Sidbury
D.C. Virgo Preparatory Academy
Amy Horgan
D.C. Virgo Preparatory Academy
Sohail Sukhera
University of North Carolina Wilmington
Jackson Norvell
Wrightsville Beach Elementary School
Ann Brooks
Wrightsville Beach Elementary School
Jaime Conti
Wrightsville Beach Elementary School
Jennifer Williams
Wrightsville Beach Elementary School

Abstract: In an era of accountability, it is vital that schools can define their success in ways that transcend a single high-stakes testing day at the end of the school year. While student growth and proficiency are important educational measures, also focusing on health and wellness, stewardship of resources, and sustainability education, offers a unique and collaborative opportunity for learning communities to engage partners, reflect on goals and practices, and empower students, staff, and community members as change agents in the work. Sustainability education informs the preparation of educators and the collaboration of educators, community members, policymakers, and university personnel. This article offers insights and examples presented by a school-university partnership seeking to vitalize the three green pillars defined by the U.S. Department of Education Green Ribbon Schools award designation amid a pandemic setting.

KEYWORDS: Sustainability education; school leadership; school-university partnerships

NAPDS NINE ESSENTIALS ADDRESSED:
Essential 3: A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential 4: A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Introduction

Schools can define their success beyond a test score. While student growth and proficiency are important educational measures, seeing a larger perspective that also takes into account health and wellness, stewardship of resources and sustainability education offers a unique and collaborative opportunity for learning communities to engage partners, reflect on goals and practices, and to empower students, staff, and community members as change agents in the work. This work was further empowered when multiple stakeholders from two different schools and a partner university joined together to focus on sustainability during a pandemic.

This collaborative learning community occurred in Wilmington, North Carolina, amongst D.C. Virgo, a K-8 lab school that the University of North Carolina Wilmington operates; Wrightsville Beach Elementary, a K-5 elementary school that is a part of New Hanover County Schools, and the University of North Carolina Wilmington (UNCW), a regional state university. The unique aspects of the coastal community provided a common element of "love of place" and innovation. Each school, however, was quite different, as their strengths and unique composition provided a different positionality from the other. This article will overview the collaborative efforts of all three schools, overview the U.S. Department of Education Green Ribbon Schools (ED-GRS) pillars, and highlight specific efforts that span inquiry and partnership work to engage students.

D.C. Virgo Preparatory Academy (DCVPA) is a school of about 200 K-8 graders in downtown Wilmington. The student body is over 90% minority, and over 95% receive Free-or-Reduced lunch. The school transitioned from a public middle school to a K-8 public lab school as a result of 2016 state legislation that was written to “re-define and strengthen university partnerships with public schools, improve student outcomes, and provide high-quality teacher and principal training" (UNC System, n.d., para. 3). This mandate resulted in a complete redesign of a preparatory lab school where collaboration between the university, New Hanover County Schools, and community partners resulted in a community-based school that opened in 2018. The building is noticeably dated yet well-maintained, with an open outside design, located in an urban area of the Burnt Mill Creek watershed (D.C. Virgo Preparatory Academy, 2021).

Just a few miles away is Wrightsville Beach Elementary School (WBS), a public elementary school of 271 students in grades K-5. The student body is 8% minority, and only 8.5% of the student body is eligible for Free-or-Reduced lunch. The school was recently renovated to maximize classroom views of the intercoastal waterway and has a new second-floor addition to provide natural lighting, outdoor learning areas allowing for learning gardens, and a pier to the

waterway for students to engage in marine exploration such as kayaking and fishing (Wrightsville Beach Elementary, 2021).

The University of North Carolina Wilmington is the state's coastal university, enrolling 17,915 students. The Wilmington campus is a part of the UNC System which is comprised of 16 universities. The student body is 21% minority, and 26% of students are Pell recipients. As an R2 Doctoral University, the institution takes pride in ties to the southeastern regional part of the state and the natural coastal surroundings and resources (The University of North Carolina Wilmington, 2021). The culture is shaped by diversity and globalization, ethics and integrity, and excellence and innovation. Through engagement, inquiry, and worldly exploration, experience and critical thinking are supported holistically in the student experience. These three schools, though distinctly different, share a common identity as a U.S. Department of Education Green Ribbon School awardee.

Defining a "U.S. Department of Education Green Ribbon School" – A Review

In 2012, the U.S. Department of Education (E.D.) launched U.S. Department of Education Green Ribbon Schools (ED-GRS) to recognize schools that showed progress in the following three pillars:

1. Pillar One: Reducing environmental impact and costs;
2. Pillar Two: Improving the health and wellness of schools, students, and staff; and
3. Pillar Three: Providing effective environmental and sustainability education (U.S. Department of Education, A, n.d.).

The ED-GRS is considered a "public engagement initiative structured as a federal recognition award for school sustainability," which "helps to facilitate state and local collaboration around school facilities, health, and environmental education" (Falken, n.d., p. 1). The framework for these three green pillars is further outlined in the ED-GRS *State Implementation Toolkit*, which describes the pillars in depth along with the application process as follows:

- Pillar One takes into account items such as reduced or eliminated greenhouse gas emissions, using an energy audit, efficiency improvements, conservation measures, water quality and conservation, reduced waste, and expanded use of alternative transportation.
- Pillar Two considers the health, nutrition, and outdoor physical education for students; health, counseling, and psychological services for both students and staff; family involvement; an integrated school environmental health program; safe buildings and grounds.
- Pillar Three encompasses interdisciplinary learning about the key relationships between environmental, energy, and human systems; use of the environment and sustainability to develop STEM content knowledge and thinking skills; and development of civic engagement knowledge and skills and students' application of such knowledge and skills to address sustainability issues in their community (Falken, n.d.)

The award is a public engagement recognition; it does not have funds or other incentives. Schools, districts, early learning centers, and postsecondary institutions apply to their state education authorities for their nomination to E.D.; there are state-specific requirements. States then submit their nominees to the Department of Education for final consideration (U.S. Department of

Education, B, n.d.). To date, over 340 schools have been recognized as well as over 60 school districts and over 35 Institutes of Higher Education (such as colleges, universities, and community colleges) (U.S. Department of Education, A, n.d.).

Research that examined recipients of the ED-GRS award perceived several benefits from green efforts (i.e., gaining a greater understanding of the ED-GRS framework, self-assessing work in the green pillars, promoting staff coordination and collaboration, to pursuing additional curricular and operations improvements) (Sterrett, Imig, & Moore, 2014). The ED-GRS pillars are evident by movement and dance breaks intentionally built into the school schedule, outdoor classrooms maintained by volunteers and custodial staff, and eco-friendly teacher workspaces (Sterrett, 2016).

Key strategies can include forming a Green Team to focus on aspects such as:

- engaging in energy savings efforts ranging from lighting conservation to rain collection
- reducing waste
- exploring outdoor learning gardens
- aligning curriculum, and
- sharing out the message about sustainability efforts to the school community (Sterrett & Imig, 2015).

These strategies offered a roadmap to consider the next steps as a collaborative team of partners engaged in sustainability work together.

Leadership is important for green school efforts, especially in seeking to become a "vibrant place for learning how to live more sustainably" (Kensler, 2012, p. 794). Kensler and Uline (2017) observe that today's school leaders are preparing students for new and unique challenges and leadership and can "design and lead new eco-centric models of school that not only serve the learning needs of students but also intentionally attend to the needs of local and global socio-ecological systems" (p. 14). From cultivating a vision for whole school sustainability to focusing on place, community, and partnerships, and from encouraging innovative teaching practices to supporting health and wellness initiatives, green school leaders "integrate sustainability ethics into their practice and thus facilitate students learning how to live in more sustainable ways" (Kensler & Uline, 2017, p. 39). This requires both understanding and intentionality in action. Additionally, this work also benefits from a collaborative partnership that strengthens this effort.

The UNCW PDS Model

The Professional Development System (PDS) School-University Partnership in the Watson College of Education (WCE) at UNCW is a complex set of collegial relationships forged among twelve P-12 school district partners and university programs, faculty, staff, and students. These longstanding professional relationships serve as the foundation of academic programs, providing WCE students a variety of diverse clinical experiences, site-based seminars, and a coaching and supervision model that is implemented across all educator preparation programs (UNCW PDS, n.d.).

PDS is based on the fundamental belief that, in order to improve student learning, we must work collaboratively to enhance the quality of teaching and leadership in our schools and educator preparation programs (UNCW PDS, n.d.). As a result, the WCE PDS is committed to designing

mutually beneficial opportunities for growth and simultaneous renewal, supporting a professional learning continuum. This continuum begins with the recruitment of future teachers and fosters the ongoing development of educators as they seek to transform P-12 teaching and learning in our region. In many cases, the relationships forged through our PDS serve as a foundation for identifying school and university-based needs and opportunities for innovation through collaboration.

Throughout the pandemic, many, if not all, of the core programming and initiatives supported through our PDS remained in place, allowing stakeholders the advantage of ongoing collaboration, innovation, and support. This included the dissemination of school and district-based needs assessments, opportunities for professional learning, research and grant partnerships, and, most significant to the green schools initiative, the identification, connection, and support of university faculty and school partners with the unique strengths and expertise needed to cultivate a successful ED-GRS partnership. The partnership also provided a relationship to share insights regarding the three green "pillars" that shaped the three schools' ED-GRS applications. Through the annual partnership needs survey, the PDS director convened a meeting between the associate dean and a partnership school, Wrightsville Beach Elementary, to discuss the ED-GRS framework and opportunities. Aware of the interest and expertise at D.C. Virgo and the university, the associate dean then convened a team of three schools to engage in a shared conversation about the three ED-GRS pillars and possible next steps.

Pillar 1: Efforts to Reduce Environmental Impact and Costs

At D.C. Virgo, it was clear that pursuing ED-GRS recognition would require multiple stakeholders to be engaged. A collaborative structure called the Support Team was instituted in Year 1 of its existence that included key school leaders such as the principal, assistant principal, operations coordinator, two teacher leaders, a school social worker, the University's College of Education dean, the associate dean, the PDS Director, and a Professional Experiences staff member. DCVPA demonstrated Pillar 1 through a student-led recycling program, water conservation efforts, and maximizing alternative transportation. An outdoor classroom that includes forward-facing wooden benches and a teaching podium station was available to use during the phased re-opening during the COVID-19 pandemic, where teaching and learning could continue in the outdoors with fresh air.

Efforts were taken before and during the pandemic to save energy and water. The intentional use of window blinds and transitioning to utilize more efficient light bulbs had helped result in energy savings, as had the benefit of rain barrels that captured runoff precipitation from the roof to water the surrounding landscape. Through collaboration with the New Hanover County school district to coordinate daily bus transportation (over 90% of students participated) and promote safe walking and biking as a viable option, an estimated 100,000 gallons of gas were saved annually than if each student was driven to school separately. The DCVPA assistant principal provided weekly composting instruction to upper elementary students and worked with them to collect and empty recycling bins strategically placed around the school (D.C. Virgo Preparatory Academy, 2021).

Just a few miles away, Wrightsville Beach Elementary School (WBS) had recently undergone a significant renovation to bring in more natural light, redesign learning spaces, and accentuate the barrier island natural surroundings that allow a beautiful and engaging outdoors. Students can now view the intercoastal waterway from their classroom windows, fish from the

dock, learn about the marsh ecosystem, and walk to Wrightsville Beach for sand sweeps and seashell collections. Similar to D.C. Virgo, a group of 3rd-grade students lead a school-wide recycling effort and produced overview videos to encourage sustainable practices. Multiple outdoor covered areas are available for classroom instruction, small group lessons and activities, and presentations. A sizeable outdoor site contains soil material from a phosphate mine, including fossils that date to the Eocene Epoch.

Photo 1
Students learning with raised garden beds at Wrightsville Beach Elementary

The landscape around the school was designed to include native plants and vegetation that do not require irrigation, and raised garden beds were installed to provide a hands-on area of learning for students. Upgraded plumbing was established through the renovation project to reduce water use through low-flow fixtures and waterless urinals. At WBS, one-third of students ride the bus, about 15% walk or ride bikes, and a significant number of students carpool, saving energy throughout the year. New drainage systems were installed to redirect stormwater drainage and reduce erosion in the area (Wrightsville Beach Elementary, 2021).

The University of North Carolina Wilmington reduced the campus's energy use and greenhouse gas emissions, using 2002 data as a baseline. The university led the UNC system in the goal set by the System Office to reduce energy by 30% in 2015. This was accomplished through performance contracting, the construction of new energy-efficient buildings, and retrofitting lighting, ensuring that over 95% of outdoor lighting bulbs are LED. The university continues to reduce its impact with educational programming, institutional commitments to reducing

greenhouse gases (such as plant-forward menus), and infrastructural improvements to create efficiency and resiliency. Waste diversion efforts are emphasized across the campus, such as water bottle refill stations bolstered by the Student Government Association. The campus was designed as a pedestrian-friendly area and supported various alternative transportation methods. In addition to a university shuttle system, bicycle infrastructure and a multimodal path connecting the two areas of interest in the community weaves through the campus.

Additionally, natural areas and landscaping are critical to this work, given its coastal location. UNCW partnered with the North Carolina Coastal Federation to work on stormwater projects via an EPA grant. The project included four rain gardens and retrofitting parking lots with permeable surfaces, which "allows stormwater to penetrate through, diverting it from the drain and the stormwater system that carries the untreated water directly to the Intracoastal Waterway" (University of North Carolina Wilmington, 2021, p. 4) and ultimately managing over one million gallons of water over a three-year period.

This work furthered the existing stormwater management efforts, such as utilizing reclaimed water for irrigation and planting native flora in all-new landscaped areas. The campus hosts a ten-acre wildflower preserve in the center of the main campus and over 330 acres of natural areas on the main campus and in satellite areas. These spaces are home to native, vulnerable species and are cared for with organic maintenance and a robust integrated pest management plan (University of North Carolina Wilmington, 2021).

Pillar 2: Efforts to Improve the Health and Wellness of Students and Staff

The D.C. Virgo learning community is focused on both the physical health and the social-emotional needs of students through prioritizing a "kinship model" to foster relationships amongst the school community. The school opened an Action-Based Learning (ABL) room by refitting a classroom with ABL equipment, involving the teaching staff in ABL training, and encouraging regular movement breaks throughout the school day to re-center students for learning. The school leadership team, which includes the school administrators, College of Education dean, teacher leaders, and other university faculty and staff, sought feedback from the community in designing and installing outdoor learning spaces.

Photo 2
Action-based learning room at D.C. Virgo Preparatory Academy

The school has incorporated essential restorative practices, resulting in reduced discipline referrals and subsequent time spent out of classroom instruction. All grades participate in a daily morning meeting that includes mindfulness and engages students as a part of a learning community. In the center of the middle school learning area is a restorative room where students can "take ten" to calm down, process elevated emotions, and return to the classroom setting ready to re-engage in learning (D.C. Virgo Preparatory Academy, 2021).

At nearby Wrightsville Beach Elementary, the school also has engaged in social-emotional learning and movement breaks. During the day, movement breaks using “Go Noodle” materials along with Mindset breathing techniques and “Chime time” promote focus and engagement, and the coastal proximity and climate allow for regular outdoor activities, ranging from kayaking on the adjacent intercoastal waterway to walking or running laps around the campus track.

Photo 3
WBS students and staff kayaking in the coastal waterway

Fifth-grade students at WBS learn to ride in tandem kayaks as a part of the school's annual Kayak Race. The school counselor uses an evidence-based sun safety curriculum to teach sun protection education for grades K-5. Families are encouraged to ride bikes to school and walk, and the school hosts running clubs for both boys and girls. Parent volunteers play a crucial role in the running clubs that have since spread to other schools, promoting positive emotional, social, mental, and physical development (Wrightsville Beach Elementary, 2021).

At UNCW, supporting and nurturing the mental and physical health of the university community is a top priority. The Healthy Hawks program includes the eight dimensions or pillars of health that include engagement, emotional, financial, intellectual, occupational, physical, spiritual, and sustainability. Sixty-seven different departments and organizations hosted Healthy Hawks programming, and over 40,000 community members participated in the related programming. The use of outdoor space to connect with nature and reduce stress is intertwined with the beautiful campus and coastal climate. A wildlife preserve is in the center of campus and includes over a mile of trails that meander through longleaf pines, beside a lake, alongside carnivorous plants, and amongst hardwoods.

Leadership supports the Environmental Health and Sustainability (EH&S) mission of "leading the university to a safe, healthy, and disaster-resilient culture by providing educational, technical and operational services to support the campus community" and addressing both "regulatory compliance and actual losses associated with environmental, health, and safety issues" An integrated approach involving EH&S and the Facilities Offices, senior management ensures that the university responds to immediate needs and plans for long-term implications of living and learning near a coast prone to hurricanes and potential ecological events (University of North Carolina Wilmington, 2021).

Pillar 3: Efforts to Ensure Effective Environmental and Sustainability Education

As a K-8 university-supported lab school, D.C. Virgo collaborates with UNCW faculty and staff, such as the UNCW Sustainability Peer Educators. They provide students with weekly presentations on sustainability topics such as how plants affect air quality, the importance of water, and recycling at home and school. Staff and university collaborators distributed "plant packages" to grow and monitor plants during the pandemic, and students were then able to transfer them to the garden bed at school. A community volunteer (and UNCW doctoral student) worked with teachers to introduce mycology in the science lab and revamp the outdoors learning garden. The weekly mycology session introduces the students to the concepts of mushroom tissue transfer to Petri dishes, transferring the mycelium culture to sterilized grain, and transferring the myceliated grain spawn to sterilized sawdust or pasteurized wheat straw substrates. Participating in activities involving all aspects of mushroom growing provides the students with a hands-on experience of microbiology concepts.

The outdoor learning garden provides students a hands-on learning opportunity to experience growing vegetables, herbs, and flowers. The plants intrigue the students, but equally intriguing are working with the soil and observing different bugs that are part of the small garden ecosystem. Watering the plants using rainwater collected from the school building's roof, planting, weeding, and cultivating are some of the regular garden activities. This work started with the middle grades and has expanded to include elementary grades and community volunteers, notably from the New Hanover County Master Gardener Volunteer Association.

Photo 4

DCVPA Students working with volunteers at the learning garden

DCVPA teachers and a university professor collaborated to teach Saturday sessions related to environmental and sustainability concepts such as meteorology, agriculture, STEM careers, and maritime. A National Science Foundations (NSF) Research Experiences for Undergraduates (REU) grant was awarded as a three-year effort to provide experiences for first-year university students and DCVPA K-8 students to understand the marine sciences better and spark interest in career pathways related to the environmental sciences. School and university leadership fosters and supports collaborative relationships to sustain this work, especially during unexpected closures pertaining to events such as a hurricane or pandemic (D.C. Virgo Preparatory Academy, 2021).

Wrightsville Beach Elementary School utilizes its coastal surroundings to enhance student learning through an engaging Marine Science Program that features team-building, problem-solving, citizenship, and responsibility. The school counselor also served as the Marine Science Coordinator, and the program grew over 20 years to include classroom education, community outreach, interdisciplinary learning, and citizen science projects. School leadership then collaborated to integrate marine science concepts into every grade level at the K-5 school.

All WBS classes regularly walk to Wrightsville Beach for beach sweeps, beach and dune investigations, and seashell collections. Taking learning walks to the salt marsh, maritime forest, dune, and beach allow 5th-grade students to learn about the Barrier Island and surrounding ecosystems. Teachers have professional development opportunities to advance environmental sciences. Community outreach plays a significant role in engagement efforts, such as shorebird sanctuary signage and extension classes for other district schools (Wrightsville Beach Elementary, 2021).

At UNCW, interdisciplinary learning is a crucial focus in promoting efforts such as the Sustainability Learning Community, a first-year learning and living community anchored in three courses that focus on the dynamic between people, planet, and profit. It includes outreach efforts such as implementing compost programs at local shelters. Green initiatives undertaken by the Sustainability Minor students include building a solar-powered charging station for campus events, surveying coastal businesses for sustainability practices, and creating a documentary of sustainable "points of pride" across the state of North Carolina.

Photo 5
UNCW Sustainability Learning Community Solar Charging Station

The university's focus on sustainability extends into the community. Engagement efforts include hosting regional Science Olympiad competitions, providing professional development workshops for in-service teachers; loaning STEM equipment to caregivers for the unique education community; and securing grant funding to bring programs like MarineQuest to rural, underserved schools. Civic engagement is also a focus; the Office of Student Leadership and Engagement (OSLE) creates opportunities for UNCW students, fraternities, and sororities to serve others in their communities. Examples include the Diaper Bank of North Carolina, Rise Up Community Farm, and Nourish NC. The UNCW Sustainability Garden donates fresh produce at the end of each growing season as a part of the Hawks Harvest initiative. Shared leadership efforts have strengthened partnership work and enabled sustainability efforts to thrive even amid crises such as hurricanes (University of North Carolina Wilmington, 2021).

Implications

Purposeful Partnerships

This unique, collaborative effort was made possible through shared leadership and partnership synergy. The PDS relationship between the university and the partner schools jumpstarted the conversation about pursuing ED-GRS recognitions. An initial conversation with the PDS director, principals, and associate dean expanded to include larger green teams of teacher leaders, university experts, and doctoral students. The green teams that came together from each school collaborated on thinking through the three green pillars and encouraged each other through the process while being continually mindful of the ultimate goalkeeping students at the forefront of the work. Green school efforts provide educational leaders a unique and vital opportunity to "deepen the relevance of the school experience for children and deepen their connection to local and global communities" (Sterrett et al., 2016, p. 81). Recognizing volunteers who played a crucial

role in maintaining learning areas, teaching a mini-lesson, or supplying compost materials helped encourage and foster shared ownership of the work (Sterrett, 2011).

Strength of Multiple Stakeholders

Shared leadership roles in this collaborative work helped realize challenges and opportunities, affirmed the work of students and staff, and further engaged community members. The role of teacher-leaders was pivotal, as they have the most frequent contact with students in school. The school administrators, including the principal, assistant principal, and coordinator, served as stewards of resources, from staff and volunteer time and expertise to physical plant and budgeting considerations, as overviewed by the assistant principal, community volunteer, and associate dean in this video clip. The school social worker helped strengthen school culture through restorative practices, as described by both students and staff in this video clip. Teacher leadership was key in championing these efforts and gauging student success and engagement. Teacher leadership occurs when a learning environment provides space for others outside the organization to present new ideas and experiences, as shared by this teacher overviewing mycology efforts. While leading, teachers should be willing to learn and display their openness to engage in new experiences. Through shared partnerships with sustainability experts, students were presented with chances to view the teacher as a learner and themselves as the educator.

Student engagement

The willingness to be open to new practices and experiences should lead teachers to diverse student learning and student success perspectives. For example, through the teacher's desire to learn and provide a space for mycology lessons within DCVPA sixth grade science classes, E.C. students were able to demonstrate to others their comprehension of scientific processes techniques utilizing verbal communication and modeling strategies. The DCVPA students' capabilities provided evidence to others within and outside the learning environment of how student leadership expands beyond the limitations of what others deem superior academic achievement. Teachers and students can foster learning relationships and a love of place, as overviewed in this video about the WBS Marine Science program. The development of sustainability education programs within the learning environment provided a context of how learning occurs richly and authentically.

The construction of the DCVPA recycling program resulted from student voice and activism. Encouraging students' voices led to the student-led recycling program, as highlighted in this video. The initial willingness and engagement of new ideas by DCVPA teachers have resulted in new visions of learning success and leadership. The eagerness to learn demonstrates how educators can develop sustainable partnerships to strengthen student learning experiences aligned with curriculum standards. The role of the College of Education partnership director and associate dean helped connect faculty expertise with partnership strengths and innovation. And the university sustainability officer provided insights regarding data and best practices and championed university student engagement in an ongoing manner.

Preparation and professional development

Leadership preparation and professional development should focus on sustainability efforts. Louv (2012) has highlighted the growing body of evidence on how outdoor experiences can enhance students' ability to learn and the positive impact on both physical and mental health, along with the fact that education must prepare a new generation of leaders to innovate "new sources of energy; new types of agriculture; new urban design and new kinds of schools, workplaces, and health care" (p. 183). Today's educational leaders can help prepare students to be that next-generation focused on innovation and sustainability. School-university partnerships can foster this work by providing time and space to share interests and expertise, consider new learning opportunities, and affirm collaborative work.

Conclusion

This shared sustainability work has resulted in student engagement and learning. Forged through partnership and strengthened by a shared vision of what it means to be a "green school," this effort, undertaken during the onset of the pandemic, affirmed the work of students, staff, and partners at the school and university. Both schools and the university not only completed the application process, but all three organizations also received the U.S. Department of Education Green Ribbon School (ED-GRS) recognition. After being invited to the fall 2021 ED-GRS ceremony in Washington, D.C., the U.S. Department of Education also selected them to be part of the "Green Strides Tour," in which federal and state officials visited the ED-GRS recipients as a part of a statewide tour (NCDPI, 2021). This tour highlighted how this effort brought partners together in the pandemic, connecting stakeholders with varying areas of expertise. The three pillars can provide a means to strengthen aspects of the partnerships, as depicted in Figure 1.

Figure 1
ED-GRS Pillars as connectors of engagement and collaboration

Shared conversation of sustainability education		
Pillar 1 **Reducing Environmental Impact**	**Pillar 2** **Improving Health and Wellness**	**Pillar 3** **Environmental Education**
"How can we be good stewards of our resources?"	"How might we encourage healthy choices and habits for students and staff?"	"How might we consider ways to infuse environmental education in teaching and learning?"
Weekly composting instruction at DCVPA School-wide recycling effort at WBS Waste diversion efforts such as water bottle refill stations at UNCW	Action-Based Learning and regular movement breaks at DCVPA. Regular outdoor activities, such as kayaking on the intercoastal waterway at WBS A wildlife preserve in the center of campus includes over a mile of trails at UNCW	Teaching mycology in the science lab and revamping the outdoors learning garden at DCVPA Marine-Science Program features team-building, problem-solving, and responsibility at WBS A first-year Sustainability Learning Community anchored in three courses at UNCW

The application and subsequent recognition tour highlighted student and staff leadership in this work. Students were engaged in leading the recycling collections, and their voices came through as they led the tours. The process, and the recognition, provided a sense of affirmation and pride that went beyond mere test scores. The shared sustainability partnership work itself defines the three learning communities. It has created a new overlap, bringing students and staff together by focusing on hope, agency, and commitment to critical societal issues that span health and wellness, sustainability practices, and stewardship.

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Author Bios

*Dr. Sterrett (*William_Sterrett@baylor.edu*) served as an associate dean and professor at the University of North Carolina Wilmington; he now serves as department chair and professor of educational leadership at Baylor University.*

Ms. Pohlman served as the Chief Sustainability Officer at the University of North Carolina Wilmington.

Ms. Sabrina Hill-Black serves as the D.C. Virgo Preparatory Academy principal in Wilmington, NC.

Ms. Lewis serves as PDS Director for the Watson College of Education at the University of North Carolina Wilmington.

Dr. Laura Jennings serves as assistant principal of D.C. Virgo Preparatory Academy in Wilmington, NC.

Ms. Jodi Hebert serves as operations coordinator and liaison of D.C. Virgo Preparatory Academy in Wilmington, NC.

Ms. Sidbury serves as a D.C. Virgo Preparatory Academy teacher leader in Wilmington, NC.

Ms. Horgan serves as a school social worker at D.C. Virgo Preparatory Academy in Wilmington, NC.

Mr. Sukhera is an instructor at Cape Fear Community College and a doctoral student at the University of North Carolina Wilmington.

Mr. Norvell serves as principal of Wrightsville Beach Elementary School in Wilmington, NC.

Ms. Ann "Cissie" Brooks served as counselor and Marine Science coordinator at Wrightsville Beach Elementary School in Wilmington, NC.

Ms. Jaime Conti serves as Instructional Coach at Wrightsville Beach Elementary School in Wilmington, NC.

Ms. Jennifer Williams serves as a teacher leader at Wrightsville Beach Elementary School in Wilmington, NC.

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