Embedding Environmental Literacy Into Career and Technical Education in Delaware

Findings and Implications from an Early-Phase Implementation Study

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Environmental concerns are contributing to a rise in the number of "green jobs" — that is, jobs that are evolving to reflect greater environmental awareness by reducing, adapting to, or responding to the effects of climate change.[1] Improving high school students' environmental literacy, or their understanding of the relationship between human systems and environmental systems, before they transition into the workforce is one strategy that may help prepare students for green jobs across sectors. With this goal in mind, the Delaware Department of Education (DDOE) and Advance CTE partnered to embed environmental literacy into Delaware's Career and Technical Education (CTE) pathways.[2] The initiative, known as the Delaware Career and Technical Education Pathways Environmental Literacy Initiative (Delaware EL Initiative), was funded by the National Oceanic and Atmospheric Administration.

The Delaware EL Initiative was designed to tie in with another initiative, Delaware Pathways, which links CTE programs with workforce development activities to align students' educational experiences with their future career goals.[3] As part of the EL initiative, the DDOE, Advance CTE, and a group of stakeholders including employers and students from across

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the state designed a set of environmental literacy (EL) competencies aligned with Delaware's CTE pathways. In spring 2025, these EL competencies and associated resources for teachers were pilot tested in three pre-existing CTE pathways at two schools.

MDRC partnered with Advance CTE and the DDOE to carry out an implementation study of the pilot test. MDRC conducted semi-structured interviews with high school educators, postsecondary stakeholders, DDOE staff members, and Advance CTE staff members; held focus groups with students; and analyzed student survey data. The goal of the qualitative data collection was twofold: first, to learn about the upfront design work involved in developing the EL competencies and corresponding framework documents, and second, to assess the fidelity of the pilot test at the two schools.

This research resulted in several noteworthy findings and implications for states and districts seeking to embed EL content into their CTE pathways. The findings fall into two primary categories: initiative design and implementation. Associated implications are provided for the implementation findings.

Design findings from the pilot phase of the project included the following:

STAKEHOLDER ENGAGEMENT

- The Delaware EL Initiative used a relationship-centered approach and multiple rounds of feedback to build buy-in for the competencies.
- Strategic framing around the initiative's purpose ("the why") was critical for reducing resistance and gaining support from educators.

EMPLOYER ENGAGEMENT

- Targeting CTE classrooms emphasized the initiative's relevance to workforce readiness, resonating with employers who viewed environmental literacy as a valuable skill.
- Despite positive attitudes, employers were difficult to engage due to time constraints, resulting in limited feedback that may not fully reflect employer priorities.

BREADTH ACROSS COMPETENCIES

- EL competencies were designed to be cross-disciplinary, enabling integration across diverse CTE pathways and sectors.

STUDENT CHAMPIONS

- Student champions played a key role in advocacy and engagement, offering insights to strengthen implementation and center student voice.

Implementation findings from the pilot phase of the project included the following:

FINDINGS BASED ON STUDENT FEEDBACK

- Teacher enthusiasm and confidence in leading EL conversations strengthens student engagement.
- Leveraging student interest and feedback is an important component of maintaining student engagement.

FINDINGS BASED ON TEACHER FEEDBACK

- Providing off-the-shelf resources and professional development for teachers supports EL integration and avoids the "initiative fatigue" that can come from being simultaneously engaged with multiple new initiatives.
- Cross-pathway integration and clear policy mandates support long-term sustainability and program expansion.
- Future implementation efforts can be enhanced by providing educators with ideas for methods to assess student learning.

CTE pathways across the country are evolving to prepare students with a deeper understanding of the link between environmental changes, the corresponding industry changes, and the skills needed within career fields to address those challenges directly.

This publication will describe the design of the Delaware EL Initiative, provide an overview of the pilot program, and discuss findings and implications drawn from interviews, focus groups, and a student survey. It will conclude with a discussion of considerations for implementation of similar initiatives.

Integrating Environmental Literacy Into Delaware's CTE Pathways

States are increasingly confronting environmental challenges that are reshaping labor markets and driving demand for a workforce equipped to fill emerging green jobs. Many of these roles require not only familiarity with environmental issues but also proficiency in new and evolving technologies. Employer demand for green skills has surged—rising by 40 percent since 2015—yet only 13 percent of the current workforce possesses the necessary skills to meet these needs.[4] To meet demand, CTE pathways across the country are evolving to prepare students with a deeper understanding of the link between environmental changes, the corresponding industry changes, and the skills needed within career fields to address those challenges directly.

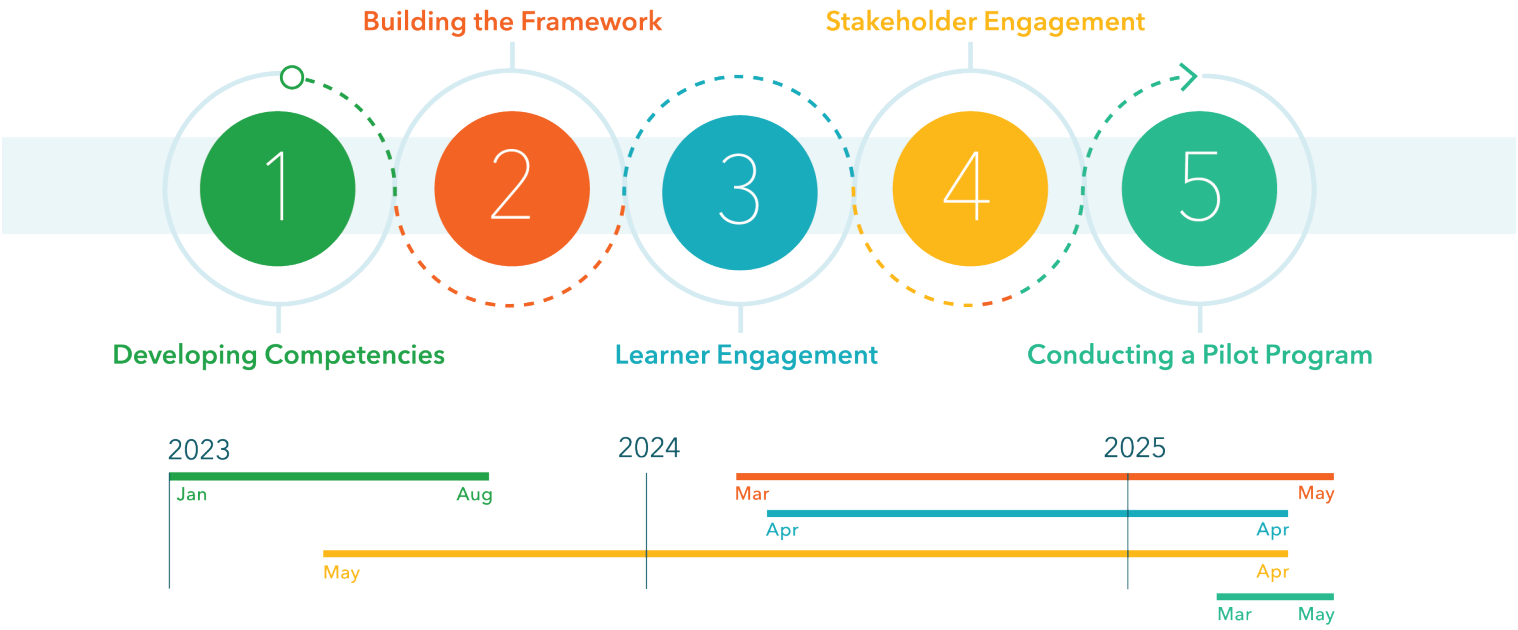
Achieving this vision requires leadership from both policymakers and practitioners. Delaware's effort to embed environmental literacy into workforce development strategies offers a promising example for others to learn from.

Designing the Initiative

The Delaware EL Initiative began with a multi-part design phase involving a collaborative process to develop competencies, the creation of pathway-specific resources for CTE teachers, and work with student champions who were involved in advocating for EL. The design phase is represented in Steps 1 through 4 of Figure 1.

During the design phase, a team of Advance CTE and DDOE staff members conducted a meta-analysis of Delaware CTE standards, the state's environmental literacy plan, and other states' environmental education standards to identify shared topics and concepts across CTE pathways. The team also looked at how other CTE programs across the country were already incorporating green competencies into their curriculum. Using these shared topics and concepts to guide design of the EL competencies helped ensure that the competencies would ultimately be replicable and generalizable across the state. The competencies developed using this approach were the first of their kind, in that they can be broadly applied to all CTE programs. The competencies were validated with input from employer, educator, postsecondary, state, and community organization stakeholders.

Figure 1. EL Initiative Design and Pilot Program Timeline



SOURCE: Figure 1 is provided courtesy of Advance CTE. For original context, see Velie Sando and Dan Hinderliter, "Integrating Environmental Literacy into Career Pathways: A Delaware Case Study" (Advance CTE, 2025).

The competencies, shown in Box 1, were designed to support Delaware's CTE students in becoming environmentally literate and prepared for the future workforce. They are intentionally broad and not industry specific, allowing for flexibility across CTE pathways. Moreover, they were written to avoid duplicating existing science, social studies, and CTE standards so as not to burden teachers with redundant content. For more information about the design process and competency development, see Advance CTE's case study published in summer 2025.[5]

Box 1. Delaware's Environmental Literacy Competencies

"To be environmentally literate in their chosen career field, a CTE learner will be able to:

1. **IDENTIFY AND EXPLORE CAREER PATHS WITHIN A CHOSEN INDUSTRY** that expose disparities and improve environmental outcomes for the economy, businesses, communities, and individuals.
2. **EXPLAIN HUMAN-CREATED LOCAL AND/OR GLOBAL ENVIRONMENTAL IMPACTS** within a chosen industry and the results of those impacts on economic, business, community, and individual health and wellness.
3. **DEMONSTRATE AN UNDERSTANDING OF INTER-RELATIONSHIPS** between and among components of environmental systems, e.g., atmosphere (air), hydrosphere (water), biosphere (living organisms), and pedosphere (soil).*
4. **CONDUCT A COST-BENEFIT ANALYSIS**, with respect to a chosen industry, to evaluate the environmental, social, and economic impact of business and consumer decisions.
5. **DISCERN** between rigorous environmental scientific research and speculative interpretations.
6. **IDENTIFY AND ANALYZE** environmental issues, policy, regulations, and legislation with respect to a chosen industry.
7. **PROPOSE NEW OR UPDATED** policy, regulations, and/or legislation that support environmental conservation, energy efficiency, environmental justice, and/or health and wellness in the workplace or community.

SOURCE: Delaware Pathways, "About" (website: https://delawarepathways.org/environmental-literacy/, 2025).

NOTES: *Delaware Pathways currently uses the term *pedosphere* (soil) in the list of competencies. However, the competency authors have suggested that the term *geosphere* (rocks and minerals) may be more suitable.

When creating a plan to implement the EL competencies, the Advance CTE and DDOE team wanted to minimize the burden on teachers. They identified three CTE pathways in which to pilot test the EL resources, prioritizing those that were already scheduled for revision, to minimize disruption. They also looked for ways in which environmental concepts were already present in curricula, even if not explicitly labeled. For example, the Health Sciences pathway already offered lessons on infection control that addressed relevant competencies, even though the lessons did not explicitly reference environmental literacy.

Once the competencies were established and pilot CTE pathways were identified, the team developed and gathered resources to help teachers integrate the EL concepts into their classrooms. These resources included professional development sessions to introduce the initiative to educators and pathway-specific documents linking the competencies to CTE subjects. These one-to-two-page documents consisted of basic industry statistics, links to sources about how to navigate new green approaches to industry-specific tasks, local community opportunities, green pathway programs offered at local universities, and more.

A central part of Delaware's plan for increasing students' environmental literacy was learner engagement, which was enhanced through collaboration with a group of "student champions." These high schoolers and recent graduates from across the state were recommended by their teachers and advisors to help incorporate student preferences and interests into the design and messaging of the initiative. (Student champions consulted on design and launch but did not participate as students in the piloted courses because they were not enrolled in the pilot schools.) The student champions represented Delaware students during the planning phase of the initiative, meeting regularly with Advance CTE and the DDOE to set goals for their group and to discuss how they thought information on environmental literacy should be disseminated. Their meetings also featured guest speakers from green job industries. Throughout the year, the group collaborated with Advance CTE to create a one-pager for schools across the state explaining the importance of environmental literacy. They also shared the EL work being done in Delaware with educators and their peers via virtual and in-person presentations at conferences such as the YES! Conference and Educators Rising.[6] Through these engagements, student champions shared their motivations and helped peers and teachers understand the EL initiative.

Implementing the Initiative

The DDOE and Advance CTE team conducted the pilot program in Delaware schools to begin exploring how to embed the competencies into classrooms. For the pilot program, the DDOE presented the opportunity to all districts and charter schools with CTE programs with the hope of securing participation from one school in each of the state's three counties. While three schools, each from a different county, participated in the development, review, and training, only two schools continued their participation through the pilot program. The third school cited timing conflicts as the reason for withdrawal. Educators were invited to teach courses, using the resources and professional development provided, to address the EL competencies while providing CTE pathway instruction.

The pilot program took place over an eight-week period in spring 2025. The two participating schools offer nine CTE pathways to approximately 1800 students. One school serves a student body in which the majority of students are Black and roughly one-third are from families with low incomes. The other school serves a student body in which two-thirds of students are White and fewer than one-fifth are low-income students. EL competencies were introduced across three CTE pathways: Agriculture, Food, and Natural Resources (AgriScience), Education, and Health Sciences. Teachers received stipends for their participation in the pilot. Seven teachers participated, each with between 20 and 40 students participating in the pilot course, for an estimated 250 students.

Study Design

To better understand the implementation of the EL initiative in the early-phase study, MDRC researchers worked alongside the EL initiative team from Advance CTE and the DDOE to gather data from relevant stakeholders.

Data Collection Methods

MDRC approached the project with the goal of answering the research questions shown in Box 2.

Box 2. Research Questions

- How were the new Environmental Literacy (EL) competencies developed, and how do they align with existing Delaware Career and Technical Education (CTE) standards? Who were the stakeholders involved in developing the EL competencies and how were they identified?
- To what extent has state-or district-level professional development prepared teachers to effectively integrate environmental literacy into their CTE courses within the three pilot pathways (AgriScience, Education, and Health Sciences), and what effect has it had on their teaching practices?
- How have resources, including state funds and instructional materials, been used to support integration of environmental literacy into Delaware's CTE pathways?
- How has collaboration among state agencies, schools and teachers, employers, and industry stakeholders contributed to the implementation of environmental literacy into CTE pathways?
- In what ways, if any, is the integration of environmental literacy into CTE pathways in Delaware being monitored and evaluated?
- How much has the integration of environmental literacy into CTE pathways in Delaware affected student interest and engagement in green jobs and/or sustainability more generally? How are students thinking about postsecondary plans after learning more about environmental literacy in their CTE courses?
- What insights gained during this implementation process could inform or be used to improve similar EL initiatives in other districts or states?

To examine both the design of the initiative and its implementation during the pilot phase, MDRC researchers collected data using three methods: interviews, focus groups, and surveys.

INTERVIEWS: MDRC conducted 17 semi-structured interviews with a diverse group of stakeholders who were either involved in developing the EL competencies used in the pilot program or who implemented the competencies in their classrooms. Participants included educators, employers, postsecondary staff, and other contributors. Interview topics included participants' roles in shaping the EL competencies, their engagement with implementing EL resources in CTE classrooms, and their suggestions for future implementation efforts.

FOCUS GROUPS: Three focus groups were conducted to gather student perspectives. Two groups consisted of students enrolled in the pilot CTE pathways, with one group representing each of the pilot schools. The third group included student champions — those students who did not directly participate in the pilot pathways but who collaborated with Advance CTE and the DDOE on the initiative's design to promote EL engagement.

SURVEY: Advance CTE administered a survey of 49 students who participated in the pilot program. The survey explored students' perceptions of the EL initiative, their level of engagement with the content, and suggestions for improving the framework. MDRC conducted analyses of the survey data.

Design Process Findings

Through the design process, the EL initiative team tapped into several components that were important in getting the work off the ground: stakeholder engagement, a focus on workforce readiness, breadth in the competencies, and student program champions.

Stakeholder Engagement

Delaware's EL initiative team adopted a deliberate and relationship-centered approach to stakeholder engagement to generate buy-in. As shown in Figure 1, the DDOE and Advance CTE worked through rounds of feedback and revisions to develop the competencies, beginning in 2023. The team intentionally prioritized listening and relationship building with interested parties; as one staff member put it, early conversations with stakeholders were often used to "just explain the why." Advance CTE interviewees also spoke about the importance of the "snowballing" tactic — that is, relying on existing relationships to help establish new connections with partner organizations, employers, and postsecondary partners who could provide feedback on the initiative. As an Advance CTE staff member explained, this approach resulted in an inventory of "people across the state who are interested and invested in the project even beyond the secondary school system." Feedback from a diverse set of voices reinforced the EL initiative team's confidence in the relevance and quality of the competencies.

From the state level to individual teachers, strategic framing — particularly around the initiative's purpose — was essential to creating buy-in. School administrators and teachers noted that new initiatives can face pushback when the rationale is unclear, especially due to educators already being occupied with a multitude of competing expectations. Framing the orientation to an initiative around the "why" can help stakeholders understand its purpose, build trust, and reduce resistance.

Emphasizing EL education as a strategy for workforce readiness can increase relevance for employers who will benefit from hiring environmentally literate graduates.

Employer Engagement

For this initiative, the team targeted CTE classrooms due to their intrinsic link to the future workforce. One DDOE staff member noted that "being environmentally literate is applicable across all jobs," a sentiment that was echoed across interviews with employers and school staff members as well.

Emphasizing EL education as a strategy for workforce readiness can increase relevance for employers who will benefit from hiring environmentally literate graduates. Employers who were interviewed about their involvement in the creation of competencies universally found the work to be interesting and pertinent. One employer indicated that environmental literacy would be a "huge benefit" for young people entering the workforce and would provide strong foundational knowledge to build on as workers grow more specialized in their respective industries. However, despite employers' positive attitudes toward the initiative, employers tended to be a difficult stakeholder group to engage during competency creation. Employer interviewees shared that work responsibilities made it difficult to find time to give feedback on the EL initiative. As a result, feedback received from employers may reflect the viewpoints of only a small number of individuals who responded, potentially leading to competencies that may not accurately depict employer priorities.

Breadth Across Competencies

Delaware's EL competencies were intentionally designed to be nontechnical and cross-disciplinary, ensuring they could be seamlessly embedded into a wide range of CTE pathways. For instance, as shown in Box 1 above, the first EL competency has a goal for CTE students to explore career paths that improve environmental outcomes and target disparities for the economy and communities at large, not just within a particular sector. This framing helps educators and students understand how to approach environmental literacy within the context of their specific pathway.

Student Champions

Student program champions contributed significantly to increasing engagement from other stakeholders. By involving students in advocacy efforts and seeking their input, the EL initiative team strengthened EL relevance and visibility. The student champions provided insightful perspectives on the importance of environmental literacy in their future career pathways, as guest speakers at conferences and when talking to teachers in the pilot pathways. Their perspectives were critical in

harnessing student engagement and innovating for future success in implementation. For example, when asked about insights for strengthening the initiative, students suggested making an intentional effort to broaden accessibility for students who are English language learners. All student champions interviewed echoed the importance of keeping students at the core of the initiative and emphasizing student voice while doing so.

The focus group involving student champions surfaced the following ideas about features that could help the student champion role be even more beneficial to the EL initiative:

- The group can create and share a record that summarizes its goals and work completed, to help inform future groups.
- The student champions can represent varied career interests and ages to guide how information is taught across ages and pathways.
- The group can create an opportunity for peer learning while helping to share feedback with leadership and further the initiative.
- Students from differing pathways can support the diversification of EL education for all pathways.

Implementation Findings and Implications

The MDRC implementation study of the pilot program provided information about teachers' perceptions of their own preparedness, the usefulness of the resources given to teachers, teacher engagement, and student engagement throughout pilot implementation.

Findings Based on Student Feedback

A primary data source for this implementation study was feedback from CTE students who participated in the pilot program. Through the focus groups and student survey, students provided valuable insights into teachers' roles in implementing the initiative, the relevance of environmental literacy to their career pathways, and their overall engagement with the program.

Students' Perspectives on the Effectiveness of Teaching Methods and Resources

Students in the pilot program responded positively to how environmental literacy was incorporated into their classrooms. Focus group participants noted that their teachers appeared well prepared to guide them through EL-related learning. One student noted that "teachers have the most influence on us," suggesting that the way environmental literacy is taught, and strong teacher engagement, could in turn shape student engagement.

The student survey fielded by Advance CTE had 49 respondents. Student responses highlighted that hands-on and research-based activities were especially engaging; 80 percent of students indicated that more hands-on learning would have improved how EL content was incorporated into their classrooms. A majority of students (57 percent) also indicated that having more activities focused on connections to their future careers would have improved EL integration. Projects such as posters and presentations helped students synthesize and communicate key concepts. Many students expressed interest in having more real-world exposure to employers and in cross-curricular integration. Notably, 98 percent of student survey respondents felt prepared to discuss environmental issues within the context of their career pathways after participating in EL activities.

Students also identified the kinds of EL resources they encountered in their classrooms. While all students had access to online resources, the format and variety of resources differed across classrooms. Some students engaged with printed articles, online discussion boards, and books on relevant topics.

IMPLICATION: To deepen student engagement, provide teachers with professional development that fosters enthusiasm and confidence in leading EL conversations. Students are more likely to engage when teachers demonstrate genuine interest in the subject matter and draw connections to real-world applications, whether by providing hands-on experiences or fostering discussion about how environmental issues intersect with everyday life. Furthermore, connecting with employers and real-world experiences can enhance student engagement.

Students' Perspectives on the Relevance of EL Content and Its Connection to Their Future Careers

Students from the pilot classrooms shared thoughtful insights on how environmental literacy connects to their coursework and future careers. Many expressed the view that the EL competencies relate to their chosen pathways and talked about how their future professions may impact the environment. For example, one student planning to pursue engineering spoke about how sourcing ethical and ecofriendly materials will soon be imperative for engineers, and another enrolled in an education pathway emphasized the importance of environmental literacy in teaching future generations.

All respondents to Advance CTE's student survey indicated that the EL activities helped them understand the impact of their future career on the environment, and 90 percent found environmental literacy relevant to their career pathways. Students were also asked to rank which issues from a list were most engaging and they were able to select multiple options. Across the board, surveyed students ranked global-scale issues like climate change (38/49) and air and water pollution (31/49) as most engaging for them, as well as action-oriented topics such as renewable energy systems (26/49) and sustainability (24/49). Other topics that students found engaging included waste management (19/49), youth advocacy (17/49), and food security (16/49). Students were motivated by a range of EL-related topics, indicating the wide scope and breadth of EL topics that captivated CTE students across pathways and aligned with their interests.

Students in the pilot group were all in a chosen CTE pathway, and thus many students had predefined career goals (for example, veterinary medicine) prior to EL exposure. EL content reinforced existing interests and encouraged students to approach their future careers in a more environmentally conscious way. For example, students in the Health Sciences pathway were surprised to learn that the healthcare industry emits large quantities of greenhouse gases. This insight challenged students' assumptions about the field's mission to promote health. Students also showed interest in learning about green jobs and understanding their personal environmental impact through current events and classroom resources.

These insights from Delaware CTE students mirror broader national trends about student interest in climate education. A national poll of high school students by EdWeek found that 65 percent of survey respondents were interested in learning more about climate change and its future implications. About 50 percent of survey respondents said they would like to better understand the science behind these environmental issues.[7]

IMPLICATION: When students feel their interests, needs, and feedback are reflected in the content, they are more likely to stay engaged. This is especially important in multiyear CTE pathways, where repeated exposure to EL instruction must be thoughtfully framed to avoid overexposure and disengagement.

In focus groups and through the pilot student survey, students shared a desire for several pillars to be integrated into the work of future student champion groups and environmental literacy work as a whole. These integrations can be used to promote understanding of environmental literacy's real-world relevance and applications across disciplines. They include:

- More educational field trips, paid internship opportunities, and firsthand experiential activities
- More contextualization of environmental literacy within specific fields to create stronger career connections
- Increased employer engagement and cross-curricular integrations
- More information about current environmental events
- An increased exposure to green jobs
- An increased number of classes focused on EL topics

Findings Based on Teacher Feedback

The study team spoke with educators across pilot pathways to gain insights into how the initiative was introduced, what training and resources were made available to them, and overall perceptions on rolling out an initiative of this scope.

Teachers' Perspectives on Preparedness

Teachers had varied perceptions of their preparedness to integrate the EL competencies. Instructors of the AgriScience pathway naturally felt more confident than those in the Health Sciences and Education pathways because of their prior experience teaching topics linked to environmental science.

To support instructors in the pilot program, the initiative provided a variety of resources. At times, educators faced challenges integrating these materials meaningfully due to limited time and support. Others noted a lack of ready-to-use resources tailored to their specific pathways. One Health Sciences teacher described feeling overwhelmed at first, unsure how EL competencies connected to the curriculum, but explained that the resources provided by the initiative offered clarity. The instructor noted, "They had a whole list [of resources] that were related to allied health science, so when I was looking through those, I thought, 'No, this is actually really good—like, this would be a good way.'"

Professional development sessions, often facilitated by staff members from Advance CTE and the DDOE, varied in content, structure, and attendance. Educators and administrators noted that educators preferred sessions that were locally relevant and interactive, especially when the sessions were embedded in existing professional learning community (PLC) structures. Teachers found the professional development schedule to be problematic; having the sessions near the start of the year was overwhelming and did not give educators enough time to incorporate EL content into their planning.

The influence of EL-related professional development on teacher engagement was limited but promising. After the professional development, teachers used their PLC time to review EL framework documents and requested follow-up sessions, indicating early signs of engagement. Teachers appreciated the opportunities to provide feedback on the initiative and felt more invested when their input shaped materials. One administrator described increased teacher interest following a professional development session:

> And at the end of the day, one, the teachers are, like, wanting more, they wanted to know more. Two, we were asked to do feedback on certain documents … and they loved that because it's like, we're having an impact on this, but we didn't have enough time. So they asked if they could have more time to do that, which they did. They took time of their own PLCs to continue that. And they've asked, when is the next time we're going to have more types of official professional learning around that? … But the consensus was that it was a really beneficial day. They saw the connections that would come to their actual pathways. They got excited about it.

IMPLICATION: Teachers are interested in and enthusiastic about EL implementation but need targeted support to sustain engagement. This support should include dedicated professional development focused on embedding EL content into existing curricula as well as pathway-specific "off-the-shelf" instructional materials and lessons that teachers can use right away. Teachers consistently

emphasized the importance of aligning the competencies with current lessons and having time to plan accordingly. Providing educators with structured time during professional development to engage with off-the-shelf materials builds capacity and reduces teacher initiative fatigue.

Teachers' Perspectives on EL Engagement and Ease of Integration

Teacher engagement with EL instruction varied across pilot schools but showed potential at both schools. Teachers indicated that being able to support students with hands-on and student-led projects, such as an EL and green job project workshop conducted by one of the pilot schools, can foster teachers' own engagement, especially when supported by adequate resources and time. Teachers also noted that compensation and financial resources, whether through paid teacher professional development or community-based partnerships, increase teacher ownership.

A promising approach that emerged from discussions with teachers was cross-pathway collaboration. Teachers found that interdisciplinary approaches allowed environmental literacy to be embedded more organically into their instruction. Educators in environmental pathways (AgriScience) were able to make clear connections between their pathways and other disciplines, while educators in nonenvironmental pathways (Education and Health Sciences) had a harder time making connections. Creating opportunities for educators to learn from each other, through communities of practice or shared planning time, can help bridge these gaps. One educator explained: "A business class might be able to integrate maybe the clothing they sell in the school store. Maybe that would be made from renewable type of material, like cottons, natural materials, versus, say, polyester or whatever. Or, it's maybe a recycled material that's put into their, what they're selling for, say, school gear or something like that. They could kind of integrate that way."

Despite enthusiasm for the program, many teachers reported that other responsibilities often took precedence over EL integration. Some also expressed concerns about the initiative's long-term viability, citing uncertainty around political turnover and whether future administrations would continue to support EL efforts.

IMPLICATION: To strengthen teacher engagement with EL instruction, schools and districts should emphasize the importance of cross-pathway collaboration and establish statewide policies that support long-term sustainability. Providing teachers with time and resources for cross-pathway collaboration can reduce the burden of initiating integration on their own. For example, offering a resource that outlines potential cross-pathway connections could serve as a helpful starting point.

Clear policies and expectations — especially those backed by funding — signal to educators that environmental literacy is a priority. When administrators champion new initiatives, teachers are more likely to follow suit. Funding-backed policies can also empower teachers to access resources, source materials, and support student learning opportunities that might otherwise be out of reach. Embedding environmental literacy into curricula through policy and support structures can help ensure sustainability and scale.

Teachers' Ability to Evaluate Student Learning

Given the pilot program's limited scale, implementation was approached in a flexible and adaptive manner, without pre-established metrics or a formal monitoring structure. Instead, the process evolved organically, with teachers playing a vital role in measuring student success with the concepts. While the pilot program did not include a formal system for teachers to evaluate students, one school demonstrated resourcefulness by organizing a workshop where students presented research posters aligned with EL competencies and their CTE pathway topics. This example highlights the potential for teacher-led innovation and engagement.

IMPLICATION: Future implementation efforts can be enhanced by providing educators with ideas for methods to assess student learning. While teachers valued the flexibility of the competencies, they also expressed interest in seeing examples of effective practices for monitoring student growth. The current absence of formal measurement infrastructure presents an opportunity to develop systems for measurement and assessment that could support consistent implementation and inform statewide goals.

Conclusion

Training workers to be ready for a future that is environmentally and ecologically sustainable is imperative and meets the demand of a labor market characterized by rapid change. States and districts can follow Delaware's lead in instilling in students the environmental literacy needed to thrive in this evolving workforce. The idea of embedding environmental literacy into existing career pathways was positively received by educators and students. From engaging stakeholders in the creation of the competencies to providing educators with comprehensive resources and support, the implications listed above can support states that are interested in shaping the next generation of the green workforce.

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