The SDG Accord

The University and College Sector's Collective Response to the Global Goals

Data Driven Solutions for Sustainable Development

Langara.

ʔəx̌ʷməθkʷəy̓əm | at Musqueam

SDG focus

☒ Goal 4 - Quality education
☒ Goal 9 - Industry, innovation and infrastructure
☒ Goal 13 - Climate action

What did you do?

Using AI and analytics for real change: A sustainability highlight for 2024 was a student-led innovation through the Campus as a Living Lab initiative. PDD Analytics program partnered with our Facilities team and design consultant Prism Engineering to identify energy-saving opportunities using heat mapping visualization and real-time AI forecasting. Moving from a reactive to a proactive approach will address HVAC inefficiencies, demonstrating ways to achieve additional energy savings using new technology; as much as 20 to 37 per cent is estimated based on research in this area.

What were the benefits and outcomes?

1. Energy Efficiency: Forecasting HVAC needs can lead to significant energy savings, estimated at 20-37% depending on current operations.

2. Skill Development: Students gained hands-on experience with AI, data analytics, and cross-cultural teamwork. Student Impact: "**This project has shown us how powerful data can be in making real changes**," said Sandra Enubuzor, second-year student.

3. Community Benefit & Experiential Learning: Integrating sustainability into our campus operations and academic experiences reinforces Langara's commitment to fostering a sustainable future. Sustainability is a shared responsibility, and when students see their ideas shaping the future of our campus, they understand the true impact of their learning.

What barriers or challenges did you encounter in embedding sustainability into your learning and teaching practice and how did you overcome them?

1. Collaboration and timing to work for student project timelines and real-world applications can be difficult; creating projects that live on and have learning throughout can support creating more opportunities for experiential learning; having a framework that all participants understand is important to ongoing success.

2. Resourcing for collaborators internally and externally. It is difficult to estimate capacity requirements to support experiential learning experiences that work to address current operational initiatives or ongoing upgrade projects.

3. Keeping a pipeline of applied learning opportunities for students; this relates back to timing and structure.

What are your conclusions and recommendations for others?

Partnerships and collaborative projects are highly rewarding and lead to innovative approaches and impactful learning experiences. Creating effective structures and resourcing models to support this work is challenging. Knowledge sharing and lessons learned across institutions could lead to more impactful projects with the right framework in place to manage the initiatives.

Web link to further information:

Langara College - Data-driven solutions for sustainability: How Langara students are making an impact on campus