

Empowering Lifelong Learning and Workforce Development through Penn State Extension on the Open edX Platform



Introduction

Land-grant universities like Penn State have a long-standing commitment to public outreach and extending knowledge beyond the traditional campus setting. Reaching diverse audiences, particularly in rural communities and specialized industries, requires innovative and scalable solutions. Expanding access to relevant, high-quality non-credit education presents a powerful opportunity to support economic development, professional advancement, and personal enrichment for Pennsylvanians and beyond. This is especially crucial for sectors like agriculture, natural resources, and emerging industries where continuous learning and upskilling are vital for staying competitive and addressing evolving challenges.

Penn State Extension's digital education initiative, leveraging a learning management system built on the Open edX platform, serves as a key strategy to fulfill this mission. The initiative aims to broaden access to Penn State's expertise, reaching individuals, businesses, and organizations across Pennsylvania and globally. By offering courses on topics ranging from sustainable agriculture to workforce development in green industries, it seeks to empower learners with practical knowledge and skills for personal and professional growth.

Digital Education Initiative

The adoption of a user-friendly online platform has significantly expanded Penn State Extension's reach, connecting with learners who may not have the time or ability to attend in-person programs. This digital approach offers several key advantages:

- **Increased Accessibility:** Online courses remove geographical barriers, allowing individuals from anywhere in the world with internet access to benefit from Penn State Extension's expertise.
- **Cost-Effectiveness:** Digital delivery can reduce the costs associated with traditional in-person training, making education more affordable for a wider audience. Penn State Extension offers a variety of paid and potentially free resources.
- **Convenience and Flexibility:** Learners can access course materials and engage with content at their own pace and on their own schedules, accommodating work and personal commitments.
- **Reaching Specialized Audiences:** Online platforms enable the development and delivery of highly targeted training programs for specific industries and professional groups, such as pesticide applicators and green industry workers.
- **Scalability:** The Open edX platform provides a scalable infrastructure to accommodate a growing number of learners and a diverse catalog of courses.

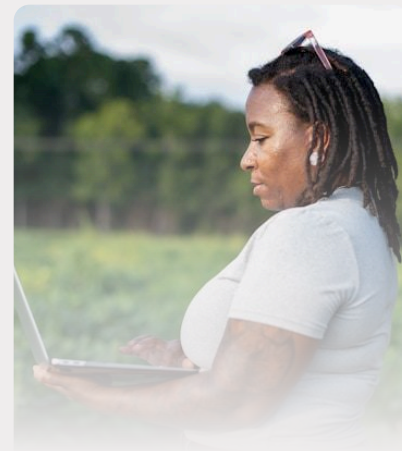


Key Mechanisms

This accessible and flexible approach has transformed Penn State Extension's knowledge and resources, extending its land-grant mission into the digital age. Furthermore, the digital offerings directly support workforce development and economic vitality through several key mechanisms:

- **Industry-Relevant Content:** Courses are developed in collaboration with industry stakeholders and government agencies to ensure alignment with current needs and regulations.
- **Professional Development and CEUs:** Many courses offer Continuing Education Units (CEUs) and certifications that are valuable for professional advancement and maintaining licenses.
- **Upskilling and Reskilling:** Programs cater to individuals looking to acquire new skills, advance in their careers, or adapt to changing industry demands.
- **Partnerships for Workforce Training:** Collaborations with organizations like the Pennsylvania Department of Agriculture and the Pennsylvania Landscape and Nursery Association directly address specific workforce training needs.
- **Microcredentialing Initiatives:** Future plans for microcredentials will provide learners with recognized digital badges and certifications for specific skill sets, enhancing their employability.

By directly addressing the learning and development needs of individuals and industries, Penn State Extension's digital education initiatives contribute to a more skilled workforce and a stronger economy.



Solution

Penn State Extension envisioned a robust digital platform to extend its educational outreach beyond traditional in-person programs. By building its non-credit digital education offerings on the Open edX platform, it established a centralized system for delivering a wide array of courses catering to diverse learning needs. The platform's flexibility allowed for a multimedia-rich learning experience, emphasizing video and interactive elements. A mobile-responsive design ensures accessibility across various devices. Integration with Penn State Extension's e-commerce and data management systems provides a seamless user experience and facilitates data-driven decision-making. Strategic partnerships with state agencies and industry associations inform the development of relevant and timely course content.

Rebecca Rumbel sheds light on the key factors that led Penn State Extension to choose the Open edX platform:



"We chose the platform because of its ability to be customized and for its ability to work with our needed integrations with other platforms. We also appreciated the community aspect of Open edX. Last, we saw this LMS as a sustainable solution to support our long-term digital education strategy. Ten years later, it proves to still be a viable solution for us."

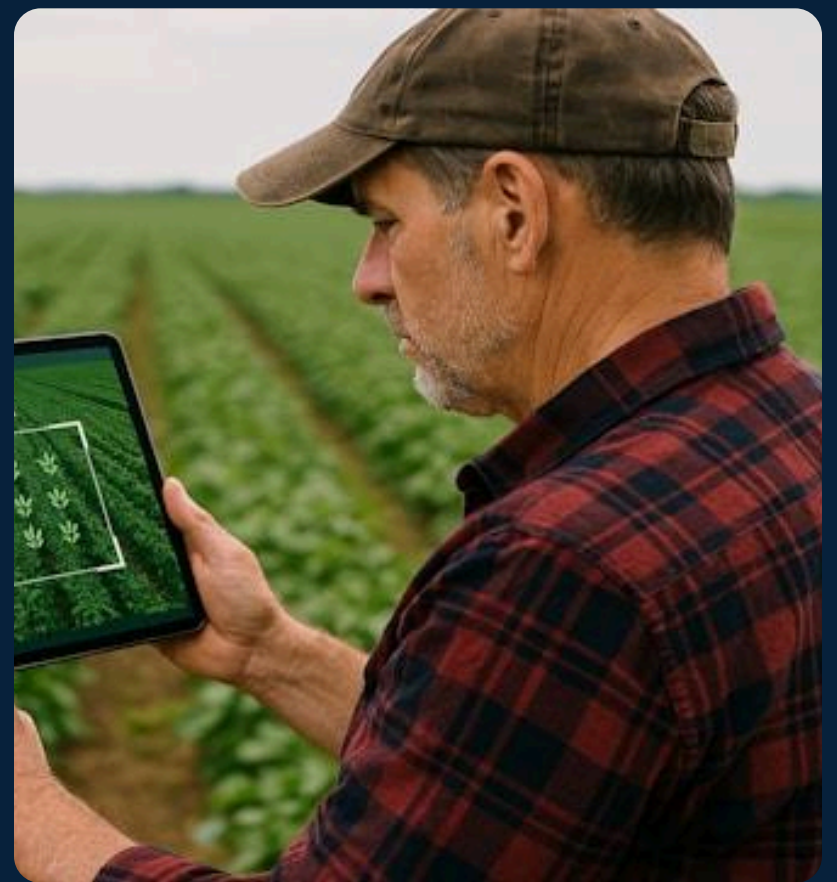
"The simplicity of the LMS was a large factor for us, as well as the ability for it to integrate with our other platforms."

Rebecca Rumbel | Assistant Director for Digital Education, Non Credit, College of Agricultural Sciences, Penn State University

Implementation

Penn State Extension partnered with a third-party vendor for the initial LMS implementation and ongoing support. Key aspects of the implementation include:

- **Open edX Platform:** Selected for its open-source nature, adaptability, scalability, and ability to support a diverse range of course formats.
- **Extensive Customization:** The platform has been tailored to meet Penn State Extension's specific branding and integration requirements.
- **API Integrations:** Robust API integrations were established with Penn State Extension's e-commerce platform for seamless enrollment and payment processing, as well as with a CRM platform for customer relationship management and data analytics.
- **Multimedia Focus:** The platform supports the integration of rich multimedia content, with a strong emphasis on video-based learning.
- **Structured Course Design:** A standardized course structure was implemented to ensure consistency and facilitate rapid course development.



Impact

Penn State Extension's digital education initiatives have yielded significant results:

- **Global Reach:** Courses have reached learners in nearly every US state and numerous countries worldwide, significantly expanding the traditional service area.
- **Large Learner Base:** While specific enrollment numbers fluctuate, the platform serves a substantial number of learners annually, with increasing repeat customers due to valuable offerings like pesticide applicator recertification.
- **Workforce Development Impact:** Successful partnerships with the Pennsylvania Department of Agriculture and industry associations have resulted in impactful training programs for critical sectors. The Spotted Lanternfly training, for example, has been adopted by multiple states.
- **Revenue Generation:** The platform provides a mechanism for generating revenue through course fees, supporting the sustainability of extension programs.
- **Enhanced Engagement:** The use of multimedia and interactive elements contributes to a more engaging and effective learning experience.
- **Data-Informed Decisions:** Integration with a CRM platform allows for tracking learner progress, course completion rates, and the impact of marketing efforts.



"With our launch of online courses and new website in 2016, we've really seen that reach expand way beyond Pennsylvania... we reached 27 countries last year through our outlet of online courses."

Rebecca Rumbel | Assistant Director for Digital Education, Non Credit, College of Agricultural Sciences, Penn State University

The **Organizations** That
Made This Possible



Future Directions

Penn State Extension continues to innovate and expand its digital education offerings on the Open edX platform, with a focus on:

- **Expanding Learner Personas:** Developing targeted courses and learning pathways for specific audience segments, such as homesteaders and new farmers.
- **Implementing Microcredentialing:** Establishing a Penn State Extension microcredentialing program to recognize specific skills and expertise, enhancing learner employability.
- **Increasing Blended Learning Opportunities:** Integrating online learning with in-person workshops and events to create more comprehensive and hands-on educational experiences.
- **Leveraging Synchronous Learning:** Expanding the use of cohort-based courses with live webinars and discussion forums to foster greater interaction and community.
- **Exploring Emerging Technologies:** Investigating the potential of technologies like 3D modeling and AI to enhance the learning experience.



Advice for Other Institutions

Rebecca Rumbel offers valuable advice for other institutions considering a similar path:

- **Start Simple:** Begin with core offerings and gradually expand complexity.
- **Embrace Native Tools:** Leverage the built-in authoring capabilities of the Open edX platform.
- **Prioritize Quality Content:** Focus on developing engaging and relevant learning materials.
- **Consider Third-Party Vendors:** For institutions lacking in-house expertise, partnering with experienced Open edX providers can streamline implementation and support.
- **Focus on Integrations:** Ensure seamless integration with existing university systems for enrollment, payment, and data management.



"I would say, start simple... .. If you have good, solid content, you can present it well, natively."

Rebecca Rumbel | Assistant Director for Digital Education, Non Credit, College of Agricultural Sciences, Penn State University

Conclusion

Penn State Extension's strategic development and implementation of online courses exemplifies how land-grant universities can effectively extend their educational mission in the digital age. By providing accessible, relevant, and engaging online learning opportunities, Penn State Extension is empowering individuals, supporting workforce development, and contributing to economic growth across Pennsylvania and beyond. Their experience offers valuable insights for other institutions seeking to leverage open-source platforms to broaden their reach and impact in lifelong learning and professional development.