2023-24

TLOS ANNUAL REPORT

Technology-enhanced Learning and Online Strategies

Office of the Executive Vice President and Provost

Introduction

In its second year under the Provost's Office, Technology-enhanced Learning and Online Strategies (TLOS) continues to evolve, forge strong partnerships, and support the university in the four key areas of course and program design, faculty digital fluency, accessible technologies and Universal Design for Learning (UDL), and the digital learning ecosystem. Additionally, TLOS is committed to working closely with partners across the university to adapt and respond to emerging strategic priorities. We are pleased to present our key accomplishments in these areas for the 2023-24 academic year.

Course & Program Design

Supporting Course & Program Development for Professional Graduate Programs (PGPs)

This year, we enhanced our support for Professional Graduate Programs, engaging with three additional programs identified by the PGP Steering Committee and Working Group. We made notable progress on the Online Master of Natural Resources and initiated work on the Executive Master of Natural Resources and Online Master of Agriculture and Life Sciences. In addition to these programs, we continued our work to develop and enhance courses for the Online Master of Business Administration (OMBA).

21 TLOS Flexible Teaching Fellows provided **60+** hours of course reviews, peer consultations, and professional development facilitation in support of high-quality flexible/online teaching.

100+ faculty consultations held on a variety of topics, including Canvas, digital assessment, and media production.

Advancing Flexible and Online Course Development

We are advancing flexible and online course design through two key initiatives: developing the Business Information Technology (BIT) Cyber program and enhancing the quality of flexible and online courses through our Flexible Teaching Fellows Program. We have redesigned six courses in the BIT-Cyber program and are working on three more, completing approximately one-third of the program's courses. Through our Flexible Teaching Fellows Program, we are fostering peer collaboration, allowing instructors to support each other in their course development efforts. This year, we sponsored 21 faculty fellows who, through extensive professional development and peer consultations, have played a crucial role in maintaining excellence in course design across departments and colleges.

Evolving Media Development Capacity

We have expanded our media development facilities and services to better assist various programs, including PGPs. Although programs such as the OMBA and BIT have begun using our media services, our resources remain underutilized due to a lack of awareness of our services and challenges with motivating faculty to enrich their courses with media. With stronger support from academic department leadership, we could significantly advance the creation of media-rich online courses. To better support future media development, we expanded our service offerings by launching a new modular studio and enhancing our Do It Yourself (DIY) studio. Through a handful of grant-supported projects, we have started exploring 360-degree video and 3D modeling to create immersive extended reality (XR) learning experiences.

Faculty Digital Fluency

Expanding Professional Development into Emerging Areas

Our instructors face a rapidly evolving digital landscape, requiring new skills and knowledge. To help instructors build confidence and stay ahead of emerging trends, we have expanded our Professional Development Network (PDN) offerings to include new topics such as artificial intelligence (AI), data analytics, online instructional methods, and innovative learning technologies. Recognizing instructors' busy schedules, we also introduced flexible, self-paced online workshops covering a variety of instructional topics.

Building Instructor Networks to Stay Ahead of Trends

To help instructors adapt to the latest trends in higher education, we partnered with the Provost's Office and the Center for Excellence in Teaching and Learning (CETL) to help organize Faculty Innovation Communities of Practice. These communities focus on the next generation of tools and practices that will shape teaching and learning at Virginia Tech, playing a crucial role in keeping the university at the forefront of technological and pedagogical advancements. This year's communities centered on XR, UDL, microcredentialing, large classroom teaching, adjunct faculty practices, student success measures, community and inclusion, and global collaboration.

5,266 PDN offered courses completed by 2,033 faculty.

460+ PDN sessions led by partners.

120+ PDN sessions and events directly led or co-led by TLOS.

87% of enrolled faculty completed all PDN Computer Refresh program requirements.

Accessible Technologies and Universal Design for Learning (UDL)

Advancing Accessibility and UDL

We continued our comprehensive efforts to foster inclusive and equitable learning environments that support the diverse needs of all students. One of the ways we furthered these efforts was by promoting Universal Design for Learning. We offered specialized UDL workshops on AI as it relates to accessibility and authentic assessment; hosted UDL Day 2023, a professional learning event that highlighted the connections between inclusive design, pedagogy, and technology; continued offering the Accessibility Professionals Certification Grant Program (CPACC) with a focus on enhancing cross-disciplinary expertise in accessibility and UDL; and piloted a UDL Effectiveness program with STEM faculty to apply UDL principles in their courses. With funding from the Provost's Office to support Phase 2 of the UDL Teaching Innovation project, we established a UDL Faculty Fellows program with representation from the majority of academic colleges. This initiative increased UDL awareness among faculty

19 faculty, staff, and graduate students participated in the spring 2024 accessibility certification cohort.

487 hours of live captioning provided.

142 hours of audio transcription provided.

and provided essential resources and professional learning opportunities for instructors to implement UDL teaching techniques in their courses. To build awareness about improving the structure and accessibility of digital educational content, we launched our seventh Choose Accessible Learning Materials (C.A.L.M.) campaign. This campaign was recently recognized with a Spotlight Award from the Virginia Higher Education Accessibility Partners (VHEAP) for its impact at Virginia Tech and across other higher education institutions and K-12 schools.

Enhancing Accessibility Through Inclusive Services

In our ongoing efforts to support the university with inclusive media and technology services, we made significant improvements to our captioning service based on faculty feedback. We are now exploring options to further enhance media accessibility by providing audio descriptions for post-production videos. To ensure equal access to technology for all users, including those with disabilities, we conducted 31 comprehensive accessibility reviews for both procured software and internally developed applications.

Digital Learning Ecosystem

Increasing Support for Generative AI Tools and Strategies

Generative AI has the potential to transform teaching and learning, making it essential for faculty to understand and effectively use AI tools. As faculty adopt these tools and adapt them for classroom use, they need hands-on experience, expert support, and peer collaboration to stay current. To this end, we formed an intensive summer cohort on Teaching in the Age of Generative AI; led numerous AI-focused professional development sessions covering topics such as course design, assessment creation, collaboration, and material development; and hosted a faculty showcase, where instructors shared how they integrated AI into their courses. We also partnered with the Division of IT to lead a campus-wide Generative AI Working Group, which was charged by Cyril Clarke and Amy Sebring with developing guidelines for responsible AI use and proposals for AI governance and funding.

Implementing AI-Based Tools to Enhance Teaching and Learning Experiences

With the rapid rise in AI enhancements to existing software platforms, we carefully considered the extent to which we should implement new features to assist instructors and students. Following a year-long pilot of Gradescope, an AI-based tool that streamlines grading, we signed a multi-year contract and created a campaign to accelerate faculty adoption. We also enabled new AI features in Zoom after confirming the security of university data and surveying faculty, staff, and students. These outreach efforts helped ensure that our actions were aligned with pedagogical needs and user preferences, and they informed our decision to provide all users with the ability to opt out of using the new features.

Refining Support for Emerging Technologies Exploration

We continued to support the exploration of emerging technologies in teaching and learning through Technology-Enhanced Learning Grants (formerly Innovation in Learning Grants). This year, we awarded and supported nine faculty-proposed projects to implement and evaluate new approaches to teaching using innovative technologies. Two of the proposals were found as a result of our partnership as proposal reviewers on grants offered by CETL. All the projects provided teaching faculty and our team with opportunities to explore and gain experience with generative AI, XR, and other innovative tools to enhance teaching and learning. The evaluation component of these projects offered a way to better understand students' experiences with and perceptions of these tools.

7 new tools integrated with Canvas.

1.7 Million hours of Zoom usage by faculty, staff, and students.

950+ escalated help tickets handled.

Emerging and Strategic Priorities

Bridge Experience Program Tracking System

In partnership with Undergraduate Education, we successfully transitioned the Bridge Experience Program Tracking System from a standalone platform with numerous technical and usability challenges to a new model that is fully integrated with Canvas. This transition improves the tracking of experiential learning activities by moving the system to a familiar, stable platform, enabling both program growth and improvements in user experience. Program leaders are empowered with greater control over their Canvas sites, access to real-time data, and the ability to onboard additional programs easily. Twelve programs are adopting the tool in fall 2024, and we are continuing to provide support as the Bridge Experience Program pursues its long-term goal of participation by 50% of undergraduate programs.

Pathways Assessment Tool

Following a two-year process of identifying institutional needs and gathering faculty feedback in partnership with the Office of Institutional Effectiveness and the Office of General Education, we worked with IT Learning Systems to develop a Canvas-based application that enables faculty teaching Pathways courses to gather data and submit semester-end assessment reports inside Canvas. In fall 2024, the first faculty in Pathways' four-year evaluation cycle are using the new tool, which aims to increase response rates, eliminate reporting on outcomes that do not apply to a particular course, and decrease the burden on faculty for preparing report data.

Conclusion

The 2023-24 academic year marks our second year in the Provost's Office, where strong partnerships with academic units have been key to our success. Our team has been at the forefront of university-wide conversations about the impact of generative AI at Virginia Tech, and we have served the campus community, especially instructors, as a trusted advisor on generative AI in teaching and learning. Our other significant accomplishments, from course and program redesigns to promoting accessible technologies, all support Virginia Tech's pursuit of excellence in technology-enhanced education and reflect our commitment to that mission.

Plans and Goals for the Upcoming Year

Expand AI Integration in Teaching and Learning

- Develop a teaching and learning with AI program for faculty within PDN
- Pilot AI-enhanced tools in select courses and evaluate their impact
- Collaborate with university leadership to create comprehensive AI literacy resources and guidelines for ethical AI use in academic settings

Enhance Support for PGPs

- Complete development of ongoing PGP projects (Online Master of Natural Resources, Executive Master of Natural Resources, Online Master of Agriculture and Life Sciences)
- Identify and initiate development for additional PGP opportunities, in collaboration with the PGP Steering Committee and Working Group

Further Accessibility and UDL Initiatives

- Prepare for and help support compliance with revised ADA Title II regulations taking effect in April 2026
- Identify the top 40 Virginia Tech websites needing improvement to comply with accessibility standards and coordinate with campus units responsible for site remediation
- Expand UDL training programs to deepen engagement around inclusivity and accessibility of modern learning environments at Virginia Tech

Reinvestment Strategies

In support of the university's request to align funding for strategic priorities, we will rework the PDN Computer Refresh program for the 2024-25 year to operate with a 14.4% reduction ($193,200) and additionally return $33,333 as the first part of a three-year phased reduction in computer lab support, which will eventually total a $100,000 reduction.

Appendix

TLOS is a unit within Virginia Tech's Office of the Executive Vice President and Provost. Its mission is to improve student learning by fostering digital fluency, partnering with faculty on digital learning experiences, and providing technology-enhanced environments for flexible and online learning. TLOS, formed in 2013, is led by Dale D. Pike, Associate Vice Provost, and Quinn Warnick, Assistant Vice Provost. The unit is comprised of 44 full-time professionals and graduate students organized into four main functional areas:

- Learning Services (including Instructional Design, Instructional Media Development, and the Professional Development Network)
- Support and Documentation (including Computer-Integrated Learning Spaces)
- Accessible Technologies and UDL
- Research and Analytics

TLOS has the following key responsibilities:

- Providing instructional tools and environments
- Facilitating course and program design
- Promoting faculty digital fluency
- Fostering UDL and accessibility
- Supporting innovative educational technologies
- Offering professional development
- Managing computer labs
- Facilitating communities of practice

The team includes instructional designers, learning technologies specialists, accessibility experts, multimedia producers, learning data analysts, project managers, and support staff. TLOS has led major initiatives such as updating the learning management system, modernizing video platforms, enhancing faculty grants for online instruction, and exploring learning analytics and AI in education. TLOS operates on principles emphasizing learning improvement, building and fostering partnerships, stakeholder balance, inclusivity, and data-informed accountability, aligning with Virginia Tech's *Ut Prosim* mission and Principles of Community.