



TLC YEAR IN REVIEW

Teaching and Learning Commons at The Naval Postgraduate School

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FOREWORD FROM THE DIRECTORS

By Scott Bischoff, Dennis Lester, and Tom Rosko

ow—2021 went by in a flash for the Teaching and Learning Commons (TLC)! Whether adapting to the complexities of shifting to and from fully online, hybrid, or face-toface classrooms in response to dynamic COVID-19 guidelines or resource constraints, TLC has strived to provide valuable education support services aimed at faculty and student success in the classroom. The Distance Learning Quality Initiative (DLQI) Phase II and Data Analytics Informing Teaching and Learning (DAITA HL) are excellent examples of how TLC-sponsored projects served as a direct benefit to participating faculty and delivered products that will have a longer term benefit for the institution while dealing with more immediate challenges like COVID-19.

One of the biggest challenges TLC faced in 2021 was helping faculty and students transition effectively back to residence classes for the fall quarter. This transition was an "all hands on deck" for the Graduate Education Advancement Center, Information Technology and Communication Services, Dudley Knox Library, Graduate Writing Center, and Thesis Processing Office. TLC found itself in the role as a key connector to the COVID Task Force, Scheduling Office, Acquisition Systems Directorate, Facilities, and Naval Support Activity Monterey to outfit residence classrooms

with "minimum essential kits" for hybrid operations where some faculty and students were in the physical classroom while others were online simultaneously. Standing up the outdoor classrooms and meeting spaces for the fall 2021 was just another instance in which cross-campus collaboration was crucial in providing faculty another option for conducting classes.

Looking back, the TLC received very positive feedback during the Western Association of Schools and Colleges (WASC) Senior Colleges and Universities Commission (SCUC) (WSCUC) Thematic Pathway for Reaffirmation (TPR) of Accreditation in the fall 2021 and the Naval Inspector General's visit in the summer 2021. These important assessments reinforced the value of TLC in advancing the NPS mission. Looking ahead to 2022, TLC anticipates that it will play a key role in the NPS Next transformation by supporting various lines of effort (LOEs) that lead to innovative changes in education. TLC stands ready to identify and implement transformative changes that move NPS forward and to exceed the requirements and expectations of its customers, sponsors, and students!

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NPS PILOTS DISTANCE LEARNING QUALITY INITIATIVE

By Matthew Schehl

his Fall, the Naval Postgraduate School (NPS) successfully completed a two-year collaborative effort to take Distance Learning (DL) to the next level of quality in meeting students' emerging needs.

The Teaching and Learning Commons' (TLC) Distance Learning Quality Initiative (DLQI), led by the Office of Teaching and Learning (OTL), introduced modular standards of best practices for course development, instruction and the application of technologies to enhance DL programs throughout the NPS campus.

"What I like about these quality standards is that they enable those engaged in online instruction to better communicate, interact and engage with students," said Ali Rodgers, Director of Faculty Development and the Office of Teaching and Learning. "How do you monitor learning and instruction in terms of collaboration, communication and feedback in a web-based environment? Do you have the correct technological resources and funding? Do you have sufficient support staff?"

"DLQI provides that."

NPS has a solid history of providing DL education stretching back more than two decades. Yet even the most experienced of educators often find it challenging and time-consuming to create effective and engaging learning experiences for their students.

"We're looking to expand our DL presence to offer more online, and that entails how we develop and design cohesive learning experiences across a set of courses," Rodgers observed. "Quality standards provide a really good framework to support quality learning experiences."



DLQI Phase I participants focused on continuous improvement during weekly Zoom sessions.

Supported by the Graduate Education Advancement Center, the OTL set out in September 2019 to begin formulating DLQI.

The project was conceived in two phases. The first phase would introduce best practices for course development, instruction and the application of presentation, communication and collaborative technologies to enhance DL programs. Phase two, designed for program managers and academic associates, would introduce a systematic needs assessment and program review process.

"The impetus for DLQI was really our desire for continuous improvement of the faculty here," noted Dennis Lester, Director of Graduate Education Advancement and Associate Provost for Graduate Education at NPS. "We recognized that this was an area the TLC could enhance and improve upon to meet the growing emphasis on DL and the anticipated future of NPS in a more flexible way."

Then COVID hit. Overnight, the project became an absolute exigency and the TLC swung into action.

"In response to the rapid switch from resident to DL, the TLC is supporting learning-focused communities of practice and is providing leadership and resources as NPS goes fully all-in and online," Ralucca Gera, then TLC director and Associate Provost for Graduate Education, commented at the time.

"Where Phase I of the Distance Learning Quality Initiative (DLQI) concentrated on the quality of distance learning at the course level, Phase II focused on quality at the program level. The DLQI Pilot provided faculty members with the latest pedagogical and neuroscience-based research, best practices, and tips to fuel data-driven decisions towards continual improvement.

The hard work, skill, and professionalism of the faculty, staff, and cross-functional teamwork at NPS is beyond compare. Maybe most noteworthy are the valuable lessons learned and camaraderie of the NPS community coming together to solve problems, overcome challenges, and provide the highest quality educational experiences possible."

-Shona Dunn, GEAC Instructional Designer

In consultation with NPS faculty and staff, the GEAC researched exemplary, research-based DL practices used at leading educational institutions throughout the world to meet standards for evaluation and accreditation as well as legal requirements for accessibility. It grouped the most important elements into a quality standards checklist of eight categories faculty could reference.

This included course preparation, content organization, learning outcomes and assessment, student engagement, course website design and navigation, teaching and learning technology, use of flexible enough to accommodate a wide variety of learner needs, program goals, technology tools and teaching styles," Lester recalled. "We had to do an immediate transition, and I was particularly impressed that people just rolled up their sleeves to figure out how to make this happen."

The group enlisted a nominated cadre of faculty to formally test the guidelines out for the first phase of the project.

From March through September of 2020, seven faculty members from a broad swath of academic disciplines

"As I look back on the experience, I think we got some really good data from our faculty. I think the faculty recognized the value and felt good knowing that these quality standards exist and that they're doable."

-Ali Rodgers, Director of Faculty Development

media and accessibility. The group also compiled these in a DLQI handbook for reference.

"Our goal was to create a set of guidelines that would be comprehensive enough to include the features that most contribute to student success, but utilized the checklist as they swung into mandatory DL instruction, designed, and taught their courses. They then provided frank feedback on what worked, and what didn't.

"The pilot allowed faculty to assess their courses using quality standards and to

PHASE | PARTICIPANTS

identify next steps to enhance learning and instruction," Rodgers said. "Everybody had a common experience using the standards, which was the intention of the program."

"As I look back on the experience, I think we got some really good data from our faculty," she continued. "I think the faculty recognized the value and felt good knowing that these quality standards exist and that they're doable."

Armed with this input, the OTL then implemented the second phase of the project.

From May through September 2021, phase two piloted a standards-based and systematic needs assessment and review of degree and certificate programs by select academic teams. In doing so, it looked at integrating and embedding educational technologies to achieve learner outcomes and leveraged some of the aggregate principles of adult learners to allow for choice and self-pacing as a student moves throughout a curriculum.

"This provided opportunities for people to talk about learner needs and to share ideas about what we could and should be doing with our students—specifically, what our students are capable of doing on their own versus things that

DEBORAH GIBBONS Associate Professor, DDM

GLENN HODGES Research Assistant Professor, Computer Science, GSOIS **STEVE IATROU** Senior Lecturer,

Information Sciences, GSOIS

PAUL CLARK Senior Lecturer, Computer Science, GSOIS MONIQUE FARGUES

Professor, Electrical and Computer Engineering, GSEAS

ANGELA ARCHAMBAULT Faculty Associate - Education, National Security Affairs, GSIDS **GUILLERMO OWENS**

Distinguished Professor, Applied Mathematics, GSEAS

PHASE II PARTICIPANTS

QUINN KENNEDY CAROLYN HALLADAY

Research Associate Professor, Operations Research, GSOIS Senior Lecturer, National Security Affairs, GSIDS MONIQUE FARGUES Professor, Electrical and Computer Engineering, GSEAS

ALAN SHAFFER

Senior Lecturer, Information Sciences, GSOIS

KRISTIN GIAMMARCO

Associate Professor, Systems Engineering, GSEAS "I've got a feeling that with these standards and best practices we've come up with, real outcomes will show the merit in implementing them. I think that's where we'll see the TLC moving soon."

-Dennis Lester, Associate Provost for Graduate Education

they need a lot of guidance and informal coaching," Rodgers said.

"When I think back, the standards introduced in DLQI represented different tiles in a course mosaic that we were able to apply to create a nice template and advance discussions about the effectiveness of our course design and the best use of instructional time," she continued.

"That's definitely a silver lining of the storm cloud [of COVID] that we were operating under." As in-person classes resume, Rodgers and Lester hope to continue to roll out the DLQI program and expose more faculty to it, enabling them to consider how offering some or all of their coursework as a DL component might most benefit their students.

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RESOURCES AND DELIVERABLES

Participants in the DLQI were given handbooks, checklists, and other guides to help them prepare their final deliverables for the end of each phase of the program.



Scan for more information on the Distance Learning Quality Initiative



GWC | GRADUATE WRITING CENTER WRITE-INS

By Cheryldee Huddleston

At the Graduate Writing Center, we are always looking for ways to create community—an essential facilitator of learning. In this pursuit, in March 2020 we held our first write-in, providing students dedicated time to write papers in a group setting, with help from writing coaches and librarians on hand. The pandemic closure of NPS at exactly that time, however, proved "community" to be even more important than we knew. We began holding write-ins virtually, and in 2021 we held sessions both virtually and on campus. We gathered in Herrmann Hall, the library, and anywhere Zoom could take us...sometimes in all these places at once. No matter the location, write-ins

offered, as student Amelia C. Beaton (Capt., USAF) put it, a sense of "being in the same boat." Student Winston Massey (LCDR, USN), a write-ins regular, noted the importance of "being able to see faces," even if they are virtual.



Scan for more information about GWC write-ins



GWC writing coach, Jasmine Mally, works one-on-one with an NPS student during a write-in workshop.

DIGITAL LITERACY

By Scott Bischoff, Co-Director, TLC

As COVID necessitated and accelerated hybrid operations we introduced new and updated technologies. The "podium" in the physical classroom or at a remote location became more complicated as the required skills to manage a hybrid class is not straightforward. Here, NPS is not alone as the Higher Education IT Consortium - Educause lists faculty digital fluency as #3 on the 2022 IT Challenges for Higher Ed. The TLC will be instrumental in ensuring our prestigious faculty remain on the digital leading edge in the classrooms allowing the focus to remain on the education and content, not the systems.

Shared Vision, Shared Strategy

- Evolve or become extinct
- The Shrinking World of Higher Education or an Expanded Opportunity?

Student Success as Institutional Success

• Digital faculty for a digital future

Ο

- Learning from COVID-19 to build a better future
- From digital scarcity to digital abundance

The Sustainable Mission Model

- Cyber everywhere! Are we prepared?
- The digital vs. in-person balancing game
- Weathering the shift to the cloud
- Can we learn from a crisis?

Graphic based on infographic by EDUCAUSE

DIGITAL LITERACY GWC Quick Clips & Tips

By Betsy Wallace

Through 2021, the Graduate Writing Center (GWC) transformed its online resources to better serve NPS students in hybrid learning, including the addition of a new website page, <u>Quick Clips & Tips</u>.

Quick Clips & Tips amasses the GWC's best digital content (and best quips!). Short videos and posters use multimedia to simplify challenging writing concepts such as incorporating equations and correct capitalization. A new interactive lesson, *Plagiarism Prevention 101*, uses digital games to teach attribution.

Built for rapid comprehension, Quick Clips & Tips is a digital launch pad into the world of academic writing and research.



Scan to view Quick Clips & Tips



DAITA HL

Data Analytics Informing Teaching and Hybrid Learning

By Miriam Bergue Alves

TLC Education Grants funded via the Data Analytics Informing Teaching and Hybrid Learning (DAITA HL) Initiative, were designed to support instructional improvement efforts by NPS faculty. Faculty submitted proposals for awards up to \$15K to investigate and advance blended and hybrid learning practices at NPS during FY21. TLC conceded educational grants to six faculty from GSEAS, GSOIS and GSDM. The awardees presented their project results in a <u>series of six webinars</u>, promoted by TLC Faculty Voices, and attended by NPS faculty and staff. On behalf of the TLC <u>DAITA HL Initiative</u>, we congratulate all awardees for their accomplishments and contributions to improve teaching and learning at NPS.

A prototype solution for a whiteboard-like environment in VR

MICHAEL GUERRERO

MOVES (Modeling, Virtual Environment, and Simulations) Institute

Teaching/training content which relies on 3 spatial dimensions is more likely to be understood (and more quickly) when presented in VR vice other methods.

With respect to whiteboards in a class-

room setting, a survey of existing whiteboard applications exposes instances that are of poor quality and fail to benefit from the strengths that the medium affords. This project aims to create and deploy a usable prototype solution for a whiteboard-like environment in VR; one that is specially tailored for both teachers and students in a way that mimics traditional whiteboards and begins to explore the possibilities that come with not being bound by the constraints of the real world.

Use of VR decreased student confusion rates from ~25% (Spring '21) to ~8% (Fall '21).

Utilization of a "dashboard" assessment tool to support remote students

PROFESSOR LEO BLANKEN

Department of Defense Analysis

CECILIA PANELLA Department of Defense Analysis

Dr. Blanken and Ms. Panella explored the utilization of a "dashboard" assess-

ment tool to support the offering of an existing "Innovation-Design Certificate" for remote student populations. The effort is intended to synchronize the remote students' coursework and projects with innovation activities being conducted in parallel on the NPS campus. The intention is also to validate the management of distributed NPS project-based curricula for hybrid learning while energizing innovation activities throughout the force.





Scan to learn more about the webinars

OTHER GRANT AWARDEES



PROF. MARIGEE BACOLOD *Graduate School of Defense Management* Exploration of the technology and configurations of the FLEX classrooms



PROF. MATTHEW ZEFFERMAN Department of Defense Analysis Mobile all-in-one system for game theory concepts activities



PROF. RAMA GEHRIS Systems Engineering Department A tool to support consistent point scoring system from a customizable user-defined rubric



PROF. WEILIAN SU Department of Electrical and Computer Engineering Use of Microsoft Power BI to enhance learning, data collection, processing, and analysis of network traffic

DKL | READ POSTERS

For nearly a decade, the Dudley Knox Library (DKL) has been promoting faculty publications through its "READ" poster initiative. An ALA (American Library Association) effort to encourage reading, familiar to most who have visited their local libraries and seen the celebrity posters, DKL adapted the "READ" effort to help publicize the work of NPS Faculty. A joint effort between staff of DKL and GEAC, the creative posters hang throughout the Library and help promote the recent publications of NPS's faculty. They are also available in <u>Calhoun</u>.

If you have published a book and would like to be on a "READ" poster, please contact Greta Marlatt at <u>GMarlatt@NPS.edu</u>.



Scott Gartner

DKL | SHIFTING BETWEEN ONLINE AND ONSITE SERVICES





Starting in the summer quarter, the Dudley Knox Library welcomed patrons back to the Library in NPS's hybrid learning environment, with many students seeking a space to attend a class online in addition to study and do research. During the time the building was closed several changes took place including the shift of GWC/TPO to the second floor, the removal of compact shelving to create additional study space, and Restricted Resource Services received some IT updates increasing capabilities in support of the drive for doing more classified research. And the NPS *Next* Transformation Center was stood up in DKL, as the gathering space for strategic planning. While its doors were closed due to COVID restrictions, DKL was able to add a substantial amount of online content dramatically increasing access. New services include online tutorials, updated libguides, a chat service for IT assistance, and online exhibits to promote **Diversity, Equity and Inclusion**. Also, in an example of ongoing TLC cooperation, DKL's Systems Office is working with ITACS to update outdated AV equipment in study spaces.



Scan for more information on Special Exhibits

OUTDOOR CLASSROOMS

During Fall 2021, NPS introduced three outdoor classrooms around campus: Cottage Place, Quad Landing, and Bocce Court. These spaces can accommodate up to 36 students each. Subject to availability, any faculty member may reserve an outdoor classroom for a single or recurring use. Outdoor spaces are a favorable environment for hands-on, inquirybased learning and small group interactions that facilitate reflection and knowledge integration. Below are some benefits for creating outdoor educational experiences to enhance learning and instruction, with more guidance found at the TLC website:

- An outdoor setting can help students to examine and explore new directions of inquiry or alternative approaches for problem-solving
- The more relaxed atmosphere of an outdoor space can be a favorable environment for informal, no-stakes knowledge checks or experimenting with new approaches to applied learning
- The configuration of an outdoor classroom affords opportunities to make content presentations more interactive.

Scan to access more information and schedule outdoor classrooms.



ITACS | HYBRID READY CLASSROOM COUNT

"Hybrid" equipped classrooms enable the instructor to teach classes to both resident and remote students simultaneously using Teams or Zoom.

110 (total) classrooms and labs on NPS main campus, all with basic classroom AV systems. Most, but not all rooms will have a level of support for hybrid instruction.

Note: Equipment is being deployed to classrooms in response to quarterly demand for hybrid instruction and based on availability. The equipment profile in

classrooms is subject to change as requirements evolve, the first priority being ensuring hybrid instruction is possible in rooms scheduled for the purpose.



Scan to view the Hybrid Instruction wiki

CURRENTLY EQUIPPED FOR HYBRID INSTRUCTION

	5	3	3	73
	FLEx Spaces	Computer Labs	Hybrid Classrooms	Minimum Essential Kit
Reconfigurable tables	•		•	
Fixed tables		•		
Built-in hybrid support	٠	•	٠	
Multiple video displays	٠			
Front & rear pan/tilt/zoom cameras	•	•	٠	
Ceiling mounted microphone arrays	•	•	•	
USB document camera	٠	•	•	•
USB speakerphone				•
Laptops at each seat		•		

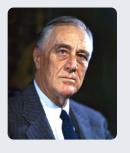


WHAT'S NEXT...

By Dennis Lester

he circumstances prompting FDR's famous quote were far more formidable than those we face at NPS today. Even so, NPS and other educational institutions are faced with ever-increasing pressures to transform from traditional structures and educational approaches that were established hundreds of years ago. COV-ID-19 created more impetus for change in higher education in general with conversations centered around "more flexible, faster, more responsive, and learner-centered/directed." Similarly, resource constraints along with changing professional and personal needs and expectations have amplified the call for changes in education at all levels.

The transformation initiative, NPS *Next*, which began in 2021, is NPS's most recent response to the demand for change in the Naval Education Enterprise (NEE) that seeks to promote more flexible, integrated, and life-long learning for Sailors, Marines, and Airmen. Representatives from TLC have been involved in various lines of effort (LOEs) that include curriculum, content delivery, tuition, and organization modernization as part of this transformation effort. Additionally, TLC reps have been working with other "Never before have we had so little time in which to do so much." —Franklin D. Roosevelt (NARA)



components of the NEE that include the U.S. Naval Academy and Naval War College to share information and to collaborate on solutions that will meet the educational needs of the Department of the Navy.

One of the high interest items in transformation is the use of appropriate metrics to determine the value of changes in meeting desired outcomes. The report from the recent WSCUC TPR reinforced the idea that NPS has an opportunity to strengthen student learning by closer tracking of learning outcomes at the course and program levels to "inform institutional decisions" as part of a more rigorous assessment process (WSUSC, 2020). Accordingly, learning outcome assessment appears to be a strong candidate for a TLC initiative in 2022 as a natural follow-on to the Flexible Learning (FLEx) Spaces, DLQI, and DAITA HL activities sponsored by TLC in 2019-2021.

TLC looks forward to another very productive year in 2022 with emphasis on helping faculty and students navigate the waters of transformational change at NPS!

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WRITING CENTER CONSORTIUM FOR GRADUATE-LEVEL PROFESSIONAL MILITARY EDUCATION

By Aileen B. Houston

E ven before COVID hit, the Writing Center Consortium for Graduate-Level Professional Military Education (WCCG-PME) was connecting across distances and communities.

Founded in 2019, the WCCG-PME has brought together writing center professionals from eight graduate military institutions across the country and the branches, from NPS's Graduate Writing Center (GWC) to the National Defense University's Writing Center in Washington, DC, and everywhere in between.

To bring faculty together across these institutions as well, in 2022 the consortium plans to offer its second virtual workshop series. By faculty and for faculty, the workshops focus on improving student writing across curriculums and



fostering deeper, more impactful communication and thinking.

In the hands-on workshops, faculty members share best practices, templates, and lessons learned on the teaching of writing for graduate-level military students, regardless of discipline.



Scan for more information, including slides and handouts from the 2021 workshops.

A MESSAGE FROM THE PROVOST

As NPS embarks on its NPS *Next* transformation I would like to share some valuable insights from award winning NPS faculty regarding teaching and learning.

CHRISTOPHER SMITHTRO

Physics Department Schieffelin Award, 2021

"Teaching is very difficult to do well and invariably after every lecture I think about the things I could have done better. I keep a course journal and after class I write down any changes I think I should make, with the goal of improving the next offering. The best changes usually come when students ask a question that catches me off-guard."

FRANK KRAGH

Electrical and Computer Engineering Schieffelin Award, 2019

"Time-efficient education requires that the professor continuously evaluate each student's academic preparedness and tailor the course content to address weaknesses and leverage strengths in both prerequisite and current-course materials. This is especially true when teaching mature students with a wealth of experience, such as at the Naval Postgraduate School."

DAVID ALDERSON

Operations Research Department Hamming Award, 2021

"The biggest idea that has shaped my teaching is the phrase "teaching is not learning". The idea is to make the role of the instructor not be about trying to "cover the material" but instead about "organizing the encounter" for the student to engage the material—specifically, to create an encounter in which to (1) allow the student see it, (2) allow the student do it, and (3) allow the student discover it. "

RACHEL SIGMAN

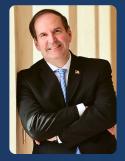
National Security Affairs Department Hamming Award, 2020

"In terms of fostering community in class, I find that friendly competition can go a long way. I've had great success with debates that students prep for in groups over a period of 1-2 weeks. I've also given series of low-stakes quizzes where students accumulate points each week and high-scorers win small prizes at the end of the quarter. These kinds of activities -- none of which have major grade implications -- give students an opportunity to interact with each other and with me in relaxed and fun ways."

LYN WHITAKER (EMERITUS)

Operations Research Department Hamming Award, 2019

"Through our research we come to learn what the services are looking for, what problems they're facing, what data they have, and we're the ones educating the analysts and decision makers who are going to be our future partners in addressing these problems. This is what makes NPS uniquely equipped to serve as the Navy's graduate school."



Looking at these insights, it is no wonder that NPS teaching rocks!

- Scott Gartner, Provost



Teaching and Learning Commons at The Naval Postgraduate School W W W . N P S . E D U / T L C



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