Ryan Straight, Ph.D

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Employment

University of Arizona

Assistant Professor[1]	2023-present
Associate Professor of Practice	2022-2023
Lab Director · MA{VR}X Lab	2021-present
Assistant Professor of Practice	2021-2022
Assistant Professor[2]	2016-2021

Education

Ohio University, Ph.D · Instructional Technology	2015
University of Arizona, MS · Cybersecurity	2023
Ohio University, M.Ed · Cultural Studies in Education	2009
Ohio University, BS.Ed · Integrated Language Arts	2005

Academic Appointments

Affiliated Faculty, Center for Semiconductor Manufacturing, University of Arizona	2023-present

Scholarship

PEER REVIEWED

Articles

Straight, R. (2024). Doing Postphenomenology in Cybersecurity Education: A Methodological Invitation. *Cybersecurity Pedagogy and Practice Journal, 3*(1), 64–72. https://doi.org/10.62273/TWSH7587

Straight, R. (In review). Ed3: A Comparative Study Situating Web3 Technologies in Pedagogical Spaces.

Conference papers

Straight, R., Alharthi, D., & Honomichl, R. (2023). Bridging Complexity and Distance: Designing an Online MS Program in Cyber and Information Operations. In *Proceedings of the 16th Annual International Conference of Education, Research and Innovation*. Seville, Spain: IATED.

[1] Tenure elibible
[2] Non-tenure eligible

Straight, R. & Yowika, W. (2023). From Parasocial to Posthuman: (Virtual) Pedagogical Agents, Parasocial Phenomena, and the Future of Immersive Learning. In *Proceedings of EdMedia + Innovate Learning 2023*. Vienna, Austria: AACE.

Straight, R. (2016). Emergent mentorship and learning communities of practice among players of augmented reality video games. In *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*. Washington, DC: AACE.

Smith, J., **Straight, R.** & Franklin, T. (2011). Student occupational expectations: A web 2.5 geolocative study. *Proceedings of the Association for the Advancement of Computing in Education 2011* (pp. 2522-2526). Honolulu, HI: AACE.

Straight, R. (2011). Commercial off-the-shelf video games as computer-assisted language learning environments. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2011*(pp. 1982-1986). Chesapeake, VA: AACE.

Smith, J. & **Straight, R.** (2011). The development and delivery of custom mobile apps for K-12 learning: Viable options for educators. In *Proceedings of the Society of Information Technology & Teacher Education International Conference 2011* (pp. 3102-3107). Chesapeake, VA: AACE.

Refereed

Straight, R. (2024). "InnovateGPT: Let's Build an AI!" OLC Innovate. Denver, CO.

Straight, R. (2023). "The State of Online Learning in Web3: How Educators Understand and Implement Ed3, Blockchain, and Metaversal Technologies." OLC Innovate. Virtual. https://doi.org/10.17605/OSF.IO/E8SZT

Straight, R. (2022). "Who Says You R Not a Coder? Building Data-Driven, Open Source, Static Course Content for Accessibility and Interactivity with R." OLC Accelerate. Orlando, FL. https://doi.org/10.17605/OSF.IO/4R89Q

Straight, R., Barberry, J., Bernstein, D., & Peck, M. (2022). "Web3 and Education: An Optimistic Primer on Online Learning's Blockchain-based Future." 2022 OLC Accelerate. Virtual. https://doi.org/10.17605/OSF.IO/8HSRX

Straight, R. (2022). "Karu: Introducing the Metaversal Library for the Future of Immersive Larning." Presented at 2022 OLC Innovate, Dallas, TX. https://doi.org/10.17605/OSF.IO/3A9CS

Straight, R. (2021). "Technological Mediation: A Postphenomenology Primer for Instructors, Designers, and More." 2021 OLC Accelerate. Virtual.

Saldana, D., **Straight, R.**, & Wittman, R. (2021). "Teams-Work Makes the Dream Work: Using Microsoft Teams to Build Community in Fully Online Programs." 2021 OLC Innovate. Virtual.

Straight, R. (2020). "Community Continuity in the Time of Corona." Presented at the 2020 OLC Ideate event. Virtual.

Rettler-Pagel, T. & **Straight, R.** "Owning Your Success: Battling the Impostor Phenomenon in Higher Education." Presented at the 2019 OLC Accelerate conference, Orlando, FL.

Straight, R. "The New Professor: How I Podcasted My Way Into Students' Lives (And How You Can, Too)." Selected Best In Track. Presented at the 2019 OLC Innovate conference, Denver, CO.

Straight, R., Gunder, A., Stewart, J., King de Ramirez, C., Thompson, K., & Pizzo, J. (2018). "And We're Live! A Rough Guide on Academic Podcasting." Presented at the 2018 OLC Accelerate conference, Orlando, FL.

Gunder, A., Knott, J., & **Straight, R.** (2018). "#SquadGoalsNetwork - Remixing the Personal Learning Network." Presented at the 2018 OLC Accelerate conference, Orlando, FL.

Shah-Nelson, C., Gunder, A., Stewart, J., Romanoski, M. Knott, J., Scragg, B., & **Straight, R.** (2018). "With a Little Help From My Friends: The Power of the PLN." Presented at the 2018 OLC Accelerate conference, Orlando, FL.

Straight, R. (2017). "Slacking Off in Class: Cloud-Based Team Collaboration in Online Higher Education Programs." Presented as an Innovation Lab at the 2017 Online Learning Consortium Innovate conference, New Orleans, LA.

Straight, R. (2016). "Slack and the Online Classroom." Presented at the 2016 University of Arizona IT Summit, Tucson, AZ.

Invited

Straight, R., & Gunder, A. (2024). "Pondering a Posthuman Pedagogy: Redefining 'Learner' in the AI Era." Selected as Featured Presentation. Presented at the *2024 OLC Innovate conference*. Denver, CO.

Straight, R., & Gunder, A. (2024). "Posthuman Learners: The Student-AI Hybrid." *Transforming the Teaching & Learning Environment*. University of Pittsburgh. Virtual.

Straight, R. (2023). "The Inescapable Technological Mediation of Online Learning." *Transforming the Teaching & Learning Environment*. University of Pittsburgh. Virtual. https://doi.org/10.17605/OSF.IO/T86DB

Straight, R. (2022). "Cybersecurity, Education, and Technological Mediation." Women in Cybersecurity (WiCyS). https://doi.org/10.17605/OSF.IO/D28S3

Straight, R. (2022). "Simulations, Immersion, and Gamification." *Digital Literacy & AI Webinar Series*. UNESCO. Virtual. https://doi.org/10.17605/OSF.IO/54DF3

Straight, R. (2021). "Introduction to the XRpedia." Presented at the 23rd Virtual Worlds Forum. Virtual.

Straight, R. (2019). "The Games Peoples Play." OLC Collaborate, Maui 2019. University of Hawai'i Maui College, Kahului, Maui, HI.

Invited panelist, *TENWEST Festival - Social Impact Summit, "Innovation in Educational Technology," Tucson, AZ - 2017.

Submitted

Straight, R. (2022). "A Philosophy of Technology and Education in the Metaverse." Ed3 Unconference. Virtual. https://doi.org/10.17605/OSF.IO/JCE6B

Straight, R. & Ozgen, D. (2022). "Building a Metaversal Curriculum." Ed3 Unconference. Virtual.

Straight, R. & Gunder, A. (2016). "Innovative Learning Projects: Promoting Leading-Edge Opportunities in Higher Education." Poster presented at the 2016 University of Arizona IT Summit, Tucson, AZ.

Honors and Awards

Outstanding Innovator award, College of Applied Science and Technology, 2022.

Included in The 2019 Dean's List: EdTech's 30 Must-Read Higher Education IT Influencers
Best In Track: "The New Professor: How I Podcasted My Way Into Students' Lives (And How You Can, Too)", OLC Innovate 2019.
Effective Practice Award, "#SquadGoalsNetwork – Remixing the Personal Learning Network," Angela Gunder, Jessica L. Knott, Ryan Straight, Clark Shah-Nelson, Keegan Long-Wheeler, Benjamin Scragg, John Stewart; The University of Arizona, Michigan State University, The University of Maryland, The University of Oklahoma, Arizona State University. OLC Accelerate 2018.
Honors Professor, Honors College, spring semesters.
UA Distance Faculty Fellow, inaugural, 2017 - 2020. (Program suspended in 2020 due to COVID-19.)

Funded Projects

SemiXperience: Extended Reality Semiconductor Manufacturing Education Platform. Center for Semiconductor Manufacturing. Role: co-PI. Funding source: Arizona Commerce Authority. Total budget: $35,000,000. Project budget: $1,500,000.

Campuswide Novel Asynchronous Communication. Role: PI. Co-PI: Romi Wittman. Funding source: Innovative Learning Project, UArizona. Total budget: $3,000. Internal.

Submitted Grants

Principal Investigator

GRASPE (Cybersecurity): Gamified Realities and Storytelling Platform for (Cybersecurity) Education. 20% effort. Role: PI. Funding source: NSF 22-548 (ECR: Building Capacity for STEM Educational Research (BCSER)). Total budget: $348,363 (Direct: $221,409; Indirect: $118,454). (2024-27). Submitted Research.gov 2024-02-23. **Pending.**

> In this STEM education research capacity project, the investigator proposes to develop narrative-based cybersecurity educational materials using emerging technologies like augmented reality to investigate evidence-based improvements in underrepresented populations. Using culturally responsive curricular design and postphenomenology and posthuman inquiry methodologies, the project seeks to enhance learner safety and knowledge through technologically mediated, epistemological exercises and experiences. This study will investigate how and to what extent these next-generation, gamified learning experiences impact domain knowledge and scenario-based learner response. The hypotheses guiding this proposal are: 1) compared to "traditional" media, these emergent technologies will produce a measurable increase in learners' STEM domain knowledge, analysis, and evaluation; 2) learners who partake in narrative, gamified learning materials will demonstrate higher engagement with this highly complex, critical STEM domain; 3) culturally responsive design and development will have a significant impact on learners from underrepresented groups.

CYBRITE: Cyber Team Building and Research Initiative for Tomorrow's Experts. 1% effort. Role: PI. Funding source: Hacker Initiative (No Starch Press). Total budget: $10,000. (2023-2024). Submitted direct 2023-08-07. Not awarded.

> The University of Arizona College of Applied Science and Technology (CAST) is launching a fully remote and online Master of Science in Cyber and Information Operations degree program in Fall 2023. CYBRITE aims to enhance the skills of event participants in cyber investigative techniques while fostering mentoring and leadership abilities in graduate

students. The Hacker Initiative seed grant will support the creation and execution of a team-based, Jeopardy-style capture-the-flag (CTF) event, leveraging large language models (LLMs) as both the tool and the target. This initiative will encourage student engagement and stimulate interest in cyber workforce pathways. With its pool of experts in cyber and computing, CAST is well-equipped to house and support this project as the region's academic pathway for undergraduate and graduate cyber degrees.

Co-Principal Investigator

Building the Next Generation Human Firewall (NGHF): A Customizable Informal Cybersecurity Learning Model. 10% effort. Role: Co-PI. Co-PIs: Dalal Alharthi (PI), Paul Wagner (Co-PI), Michelle Higgins (Co-PI), Amber (Co-PI). Funding source: NSF 22-626 (EHR: Advancing Informal STEM Learning (AISL)). Total budget: $146,583 (Direct: $97,722; Indirect: $48,861). (2023-24). Submitted Research.gov 2023-01-10. Tracking number: 2314286. Not awarded.

The overarching aim of this Type 3 AISL Planning proposal is to develop a customizable and replicable informal cybersecurity learning model for youth ages 11-13. Currently, demand for highly qualified cybersecurity professionals far exceeds supply. In addition to that, the cybersecurity industry is not ethnically diverse, according to the (ISC)2 Cybersecurity Workforce Study that was released in 2022. Minoritized individuals comprise 17.1% of the cybersecurity workforce and only 21.5% are women. These demographic concerns warrant the development of methods to successfully recruit and retain more women and minoritized individuals into the field. The development of this planning proposal was motivated by (1) the need for a diverse well-trained cybersecurity workforce, and (2) the desire to contribute to informal cybersecurity learning literature. To accomplish goal #1, our proposed partnership will develop and pilot test an informal cybersecurity learning program that aims to engage and build the confidence of youth ages 11-13 (particularly girls, Latinos, African Americans, and Native Americans) as the potential next generation of cybersecurity leaders. To achieve goal #2, we will develop a Type 4 Integrating Research and Practice proposal focused on implementing an updated informal cybersecurity learning model in multiple schools, with particular attention on how the model can be customized in diverse settings, enabling other educators and researchers to replicate and/or extend the proposed work. We will develop an informal cybersecurity learning program for youth ages 11-13 through a cyclic approach that includes five phases: community building, designing learning experiences, delivery methods, pilot testing, and assessment methodology.

Teaching Experience

University of Arizona, 2014 - ongoing

Honors: Special Topics in the Social Sciences (Undergraduate)
Cyber Operations: Cyber Law, Ethics, & Policy (Undergraduate)
Cyber Operations: Cyber Law, Ethics, & Policy (Graduate)
Applied Computing: Introduction to Human-Computer Interaction (Undergraduate)
Applied Computing: Statistics in the Information Age (Undergraduate)
Applied Computing: Introduction to Game Design (Undergraduate)
Applied Computing: Introduction to Game Development (Undergraduate)
Educational Technology: Interpreting & Presenting Digitally (Undergraduate)
Educational Technology: Integrating Technology into the Curriculum (Undergraduate)

Educational Technology: Learning Technologies in the Digital Age (Undergraduate)
Educational Technology: Learning Theory of Instructional Design (Graduate)
Educational Technology: Multimedia Applications in Education (Graduate)
Educational Technology: Introduction to Interface Design (Graduate)
Educational Technology: Educational Gaming and Simulations (Graduate)

Service/Outreach

Graduate Student Committees

Reviewer, dissertation (Minor Chair) & comprehensive exam committees: Adina Gardner. Nursing: Neurobiology.

Institutional Service

Director, College of Applied Science & Technology Virtual Reality Lab. (2021 - Ongoing)
Women in Cybersecurity (WiCyS) student group support (2021 - ongoing)
College of Applied Science & Technology Faculty Forum
President: 2019 - 2021 (two terms; typically a one-year engagement)
Past-President: 2021 - 2022
UAccess Learning revamp project - Interface subject matter expert (2020)
University of Arizona Faculty Learning Community - Teaching Continuity co-creator (2020 - 2021)
CAST Executive Leadership team (2019 - 2021)
College of Applied Science & Technology Honors faculty advisor (2019 - 2020)
Faculty advisor, Associated Students of Arizona South Student Government (2017 - 2020)

Local/State Outreach

Regional news coverage: "CAST is diving into virtual reality with new lab." Herald/Review, Sierra Vista, AZ. https://www.myheraldreview.com/news/lifestyle/cast-is-diving-into-virtual-reality-with-new-lab/article_3702222e-9f07-11ec-965a-07c77fbdc622.html
Development of educational virtual tour of Patterson Observatory, Sierra Vista, OH. Link: https://mavrxlab.org/news/2021-09-02-patterson-observatory-3d-tour/index.html
Lab-based "Dine Under the Stars" charity event support, 2021 - 2022.
Write-up in University of Arizona's *UA@Work* feature *Lo Que Pasa* about Faculty Learning Community, April 29, 2020.
Invited speaker, "STEM Resources for Parents and 6-8th grade children," Gridley Middle School, Tucson, AZ - 2016.

National/International Outreach

Reviewer: *Journal of Cybersecurity Education, Research, and Practice*, 2024-ongoing.
Associate editor: *Humanities & Social Sciences Communications* (formerly *Palgrave Communications*), published by *Springer Nature*. 2019-ongoing.
Reviewer: *Humanities & Social Sciences Communications* (formerly *Palgrave Communications*), published by *Springer Nature*. 2019-ongoing.
Usability advisor, *Teamflow*, 2021.
Invited Judge: OLC Innovate 2021 *Effective Practice Awards*.

Host, "*The New Professor*" podcast, 2017 - 2020.
Usability advisor, *Ensightful*, 2020 - 2021.
Guest, *Teaching in Higher Education (TiHE) Podcast*, May 2020.
Guest, *Learning Nuggets* podcast, April 28, 2020.
Profile featured in Scholastic magazine's **Tech4Innovation**, 2019.
Keynote: *Twenty Under 40 & Citizen of the Year* Awards presented by the Sierra Vista Herald and SSVEC (2019).
Steering Committee, OLC Innovate: Workshops track co-chair, 2019.
Social Media Advisor, *Learning Science Research Nurturing Students & Classroom Innovation (LRN-SCI)*, International Society for Technology in Education (ISTE), 2018 - 2019.
Consultant, *Course of Mind* podcast, International Society for Technology in Education (ISTE), 2018-2019.
Online Learning Consortium workshop facilitator, *Designing Gamified Learning Environments*, 2019 - 2020.
Online Learning Consortium workshop facilitator, *Designing Game-Based Learning*, 2019 - 2020.
Staff writer, *Chronicle of Higher Education - ProfHacker* (2017 - 2019)

Departmental Committees

Graduate Program Development (Doctoral) (2022 - ongoing)

College Committees

College of Applied Science & Technology Technology Committee (2023 - 2025)
Undergraduate Research Development committee (2022 - ongoing)
Student Showcase organization committee, member (2018)
College of Applied Science & Technology Policy Committee (2017 - 2018)
College of Applied Science & Technology Technology Committee (2016 - 2018)

University Committees

Graduate Council (2022-2025)
University Search Committee for Online Teaching and Learning Meeting Software (2017 - 2018)
University Funding Committee (2017 - 2018)
Graduate College Grievance Committee (2015 - 2018)