

UNIVERSITY OF KENTUCKY BOARD OF TRUSTEES

Robert S. DiPaola, Provost and Co-Executive Vice President for Health Affairs



Agenda

- UK ADVANCE
- Quality Enhancement Plan



UK ADVANCE

Advancing **D**ata utilization for **V**alue in **A**cademics for **N**ational and **C**ampus-wide **E**xcellence

- Charged by the President in June 2023
- Principles
 - Adopt artificial intelligence (AI) to do better things in education and research.
- Goals
 - Enable a transdisciplinary team approach.
 - Develop recommendations in defining responsible use to achieve the University's mission in education, research, service and care.
 - Serve for rapid response.
 - Understand potential AI programmatic biases.
 - Enable and enhance University's role for community and Commonwealth.
 - Develop effective cross-campus communications and education.

Three E's approach

- Review emerging **evidence**.
- Review **experiences**, nationally, locally and within campus community.
- Engage **experts** for the following goals:
 - Provide guidance, recommendations to campus community, both short- and long-term.
 - Develop inquisitive questions and launch innovative research in partnership with the Vice President for Research.
 - Develop recommendations in defining responsible use to achieve the University's mission in education, research, service and care.
 - Identify and develop training toolkit and communication strategy to enable faculty to become familiar with AI — along with its implications and applications, especially in the areas of assessment design and detection.

Faculty guidelines

- Issued August 11, 2023.
 - Course policies
 - Critical issues
 - Potential misuse
 - Opportunities for use
 - Assignment design
- Updated December 14, 2023.

Date Issued: 14 December 2023

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Spring 2024 Guidelines and Recommendations for Generative AI in Instructional Contexts

Summary

Since the public release of OpenAI's ChatGPT on November 30, 2022, questions and concerns have rapidly circulated concerning the role of generative artificial intelligence (AI) in higher education, particularly in instructional or curricular contexts. While ChatGPT and other large language model (LLM) generative AI tools produce text-based output, other generative AI can output text, data, images, sound, video and mixed media formats. More recent developments have seen generative AI integrated into existing software platforms.

The International Association of Privacy Professionals defines generative AI as "[a] field of AI that uses machine learning models trained on large data sets to create new content, such as written text, code, images, music, simulations and videos. These models are capable of generating novel outputs based on input data or user prompts."¹

Sidney Dobrin, author of *AI and Writing*, explains that "[w]e can think of a GenAI as participating in a rudimentary conversation with a user" who "ask[s] the AI to create a specific deliverable — an essay, a song, an image, the solution to a math problem or so on. The AI then scrubs through all of the data available, looking for patterns and recurring information about the requested task. It then reorganizes that data into a pattern that it deems to answer the prompt."²

Over the past year, access to generative AI technologies has expanded rapidly from ChatGPT to a range of tools such as ChatGPT Plus, Google Bard/Gemini, Microsoft/Bing Copilot, Anthropic's Claude, Perplexity, xAI's Grok, Meta's Llama (with its open-source modifications), and more. Access to these tools ranges as well, from pay-based subscriptions to free accounts, open use (i.e., no account needed), and open source. In addition, generative AI is increasingly embedded in software such as media production and office productivity suites. LLM-based generative AI

¹ IAPP 2023.
² Dobrin 2023.



Research guidelines

- Issued October 27, 2023.
 - Use for/in research
 - Privacy concerns
 - Patent and copyright
 - Grant proposals and peer review
 - Graduate research
 - Authorship and responsibility
 - Detection
- March 16, 2024.

UK ADVANCE Recommendations on the Use of Generative AI in Research, Scholarly, and Creative Activity

Date Issued: April 16, 2024

The public release of generative artificial intelligence (generative AI) tools represents a significant moment for the University of Kentucky's research and scholarly enterprise. Since late 2022, the capabilities of generative AI have proliferated and advanced at a rapid pace. Machine learning and artificial intelligence are established methods for use in research, but generative AI is novel in that it *produces* content—text, code, image, sound, video—based on user input and dialogue and presents additional questions.

Emerging research has explored the potential for innovation and efficiency that generative AI presents. UK has foundational research strengths across many disciplines that use and benefit from AI, machine learning and deep learning. UK has seen significant growth in AI-related grants, with many more opportunities for securing expanded research funding in AI across nearly every federal agency and through philanthropic avenues.¹ With a comprehensive AI strategy, we can focus our strengths to fully embrace and utilize AI technology to advance our mission not only to facilitate learning and expand knowledge, but also to serve our global community better by discovering, disseminating, sharing, and applying knowledge. We aim to accelerate our transdisciplinary research agendas, educate our research faculty and staff on state-of-the-art AI platforms, and address the needs of our corporate partners and citizens of the Commonwealth who rely on our university for AI-related training.

At the same time, there are documented concerns that bear significant implications for research and scholarly activity such as the accuracy or bias of generated information and issues around authorship, transparency, and intellectual property rights such as copyright and data privacy.

The University of Kentucky promotes and expects a culture of research integrity and responsible and ethical conduct of research. Research integrity depends on the reliability and trustworthiness of research. Responsible conduct of research and scholarly activity (RCR) is founded on core values such as honesty, accuracy, efficiency, and impartiality. The availability of generative AI tools has the potential of advancing and enhancing research and scholarly work when used responsibly. These recommendations are offered for all faculty, staff and trainees (visiting scientists, postdoctoral fellows, graduate students, undergraduates, etc.) who participate in research as well as scholarly or creative work.

Following an initial review of emerging U.S. federal agency rules and guidelines from professional organizations and journals, among other sources, regarding the use of generative

¹ see ai.gov



Clinical care guidelines

- Issued March 15, 2024.
 - Relevant UK HealthCare policies
- Areas of caution:
 - Privacy and security
 - Human agency and accountability
 - Black-box technology
 - Accuracy/falsification
 - Bias and equity
- Use within and outside UK HealthCare systems.

Date Issued: March 15, 2024

advance.uky.edu

Guidelines and Recommendations for the Use of Generative AI in Clinical Care

UK ADVANCE

Overview

For over a year, the public availability of generative artificial intelligence (AI) tools has elicited a great deal of research, experimentation, and speculation as to how this new technology can enhance and transform all aspects of human endeavor from the future of work and education broadly to specific settings such as clinical care. At the same time, generative AI presents many areas of caution when it comes to data security and privacy, the effectiveness and accuracy of the tools, bias or inequity in how the technology impacts different groups of people, and the degree to which human agency and accountability is retained when generative AI is deployed.

Clinical care settings in particular demand careful attention to these issues.¹ As Brainard, Tanden, and Prabhakar note in a White House briefing room release, “[w]ithout appropriate testing, risk mitigations, and human oversight, AI-enabled tools used for clinical decisions can make errors that are costly at best—and dangerous at worst.”² The American Medical Association further notes the importance of informed guidance and policy on the use of AI in clinical care settings given the “lagging effort” around comprehensive oversight of novel AI technologies in areas not already explicitly regulated—particularly, in “clinical applications, such as some clinical decision support functions.”³

Machine learning (ML) and AI have been used in healthcare settings in many ways.⁴ These guidelines and recommendations specifically address *generative AI* as a particular type of AI technology and a growing set of tools with increasingly multimodal capabilities.⁵ The AMA defines generative AI as “a type of AI that can recognize, summarize, translate, predict, and generate text and other content based on knowledge gained from large datasets.”⁶ This ‘other content’ has increasingly involved images, audio, video, and non-linguistic data often in

¹ Meskó and Topol 2023

² Brainard, Tanden, and Prabhakar 2023

³ AMA 2023

⁴ ANA Center for Ethics and Human Rights 2022; Clipper, et al. 2018; Jiang, et al. 2017; Kaul, Enslin, and Gross 2020; Kavasidis, et al. 2023

⁵ Topol 2023

⁶ AMA 2023. Ning, et al. (2023) write that “the capability of generative AI to generate realistic content differentiates it from other general AI technology.” The critical difference between generative AI and other kinds of AI, adds Zewe (2023), is that generative AI “is trained to create new data, rather than making a prediction about a specific dataset.”



Center for the Enhancement of Learning and Teaching (CELT): Support for UK's educational mission in the age of generative AI

- 62 trainings, workshops or talks on generative AI from January 2023 to May 2024.
- 2024-2025 Teaching Innovation Institute focusing on generative AI.
- Suite of web-based resources for teaching with generative AI.
- Ongoing consultations with faculty and other instructors and staff.
- Coordinate “AI in Education” session for 2023 and 2024 Commonwealth Computational Summit at UK.



Website and resources

- Mission, goals
- Team members
- Resources
- Media coverage
- UKAdvance@uky.edu



The transdisciplinary UK ADVANCE Team exists to define and develop recommendations for responsible use of generative artificial intelligence (AI) at the University of Kentucky. The team will provide ongoing guidance to the campus community to achieve the university's mission for education, research, clinical care and service.

Specifically, the team will determine questions to answer through research and innovation; understand potential generative AI programmatic biases; embrace the university's mission to advance the Commonwealth; and develop strategic communication and effective education throughout the campus community.

As a result, faculty, staff and students will discover tools available to help them become familiar with generative AI. Faculty will understand its applications and implications, especially in the areas of assessment design and detection.

If you have questions about how generative AI impacts you at UK, or if you have questions about the ongoing work of the ADVANCE Team, please email us at UKADVANCE@uky.edu.

Clinical Guidelines

The use of AI presents many areas of caution, particularly as it relates to clinical care settings. These guidelines and recommendations specifically address generative AI as a particular type of AI technology and a growing set of tools with increasingly multimodal capabilities.

[READ GUIDELINES](#)

Faculty Guidelines

Generative AI is a rapidly evolving technology. The spring 2024 guidelines reflect our best understanding at the current time and may be updated to reflect the nature of the field as it continues to change.

[READ GUIDELINES](#)

Research Recommendations

Generative AI tools have the potential of advancing and enhancing research and scholarly endeavors when used responsibly. These recommendations are for all faculty, staff and trainees who engage in this work.

[READ RECOMMENDATIONS](#)

CELT

The Center for the Enhancement of Learning and Teaching (CELT) provides numerous resources for faculty and all instructors, especially materials related to understanding and incorporating generative AI in course curricula.

[VISIT](#)

University Senate

The University Senate provides recommendations — including sample language for a course syllabus — on how to manage AI/ML in the classroom.

[VISIT](#)



QUALITY ENHANCEMENT PLAN

What is a Quality Enhancement Plan (QEP)?

- A QEP is a component of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) Reaffirmation of Accreditation process.
- Reflects and affirms that learning is at the core of the institution's mission.
- Derived from an institution's ongoing comprehensive planning and evaluation process.
- Reflects and affirms a commitment to enhance overall institutional quality and effectiveness by focusing on an issue the institution considers important to improving student learning outcomes and/or student success.

QUALITY ENHANCEMENT PLAN

A QEP is designed around the framework of:

- **Topic:** The institution identified a topic through its ongoing, comprehensive planning and evaluation processes.
- **Broad-based support:** The topic has broad-based support.
- **Focus:** The plan focuses on improving specific student learning outcomes and/or student success.
- **Resources:** The institution commits resources to initiate, implement and complete the QEP.
- **Assessment:** The institution has developed a plan to assess the achievement of its QEP.



QUALITY ENHANCEMENT PLAN

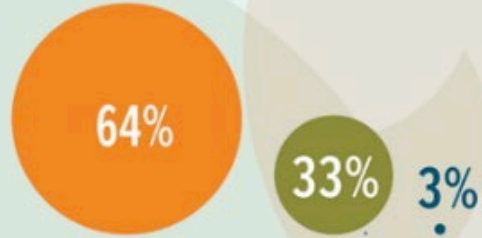
NEW COLLEGE GRADS LACK SOFT SKILLS, EMPLOYERS SAY

Employers want job candidates with “uniquely human” skills, but finding those candidates isn’t easy. Nearly 3 in 4 employers say they have a hard time finding graduates with the soft skills their companies need.

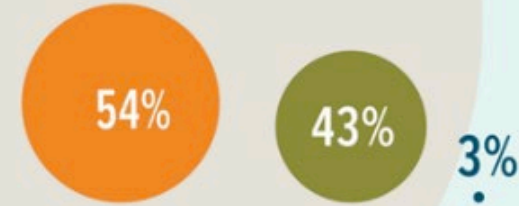


How would you describe the process of finding qualified applicants whom your organization values?

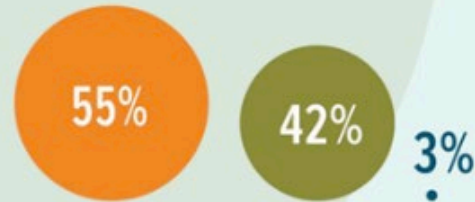
- VERY OR SOMEWHAT DIFFICULT
- VERY OR SOMEWHAT EASY
- DON'T KNOW



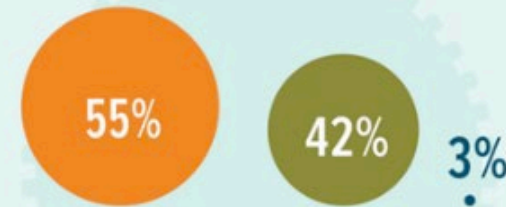
How would you describe the process of finding qualified applicants with CRITICAL-THINKING skills?



How would you describe the process of finding qualified applicants with COMMUNICATION skills?



How would you describe the process of finding qualified applicants with LISTENING skills?



How would you describe the process of finding qualified applicants with INTERPERSONAL skills?

Source: Cengage/Morning Consult, a 2018 survey of more than 650 employers and over 1,500 students.

Cengage/Morning Consult, a 2018 survey of more than 650 employers and over 1,500 students.

QUALITY ENHANCEMENT PLAN

Transdisciplinary Educational approaches to advance Kentucky (TEK)

Learn

Provide opportunities for students to **learn essential employability skills** in newly created and re-designed courses.



Introduction to Transdisciplinary Approaches (UK 101, etc.)



New transdisciplinary courses: Discover (TEK 200) and Engage (TEK 300)



Retooling of existing courses for transferable skills.

Leverage

Leverage faculty expertise to expand the use of transdisciplinary approaches in undergraduate classes across the University.

TEK Faculty Fellows

Track 1

- Discover and engage.
- Develop and teach new TEK courses.

Track 2

- TEK Skills
- Retool course focus with TEK SLO (or new course).

Link

Link the transdisciplinary skills students are learning to **Kentucky workforce needs**.

Discover

- Introduction to experts.
- Workforce community.

Engage

- Community based.
- Team with workforce partners.

Badge: Transdisciplinary Workforce Skills



Community Engagement:
TEK Research Showcase

QUALITY ENHANCEMENT PLAN

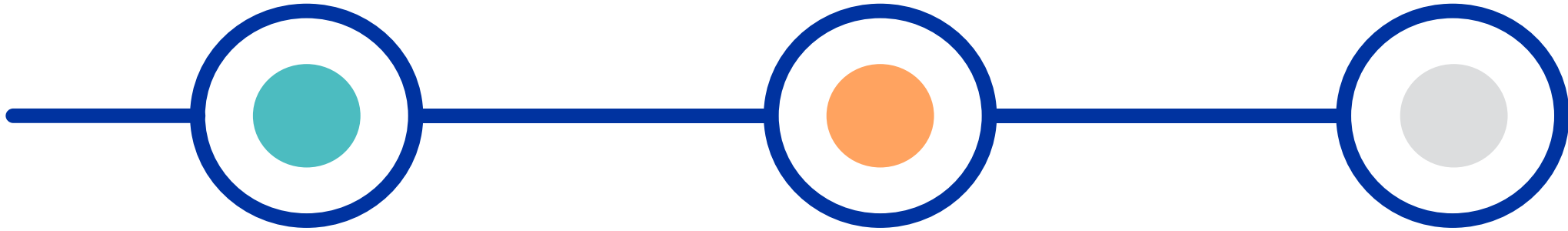
Student interest in TEK (n=628)

- 71.6% of respondents are interested in taking part in TEK.
- 96.5% of respondents perceive employability skills as important to their future.
- 86.0% of respondents are interested in participating in new courses that help students engage with developing employability skills, connecting with community partners or solving important issues.

Student interest areas:

- Education and accessibility
- Food insecurity
- Health disparities
- Social justice and racial inequality
- Environment and sustainability
- Community development
- Workforce issues
- Energy
- Economic development and labor markets

Implementation timeline



SPRING 2023

- ✓ Initiate request for proposal (RFP) process for TEK Faculty Fellows.
- ✓ Professional development for interested teams to support applications.
- ✓ Develop content for UK 101 and first-year experience courses.
- ✓ Continue developing digital badge program and work with University Senate for approval.

FALL 2023

- ✓ Deliver TEK modules in UK 101 and first-year experience courses.
- ✓ Collect data from students.
- ✓ Professional development for TEK Faculty Fellows =.
- ✓ Develop TEK 200-level: Discover.
- ✓ Infuse employability skills into existing courses.

SPRING 2024

- ✓ Offer TEK 200-level: Discover.
- ✓ Begin curricular approval process for permanent courses.
- ✓ Professional development for TEK Faculty Fellows.
- ✓ Initiate RFP for TEK 200-level and TEK 300: Engage.
- Collect data from students.
- Analyze data.
- Students generate products.

TEK Faculty Fellows: Preparing students for Kentucky's workforce

- Create new courses focused on Kentucky problems that satisfy UK Core areas.
 - Spring 2024 courses targeted:
 - Identifying and addressing misinformation.
 - Climate change impacts.
 - Community development in cultural spaces.
 - Access to well-being services.
- Embed employability skills in departmental courses across disciplines.



TEK Faculty Fellows: 2023-24 Inaugural Cohort

- **Kari Benguria** — Senior Lecturer, School of Information Science, College of Communication and Information
- **Christy Brady** — Assistant Professor, Health and Clinical Sciences, College of Health Sciences
- **Lauren Cagle** — Associate Professor, Writing, Rhetoric and Digital Studies, College of Arts and Sciences
- **Thomas Cochell** — Senior Lecturer, Chemical and Materials Engineering, Stanley and Karen Pigman College of Engineering
- **Liz Combs** — Senior Lecturer, Dietetics and Human Nutrition, Martin-Gatton College of Agriculture, Food and Environment
- **Troy Cooper** — Assistant Professor, School of Information Science, College of Communication and Information
- **Lisa Enright** — Lecturer, Center for Instructional Communication, College of Communication and Information
- **Lindsey Fay** — Professor, School of Interiors, College of Design
- **Joel Hamm** — Assistant Professor, Emergency Medicine, College of Medicine
- **Jason Hans** — Professor, Family Sciences, Martin-Gatton College of Agriculture, Food and Environment
- **Ryan Hargrove** — Associate Professor, Landscape Architecture, Martin-Gatton College of Agriculture, Food and Environment
- **Jordan Hines** — Lecturer, School of Architecture, College of Design
- **Lou Hirsch** — Assistant Professor, Plant Pathology, Martin-Gatton College of Agriculture, Food and Environment
- **Chris Huggins** — Assistant Professor, Sociology, College of Arts and Sciences
- **Amanda Lawrence** — Senior Lecturer, School of Information Science, College of Communication and Information
- **Tracy Lu** — Associate Professor, Retailing and Tourism Management, Martin-Gatton College of Agriculture, Food and Environment
- **Patrick Lee Lucas** — Professor, School of Interiors, College of Design
- **John Nash** — Associate Professor, Educational Leadership Studies, College of Education
- **Winter Phong** — Assistant Professor, Arts Administration, College of Fine Arts
- **Erin Richard** — Senior Lecturer, Biology, College of Arts and Sciences
- **Melody Ryan** — Associate Professor, Pharmacy Practice and Science, College of Pharmacy
- **Rachel Shane** — Professor, Arts Administration, College of Fine Arts
- **Liz Swanson** — Associate Professor, School of Architecture, College of Design
- **Alice Turkington** — Associate Professor, Geography, College of Arts and Sciences
- **Meg Wallace** — Associate Professor, Philosophy, College of Arts and Sciences

Discover Courses in Action | March 7

- UKC 100 | Pilot course
 - 19 students in this section.
 - Working with "the nest."
 - Access to family well-being services.
- "It is pretty inspiring to be able to get outside of our comfort zone and try and do something that betters the community to work together on something greater than ourselves."
- "The creative and innovative structure of the class is a breath of fresh air. I like the way the class is set up to be collaborative and build community...Opening my eyes to something new is positive in helping me figure out what I want to do with my career. I really enjoy the teamwork aspect and learning how to communicate effectively."



QUALITY ENHANCEMENT PLAN

Networking with workforce leaders | March 6

- Goal of session was to facilitate conversations between faculty and workforce leaders.
 - Develop students' skills for the needs of the workforce.
 - Create mutually beneficial community partnerships.



QUESTIONS

