<u>Principles for the UT Community Engaging with Emerging Technologies</u>
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Background

The University of Tennessee (UT) aspires to provide student learning and growth opportunities and to advance human knowledge and capabilities. We are sensitive to generative Artificial Intelligence (AI) technologies and other emerging technologies that change our teaching, learning, and research environments. The Philosophy Committee's charge was to explore the premises of our work as educators and researchers that form the foundation for our mission and then identify common principles which can guide our interactions with emerging technologies that change the way we live, learn, and work.

The pace of change requires the university's academic and support units to continuously evaluate emerging technologies to determine when, where, and how their capabilities may align with our stated values and serve (or impede) our objectives.

The general principles shared here can be used to address the influence of new technologies like ChatGPT as they enter our teaching, learning, and research environment. **This document is intended to provide a foundation for discussion and policy development as the UT community works with emerging technology within the paradigms and practices of their disciplines.**

Principles

We—UT faculty and staff—recognize the rich and diverse intellectual perspectives represented by the academic disciplines across the university. While we acknowledge these differences, we believe there are also many scholarly principles that bring us all together including respect, integrity, and the academic freedom and desire to create and use knowledge to build a better world. Academic freedom in this context includes the full range of freedoms: exploring technology, implementing it, or taking a critical approach to technology. The work of responding to new technology is on-going. Principles can be useful when having discussions about and creating policy for how to interact with these technologies. The following **eight principles** begin with qualities that the work should embody, rather than objectives that might be met, or general axioms that might become outdated with new technological advances. These principles represent shared trans-disciplinary commitments that are likely relevant across all disciplines.

At the University of Tennessee, we aim to be:

1. **Intentional**. We recognize the need to identify, acknowledge, and understand AI and other emerging technologies.
2. **Human-Centered. W**e strive to understand and honor what it means to be human. This principle is important in all domains—those that build and use technologies, those that explore the interaction between humans and technologies, and those that are further removed from technologies. This principle suggests that discussions around emerging technologies should not take for granted "what it means to be human," and should acknowledge the human design and implications of the technology, as well as the technical specifications. As a land-grant research institution, UT strives to add to human knowledge and advance human capabilities, in support of the people and environment of Tennessee. Success in this realm means engaging in research and sharing the results of research in furtherance of human well-being.
3. **Inclusive.** UT's mission is best met when a new technology, if integrated into UT's practices, is equitably accessible, unbiased, and ecologically sustainable. Discussions thrive when all voices are encouraged and respected, listening is important, and unintended consequences matter.
4. **Open & Transparent**. UT's mission encourages us to be open as we consider how to offer education and conduct research that explores and potentially uses these technologies, while also providing students with insight into how these technologies are interacting with areas of knowledge created by humans.
5. **Critically engaged.** At UT we share the tenet that responsible scholarship and good citizenship require critical reflection on and questioning about the outcomes they produce.
6. **Adaptive**. UT is fortunate to have a range of expertise in many , and each discipline may have specific frameworks for insight and decision making. This diversity of perspective allows UT to be nimble and adaptable, in keeping with its mission. As new technologies emerge and develop, we expect departments to debate and articulate responses both for and within their domains of expertise and in dialogue with experts in other domains.
7. **Contextual**. At UT discussions and explorations of emerging technologies should include considerations of purpose, value, audience, and methods specific to the context in which the technology will be applied. For example, incorporating technology into an undergraduate course will present different issues and considerations than utilizing it as part of a faculty research project.
8. **Prepared**. UT's mission is to prepare our 21st-century students and graduates to be good citizens in their communities and to be successful in their careers. The varying domains of inquiry define success in different ways. Technologies should be considered for how they will support work in varied domains in the future.

Discussing Underlying Concerns about Emerging Technologies

UT faculty, staff, and students need to be attentive to the following characteristics of new technologies when considering how to react to their influence.

1. **Bias.** Technology is created by humans. Any human design process may introduce bias, or the design itself may be biased. The role of bias should be considered when addressing educational uses. Access and equity related to the tools should be considered.
2. **Socio-technical assumptions.** Like any technology, generative AI technologies operate within multiple social systems simultaneously, and what appear to be successes in one domain may produce negative unintended consequences in another. In crafting UT's response to these technologies, it will therefore be important for us to review the social structures within which the technologies are being used.
3. **Rate of advances.** Technologies change rapidly, and UT's institutional response to one generation of software may quickly become irrelevant to new variants. It will therefore be vital to stay attentive to how technologies may be developing and how each new development presages the emergence of more or different tools. For example, there may not be an effective way to build tools that detect usage of the technology if the rate of advance is faster than the detection tools can be updated.

Discussing Teaching & Learning Principles and Emerging Technologies

As scholars and educators, we all share the expectation that students will demonstrate cognitive growth, learn to achieve within their discipline, and develop creativity to meet their discipline's demands. We further expect students to recognize and elevate the dignity of others, to communicate about a shared world with others, and to be prepared to act ethically within that world. These expectations guide our educational practices.

As new technologies emerge, the following considerations are important how we implement any new technology in pursuit of our teaching and learning goals:

1. What do we want and need students to learn to do on their own, without relying on the technology?
2. How do we anticipate students might use the technology without our guidance or permission as they engage in the learning activities that we have created for them?
3. In what ways, and for which goals, do we *want* students to learn to use the technology?
4. What value does engagement with the technology potentially add to students' learning experiences, and their ability to achieve their educational and career goals?

1. How might we want to limit the use of this tool in the classroom?
2. How might we want to integrate this tool into the classroom?
3. How might we ensure that students are growing cognitively and developing critical thinking skills and ethical approaches to their learning and future activities given that the new technology exists?
4. How might we focus on learning goals and processes that support learning as students interact with the technology
5. How might we engage responsibly with the technology to assess how best to prepare students within our discipline?

Challenges for Faculty

Service and Professional Development: Learning about emerging technologies and engaging in strategic planning about how to respond to them is time consuming for faculty. Dealing with the emerging technology could affect promotion and tenure because of shifting expectations and/or time demands associated with faculty responsibilities for service and research. These issues should therefore receive formal discussion in the course of committee work that is part of faculty workloads and should not be relegated to ad hoc discussion by individual faculty members, outside their workload allocations. A discussion about this could be structured around defining the core aspects of the discipline or field and exploring how a technology changes these core aspects.

Research: Given that we at UT value expertise in different disciplines, it is vital that those with research obligations within each discipline should collectively evaluate the possible effects of the new technology on research-related processes, including (but not limited to) the relationship between new tools and the review of the literature, data collection, research methodology, and processes related to dissemination of new research (publications and presentations). While each discipline will handle these matters differently, we at UT endorse the core principles of academic freedom and creativity in pursuit of ethical research, peer review of research methods and findings, and replicability or related confirmation of research findings. Any new technology may afford practical benefits for some tasks, but these benefits may also create unintended negative consequences in other areas of the research process, and these unintended consequences merit consideration.

Equity: The UT Volunteer spirit emphasizes collective work toward enhancing all aspects of the university's function. However, we at UT acknowledge that learning about new technologies and engaging in strategic planning in response to these technologies will create a significant service burden. All units should consider and plan how to ensure that all faculty have access to the resources of time and professional development opportunities necessary to participate in this work and that the work is compensated fairly and distributed equitably.

Discussing University Goals and the Emerging Technology

Based on the above principles and considerations, we recommend five broad goals that align with the university's strategic vision to help guide the work ahead.

Goal 1. Cultivating the Volunteer Experience

Within the discipline's parameters, we must identify how the emerging technology influences the student's engagement with scholarship now and how it may influence their life after graduation. We must consider how these two aspects should be valued when making decisions about how an emerging technology should be treated in the classroom environment. This will likely be a continuum from discouraging using the technology for assignments to making the technology a part of assignments.

Goal 2. Conducting Research that Makes Life & Lives Better

Within each discipline's parameters, those conducting research that employs or engages with AI technology should be attentive to issues related to ethics, access, and bias. Socioeconomic forces often accelerate the adoption of new technologies, but it is the responsibility of researchers and knowledge creators in the university to take a critical stance. We must consider unintended consequences with care, to ensure that the end goal of any given new technology aligns with UT's mission to enhance the well-being of individuals in Tennessee and beyond. Research that employs, engages with, or investigates emerging technologies should include discussions around ethics, access and bias. Considerations might also include developing research opportunities for students to engage with these technologies.

Goal 3. Ensuring a Culture Where Vol is a Verb

We have a duty to respect ourselves and others, to build spaces where challenging ideas and diverse points of view can be shared. Emerging technologies are built by humans and bear traces of human biases in their structure and function; likewise, emerging technologies often assume that users have sufficient infrastructure and equipment to gain access, assumptions that disadvantage those without sufficient infrastructure or computer equipment. UT strategic planning processes should continue to include diverse voices and viewpoints on an ongoing basis.

Goal 4. Making Ourselves Nimble & Adaptable

We need to promote institutional practices and ground rules that allow us to respond quickly and flexibly to the challenges and opportunities afforded by emerging technologies while maintaining true to our mission.

Goal 5. Embodying the Modern Land-Grant University

UT's mission emphasizes serving our state and our communities. Those teaching and conducting research in each discipline should consider how new technologies influence their contribution to our collective obligation to enhance the success and well-being of Tennessee residents. We will also need to ensure that our students will be well prepared to be successful and contribute meaningfully to a rapidly changing technological landscape. Furthermore, UT should continue to encourage dialogue among those in different disciplines to ensure a shared approach and maximize collaboration.

Appendix: Suggestions for Broad Campus Engagement

The main document provides general principles that can be used to address the influence of new technologies that may affect our teaching, learning, and research environment. It provides a foundation for discussion and policy development.

This appendix provides a framework for associated actions that might be taken to engage the campus as new technologies emerge. It is intended to provide ideas for how to engage the broader UT community about the new technology. Not all activities need to be completed for any given situation. This table is inspired by the model created by the Academic Structures Working Group in 2021.

Inform Phase (Informs Campus as Technology is Emerging)

Activity	Description
Executive Summary	Provide a brief executive summary to leadership stakeholders in advance of broader engagement. This helps clarify key issues of concern and provides any pertinent institutional information. Leadership stakeholders are those people involved in addressing the technology and often represent the range of UT community members.
Leadership Stakeholder Video	Produce a video with a message from appropriate leadership stakeholders to be distributed. This helps prepare the community to engage.
Information Provision	Distribute information widely. Include information on context, trends related to the emerging technology, and any case studies of peers. Take care to message appropriately across disciplines.
Website	Leverage website to distribute information.
Fact Sheets	Develop one-page fact sheets highlighting important issues related to the emerging technology and higher education both in terms of research and teaching
Information Sessions	Conduct an informational meeting with the Faculty Senate Executive Council, Council of Deans, Chancellor, and any affiliated working groups.

Consult Phase (Collects input from campus stakeholders about the emerging technology)

Method	Description
Online Survey	Use an online survey as a method for general anonymous feedback from relevant community members. Be sure no PID is collected.
Town Hall or Listening Sessions	Use town hall format or community listening sessions for general feedback.

Engage Phases (Promotes Active Engagement in planning around the technology)

Method	Description
Peer-to-Peer	Use existing meetings and structures for peer-to-peer engagement (e.g., Council of Deans, Deans, Department Heads, a special meeting of the deans or department heads, department/school/unit meetings).
Outside Facilitator (only for highly disruptive technologies)	Use an outside facilitator for critical engagement meetings. Organize well in advance and promote a professional presence.
College Presentations	Organize engagement sessions for each college. Include leadership stakeholders as resources for college sessions.
"Committee" Office Hours	Organize the opportunity for one-on-one meetings or working group office hours for individual meetings for those who do not prefer large groups or would like to provide private feedback (e.g., new faculty).
Travelling Roadshow	Organize a traveling roadshow available within walking distance to departments. Work with department heads to help communicate meeting times. Consider teaching culture/schedule. Potentially provide zoom options.