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Governing Generative Artificial Intelligence (GenAI)

Preserving Human Creativity in Institutional Systems

Illustrative classroom example: agentic tools that coach students through thinking instead of producing answers for them.

Norman S. St. Clair, Ph.D. and Pamela McCray, Ph.D.

University of the Incarnate Word

Institutional AI governance

Faculty practice

Student learning

The governance question becomes real as lived pedagogy/andragogy.

Responsible practice diffuses into adult-learning and flexible-access design (Beatty, 2019; Knowles, 1980).

Institutional frame

Generative AI now sits inside teaching, assessment, scholarly work, and compliance expectations.

Faculty practice

Our tool development and co-instructor perspective show how governance becomes lived pedagogy/andragogy.

Student experience

Learners interact with coached supports that ask, challenge, and scaffold their own work.

Responsible GenAI is not an add-on policy. It is a designed learning relationship.

The tools preserve human creativity by putting the cognitive work back on students.

Not answer generation

- The tool does not write the student's answer.
- It asks where the student's logic is now.
- It presses for clarity, evidence, and alignment.

Guided instruction & student development

- Students work through a scaffolded dialogue.
- Feedback adapts to current readiness.
- Reasoning and logic becomes visible.

Human validation

- The instructor and co-instructor remain essential.
- Confidence grows through social interaction.
- AI extends coaching; it does not replace it.

Why the human layer matters: AI-guided support works best when paired with adult learner agency, flexible access, social interaction, confidence-building, and validation (Beatty, 2019; Knowles, 1980; Vygotsky, 1978).

The tools are trained around three learning commitments.

Constructivism sets the responsibility, Socratic dialogue sets the interaction, and ZDP sets the adaptation.

Constructivism and ZDP (Piaget, 1970; Vygotsky, 1978)

Students must do the learning work: choose, explain, defend, revise, and produce their own deliverables.

Socratic questioning

Cato and related agents guide through questions, challenge partial reasoning, and avoid simply handing over answers.

Social learning and ZDP (Vygotsky, 1978)

The dialogue adjusts to what a student knows solidly, what needs support, and what is not yet within reach.

The design target: flexible, individualized support with faculty guardrails and a human social layer (Beatty, 2019; Vygotsky, 1978).

8 live links

ChatGPT grouped

My agentic teaching and research toolkit

Linked tool names open the available tool pages. ChatGPT tools are grouped together under GPT Tools for Students.

Research

St Clair Research Suite

Research Model

open link

Research

Cato Research Guide Student Mentor

AI Studio

open link

Teaching

Cato Teaching Assistant

Leading Change and Data Driven Decision Making

open link

Tutoring

Cato Student Tutor

Leading Change and Data Driven Decision Making

open link

Presentation

Atlas Co-presenter

AI Studio

open link

Curriculum

Curriculum Map

Gemini

open link

Student support

GPT Tools for Students

ChatGPT

Cato PoP Tool

Problem of Practice coaching

open

Meta Synthesis

Research design and methodology

open

The human expertise is the curriculum inside the agent.

The build effort is not the button click. It is faculty work shaping knowledge, guardrails, and feedback cadence.

Inputs

Book content, quizzes, discussion prompts, instructor notes, expected answer qualities, transcripts, and research logic.

Guardrails

No answer-giving posture, no obsequious feedback, Socratic prompts, privacy boundaries, and source checks.

Student-facing loop

Ask. Diagnose. Coach. Challenge. Suggest next step. Send the student back to the work.

The transcript estimate: roughly 60 hours (per) went into training each Cato assistant for one course after the basic tool creation.

The students who truly interacted with the tools, not merely viewed them, moved farther, faster.

Pamela's speaking moment: connect the co-instructor perspective to student confidence, clarity, and research readiness.

Observed growth

Students who actively engaged became more succinct and clearer in defining their problem of practice.

Research process

The tools helped them align problems, drivers, evidence, and supporting literature in a facilitated way.

Affective support

Human validation from the co-instructor lowered intimidation, helped students trust the tool, and grew confidence.

Frame for the room: comfort level mattered; not everyone used the tools, but three to four students truly embraced them and their deliverables showed the difference.

The classroom implementation creates ethical habits, not just AI access.

Responsible use is operationalized through boundaries students and faculty can actually see.

Privacy boundary

Student dialogue is not collected for faculty surveillance; continuity stays with the student through browser-local history/cache.

No lazy tool

The agent is trained to coach, question, and send learners back to their own work.

Evidence habit

Students see how claims should be connected to sources, research logic, and checks.

Platform fit

Different tools serve different needs: AI Studio, Gemini, ChatGPT, Claude, and institutionally available Copilot.

Prompting becomes evidence of learning Cheng et al. (2024) and Oliveira et al. (2025).

The transcript points to a new assessment question: not only what did the student submit, but how did the student's inquiry improve (Knowles, 1980; Vygotsky, 1978)?

Old signal

Final paper or deliverable

Emerging signal

Quality of prompts, revisions, and reasoning trail

Pedagogic use

Evidence that student thinking became more precise

This preserves creativity because the student must show the development of the work, not merely the polished artifact.

The social ingredient remains the irreplaceable part of learning.

Vygotsky's social learning frame and Bloom's affective domain explain why the co-instructor relationships matters (Vygotsky, 1978).

AI coaching layer

Available on demand. Socratic and adaptive. Trained with faculty logic.

Human validation layer

Reduces intimidation. Builds confidence. Names growth in ways students trust.

The balance is the model: AI can extend individualized coaching, but humans address power dynamics, belonging, confidence, and ethical judgment.

The governance opportunity is to design GenAI that makes students more humanly capable.

From institutional policy to classroom tools, the aim is guided creativity, visible reasoning, and stronger student agency.

What we learned

A governance framework becomes meaningful when translated into course-level routines and tools.

What we will refine

Gather structured student feedback, compare active tool users and non-users, and document prompting evidence.

What others can adapt

Start small, pick one learning problem, train the tool around your pedagogy, and preserve human validation.

Questions

References

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