Executive Summary for Program Heads

GLOW: Scalable GTA Communication Rehearsal for STEM Programs

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Purpose

GLOW is a web-based simulation platform designed to strengthen graduate teaching assistants' instructional communication skills before they enter live teaching environments. It provides structured, repeatable practice in managing common (or extreme) office-hour and help-room interactions -- particularly those involving confusion, pushback, deadline pressure, and escalating student behavior.

GLOW is best positioned as a **scalable rehearsal layer** within GTA onboarding that complements, but does not replace, mentoring, observation, and workshop-based training.

Why Program Leads Adopt GLOW

1. Standardized, Rubric-Aligned Practice

- All simulations are evaluated using stable, discipline-agnostic rubric domains (e.g., clarity, de-escalation, professionalism).

- Feedback is consistent across participants and cohorts.

- Programs retain scenario customization aligned to local courses and policies.

This preserves comparability while maintaining disciplinary relevance.

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2. Scalable Training Without Proportional Staff Burden

Traditional live role-play scales poorly. GLOW enables:

- Hundreds of GTAs to complete multiple rehearsal cycles

- Immediate, rubric-anchored feedback

- Retry opportunities for skill reinforcement

- Reduced demand on faculty and senior TA time for basic rehearsal

Human coaching time can then be concentrated where analytics indicate higher need.

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3. Actionable Program-Level Analytics

Administrative dashboards provide:

- Completion tracking

- Attempt counts

- Domain-level performance distributions

- Persona-specific performance trends (e.g., aggressive cases vs. confused cases)

- … and much more

These data support:

- Targeted mentoring allocation

- Cohort-level needs assessment

- Longitudinal program refinement

Importantly, analytics should be interpreted as indicators of simulated readiness -- not summative measures of instructional effectiveness.

Implementation Model (Typical Deployment)

- Distribution as a standalone link.

- Programs set:

    - Required number of simulations

    - Benchmark thresholds

    - Persona mix (e.g., percentage of high-conflict cases)

- Participants complete simulations during onboarding or pre-semester training.

- Retakes are allowed to promote iterative improvement.

A mid-sized program (≈250 GTAs completing ≈6 simulations) typically incurs modest API costs (low hundreds of USD), excluding hosting and staff configuration time.

What GLOW Is -- and Is Not

GLOW is:

- Structured rehearsal

- Low-stakes practice

- A way to normalize exposure to difficult instructional interactions

- A complement to workshops and observation

GLOW is not:

- A replacement for classroom evaluation

- A long-term measure of teaching effectiveness

- A capture of nonverbal or embodied classroom dynamics

Simulations are text-based and introduce controlled variation (e.g., intensity, crowding, deadline pressure) to broaden preparedness.

Governance and Data Transparency

- Student dialogue is AI-generated and not derived from real office-hour transcripts.

- Excerpts used for reporting or research are anonymized.

- Programs retain control over deployment policies and internal interpretation of results.

- AI model backend is easily swappable to local deployments or other models.

Recommended Use Cases

GLOW is particularly well-suited for:

- Large STEM departments with high GTA enrollment

- Programs seeking consistency across sections or instructors

- Departments observing recurrent challenges in student-facing communication

- Onboarding models that combine workshop, simulation, and coaching layers

Programs integrating simulation with facilitated discussion and follow-up reflection report the strongest alignment between rehearsal and live teaching practice.