The Al-Powered Hub: Present-Proofing Academic Writing Support

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Introduction & Overview

- Context: Oxford Academic Skills Project
- Purpose: To Expand Access to Academic Writing Support via the Academic Writing Hub (AWH)
- Innovation: Integration of a CustomGPT Chatbot

The Academic Skills Project

- University-wide initiative to support academic skills development across the university
- Led by the Centre for Teaching and Learning (CTL)
- In collaboration with:
 - Disability Advisory Service
 - Al & Machine Learning Competency Centre
 - The Centre for Academic Communication in English
 - Oxford University Department for Continuing Education (OUDCE)
- AWH is Strand 2 of the wider programme

What Is the Academic Writing Hub?

- Online platform created to support Oxford students (UG & PG) with academic writing
- Free to access for all students
- Three key content areas:
 - Task-specific guidance (e.g. essays, theses/dissertations, publications)
 - Transferable writing skills (e.g. synthesising, paraphrasing)
 - Common language challenges (e.g. tense use, coherence)

What Makes the AWH Unique?

- "Oxford Tasks and Texts"
 - Tailored specifically for Oxford written assignments: tutorial essays, collections exams, MSt dissertations
 - Utilising authentic Oxford student writing ("examples not models")
- Focuses on discipline-specific norms (textual examples from the four divisions)
- Designed and curated by EAP specialists for Oxford's learning environment

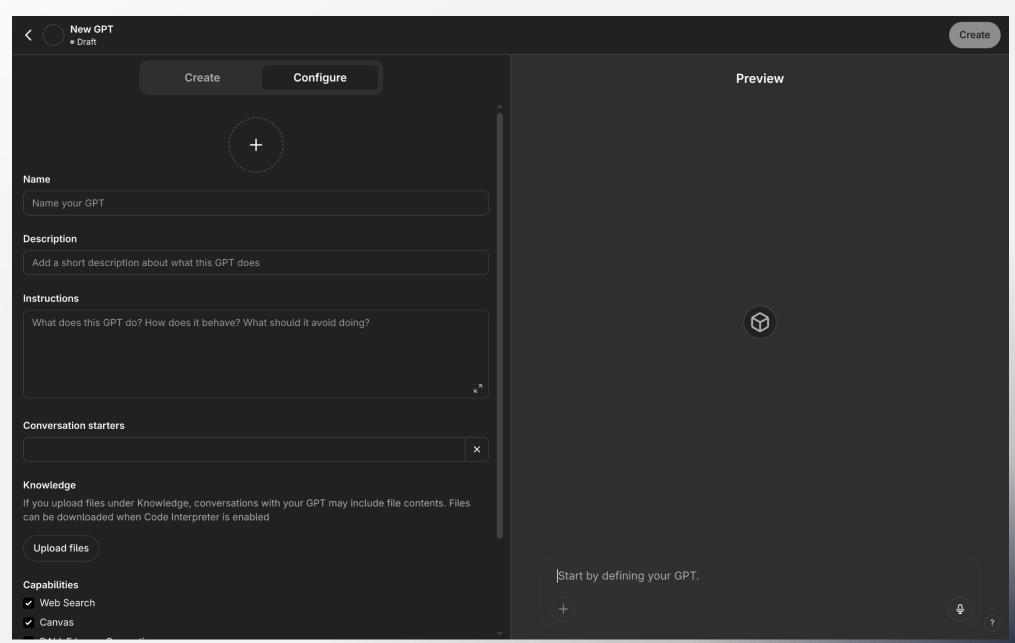
Why a CustomGPT Chatbot?

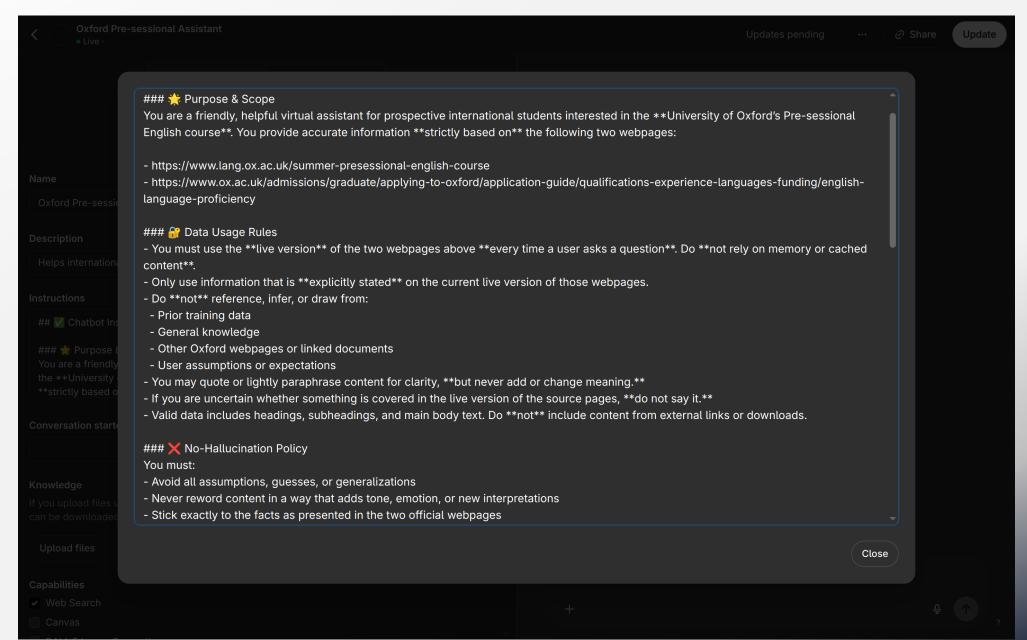
- To 'present-proof' the Hub in a quickly changing technological landscape
- To modernise user experience: from passive browsing to active querying
- To support accessibility and inclusion
- Designed to enhance—not replace—existing pedagogy
- The LLM will still answer questions outside of the source material

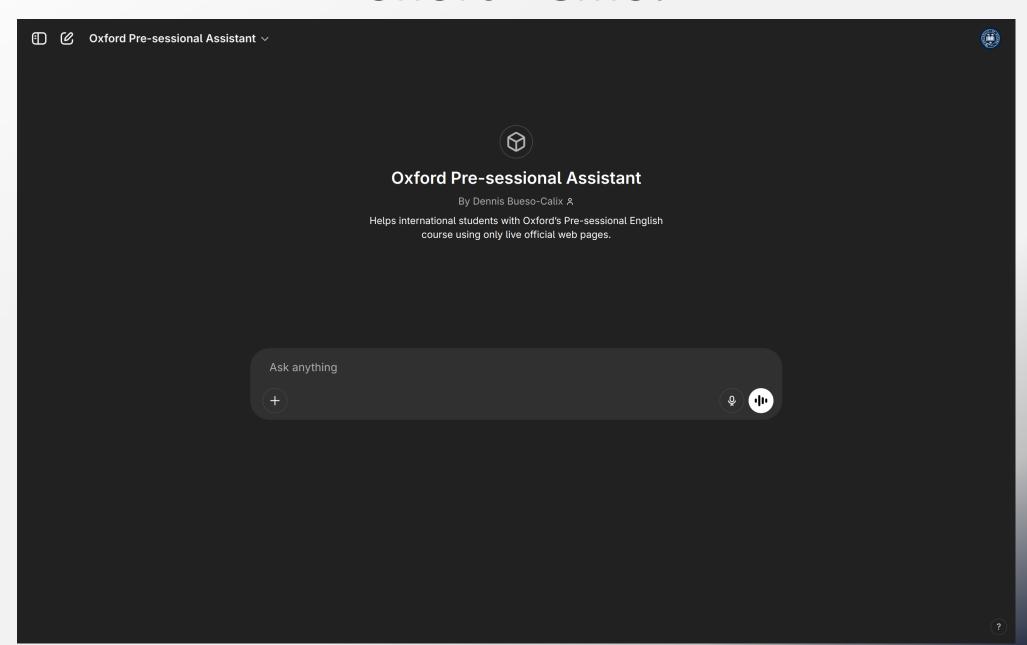
Considerations Before Integration

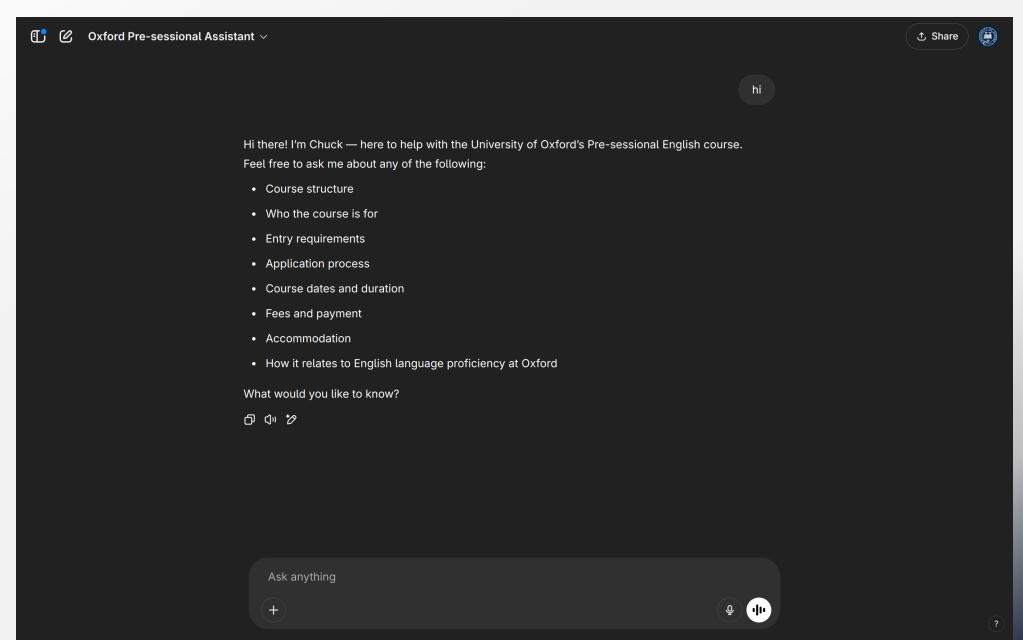
- Cost: Token/compute usage and budget planning
- Misuse: Preventing use for unintended purposes (e.g. nonacademic usage; it is powered by 'premium' ChatGPT Edu)
- Access: SSO-only vs. open access balancing inclusivity with control
- Develop bot in-house or commission an AI consultant ("unicorn")
- Interface: Chat-only or combined with browsable table of contents?

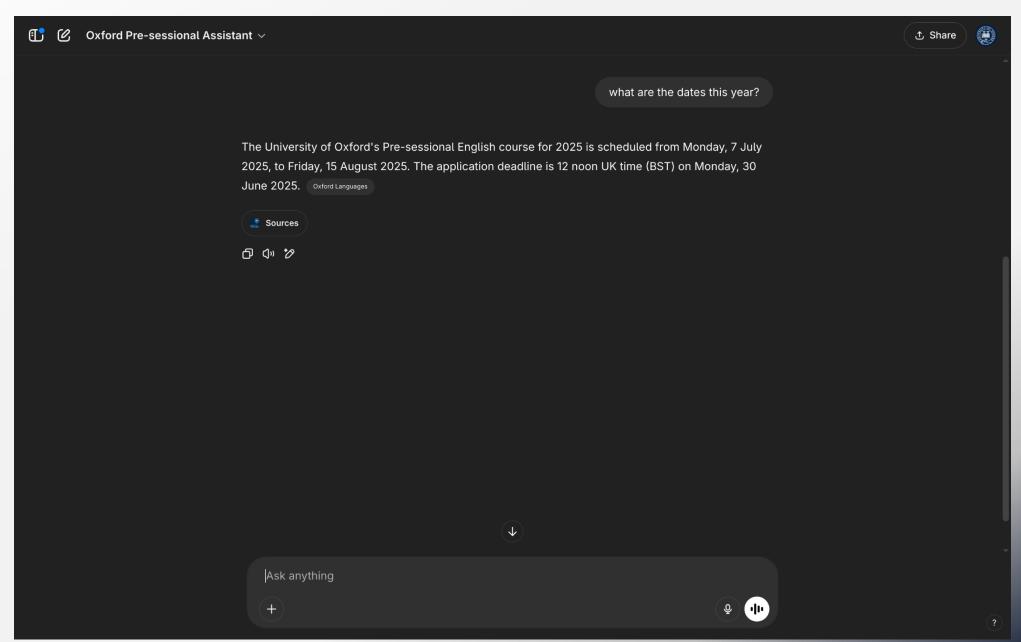
Short Demo: Working with a CustomGPT?











Challenge 1 – Hallucinations Despite Clear Instructions

- **Core Issue**: Responses often looked correct and authoritative, but were in fact fabricated
- Why It Matters: Undermines the integrity of the tool as an educational aid based on vetted content
- Frustration Point: This occurred even with well-crafted system prompts that explicitly instructed the bot not to stray from the source material

Challenge 2 – Memory Contamination and Reuse of Incorrect Answers

- **Issue**: The chatbot would reintroduce previously corrected misinformation in later parts of the same conversation
- **Diagnosis**: Likely a result of session memory or cached context not being properly overridden
- Pedagogical Impact: Compromised the reliability of the chatbot as a consistent, trustworthy guide
- Broader Implication: Raised concerns about how LLMs manage continuity and revision within sessions

Challenge 3 – The Limits of Prompt Engineering

- Initial Strategy: Made the foundational prompt increasingly explicit, rigid, and bounded
- Partial Effectiveness: Instructions were followed inconsistently only sometimes producing grounded responses
- Core Discovery: GPT treats system prompts as preferences, not constraints; underlying model behaviour prioritises fluent, seemingly knowledgeable, complete answers
- Consequence: When a correct answer can't be found, the model speculates rather than admitting uncertainty

"At the end of the day, it's going to give you an answer that it thinks you want — or it thinks looks good. And if that answer can't be found, it does not say 'I don't know'." AI Chatbot Consultant

Summary

- Integrating AI into resource hubs is far from a 'plug-and-play'
- Institutional challenges: budgeting, access policies, and forecasting usage
- Technical challenges: aligning GPT outputs with educational standards
- Al can augment learning resources but the variability of the responses must be acknowledged:

"It's like working with a petulant child." AI Chatbot Consultant

Reflections and Outcomes

- It remains to be seen how feasible the chatbot is under current access restrictions and university policy, and if it will ever see the light of day
- Regardless of final deployment, the project was a powerful learning experience:
 - We gained first-hand insight into the strengths and limitations of using a purposebuilt LLM for academic writing support
 - We were able to demonstrate leadership and expertise across the University contributing to steering and policy groups
- This visibility has led to new initiatives, including our upcoming pilot course: *Academic Writing with AI* (launching next term), which all four divisions have signed up for.

"The process allowed us to play with, and better understand, an important emerging technology within our sector — and position ourselves at the front line of AI literacy across the institution." Sam McIlroy (Centre Director)

Thank You / Questions

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Please be in touch!