“Stay calm and educate” ChangeMaker-funded project investigating SRI students’ perspectives on generative AI

**Executive summary**

* The use of ChatGPT and other generative AI tools is already widespread. For example, students are using these tools to: clarify concepts; summarise readings; structure essays; generate questions for future research; write CVs, cover letters, “professional” emails and job applications; and to plan meals and exercise regimes.
* Students are excited about the possibilities of these tools, but also feel themselves to be fairly ignorant of how they work, how to use them, and what impacts they will have. In particular, while students felt like they knew how to use them to cheat, they lacked positive use cases for how these tools could improve their learning experience.
* Students were also more concerned about the equality implications than about academic integrity and plagiarism. They were also worried about: homogenization and implications for decoloniality; and deskilling and dependency.
* Ultimately, students felt that these technological developments offer an opportunity to examine what a degree should be and what it could offer students.
* On the basis of this research, we would recommend: issuing clarification on the rules; educating students (and staff) about the strengths and weaknesses of these tools; committing to updating our guidance regularly over the medium term; and developing an open dialogue with students on this topic (possibly through open staff-student meetings at the start of next year).

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# Methodological notes

* Student perspectives: two focus groups (conducted on 08/03/23 [n = 7] and 13/03/23 [n = 5]) and an online survey (collected between 04/03/23 and 17/03/23, n = 26). Summarised survey results and partial transcripts are [available here](https://docs.google.com/document/d/1oESIGX_kN1fHuDjl2JV6re2-I6T-AlrE/edit?usp=sharing&ouid=114903469321113763121&rtpof=true&sd=true).
* Testing the tools: the two Lead Students (Mia Meade and Ruth Ogundamisi) had one hour to complete two first-year assignments using only freely available AI tools and their own initiative. You can [view the results here](https://docs.google.com/document/d/18_xcP9MN3h7fC9pQnscrGuLwXvcJg-Za/edit?usp=sharing&ouid=114903469321113763121&rtpof=true&sd=true). They were (cautiously) marked by the staff lead (Matteo Tiratelli) and grades ranged from 50 to 54. TLDR: they were well-written but breezily superficial.
* Time period: Most of this research was conducted before the release of GPT4 (the latest version of the technology behind ChatGPT). GPT4 is currently only available in limited form and for a $20/month fee, but it represents a substantial improvement in the AI’s capabilities. You can view its [unedited answers to the two first-year assignments here](https://docs.google.com/document/d/13WhhhQPWCmwxe4LZ7HO2Hvlmoa0oqraD/edit?usp=sharing&ouid=114903469321113763121&rtpof=true&sd=true) (these were closer to a borderline 2:1).
* Similar reports/resources: Most of our findings are corroborated by a similar ChangeMakers project in the [Department of Political Science](https://drive.google.com/file/d/1tYfAoA5NTShAac5v2ee7pc5OLdzKq7Wk/view?usp=sharing)[[1]](#footnote-0) and by a small survey of [first-year SRI students](https://drive.google.com/file/d/1C70ESB1Sxx_I_tQ2H7aeWSVhWbEvzc8c/view?usp=sharing) (n = 14).[[2]](#footnote-1) UCL’s AI in Education Expert Group have also produced a recent [update on their work](https://drive.google.com/file/d/1HBH9oFSFe3BloxjhS3xKR5c5WOixon34/view?usp=sharing) (04/23).

# Students’ perspectives

## 1. General attitude:

* About 60% of respondents believed that the use of AI tools, and ChatGPT in particular, was already widespread amongst students (“everyone is using it”). However, of those who disagreed, many thought that no one was using it. If there are pockets of high-use and pockets of low-use then this may have serious equality implications.
* Even students who self-selected into the survey / focus groups felt that they didn’t know much about generative AI, and references to their own ignorance and uncertainty about the future were common. But respondents were nevertheless excited about the potential of these tools. They felt that these tools would be a huge part of their future working lives and didn’t want to be cut off from it unnecessarily.
* Respondents were concerned about the ethics of using these tools and tried to distinguish between ‘acceptable’ and ‘unacceptable’ uses. In general, they did so by separating cases in which the student still exercised considerable agency and oversight from those where it was used to automatically produce large volumes of text. But respondents also recognised that this is a continuum not a neat divide. They also felt that the ways students could use these tools to cheat were clear, but that they did not know how to use them to enhance their education and to stimulate the development of their critical faculties (i.e. they lacked models for positive use cases).
* Most of the discussion was predicated on a shared belief amongst students that these tools had limited functionality. However, this is changing all the time and improvements seem to be increasingly rapid. Moreover, our experiments using these tools show that they can *already* be used to produce fairly competent first year essays in a very short period of time. See the lead students’ work [here](https://docs.google.com/document/d/18_xcP9MN3h7fC9pQnscrGuLwXvcJg-Za/edit?usp=sharing&ouid=114903469321113763121&rtpof=true&sd=true) and unedited essays produced by GPT4 [here](https://docs.google.com/document/d/13WhhhQPWCmwxe4LZ7HO2Hvlmoa0oqraD/edit).

## 2. Potential uses:

Students discussed a wide range of potential uses offered by ChatGPT. For example, students are already using these tools to: clarify concepts; summarise readings; structure essays; generate questions for future research; write CVs, cover letters, “professional” emails and job applications; and to plan meals and exercise regimes.

### Academic uses

* Participants provided many practical ways in which ChatGPT could be used by students: clarification of a concept or topic prior to attending a lecture or seminar; summarising readings from academic journals or books required for attending lectures and seminars; creating an initial plan or structure for an essay or other piece of coursework; and generating questions for essays or research. Students praised it for being able to clarify difficult concepts and articulate knowledge in an streamlined, easy-to-digest manner.
* Students emphasised its use for quantitative subjects (and STEM more widely): assisting with solving data problems, providing scientific answers, and performing calculations. They justified this by saying that they felt the software was better able to provide factual, quantitative answers rather than more subjective, opinion-based answers requiring critical thought. It was also recognised that citations produced by ChatGPT may not always be reliable, which is another reason why they felt it might not be as useful outside of QStep modules.
* Participants also expressed the desire for UCL to embed the use of ChatGPT inside the curriculum. This included professors asking students to discuss the output provided by ChatGPT to a certain question or command, addressing its strengths and weaknesses. Participants felt that its use could be encouraged as a starting point for both planning and completing coursework, as well as clarifying understanding.

### Non-academic uses

* Non-academic uses of ChatGPT were extremely varied, including: its potential use for mental health support, such as listing services available to students or tips to improve mental health (especially for international students or British students living away from home, who may experience higher rates of loneliness and other mental health conditions - please note: we’re not aware of any medical evidence supporting this use of the technology, but it’s safe to assume that students will be experimenting); composing “professional” emails; writing CVs and cover letters; completing job applications and competency assessments used by companies and recruiters.
* Its current use in professional environments was also discussed - participants were aware that it is already being used to support coding, collating and analysing data, and summarising past case law.
* Another general use mentioned by participants was that of ChatGPT becoming akin to a search engine or Wikipedia that people can use in their day-to-day lives. Examples of asking ChatGPT to form recipes based on a list of ingredients, formulate exercise plans and so on were a potential benefit highlighted by students.

### Development of language skills

* Participants in the focus group hypothesised that ChatGPT may be useful in providing help with the English language for international students. It may be able to provide these students with a format in which to organise their essays, as well as providing grammatical clarity that these students may require.
* Other AI-language learning / translation tools were also mentioned, specifically DeepL.

## 3. Potential Risks:

The risks students drew attention to fell into three categories: homogenization and implications for decoloniality; deskilling and dependency; plagiarism, ethics, and integrity. Some of these issues were unique to ChatGPT, whilst others have existed as an undercurrent of academia for a long time. However, students felt that most could be mitigated through reforms at the teacher, assessor, curriculum, and institutional level.

### Homogenisation and Decoloniality

* Participants raised concerns surrounding the training datasets used for most Large Language Models. ChatGPT relies on sources that are primarily in English, which students felt has potential to perpetuate an “Anglocentric hegemony” and ignore “other cultural perspectives”. Similarly, respondents recognised that it is an aggregate or popular average and so often “sits on the fence”. This potential to reinforce existing prejudices and patterns of thought echoes warnings by other scholars.[[3]](#footnote-2)
* Respondents also discussed the illusion of objectivity provided by these tools. Most respondents saw beyond the seemingly neutral claims made by ChatGPT, but they feared that its projected conviction may cement already-existing hegemonies. Academia has always grappled with a “pervasive loyalty to the canon”.[[4]](#footnote-3) Students thought that this would be felt differently across disciplines, with quantitative methodologies seen to be less prone to biases than qualitative and theoretical topics. Even so, the training data is limited, omits newer research, and much of it lacks scientific rigour. Students felt that up to date curricula which responded to new research and methods may help to circumvent these biases.
* Some participants highlighted that this isn’t a new phenomenon and that other search engines like Google, Google Scholar, and other databases were already perpetuating these asymmetries in information-based representation.[[5]](#footnote-4) In that sense, ChatGPT only exacerbates existing trends and the solutions probably lie in continuing and expanding the work we are already doing around diversification and decolonising.

### Deskilling and Dependency

* While students saw a variety of roles that AI technology could fulfil, they were also concerned that they might become dependent on it, while others noted that using the tool well was a skill in itself.
* In particular, students were concerned that reliance on ChatGPT might inhibit the development of skills such as: writing fluent English prose, reading and digesting complex texts, developing a coherent argument, essay planning and structure.
* On the other hand, respondents felt it was important to remember that this isn’t the first instance of new technology being conceptualised as “deskilling”, comparing ChatGPT to the invention of the calculator and word processors. They argued that these earlier tools have allowed people to circumvent the more tedious tasks and move on to more complex work[[6]](#footnote-5) - something which has also been noted in industry.[[7]](#footnote-6)
* Moreover, many students felt that the extent to which independent thinking and creativity would be impacted *in the short term* has been overstated. Indeed, our experience using these tools suggests that they often produce errors and work which is fairly superficial (something confirmed by other research).[[8]](#footnote-7) This means that there are currently many incentives not to rely too heavily on these new tools.
* The focus groups both anticipated that the margins between unpassable and lower level essays would shrink as a result of these tools, while the impact on higher quality papers was still felt to be unknown.

### Plagiarism, Ethics, and Integrity

* There was an apprehensive discussion about plagiarism, ethics and integrity. UCL’s guidance on the use of ChatGPT was largely felt to be already out of date.[[9]](#footnote-8) Put simply, most students did not believe that their peers would cite the tool, either out of fear that it would impede on their marks or because they saw it like Google or any other internet tool.
* But students also generally felt that a marker would be able to detect ChatGPT because of its writing style (which was partially true in the mock assignments we created and assessed). However, ChatGPT-4 and future language models will probably circumvent this. A focus on AI literacy[[10]](#footnote-9) may be needed to clarify what is and isn’t cheating - but it is not clear that different academic fields have a unified position on this yet.
* While some students also raised concerns that academic integrity could be undermined by the tool, others likened it to a research assistant. If the tool is used to organise thought rather than generate it, they felt that integrity could be preserved and they saw nothing wrong with this use of the tool from an ethical perspective. (Although this may further facilitate dependency and deskilling.) Students did however acknowledge the difficulties in discerning “good” from “bad” uses of these tools and were concerned that the opaque nature of ChatGPT makes it difficult to evaluate its sources. The rough answer to that question is that its “sources” are a mathematical representation of the relationships between all words in its training data, which is roughly the whole internet. But that doesn’t help students to evaluate the answers it gives when asked a straightforward question.

## 4. Suggested adaptations:

* A much greater concern for students than academic integrity was the equality implications (more “techy” students would have an unfair advantage; if UCL turned towards more in-person exams this would create further inequalities etc).
* There was considerable demand for classes in “how to use AI” including: what tools are out there; how to use them for learning not just assessments; how to ask the right questions and phrase prompts effectively; what the strengths and limits of these tools are.
* They also felt that lecturers should integrating these tools into all aspects of university teaching and model “good use-cases” (e.g. “look up this concept on ChatGPT and come to the seminar prepared to discuss your critiques of it”, “use Elicit Research Assistant to summarise the literature on X, come to the seminar prepared to discuss how the key readings confirm or disprove the extant literature”). But a small minority thought that UCL should not encourage the use of these tools in any way, although they doubted whether banning would be effective.
* There was consensus that the SRI did not need to dramatically change how it assessed students (at least for now) and strong opposition to a move away from essay-based assignments. But students thought that this was a good opportunity to rethink assessments more generally. They emphasised:
* The difference between “assessment-for-results” and “assessment-as-learning-opportunity” and the need to keep both in mind.
* The need to focus the marking rubrics on the student's voice, flair, argument, critical thinking, and originality, rather than just summarising theories (their assumption was that the former represented something “distinctive” that the student can offer beyond an AI tool).
* They also suggested a number of alternatives assessments, which might help move us in this direction and be more “ChatGPT-proof”:
	+ Open essay questions (e.g. Pick three theories from this course and use them to reflect on a contemporary event).
	+ Cumulative or “portfolio” assessments (e.g. 10% of grade is for essay plan, 15% for presentation of initial research, 75% for final essay).
	+ Multi-mode assessment (e.g. 20% individual presentation, 30% group project, 50% final essay).

# Our recommendations

## Short term:

### Clarification and consistency on rules

* Respondents felt unclear about what the rules were and many had received different messages from different members of staff. At present UCL guidance is that ChatGPT can be used in assessments but it must be cited. We would recommend an official SRI email be sent to all students to refer them to [current rules](https://www.ucl.ac.uk/students/exams-and-assessments/assessment-success-guide/engaging-ai-your-education-and-assessment).
* However, it is worth noting that respondents believed that most students would simply ignore this because (a) it was assumed that staff would react negatively to seeing that ChatGPT had been cited, (b) there would be no way of checking, and (c) they didn’t think it made sense to cite something which is not producing data or opinions of its own.

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### Educate students (and staff) about what it can and can’t do

* It is concerning that there was almost universal agreement from students that ChatGPT could be used as a “more specific Google” or a “personal tutor”; in short, as an information retrieval service.
* However, ChatGPT is a language model and has no concept of the validity of the truth claims it makes. From our experience, it is factually incorrect far more often than Wikipedia (the AI community refers to these false claims as “hallucinations”). Future iterations of the technology may address this (Microsoft are trying to integrate GPT4 into Bing web searches, for example) but, for the time being, students need to be educated about this.

## Medium term:

### Updating guidance regularly

These technologies are improving all the time and more specialised applications of them are constantly being developed. We therefore need to commit resources to ongoing research and updating.

### Open dialogue between staff and students

* Students felt that this would be vital as we move forward. We would therefore recommend:
	+ Organising a staff-student “town hall” in early October to discuss where we’re at, what we should do next academic year, and set expectations for first years,
	+ Having a standing committee of staff and students who meet more regularly to discuss these themes.
1. Thanks to Julie Norman, Oliver Matheret, Judah Purwanto, and Anusha Aggarwal for sharing their results. [↑](#footnote-ref-0)
2. Thanks to Morag Henderson for sharing this survey. [↑](#footnote-ref-1)
3. Ruha Benjamin, *Race after Technology: Abolitionist Tools for the New Jim Code* (Medford, MA: Polity, 2019). [↑](#footnote-ref-2)
4. Darcy Ribeiro and Mercio Gomes, ‘Ethnicity and Civilization’, *Dialectical Anthropology* 21, no. 3–4 (1996). [↑](#footnote-ref-3)
5. Carsten Levisen, ‘Biases We Live by: Anglocentrism in Linguistics and Cognitive Sciences’, *Language Sciences* 76 (2019): 101173. [↑](#footnote-ref-4)
6. Janet Rafner et al., ‘Deskilling, Upskilling, and Reskilling: A Case for Hybrid Intelligence’, *Morals & Machines* 1, no. 2 (2021): 24–39. [↑](#footnote-ref-5)
7. Janet Rafner et al., ‘Deskilling, Upskilling, and Reskilling: A Case for Hybrid Intelligence’, *Morals & Machines* 1, no. 2 (2021): 24–39. [↑](#footnote-ref-6)
8. Martin Compton, ‘A Worrying Mix of Truths, Half Truths and Plausible BS’ (University College London, 13 023), <https://reflect.ucl.ac.uk/mcarena/2023/02/13/whatthecup/>. [↑](#footnote-ref-7)
9. UCL, ‘Engaging with AI in Your Education and Assessment’ (University College London, February 2023), <https://www.ucl.ac.uk/students/exams-and-assessments/assessment-success-guide/engaging-ai-your-education-and-assessment#academic%20misconduct>. [↑](#footnote-ref-8)
10. Brent A. Anders, ‘Is Using ChatGPT Cheating, Plagiarism, Both, Neither, or Forward Thinking?’, *Patterns* 4, no. 3 (2023): 100694. [↑](#footnote-ref-9)