



JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

AI in academia: Balancing benefits and challenges

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A bit about me:

- Senior Lecturer in Technical Communication at the University of Jyväskylä, Finland
- Vice chair of the Finnish tech comms society (STVY ry.)
- 15 years of practical experience in the field
- Research interests: minimalism in tech comms, meaningfulness in the work of language graduates, plain language & cognitive accessibility

Contents of this presentation:

- Current status of AI development from a tech comms teacher's point of view
- Effects of AI on teaching and learning tech comms
- Draft guidelines to prepare ourselves & our students for the future (which is here now)
- Links to AI apps & further info



ChatGPT (Generative Pre-trained Transformer) is an advanced language model developed by OpenAI. It has been trained on a massive amount of text data from the internet and is capable of generating human-like responses to various prompts and questions. Its purpose is to facilitate natural and interactive human-computer communication.

Source: ChatGPT



Large Language Models (LLMs) vs. other types of AI:

Table 1: Top 20 Occupations Exposed to AI, Original and with Language Modeling Adjustment

Rank	Top 20 Occupations from Original AIOE	Top 20 Occupations after Language Modeling Adjustment
1	Genetic Counselors	Telemarketers
2	Financial Examiners	English Language and Literature Teachers, Postsecondary
3	Actuaries	Foreign Language and Literature Teachers, Postsecondary
4	Purchasing Agents, Except Wholesale, Retail, and Farm Products	History Teachers, Postsecondary
5	Budget Analysts	Law Teachers, Postsecondary
6	Judges, Magistrate Judges, and Magistrates	Philosophy and Religion Teachers, Postsecondary
7	Procurement Clerks	Sociology Teachers, Postsecondary
8	Accountants and Auditors	Political Science Teachers, Postsecondary
9	Mathematicians	Criminal Justice and Law Enforcement Teachers, Postsecondary
10	Judicial Law Clerks	Sociologists
11	Education Administrators, Postsecondary	Social Work Teachers, Postsecondary
12	Clinical, Counseling, and School Psychologists	Psychology Teachers, Postsecondary
13	Financial Managers	Communications Teachers, Postsecondary
14	Compensation, Benefits, and Job Analysis Specialists	Political Scientists
15	Credit Authorizers, Checkers, and Clerks	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
16	History Teachers, Postsecondary	Arbitrators, Mediators, and Conciliators
17	Geographers	Judges, Magistrate Judges, and Magistrates
18	Epidemiologists	Geography Teachers, Postsecondary
19	Management Analysts	Library Science Teachers, Postsecondary
20	Arbitrators, Mediators, and Conciliators	Clinical, Counseling, and School Psychologists



Large Language Models (LLMs) vs. other types of AI:

88	25-9031	Instructional Coordinators	1.324
89	13-1151	Training and Development Specialists	1.323
90	27-3042	Technical Writers	1.317

Felten, Edward W. and Raj, Manav and Seamans, Robert, How will Language Modelers like ChatGPT Affect Occupations and Industries? (March 1, 2023). Available at SSRN: <https://ssrn.com/abstract=4375268> or <http://dx.doi.org/10.2139/ssrn.4375268>



LLMs and tech comms:

- The content LLMs produce is **generic** and based on **statistical probabilities**
- The content technical communicators work with is **context-specific** and **exact**
- Technical communicators produce content that is **new**
- The background materials technical communicators use in their work are **proprietary**; they cannot be fed into an LLM (currently)
- There are **laws, regulations, and standards** that govern many types of tech comms products
- Multiple people are involved in creating tech comms products → **co-creation**

Various apps are already out there:

- ChatGPT – for everyone
- DeepL – for translating
- Elicit – for academic research
- Perplexity – for academic research
- Gamma – for creating automatic (!) presentations
- Google Bard etc. (upcoming)





An alternative presentation I created with Gamma (in minutes):

AI in academia: Balancing benefits and challenges

The integration of AI in academia has rapidly increased with the potential to revolutionize teaching, research, and administration. However, it is not without its challenges.

<https://gamma.app/docs/AI-in-academia-Balancing-benefits-and-challenges-1c2qrbga9j1c7me>



AI and...



Academic
dissertations



Course
assignments



Doing research



Learning &
teaching



Concerns:



Academic fraud: Plagiarism, cheating, unethical behaviour



Language & communication studies: how do we make sure students do the work and learn?



Future working life skills → AI will be here for good



What can we do?



Use plagiarism detection apps efficiently; direct students toward proper use – e.g., Perplexity instead of ChatGPT for research



Have clear guidelines & communicate them to everyone; university guidelines will need to be made more specific for individual subjects



Learn to use the apps ourselves → apply them in our teaching and create meaningful assignments; use them in our own research projects



Guidelines for ethical use (Jyväskylä School of Business and Economics):

- The use of LLMs is allowed, but the student is always responsible for the contents of the assignments they turn in, including references and any factual errors
- LLMs should never be used to produce a final assignment or thesis text from scratch, nor should such a text created with a language model be presented as written by the student

Full JSBE guidelines (in Finnish): <https://www.jyu.fi/jsbe/fi/opiskelu/ohjeita-opiskelijalle/opintohallinnon-saadokset-ja-maaraykset/kauppakorkeakoulun-linjaus-tekoalysovellusten-kayttoon>

University-wide guidelines (in Finnish): <https://uno.jyu.fi/fi/ohjeet/opintoasiat/opetuksen-linjaukset-ja-ohjeet/tekoalypohjaisten-sovellusten-kaytto-opiskelussa-jyu>



Guidelines for ethical use (Jyväskylä School of Business and Economics):

- LLMs can be used for text editing, for example to make a text more fluent or grammatically correct
- If a student uses a language model in an assignment or thesis, they must explain how they used it



Guidelines for ethical use (Jyväskylä School of Business and Economics):

- Teachers should ensure that students cannot complete course tasks using the language model alone without independent thinking
- This can be done, for example, by tying the tasks strictly to the teaching material used or to a lesser-known case or example



More specific suggestions (guidelines under construction in my dept):

- Tech comms classwork: trying to make the process of learning visible → discussions, working with materials during class, reflecting on the different choices; writing and drawing with actual pens on actual paper 😊
- Getting to know AI tools: trying out, for example, ChatGPT → among other things, students will discover that you need to spend time thinking of an efficient prompt to get any meaningful results



More specific suggestions (guidelines under construction in my dept):

- Translation tasks: have students submit V1, which they produced themselves, and V2, which they can generate using DeepL or another tool; have them analyse and reflect on the differences between the versions as part of the course task → submit final version, which is the one that gets graded
- Tech comms course task: we do a heuristic evaluation of real-life materials using minimalism heuristics; so far, no AI tool knows what to do with this type of task (context, nuance, specificity)



More specific suggestions (guidelines under construction in my dept):

- UX course task: use an LLM to change the tone-of-voice of a UX text; as a tech comms specialist, are you happy with the result? Why/why not? Does it comply with UX guidelines? → compare LLM output with other materials
- Reading tasks: use a tool like Perplexity to investigate a research problem; compare with materials from other sources → submit a synthesis detailing the process



More specific suggestions (guidelines under construction in my dept):

- Outsource routine tasks, not independent & critical thinking, to an AI tool
- Test and generate (research) ideas using an AI tool
- Have students discuss and critically reflect on the process as well as the outcome during class and in assignments



The ethics of AI/LLMs – largely unsolved:

- Training and maintenance; sustainable use
- Individual users as non-paid trainers
- Bias; 'garbage in, garbage out'
- Fair access
- Data privacy and security
- Ownership and responsibility for the content produced



Links to AI apps:

- ChatGPT: <https://chat.openai.com/>
- DeepL: <https://www.deepl.com/translator>
- Elicit: <https://elicit.org/>
- Perplexity: <https://www.perplexity.ai/>
- Gamma: <https://gamma.app/>



Further reading:

- **How AI Is Shaping the Future of Higher Ed:**
<https://www.insidehighered.com/views/2023/03/22/how-ai-shaping-future-higher-ed-opinion>
- **Why Writers Know Using ChatGPT Is a Bad Idea:**
<https://uk.pcmag.com/opinion/145100/why-writers-know-using-chatgpt-is-a-bad-idea>
- **ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education:** <https://doi.org/10.1016/j.lindif.2023.102274>



Further reading:

- **How will Language Modelers like ChatGPT Affect Occupations and Industries?:** https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4375268
- **Prompt-Driven AI Hurts Usability:** <https://www.linkedin.com/pulse/prompt-driven-ai-ux-hurts-usability-jakob-nielsen/>
- **ChatGPT has a Privacy Problem:** <https://www.wired.com/story/italy-ban-chatgpt-privacy-gdpr/>



ChatGPT and DocOps:

<https://stvy.fi/docs-as-code-chatgpt-course-on-29-and-30-may-hands-on-and-free-of-charge/>

Anastasiia Datsun is a Technical Writing Manager with a passion for automating documentation processes. With years of experience in technical writing, Anastasiia has honed her skills in crafting clear and concise documentation that helps users understand complex products and services. Her dedication to automation has led to the development of innovative workflows that have streamlined the documentation processes, saving time and improving efficiency. Anastasiia is constantly seeking new ways to improve documentation frameworks, quality, and user experience.

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Thank you!
Any questions or comments?

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