A New Hope or A Phantom Menace? GenAI in teaching and assessments.

Dr Kamilya Suleymenova
Birmingham Business School
University of Birmingham

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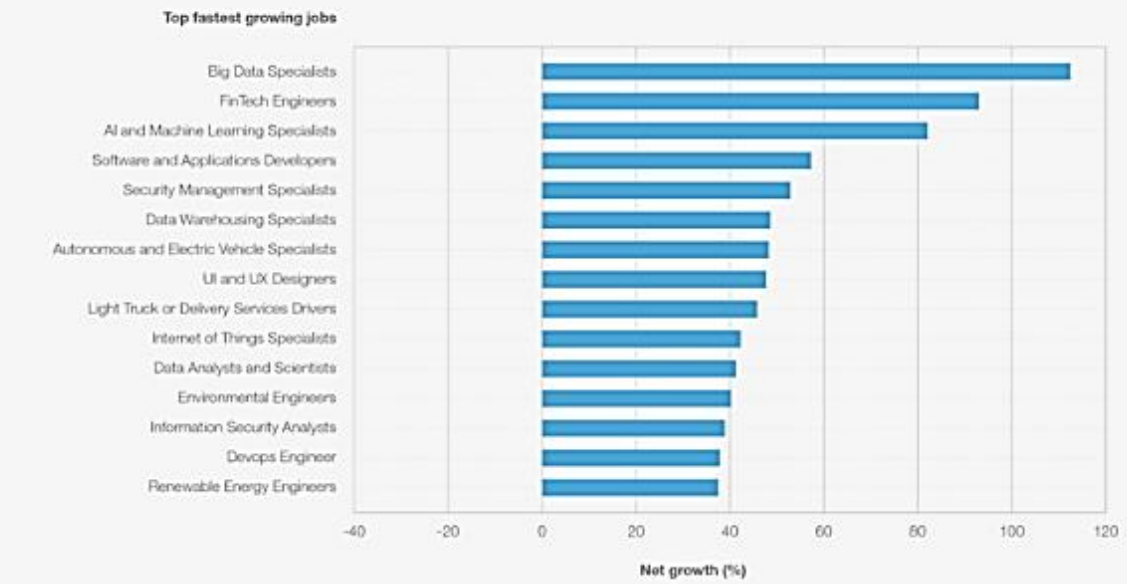
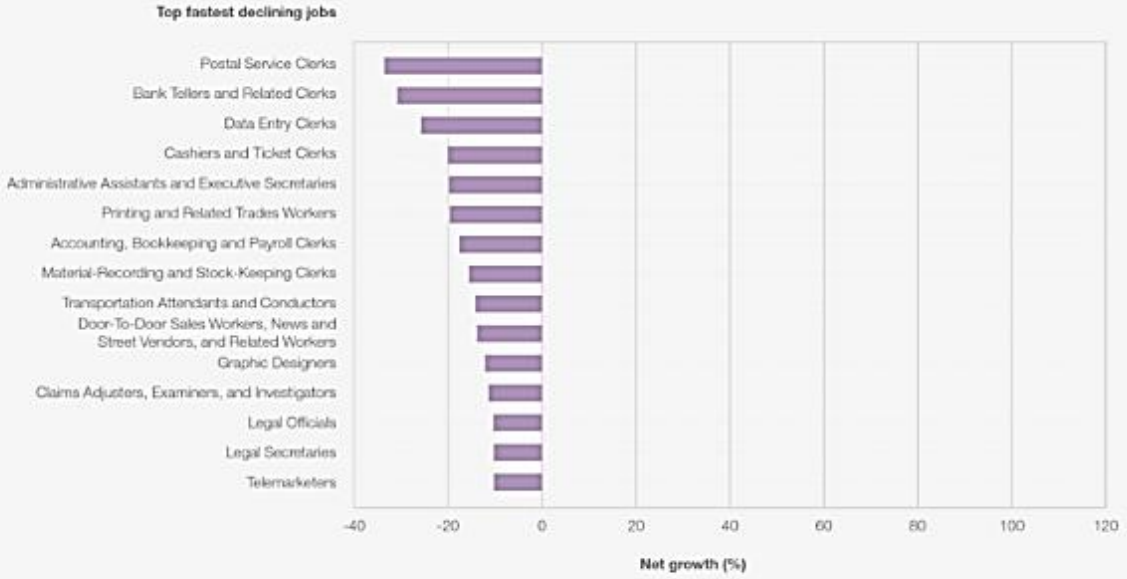
FIGURE 2.2 **Fastest-growing and fastest-declining jobs, 2025-2030**

Top jobs by fastest net growth and net decline, projected by surveyed employers





Source

World Economic Forum, Future of Jobs Survey 2024.

Adoption of GenAI in the World of Work

Source: World Economic Forum

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Ethical Considerations

- Privacy and data issues
- Bias in training data, hence output (GIGO)
- Hallucination and inaccuracy (e.g. false references)
- Plagiarism (and beyond)
- Digital divide
- High (?) environmental footprint vs helping us to find more solutions

Designing Assessments in the era of GenAI

Potential responses
Assessing vulnerability
Embedding in vs designing out

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What can GenAI do?

- Generate original text about any topic in any language
- Summarise articles (uploaded or online) and conduct literature review
- Suggest research questions and brainstorm ideas
- Create simulated datasets and conduct data analysis
- Generate images, graphs, and data visualisations
- Generate audio music and short videos
- Generate holograms and talking avatars to deliver virtual presentations
- Answer MCQs and SAQs very effectively in most cases

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Impact on Students' Skill Set

Traditional

- Grammar and punctuation
- Language proficiency
- Reading comprehension
- Basic calculation skills
- (Algebra and calculus)
- Paraphrasing
- Summarising
- Structured/scientific writing
- Information recall

Changing

- Data analysis
- Data visualisation
- Video generation
- Designing digital artifacts
- Applications of concepts
- Coding and debugging
- Time management
- Problem solving
- Original idea generation
- Information gathering
- Data collection (primary/secondary)
- Case study analysis
- Decision making

Emerging

- Digital skills
- GenAI literacy
- Prompt engineering
- Creative problem formulation
- Big data analysis
- Critical thinking
- Group work soft skills
- Emotional intelligence
- Presentation skills
- Reflective writing
- Critical evaluation
- Ethical/legal appraisal
- Responsible outlook
- Organisational skills

Potential Responses in Assessments

- Encourage use: tasks should be designed that promote or require the responsible use of GenAI tools.
- Limit its influence: change assessment nature or process itself, and educate students on significance of developing their own knowledge and skills.
- Prohibit use: additional security measures are required to ensure that GenAI tools cannot be used (e.g. closed book exams, viva voce).

GenAI-robust assessments

- Long term: fundamentally changing assessment type, designing GenAI in.
  - Synoptic assessment,
  - Creative outputs.
- Medium term: changing assessment types and diversifying types of assessment.
  - Oral assessment (more than oral exam),
  - Timing and scaffolding.
- Short term: changing types of tasks, changing marking criteria with focus on higher-level skills.
  - Re-weight away from structure/writing style to analysis and criticality,
  - Away from essay topics to creative questions.

Written coursework 1500 words

- Essay? Not necessarily!

- Different task:
  - Policy memo for a minister
  - Job application / interview
  - FT opinion piece
  - Law court argument
- Critical evaluation
- Personalisation

Different task: book preface example

- LH History of Economic Thought module, c.90 students, very “essay-based”.

- My task: Step in the shoes of an author, who has written a book about a less-known economics scholar. Choosing such a scholar, write the preface to such a book justifying your choice and highlighting the key ideas.
- Learning (2-years experience):
  - The more interesting / personal the task is – the more engaged students are.
  - Students found figures with whom they are more likely to identify or strongly oppose (female, minorities vs slave-owning, etc.)
  - Scholar had to be agreed in advance; reading each work took more time: more work for me, but both I & and students enjoyed the task more.

Critical analysis: general idea

- An output is critically evaluated: the focus is not on production (of text, images, etc.) but on their evaluation.
  - Options of output to evaluate: set text, set journal or newspaper article, choice of article, GenAI output, student output, etc.
  - Options of evaluation: track changes in MS Word, comment bubbles (MS Word or PDF), written text, voice annotations, etc.
  - Options of GenAI use: explicitly instruct students ask to use GenAI to produce an output for subsequent evaluation; explicitly ask students to use GenAI to critique the output and save their prompts to show the thought process.
  - A reflection on the process is an easy addition to such an assessment.

Literature review with GenAI

- Assessment for year 1 10-credits skills module, 100%, 1500 words coursework.

- Part 1: use Copilot only to generate a literature review on a given topic;
- Part 2: use own research with Google Scholar and specialist GenAI tools (e.g. Perplexity) to generate another version of literature review on the same topic;
- Part 3: evaluate both outputs and reflect on research methods.

Critical assessment: problem set example

- LI Microeconomics, c.400 students.
  - Shows suitability for problem sets, short answers; scalable.

- Idea: prepared answer of a hypothetical student with different (types of) errors for students to identify, correct, and propose a revision plan.
- The answer is prepared as a handwritten answer (scanned or on a tablet) and students need to provide corrections as annotations.
- Economic Network case.

Oral assessment

- Individual Evaluative Conversation, LH History of Economic Thought, c. 80-60 students, 2 years experience

- Idea: 15 mins conversation; pre-shared bank of initial questions + follow up questions, right to veto one question.
- Suitable for up to 120 students, we can share our guidance.
- Can be made very inclusive and Wellbeing-friendly: flexibility in details, focus on the core.
- Economics Network case

Other ideas

- GenAI feedback session: ask students to try and self-evaluate with the help of GenAI (e.g. with the use of your marking criteria).
  - Can be done as a small group activity prompting a discussion with peers.
- Prompt-focused: ask students to keep logs of prompts used; ask students to submit prompts as part of assessment with reflection on refinements, etc.
- Discipline-specific use of GenAI:
  - Debugging a code with GenAI;
  - Sentiment analysis (e.g. customer feedback in marketing);
  - Data visualisation: producing multiple options quickly for an in-depth evaluation;
  - Data analysis (e.g. econometrics), etc.

Dissertation - case

- Short-term options:
  - More process-oriented: use of log/notebook to document different stages of the research process; staggered submission with focus on implementation of intermediate feedback; including reflective elements;
  - Changing marking criteria to focus on more complex task, such as finding suitable research question, creativity, originality, etc.
- Long-term solutions:
  - Different types of output: presentations / vivas; patchwork/portfolio; authentic outputs; use of multiple elements;
  - More specific projects: using as a foundation company projects, real-life cases or problems, etc.

Preparing your students

Time & effort,

Principles

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GenAI-robust

- Thus, we need to focus on designing GenAI-robust assessments and include AI-literacy.

- GenAI (relatively) robust ideas:
  - Focus on skills and critical evaluation;
  - Creative & original thinking (ours and students);
  - Investment in learning (ours and students).

- Students require GenAi literacy: critical use, prompt engineering, ethical/mindful approach, etc.
  - Banning GenAI entirely is counterproductive: we need to explain why & where it can be put to good use and where it cannot.
  - We need to talk to students about GenAI.

More GenAI-Robust Assessments

- More personalised:
  - Requires students to make own justified choices as part of the process;
  - Reflect on the process and evaluation of the outcomes.
  - Could directly reference learning experience: require referencing what happened in the classroom, previous feedback, etc.
- More critical:
  - Production of the output requires less time than before, so we need to focus more on its critical evaluation and originality.
  - Justification of the approach taken (reflection, log notes, portfolios, formative feedback from teachers or peers).
- More process-focused:
  - Not only the output, but the learning: reflection, logs, supervision records…

General Principles

- Be mindful of the digital divide among students
- Introduce the required practice of skills and requirements of the task
- Use formative assessment opportunities that lead into summative
- Write clear assignment briefs to explain what is considered appropriate use for that assessment task or discipline
- Consider the accessibility implications of your assessment tasks

Thank you!

Questions?

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Note of thanks to my close collaborator, Dr Mary Dawood (GenAI co-lead for BBS).

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Other issues

- Cognitive challenges – how does GenAI impact long-term learning?
- Emotional challenges – we are “talking”, but not to a human.
- Differences due to cultural perceptions.
- Accreditations.
- Assessment on distance learning programmes/modules.
- How (and how much) GenAI literacy to cover?
- GenAI and research…

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