

The Trailblazer's Guide: Surviving & Thriving in the AI Era

A guide for education staff: 2023/24 Edition



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Where Do I Fit in Today's Evolving Landscape?

Artificial intelligence is not just a topic of academic debate or distant speculation; it's something influencing our current everyday activities. Through smart assistants managing our tasks to recommendation engines that guide our information consumption, AI's presence is increasingly felt in both our professional and personal worlds.

For educators, this prevalence underscores the importance of understanding AI not just as a topic of study, but as a transformative tool that will influence how our students understand, interact with, and shape the world around them. For educational institutions, embracing AI will not be an option but a necessity.

Whilst AI will become pervasive, its adoption will vary based on individual preferences and aspirations. Every educator can decide how they will embrace AI. Some may dive deep, transforming their teaching methods, while others might choose a more cautious approach. However, what is universal is the need to embark on this journey, be it tentatively or wholeheartedly.

Adopting AI isn't about abrupt change; it's a progressive journey. In the next section, a seven-step plan offers practical advice on how you can start this journey. By following the steps, you will increase your understanding of AI and how it can be used effectively within education. You'll also explore how AI can help you with everyday tasks and activities.

Aside: More information on the present state and future implications of AI can be found at the end of this guide (see Appendix A).

Step 1: Seek. Understand. Thrive.

Become familiar with what AI is and how it's shaping different fields.

The first step on this journey is to learn more about AI. This includes understanding AI's capabilities, its limitations, its beneficial applications, and situations where it shouldn't be used. Thankfully we are educators; we understand the importance of learning. We also understand learners and how to support learning. As such, we possess an ideal set of skills that we can use to enable us to learn about AI.

In terms of learning materials, [Queen's AI Hub](#) offers a rich set of resources, including how we might use it to help with everyday activities. You will also be able to access relevant [AI training courses](#). We'd love to get your feedback on the resources on offer so they can be expanded and improved. Please send your feedback to AI-Hub@qub.ac.uk.

As we embark on this exploration, we hope you will consider being an active part of our journey, shaping what we explore and delving deeper into what AI will mean for education more widely. To do this, we've set up a number of AI discovery groups, each focused on a different AI topic. If you want to contribute, then please get in contact (see Step 7).

Step 2: Adopt AI: Your Time-Saving Work Partner

Use AI to streamline tasks and save time in your daily work.

We're all pressed for time and swamped with tasks – our job ensures there's always something more to be done, making it hard to find time for change. At the same time, we all want to be successful in what we do.

In this regard, we are not unique. One of the major drivers for employers to use AI is its potential to boost productivity – to improve effectiveness and efficiency. Given the potential of AI in this area, we should also seek out these benefits to lessen our workload burden and enhance what we do.

Rather than immediately diving into modifying course content or re-evaluating assessment strategies, there is merit in initially focusing on the integration of AI into our daily activities. This can include handling and responding to emails, evaluating papers and documents, or crafting proposals and articles.

A section of Queen's AI Hub is dedicated to using AI to [improve effectiveness and efficiency](#). This section offers practical examples and advice on how we might use AI as part of our everyday activities.

Everyone is unique – and with this in mind, it's important to experiment with AI tools and resources to decide how they can best help you. It's likely that by integrating AI you will be able to save some hours of effort every week.

Step 3: Adopt AI: Your Virtual Teaching Assistant

Utilise AI as a virtual assistant to help with teaching activities.

Those delivering education typically spend significant time teaching, supporting, and communicating with students. It is worthwhile exploring how AI can help you with the delivery of your modules or other education activities – either to help you save time or enhance your current practices.

This can include straightforward tasks, like handling student queries about course materials, creating schedules and assessment, or perhaps processing course data, or improving accessibility. There is also an opportunity to delve into more advanced applications, such as AI-supported tutoring.

We are still in the initial stages of understanding how AI can best support education. There is a pressing need for pioneers to experiment with AI and share their experiences, ideally by engaging through the AI discovery groups¹. Over time, we hope to be able to update our AI resources to contain lots of QUB case studies.

1. See Step 7 for more information.

Step 4: Embed AI within the Curriculum

Consider how AI can be effectively integrated into your courses.

It is clear that students will need a degree of proficiency in using AI if they are to be prepared for their future. This will not be limited to understanding AI in isolation. It will also encompass the integration of AI with other core skills, such as effective writing or using information. Experience of discipline specific applications of AI will also be needed in many cases. Underpinning this, students must understand the capabilities and limitations of AI and be able to decide when it should be used.

As educators, it's our duty to help our students acquiring these skills – including both transversal and discipline specific skills. Whilst we are still in the early stages of understanding the mixture of skills that will be needed to prepare students for their future, a good approach at this point in time is to consider how AI can be easily and appropriately incorporated within our existing courses. This will help prepare our students.

The integration of AI will differ for each module based on the approach to learning and intended outcomes of that module. Finding the optimal fit is crucial, and this will require discussion by programmes teams – look out for an opportunity to help shape these conversations during the year.

Step 5: Empower Students to use AI

Explore how students can use AI to support their learning.

It's important to consider how students might use AI within our modules, both constructively and otherwise. This should be considered from a range of perspectives, such as supporting learning, completing assessment, revising materials, or improving accessibility. It's important that we are proactive in doing this given students will ask what is permitted for each of their modules.

While the university can provide general advice on AI's potential benefits and limitations, this advice will typically be expressed via principles and guidelines rather than being highly prescriptive and precise. As such, the advice will need to be interpreted and applied in a tailored manner. In other words, discipline-specific, stage-specific and module-specific local consideration will be needed.

Whilst discussions on how to embed AI will occur over the year, in line with the Russell Group's stance on AI, it is recommended that our initial starting point is one of adoption. In particular, that we enable students to use AI in a manner that will support their learning, whilst protecting the integrity of assessment. Queen's AI Hub offers advice that will help you decide what's right for your module.

Please do get involved with discussions exploring the integration of AI within each discipline. Where possible, also involve your students in discussions around what are acceptable and unacceptable uses of AI.

Step 6: Future-proof Assessment

Evaluate and adapt assessments to stay relevant in the AI era.

The blunt reality is that AI has already reduced the integrity of some traditional forms of assessment and this trend will continue as AI capabilities improve. Obviously, it is essential that we use assessment that is robust and trustworthy.

Alongside this, it is equally essential that our assessment is authentic and meaningful – assessment that validates skills which are unneeded or unimportant is of little value itself. This is particularly important in a world where AI will replace certain job functions. We must make sure our assessment is robust and demonstrates competencies in skills that are valued by graduates and employers. We cannot compromise on either of these outcomes.

Over the next year, please do contribute to the discussions on how we can evaluate our students in a manner that is both robust and authentic. The recent [QAA report](#) on assessment integrity and sustainability provides a useful starting point.

In the meantime, it's crucial that you validate your current assessment against current AI systems. The most easy way to do this is to simply try to complete your assessment using only AI. Where the assessment has been partially or fully compromised then changes will be needed. Please do explore the assessment area on Queen's AI Hub for more information on the available options. There will also be workshops exploring AI-proof assessment; please do register if this might be of use.

Step 7: Engage and Contribute

Participate in AI discussions and share your insights.

If you want to provide feedback on any aspect of this guide, Queen's AI Hub, or if you have questions about the available AI support, please get in contact at AI-Hub@qub.ac.uk.

As we embark on this journey, the future development and adoption of AI promise to have significant implications for higher education (see Appendix A). As such, it's crucial for us to collaborate and collectively harness the potential of AI as a catalyst for positive change.

We have setup several AI discovery working groups to guide our exploration. These groups bring together those who want to take on a more active role in exploring how AI can be integrated into our activities. This includes exploring new developments, creating case studies, and influencing broader discussions. You don't have to be an 'AI expert' to contribute – we're all learning and understanding how AI can be used. If you're interested in participating, please contact get in contact at AI-Hub@qub.ac.uk.

Appendix A: Current Realities & Future Forecasts

The importance of artificial intelligence has been highlighted through the widespread use of the latest generation of Large Language Models (LLMs), including OpenAI's GPT models. Using massive amounts of data and complex neural networks, these LLMs can generate text that appears to be human crafted, respond to questions, and help with tasks from ideation to coding.

The ability of LLMs to understand and generate natural language makes them useful for many tasks, including human interaction, content generation, and even research. However, they have drawbacks: biases in their training data can influence their output, and they consume lots of energy.

Recently, there's been a growth in AI plug-ins and "co-pilots" which connects AI to other software. This marks a significant move from standalone AI tools to a more integrated approach, where AI offers assistance within word processors, search engines and other common applications – blurring the notion of authorship and pushing the boundaries of collaborative intelligence.

AI is also being adapted within different disciplines. In healthcare, AI helps diagnose illnesses by studying medical images. In finance, AI examines transactions to detect fraud in real-time. In the arts, AI can create music, art pieces, and even movies. Collectively, discipline-specific AI applications are likely to be highly transformative for their respective fields.

It is challenging to predict exactly how AI will develop in the next year due to the pace of change and the potential for surprise. We don't know if a next-gen "GPT-5" model will come out or if it will be much better than the current version. However, we do know that AI will be more closely integrated into our everyday digital tools, further encouraging human-AI collaboration.

Longer term, major change is inevitable, particularly in the job market. As AI systems become more capable, certain tasks will become partially or fully automated, reshaping the skills that those in employment need. It is

also likely that some jobs, once perceived as secure, will become obsolete, while new roles, previously unimagined, will emerge. Such changes will directly affect universities given their role in preparing learners for a wide range of careers.

At the same time, education delivery is likely to diversify. A growing number of companies, ranging from startups to established technology giants, are creating AI-based education tools. Some of these tools will fulfil the role of a teaching assistant, answering questions and providing tailored feedback, whilst others might take on more central roles, functioning as tutors or teachers.

While we can't be sure about all future details, some things are certain: firstly, we need to prepare our current students with a broad range of skills that are likely to be future proof; secondly, we need to be alert to changes in graduate demand across disciplines. Finally, we need to consider how AI supported education might change the provision of higher-education more broadly.

