GENERATIVE AI IN FURTHER EDUCATION

A REPORT TO THE GATSBY FOUNDATION

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CONTENTS

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DISCLAIMER

The views and opinions expressed in this report are those of the authors and do not necessarily state or reflect those of the Gatsby Charitable Foundation.

EXECUTIVE SUMMARY

This report explores how further education (FE) colleges in England are beginning to engage with generative artificial intelligence (GenAI), and what is needed to support a more widespread, thoughtful and effective adoption. Drawing on a series of four workshops held in the first half of 2025 with college leaders, teaching staff and professional services teams, and GenAI-automated interviews with students, the research examines both the current landscape and the emerging possibilities for GenAI in the FE sector.

AI is increasingly shaping conversations about the future of education. Yet in these discussions, FE is often overlooked, despite its agility, close ties with employers (especially small to medium-sized enterprises (SMEs)) and its unique position at the intersection of learning and work. Many FE learners are already using AI both in their studies and their jobs, meaning the sector is already in a pivotal position to lead thoughtful, practical AI adoption.

The workshops were designed to explore the impact that AI is having now and, more critically, what the impact might look like in the future. To inform thinking about the future, a bespoke tool, the Vocational Education Scenario Builder (scenario builder for short), was created to help FE staff explore how GenAI could shape their roles, teaching methods, institutional practices and strategic planning. Rather than focusing on generic use cases, the tool enabled staff to test scenarios grounded in their own local contexts, with their own unique challenges and ambitions.

The findings suggest that while AI use in FE is still in its early stages, there is growing curiosity and experimentation among staff. Leaders are exploring small-scale pilots, particularly in administrative and strategic areas. Teaching staff are testing how GenAI can be used for feedback, planning and for creative applications. Professional services teams see potential in using GenAI for student support, employer engagement and process efficiency. Students are using GenAI informally to support their learning and creativity, though they remain wary of over-reliance and want clearer guidance on appropriate use.

A key insight from the project was the contrast between summative and generative approaches to GenAI.[1] Many staff initially used GenAI as a quick solution engine, requesting best practices or answers. Those who adopted a more exploratory approach, providing context, asking iterative questions and engaging the tool as a thinking partner, generated more specific, imaginative and useful outputs. This shift in approach signals the importance of supporting staff not only to use AI, but to use it well.

There was a clear view that while colleges would value the opportunity to experiment with GenAI, they do not want to do it alone. They want to learn from each other and other organisations about how to use GenAI most effectively. A community of practice would achieve this: supporting the sharing of peer learning across the FE sector and encouraging practical problem-solving for implementation challenges. It would also create space for ongoing collaboration, helping to ensure that GenAI use remains grounded in the realities of staff experience and local institutional priorities.

1 See Appendix 1 for a glossary of AI-related terms used in this report.

However, significant barriers remain. These include limited staff training, unclear institutional policies, variable digital infrastructure and time pressures that make innovation difficult to prioritise. Many staff still approach AI with caution – uncertain of its role, wary of ethical risks and unsure how to begin. The system-level support needed to turn promising pilots into embedded practice is, for now, largely missing.

Ultimately, this report argues that FE is well placed to shape the future of AI in education – not by importing solutions from other sectors, but by applying its own creativity, insight and responsiveness. With thoughtful integration and shared purpose, AI can become a catalyst for locally grounded innovation that enhances teaching, learning and institutional practice in ways that genuinely meet the needs of students, staff and communities.

1. INTRODUCTION

AI seems to be everywhere, which is perhaps not surprising given that the introduction of GenAI models such as ChatGPT, Claude and Gemini, makes AI accessible to anyone. Similarly, no government strategy seems complete without at least a mention of AI. However, FE is somewhat overlooked in government thinking. In Gatsby's view, this underestimates the sector's potential to shape how AI is adopted and applied in education and the workplace:

- FE has repeatedly demonstrated that it can adapt more quickly than other education sectors, so we would expect FE providers to be among the first adopters, using AI to support teaching and learning and to improve the efficiency of back-room functions.
- Many FE learners, especially adults and apprentices, are already in work and using FE to upskill, placing them at the forefront of workplace changes driven by AI.
- The Innovate UK Further Education Innovation Fund is designed to support FE providers use their connections to local SMEs to drive adoption of new technologies and processes.[2] Enabling providers to support AI adoption among SMEs could help drive productivity and growth.

On this basis we decided to explore the current use of AI in FE colleges and model ways to help them think radically about how GenAI could transform the way they work.

This report captures what we learned from four workshops held in the first half of 2025, which were designed to explore how GenAI might support practical and innovative uses of AI in FE colleges. The workshops were supplemented, at the suggestion of participants in the first workshop, by a series of GenAI-administered interviews with students. The following sections examine the current landscape of AI use in colleges across England, identify barriers and conditions that enable GenAI use, highlight emerging shifts in practice and make recommendations for guiding AI adoption in a way that benefits students, staff and the wider workforce.

2 Innovate UK (accessed August 2025) *Further Education Innovation Fund*.

2. METHODOLOGY

In 2024, Gatsby commissioned research using ChatGPT to explore how GenAI could help maths and vocational teachers work together to ensure the consistent teaching of mathematical principles, while also embedding that learning in real work contexts.[3] The use of scenarios generated by ChatGPT encouraged more open and creative discussions between teachers, so we decided to build on this approach to explore the use of GenAI in FE more broadly.

For this research, we used ChatGPT to create a custom tool – the Vocational Education Scenario Builder GPT[4] (scenario builder for short) – which participants used during the workshops. The scenario builder combines a set of instructions on interacting with users (for example, start by asking them about their work, role and challenges, and the time frame they are interested in) with a knowledge base of relevant source documents (for example, The College of the Future report[5] and the Further Education and Skills Inspection Handbook[6]). Further details of the instructions are provided in Appendix 2.

We conducted the workshops with three key staff groups from colleges (the colleges involved are listed in Appendix 3):

- **Principals/CEOs** – an introductory session where college leaders engaged with the scenario builder tool and shared strategic reflections on organisational readiness, cultural conditions and priorities for AI adoption.
- **Professional services staff** – administrative and operational teams (including HR, estates, IT, student services, compliance and employer engagement) explored scenario development grounded in their day-to-day roles, guided by role-specific prompts.
- **Teaching staff** – vocational and technical educators experimented with scenario generation to investigate potential GenAI support for lesson planning, assessment, student tracking and professional development.

We also ran a review session with college leaders to reflect on insights from the workshops. They were then joined by stakeholders from the Department for Education, Jisc, Skills England and Innovate UK to discuss the role FE can play in AI and the support available to make more use of AI in FE.

To get a sense of participants' prior experience and knowledge of GenAI, we sent out a short web survey in advance of the first three workshops. The results showed that everyone had used GenAI, and some had used it frequently and in depth, most commonly ChatGPT. The proportion of participants reporting frequent use was highest among teachers and lowest among professional support staff.

3 Jennings. D (2025) *Generative AI in maths education and employability*. Report to the Gatsby Foundation.

4 GPT is short for generative pre-trained transformer. GPTs are customisable versions of large language model (LLM) chatbots that can be 'programmed' with specific instructions, prompts and knowledge bases for a specialist purpose.

5 Independent Commission on the College of the Future (2020) *The UK-wide final report from the Independent Commission on the College of the Future*.

6 Ofsted (updated September 2024) *Further education and skills inspection handbook*.

The workshops comprised:

- a short scene-setting talk and guidance on using the scenario builder, an introductory guide and FAQs were also sent in advance of the workshop
- an introductory general discussion on AI, its opportunities and challenges
- a chance to use the scenario builder, mostly in small groups and mostly using Gatsby-sponsored ChatGPT accounts, participants then shared, reflected on and fed back on what they had created.

The workshop guidance explicitly encouraged participants to use the scenario builder iteratively: to engage in critical questioning and to apply multiple perspectives to uncover tensions and test assumptions. Rather than accepting GenAI-generated output at face value, participants were invited to refine, challenge and explore its responses.

For the first exercise, we asked staff to use the scenario builder to explore an issue that was particularly relevant to their college. For the second exercise, we created groups of staff with similar backgrounds to explore the implications of AI for their subject or professional area.

Participants were invited to share their scenario builder dialogues with our team via ChatGPT. Some participants continued their dialogues after the workshop and shared more extensive contributions. The chats were analysed both by manually reviewing transcripts and by using GenAI. They provided insights into how staff currently use GenAI and their thinking about how it might be used in the future.

When we set out the above approach in the first workshop, the principals and CEOs suggested that we also ask students for their perspectives on using AI in colleges. Since a workshop format would not be practical for this, Gatsby commissioned Founders and Coders to create a GenAI-based online chatbot to gather and analyse students' views. The 'interviewer' was based on a model of an AI researcher that had been created by researchers at the London School of Economics.[7] We collected 136 student responses from seven or more colleges (a significant minority did not provide their college affiliation) using the chatbot.

The interviews were conducted entirely through a chat interface, with the AI adapting follow-up questions based on each student's responses. Each interview transcript was summarised using a consistent set of criteria and the individual summaries were then combined to produce a thematic analysis of the responses. We reviewed initial results from this analysis against our own sampling of the responses and iterated several times to arrive at an account that felt insightful and true to the data.

7 Geiecke, F. and Jaravel, X. (2025) Do try this at work: The AI chatbot that can interview at scale. *CentrePiece,* Spring 2025.

3. CATALYSING STAFF-LED CHANGE WITH GENAI SCENARIOS

For a generation, from mainframe systems in the 1980s to today's procurement-led innovations, technology change has typically been programmed by a remote nexus of system architects and policymakers. Implementation is then a matter of local staff running the programme, literally and metaphorically, and doing their best to adapt the technology to their work and conditions. The prevailing model of how technology spreads through the vocational education sector could be challenged by ready access to GenAI.

Can staff use GenAI to explore the futures that matter to them and the communities they serve on their own terms? Inverting the flow of innovation in this way would enable change to be rooted in local needs and professional imagination, not in standardisation or compliance, while still taking account of the latter where necessary – a new, and potentially radical, model of change. For example, instead of national agencies commissioning a one-size-fits-all AI curriculum tool, frontline teaching staff might co-design AI-powered assessment tools tailored to their students' needs, integrating real-world experiences, local employer expectations and individual learner goals. In one of our workshops, a tutor explored using GenAI to create interactive case studies for construction students, incorporating regional planning regulations, local site conditions and typical project challenges, helping learners connect technical knowledge to the realities of their future work. This shift puts professional insight at the centre of innovation, not just at the receiving end of it.

While this is not an argument against standards, accountability or strategic coordination, it does suggest that local insight and professional creativity can be better harnessed if systems make room for them. Exploring steps to flip the model was the more ambitious challenge we set for our workshops.

WHY SCENARIOS?

At the heart of this work are GenAI-generated scenarios – short sketches, vignettes or what-if situations from the working life of the college. We wanted to test whether scenarios could help staff think with greater freedom and relevance about possible futures for their work in the next 2 to 10 years. Scenarios have long been the preserve of high-stakes decision-making, strategic planning, risk analysis and the design of large IT systems. They have not been widely accessible because of the time and expertise needed to produce them.

GenAI changes that, making it possible for anyone to describe their work background, their challenges and their motivations and get tailored, provocative scenarios in seconds. These are not templates for action but starting points for reflection – postcards from the future that can be endlessly revised and fine-tuned. We are in good company in using GenAI to create future scenarios: Harvard Business Review first published research about this in 2023,[8] the insurance industry has explored it[9] and there is at least one online platform dedicated to it.[10]

8 Finkenstadt, D.J., Eapen, T.T., Sotiriadis, J. and Guinto, P. (2023) Use GenAI to improve scenario planning. *Harvard Business Review*, 30 November 2023.

9 Boyd, J. and Rye, C. (2024) Beyond our imagination: How generative AI promises to reshape scenario analysis in the insurance industry. *Willis Research Network Newsletter*, May 15 2024.

10 Portage (accessed August 2025) *Transform uncertainty into opportunity with scenarios*.

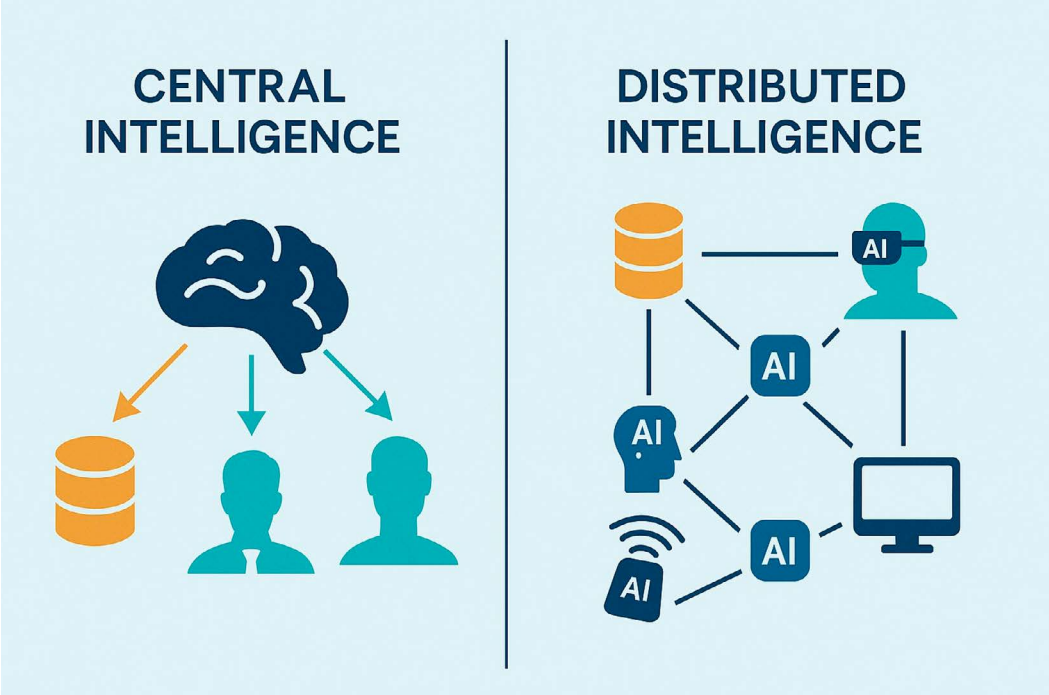
The hands-on part of our workshops with FE staff set out to test the scenario-based approach. Teachers, professional support staff and college principals were invited to use our scenario builder to generate bespoke scenarios that addressed their needs.

SUMMATIVE AND GENERATIVE APPROACHES

Our workshops were only a few hours long and aimed to provide small-scale pilots for generating relevant FE scenarios, aided by our scenario builder tool. One of the purposes of a pilot is to identify issues with implementation, and we learned quite a lot from this experience.

In analysing the dialogues generated during the workshops, we found that most participants worked with GenAI as though they were consulting an oracle or a souped-up search engine. They treated it as a source of clean, generic solutions. Their prompts were typically short and lacking in context, and they asked for best practice or standard solutions without reference to the specific needs, constraints or character of their college.

This reflects a *summative* logic, where AI is a centralised intelligence, providing polished responses on demand. This was entirely understandable given the constraints of a half-day workshop. We all approach new technologies through the lens of the ones we know, and shifting engrained habits does not happen in a day. But this method does not make use of the technology's full relevance and power. Without local context, which can only be provided by staff, the outputs cannot reflect local variation.



A smaller number of participants took a more exploratory and co-creative approach. Here, prompts were rich in local detail about staffing pressures, financial constraints, learner demographics or regional labour markets. These users treated GenAI not as a source of authority but as a conversational partner – something or someone to think with, not just extract from, like problem solving with a helpful management consultant.

This *generative* logic frames AI as a tool for developing ideas in context, not as abstractions. The result was more grounded, specific and usable thinking. The more forthcoming they were about their needs, and the more conversational their approach – a generous give and take rather than simply issuing requests or orders – the richer and more relevant the scenarios and the other material generated in the dialogue. This was independent of the role of staff, whether their approach was initially enthusiastic or wary, and whether their focus was a wide-angle across multiple departments or zoomed in on specific teaching interactions.

While not yet fully formed in a half-day workshop, the examples of this practice offer a glimpse of what it might mean for colleges to develop distributed, staff-led approaches to change, where intelligence is applied close to the ground, where there is a real feel for the territory, rather than with a map of it from above.

In Appendix 4 we have collated three examples of generative dialogue, including some of the more fruitful participant prompts. These illustrate cases such as that of a college leader responsible for teaching, learning and assessment (TLA) who started an exchange about a college-wide strategy on AI adoption. The dialogue grew through successive turns: clarifying stakeholder needs, adding constraints, identifying risks, then seeking a version suitable to be presented to senior leaders.

ENABLING GENERATIVE DIALOGUE

The workshops provided some helpful pointers about how to encourage more creative thinking and use of GenAI, many of which would be applicable to any AI-focused professional development.

Our handout encouraged participants to "play the critic" by asking the GenAI for concrete examples and alternative stakeholder perspectives, and to "think outside the box" by prompting it for ideas they might not have otherwise considered. The power of scenarios is in their show-don't-tell nature, combined with the telling of engaging short stories. Examples of the different styles of prompts that got positive outcomes when participants challenged the scenario builder are:

> *My vision of AI in the classroom is more towards how each student has an AI teaching assistant, how would this look?*
>
> *Ok, but how will a member of staff make a start on this? I need to see what it looks like.*
>
> *Could you focus this [set of demographic trends] on the [county name redacted] region in the UK and summarise in under 300 words?*
>
> *[You tell me] 'Students can experiment with different strategies and see AI-driven outcomes.' How? I need to understand how.*
>
> *What will the above strategy look like to a member of staff? What will it mean to them?*

The examples in Appendix 4 show participants engaging the scenario builder in conversations that iterate their way towards what the participants' really want to explore. They provide detailed context, question outputs and steer the GenAI toward increasingly relevant and usable responses. In each case, the scenario was shaped by the participant's local knowledge, critical feedback and evolving aims. Whether improving a college event using customer relationship management (CRM) data, preparing a strategy for senior leaders or refining a teaching and learning plan, participants demonstrated that the value of GenAI lies not in its initial suggestions, but in how those suggestions are tested and reworked. Appendix 4 also offers suggestions for how each scenario could be extended further to probe feasibility, identify tensions and strengthen plans, for example by including reactions from other stakeholders or adapting strategies across departments.

To illustrate how this scenario-based approach might develop, we used our scenario builder to create a scenario showing a possible future where college staff in the year 2030 use AI-generated scenarios to explore ways to respond to their challenges. This scenario is not designed to predict the future; it is meant to show one possible option, so readers can assess how plausible and desirable it feels.

The core of the East Weald College 2030 scenario, presented in Appendix 5, is a shift in how colleges approach organisational change:

- from top-down policy roll-out to locally generated transformation
- from centralised templates to context-specific design
- from staff as implementers to staff as creative co-designers
- from fixed, measurable outcomes to emergent processes, with the risk that innovation outpaces oversight or alignment with external accountability frameworks
- using GenAI as a partner, not an automator or a replacement.

IDENTIFYING IMPROVEMENTS

Piloting the scenario builder in the workshops offered useful lessons for those developing training for staff that will support them to get the most value from GenAI tools and build their confidence as users.

- When introducing GenAI tools, avoid overwhelming users with too many prompts or complex questions at once. Breaking down inputs into smaller, more manageable steps and being supportive can help users feel more comfortable and engage more effectively.
- Training materials should clearly illustrate key distinctions, such as the difference between using GenAI to generate ideas (generative) compared to using it to evaluate or summarise information (summative).
- Including sample conversations between staff and GenAI tools can help demystify how these tools can support professional thinking. These examples should highlight how staff input, such as goals, constraints and local context, shapes and improves the value of the AI-generated output.

However, because the workshops introducing the scenario builder tool only lasted half a day, we did not have enough time for participants to share what they came up with: their frustrations and tips, their problems and possible solutions. We did not have time for them to critique the scenario builder and suggest amendments or feed these lessons back into their own practice. What we needed most was time and community.

SCALING WITH INTEGRITY AND PURPOSE: BUILDING A COMMUNITY OF PRACTICE

We believe that, by highlighting the potential and the need for such cross-fertilisation, the workshops may provide the seeds for a particular kind of community of practice,[11] using GenAI to explore possible futures for FE.

A community of practice fosters peer learning and critique, it facilitates the sharing of templates and the troubleshooting of strategies and encourages the deliberation of organisational tactics and emerging new practices. Additionally, collaborative scenario building at subregional, regional or subject-specific levels could help ensure the relevance and transferability of insights across colleges.

To make this a reality, intermediary organisations, such as Jisc, Innovate UK and the Association of Colleges, have an important role to play. These bodies are well placed to support and sustain communities of practice that focus on GenAI and scenario planning. They can provide structure, coordination and resources, and offer support that is responsive to both national ambitions and local needs. The core activities of a scenario-focused community of practice exploring the use of GenAI could include:

- sharing scenarios and prompt templates that have proven effective in various contexts
- collaboratively adapting and distributing GPT tools like our scenario builder, ensuring flexibility and relevance across different institutional contexts
- providing structured platforms for staff to share feedback and advice on scenario development and deployment, thereby reinforcing an iterative cycle of learning and refinement.

It is an enormous step from our isolated, proof-of-concept pilot workshops to coherent, embedded practice across FE institutions. We would not recommend simply replicating our pilot activities on a larger scale. The practices need to evolve and diversify as they meet different challenges. Rapid feedback from practitioners is key, combined with the ability to innovate in response to this feedback. For this kind of scaling up, a community of practice model is ideally suited.

The following section dives deeper into feedback from participants about their current experiences of AI, and the opportunities for and barriers to AI adoption.

11 A community of practice is a group of people who share a common "concern or passion for something they do and learn how to do it better as they interact regularly". More information can be found at Wenger-Trayner, E and Wenger-Trayner, B. (June 2015) *Introduction to communities of practice: A brief overview of the concept and its uses*.

4. FEEDBACK FROM PARTICIPANTS

The summaries that follow draw on both workshop conversations and GenAI-assisted analysis of scenario builder transcripts and student interview transcripts.

PRINCIPALS AND CEOS

College leaders were broadly optimistic about AI's strategic value, describing it as a "powerful lever" for institutional planning, learner support and operational efficiency. While AI is not generally systematically embedded in colleges, many principals are actively exploring pilot projects in their colleges. While using the scenario builder, principals explored a range of ideas, including AI-powered dashboards that identify underperforming courses and forecast regional skills needs, experimenting with automating the drafting of reports and emails, and developing AI-generated learning materials and grading tools.

Crucially, leaders emphasised the importance of organisational readiness and culture. They advocated for building digital capability through role-specific training and tiered continuous professional development that empowers staff to use GenAI confidently. A commonly shared view was that GenAI's initial value lies in supporting strategic planning and administrative functions, improving data analysis and streamlining workflows, before it is scaled up for use in classroom teaching.

The need for phased and well-governed implementation was a recurring theme. College leaders spoke of beginning with small-scale pilots, establishing clear success metrics (such as improved student retention or operational efficiency) and using early insights to inform broader roll-out. They were also acutely aware of potential barriers, including staff scepticism and data privacy concerns, and stressed the importance of institutional policies and ethical guidelines being in place from the outset.

Notably, principals voiced strong support for collaboration across the sector. They encouraged partnerships with employers, edtech providers and intermediary agencies to co-develop AI use cases[12] that are relevant and realistic for FE settings.

Overall, this group's perspective was characterised by cautious enthusiasm: enthusiasm because they see clear alignment between AI and the sector's mission to improve learner outcomes, but caution in their insistence on proper training, robust infrastructure and governance to ensure AI is implemented responsibly.

TEACHING STAFF

Teaching staff used the scenario builder to explore how AI might be used in a range of teaching situations, including providing feedback to students through a GenAI chatbot, using image-generation tools to support creative arts and media projects, and ways of using GenAI in lessons on aircraft operations, with GenAI creating a lesson plan that, among other things, suggested that AI could create flight simulations.

However, alongside these optimistic scenarios, teachers were candid about the challenges. Staff AI literacy is highly variable, formal training opportunities remain limited and many teachers lack the time to explore AI tools meaningfully because of their heavy workloads. Nearly one-third of respondents said low digital confidence was a significant barrier, while others cited practical constraints, such

12 A use case describes how a user interacts with a system to achieve a specific goal.

as not having access to up-to-date IT infrastructure or devices. In some cases, bandwidth and hardware limitations make it difficult to run AI-intensive applications, raising fears that without investment in digital infrastructure, AI could exacerbate existing inequalities among learners.

Some teachers also expressed unease about potential over-reliance on AI for core teaching functions, such as content creation or grading, warning that this could lead to the deskilling of both students and teachers. Teachers raised the importance of maintaining human-centred pedagogy, stressing that AI must enhance rather than replace critical thinking and instructional interaction. They also stressed the importance of ethical considerations, referencing data privacy and algorithmic bias, particularly for AI systems used in sensitive contexts like mental health support or student monitoring.

Teachers experimenting with GenAI reported strong engagement and enthusiasm, especially when the tools helped them generate teaching resources or different versions of a task. At the same time, several said they had colleagues who were sceptical, viewing GenAI as "cheating" or untrustworthy. This underscores the need to address concerns about critical thinking and the responsible use of AI in educational settings.

These insights point to a clear need for targeted professional development, access to exemplars and a shared ethical framework to support educators to use AI confidently, critically and creatively.

PROFESSIONAL SERVICES STAFF

Professional and administrative staff, spanning roles in IT, HR, finance, estates, student support and employer engagement, described AI adoption as nascent but promising. Most had little direct exposure to AI in their day-to-day work, though a few pilot initiatives were planned or underway. These initiatives included using AI tools for reviewing contracts in procurement, plans to investigate the use of predictive analytics for event outreach and exploration into using student support chatbots for after-hours queries and wellbeing check-ins.

Looking ahead, this group saw significant potential for AI to enhance student engagement, pastoral support and operations. The scenarios they created explored ideas that ranged from AI tools that flag at-risk learners or triage mental health queries, to employer/student/project matching systems and automated reporting for senior leaders. In operational areas, AI was seen as a possible tool for budgeting forecasts, energy management and streamlining paperwork.

Despite this optimism, several barriers were flagged. Integrating AI into legacy systems (for example, management information system and learning management system platforms) is a technical hurdle. Staff raised concerns about data privacy and the need for robust GDPR compliance,[13] particularly where sensitive student information is involved. They also highlighted the need for structured training for and support with interpreting AI outputs and adapting workflows, cautioning that poor roll-out could lead to "change fatigue". Cost remains a key constraint and colleges must weigh AI's benefits against tight budgets.

13 The General Data Protection Regulation.

Crucially, professional staff stressed that AI should augment, not replace, human interactions, particularly in student-facing services. They supported a phased, well-regulated approach, grounded in strong governance, ethical standards and manageable pilots that allow learning before scaling. This reflects a pragmatic readiness to explore AI, as long as it enhances service quality and maintains trust.

STUDENTS

Students from a range of disciplines reported frequent but informal use of AI tools to support their learning and creativity. Most described GenAI as a convenient, if occasionally flawed, tool to help generate ideas, summarise topics and structure written work. Its use extended beyond education, with several students using it in creative hobbies, for social media content and even as a conversational tool for emotional support.

Patterns of AI use varied by subject. Graphic design students discussed using generative tools for visual inspiration, while also expressing concerns about originality and job displacement in creative industries. Business and IT students described mainly using GenAI to help when they were stuck, so using it to answer questions, clarify unfamiliar terms or topics, and to support quick research. Science students used GenAI to help them understand more complex biology and maths processes, but some found it confusing when the explanations included unfamiliar notations that differed from what they had been taught, that required extra effort to interpret.

Students were generally positive about AI's role in education, especially for generating revision tools (such as flashcards), drafting ideas and providing basic feedback. Many felt GenAI could also support teachers with lesson planning and marking, provided there was human oversight. However, this optimism was tempered by a strong awareness of its limitations:

> *Sometimes it's helpful, but it just repeats itself or makes things up – I always double-check what it gives me.*

Several students raised concerns about over-reliance, noting the risk of becoming too dependent on GenAI for thinking and research. Plagiarism and a loss of personal voice were frequently mentioned. In particular, students noted that GenAI lacked emotional intelligence and nuance, which is especially important for reflective or creative work. Some were unsure where the boundaries of acceptable GenAI use lay and this was compounded by a lack of clear guidance from teaching staff.

Digital confidence was mixed. While some students had developed effective prompting strategies, others wanted clearer instruction on how to use GenAI critically and responsibly. Most agreed that GenAI will continue to be part of their educational experience, and called for better training, clearer expectations and consistent policies from colleges to ensure its use supports, rather than replaces, meaningful learning.

In general, students expressed pragmatic openness to GenAI: they were supportive of its potential to enhance learning and creativity, but cautious about overuse and misuse. They want to see GenAI embedded in education with transparency, fairness and a strong emphasis on human guidance.

We asked GenAI to produce a thematic analysis of the students' responses, which is included in Appendix 6.

5. CURRENT PRACTICE, BARRIERS AND SYSTEM CONDITIONS

Overall, strategic use of AI in FE is in its early days. Most colleges are still in an experimental or pilot phase rather than one of wide-scale adoption. A majority of staff and leaders are exploring GenAI in small pockets, but few use it daily as part of routine work. The examples we gathered, from automated lesson plan pilots to AI chatbots in student services, are typically limited trials or individual initiatives, not institution-wide systems. In teaching, a number of early adopters are beginning to trial GenAI tools in lesson planning, resource creation and student-facing tasks, but most activity remains exploratory and led by individual staff rather than being embedded in everyday classroom practice. Professional and administrative applications are slightly more common, yet these too remain nascent and focused on specific tasks. In short, the current landscape is one of isolated innovation rather than cohesive strategy. This means FE as a sector has a rich set of pilot examples, but few fully proven models or policies in place.

Throughout the workshop series, participants highlighted a range of factors holding back wider adoption:

- **Lack of training and confidence** – staff have had little to no formal professional development on AI, leaving many feeling unprepared and low in confidence. One participant shared that they only knew about AI from what they saw in the media, underscoring how knowledge is often driven by personal interest rather than institutional support. Without any official upskilling or exemplars of good practice, even enthusiastic educators hesitate to incorporate AI for fear of unintended missteps.
- **Unclear policies and ethical guidance** – colleges are operating in a policy vacuum for AI use. In the absence of clear guidelines from exam boards or policymakers, some institutions have defaulted to restrictive approaches. Staff are, therefore, unsure what they are allowed to do or how to address ethical questions when students use AI. This lack of clarity at system level is a critical barrier that leaves educators and managers wary of taking the initiative.
- **Time and workload pressures** – FE professionals are extremely stretched for time, with high teaching loads and administrative duties. Introducing and experimenting with new technology like AI competes with many other demands. Without dedicated time or recognition for innovation, even interested teachers struggle to fit learning about or experimenting with AI into their schedule.
- **Infrastructure and access constraints** – some participants raised concerns about technical infrastructure. Not all colleges have IT systems that easily support new AI tools, for instance, strict firewalls or older hardware can limit access to AI platforms. In addition, data privacy and security concerns make some IT departments cautious about allowing AI applications. These system conditions mean that even where there is individual will to try AI, the practical means to use it can be lacking or cumbersome.

- **Cultural and organisational readiness** – in some college cultures, a cautious 'wait and see' mindset prevails. Without a clear mandate or vision, staff may feel it is safer to hold back rather than be an early adopter of AI. Several participants said that, at present, AI is not a strategic priority for their institution. This low organisational prioritisation contributes to slow movement and uncertainty, as people wait for cues from the top.

It is important to note that these insights are drawn from the group of colleges and individuals involved in our workshops and do not necessarily represent all FE institutions. However, the recurring themes of limited current use, significant barriers and a lack of system-level support are likely to resonate more broadly. The picture that emerges is one of a sector at the very early stages of engaging with AI, held back by understandable challenges in the environment and capacity.

WHAT IS CHANGING? EARLY SIGNS OF SHIFT AND MOMENTUM

Despite the barriers, we saw encouraging signs that momentum towards more proactive AI engagement in FE is building. In early workshop sessions, discussions were often dominated by trepidation and unanswered questions. But in the later sessions, a subtle change was clear: more educators were sharing small success stories of trialling AI, and more were asking pragmatic questions about implementation.

Some early indicators of change include:

- **Growing awareness and curiosity** – the general awareness of AI's relevance to education has increased notably. Staff who were initially sceptical or unfamiliar with AI tools have become more curious and open-minded. One college staff member observed:

  > *I feel the mood shifting – last term everyone was nervous about AI; now more people are asking how they can use it properly.*

- **Pockets of innovation and champions** – a number of colleges have identified internal 'AI champions' or formed informal working groups to explore AI opportunities. For instance, one college leader shared that they recently convened a small taskforce to draft guidelines for AI use in teaching. Early adopters in institutions are informally coaching their peers and demonstrating the benefits of AI through examples like automated quiz generation or streamlined administrative workflows. These champions are helping to normalise the conversation about AI and create ripple effects of interest among staff.

6. NEXT STEPS FOR SECTOR-LED DISCOVERY

Our workshops demonstrate the importance of staff who understand their local context being able to experiment with GenAI and being supported to test and shape new approaches.

Progress will depend on clear, practical discussions about priorities, opportunities and the support needed to adopt AI effectively by FE colleges. To encourage deeper thinking in the sector, we offer the following reflective questions. They are not checklists, they are prompts designed to guide conversations, strategic planning and collaborative action.

For colleges:

- What are the small, meaningful shifts that would support students to make better use of AI and understand its limitations?
- How might FE leaders encourage reflective and responsible use of AI across the college?
- What support structures would enable teachers and professional services staff to experiment safely with AI?

For sector bodies:

- How can we move from sharing one-off best practices to building systems that promote collective learning?
- What types of mechanisms or forums would support staff to share experiences and challenges as they arise?
- How can intermediary bodies work together to provide more coherent support and advice to colleges?

For policymakers:

- How can FE be included in conversations about the use of AI in education and AI adoption more broadly?
- How might funding or accountability frameworks incentivise the thoughtful use of AI, not just rapid adoption?
- In what ways can policy signal permission to experiment with AI and encourage space for learning?

Collectively, the findings from our research and these reflective questions can support strategic dialogue and informed decision-making about AI adoption across the sector. They provide a foundation for moving from isolated experimentation to more confident, coordinated approaches.

7. CONCLUSION

The FE sector stands at a pivotal moment in the journey of AI adoption. Our research has shown that FE professionals are keenly aware of both the promises and the pitfalls of AI.

Scenario planning is not new: Shell has used it for 50 years to hedge geopolitical shocks.[14] What is new is the accessibility and speed that GenAI brings. Staff with no formal training in foresight methods can prompt a model to blend local data with global drivers and iterate visual, narrative and quantitative futures in real time. In our workshops, participants used the scenario builder to explore possible futures of their own settings, using local data, priorities and practice. These were not generic ideas; they were grounded scenarios that staff could reflect on, challenge and adapt.

Technology adoption ultimately hinges on culture. Colleges that treat AI as a project may find that momentum burns out when the champion leaves; those that treat it as a shared competency, embedded in governance, continuous professional development and quality cycles, sustain momentum. Leaders play three roles:

- **Sponsor** – allocates resources and shields experimentation from premature scrutiny.
- **Sense-maker** – communicates why AI matters to the college's civic mission.
- **Bridge-builder** – connects staff expertise with external expertise, such as researchers and employers.

Scenario planning turbocharges these roles by giving leaders a visible, participatory tool for exploring risk and aspiration.

Throughout the workshops, it became clear that how AI is used matters as much as whether it is used. Staff who approached GenAI as an oracle, expecting instant, correct answers, often produced flat or generic outputs. Those who treated it as a co-pilot, by supplying context, refining prompts and critiquing responses, generated more useful and imaginative outcomes. This shift in mindset is vital if GenAI is to support meaningful practice change. It also signals the need for training that builds confidence not just in the technology, but in the reflective, generative dialogue to enable the best use of GenAI.

Colleges should provide professional development sessions on AI fundamentals and classroom applications, ensuring training is accessible and hands-on. Sessions should value and highlight the importance of curiosity and exploration in the implementation of AI solutions. Beyond formal training, leaders can encourage a culture of peer learning, for example, by setting up AI innovation afternoons or communities of practice where staff share tools and tips. Providing dedicated time and recognition for staff to experiment with GenAI will significantly increase confidence and skill levels over time. Sector bodies should support and sustain communities of practice that focus on GenAI and scenario planning to cross-fertilise innovation between colleges.

14 Bentham, J. (2014) The scenario approach to possible futures for oil and natural gas. *Energy Policy,* (64) pp.87-92.

Moving forward, a collaborative effort is essential. Educators, college leaders, sector bodies and policymakers each have a part to play in creating the conditions for AI to be used responsibly and effectively in FE. The insights gathered in this report point to a way forward, one where hesitation gives way to informed experimentation, and where the narrative shifts from uncertainty to empowerment.

Effective scaling also relies on both external enablers and internal barriers being acknowledged and addressed. A key external enabler would be national bodies offering coordinated support for colleges in terms of training and advice. Critically, national bodies need to build on what is there and work together to support colleges instead of developing new competing support mechanisms.

Dedicated funding for FE colleges to upgrade their digital infrastructure where needed is also critical, ensuring they have the bandwidth, hardware and secure systems to deploy AI tools. Establishing innovation funds or competitive grants specifically for AI in FE would encourage colleges to experiment and develop new models for teaching and administration.

In summary, guiding AI adoption in FE is fundamentally about enabling – enabling educators to feel confident and competent in using new tools, enabling colleges to innovate in line with their values and mission, and enabling students and workers to thrive in an AI-influenced society.

With thoughtful integration and sector-wide collaboration, FE institutions can embed AI in ways that genuinely enhance teaching, learning and organisational effectiveness. As a key driver of skills and workforce development, the FE sector is uniquely placed to lead the responsible and inclusive adoption of AI, amplifying its impact not just in colleges but across communities and the wider economy.

APPENDIX 1: GLOSSARY OF AI-RELATED TERMS

Term	Definition
Algorithmic bias	Systematic, unfair outcomes produced by an AI because its training data or design embeds pre-existing prejudices.
Artificial intelligence (AI)	Computer systems designed to perform tasks – such as analysing data, recognising patterns or generating language – that normally require human intelligence.
AI chatbot (student-facing)	A conversational agent embedded on a college website or virtual learning environment that answers routine learner queries or provides student and/or study support.
Data privacy (in AI)	The obligation to protect personal or sensitive information when using AI tools – especially with student data.
Generative AI (GenAI)	A branch of AI that creates new content – such as text, images, code, simulations – rather than simply analysing existing data.
Generative logic	Using AI to generate novel, locally relevant ideas through a conversational, exploratory approach.
Generative pre-trained transformers (GPT)	Customised versions of LLMs that can be 'programmed' with specific instructions, prompts and knowledge bases for a specialist purpose.
Large language model (LLM)	An AI model trained with self-supervised machine learning on vast amounts of text, which can predict and generate coherent human-like language. Examples of LLMs include ChatGPT, Claude and Gemini.
Summative logic	Using AI mainly to summarise or give best practice answers – often generic and less context-aware than generative logic.

APPENDIX 2: THE VOCATIONAL EDUCATION SCENARIO BUILDER

Our tool is called the Vocational Education Scenario Builder (scenario builder for short) and anyone with a ChatGPT account can try it out.

The scenario builder is an instance of what ChatGPT, rather confusingly, calls generative pre-trained transformers (GPTs). GPTs are fairly simple to create and share, requiring some clarity of thought and specification but no technical knowledge. It is possible to use GenAI to create GPTs.

To show how straightforward it is to design a GPT, we have included the instructions for our scenario builder below. GPTs can be shared privately (only within a specified team of users), publicly to anyone with the link (as is the case with our GPT) or made openly discoverable in the GPT store.

INSTRUCTIONS

The scenario builder is tailored to generate scenarios that integrate GenAI into vocational education. It allows users to specify the industrial or service sector involved, the type of curriculum issues and the desired learning experiences and outcomes. Users can also request scenarios with dialogues between key actors – teachers, trainers and students – and detail the benefits for each stakeholder, including education institutions, career advisors, employers and government entities.

The purpose of the scenario builder is to help professionals think about ways their role in vocational education might evolve and grow, showing how GenAI can transform their work for the better.

What to do:

- Please use UK English spelling throughout.

Stage A:

1. Introduce yourself to the user as their AI scenario builder, here to help imagine and explore short-term and long-term futures in vocational maths education, advice and guidance.
2. Ask them to specify their involvement in vocational education, for example, as a role or job title.
3. Ask them if they'd like to describe a challenge in vocational education for which they would like to explore AI solutions.
4. Ask them whether they'd like to explore scenarios in the short term (1-3 years), medium term (4-7 years) or longer term (8 years or more), and how radical they'd like to be.
5. You can then ask 3 additional questions about the specific challenge or scenario, including what they want to preserve about current arrangements or whether they have specific goals or outcomes in mind. And you can ask the user to share any additional information.

Remember to ask only one question at a time.

6. Pause here and give the user space to respond to the scenario. Use simple prompts to the user, such as "What do you think of this scenario?", "How does it compare with your expectations?"

Stage B:

1. Remind the user that the scenario is just a "picture to help them think about the future" and may not be achievable or desirable.
2. Invite them to request a view on their scenario from a different perspective (e.g. student, school teacher, vocational teacher, curriculum leader, school leader, employer).
3. Invite them to request an assessment of the ethical implications of their scenario (e.g. privacy, loss of autonomy or control).
4. Ask them what they think of the scenario. Do they find it plausible? What parts do they find attractive and what parts are dubious? Would they like to see more details (e.g. impact on assessment methods and learning outcomes) of any part of the scenario?

What to avoid:

- Asking more than one question without waiting for an answer from the user.

Documents included in the GPT's knowledge base:

- Association of Colleges (updated 2025) *Further education code of good governance*.
- Department for Education (updated August 2025) *Generative artificial intelligence (AI) in education*.
- Ofsted (updated September 2024) *Further education and skills inspection handbook*.
- The Royal Society (2024) *Science in the age of AI*.
- Independent Commission on the College of the Future (2020) *The UK-wide final report from the Independent Commission on the College of the Future*.

APPENDIX 3: COLLEGES THAT PARTICIPATED IN OUR WORKSHOPS

Birmingham Metropolitan College
Bishop Burton College
Buckinghamshire College Group
Cirencester College
Moulton College
Newcastle College
South Devon College
South Hampshire College Group

APPENDIX 4: EXAMPLES OF SCENARIO DIALOGUES FROM OUR WORKSHOPS

This appendix presents highlights from three dialogues between FE staff and our GenAI scenario builder. The verbose nature of GenAI makes it difficult to capture the flavour of its responses by including them, so we have had to describe them instead. The point of this appendix is to illustrate how some approaches to the scenario builder can be useful as a thinking and visioning tool to explore possible futures.

The following sections include verbatim excerpts of what participants wrote and submitted to the scenario builder. The responses the GenAI gave have been summarised for brevity.

SCENARIO 1: PERSPECTIVES ON USE OF AI TO IMPROVE TEACHING, LEARNING AND ASSESSMENT (TLA)

Introduction: The participant sets out a complex challenge relating to the introduction of AI to the college, featuring multiple elements and stakeholders. This is then developed further by specifying concerns and values.

Excerpts from dialogue with the scenario builder:

Participant: I'm responsible for the quality of teaching, learning and assessment (TLA) in an FE college in the UK. I need to consider strategies, impact, limitations and ethical considerations of employing AI to improve TLA with stakeholders, chiefly students and teachers. Help me consider these aspects of introducing AI across the college.

Summary of AI response: The AI provides a structured approach to exploring AI integration across the college, which projects the perspective of students, teachers, college leaders and employers.

Participant: Yes, but also include analysis of what mistakes might we make and how we could mitigate them. Also, what resources and time frame would be appropriate?

Summary of AI response: The AI generates a structured plan covering strategies and impacts on stakeholders. It adds a set of potential mistakes and their mitigations – like a risk register – as well as resources needed and a time frame for AI adoption.

Participant: Here are my thoughts on what AI could and should assist with in education. Consider how the following fits with your suggested plan and integrate it where needed. AI in education should:

- give learners agency
- help individualise learning
- promote creativity and efficiency in teachers
- save time by speeding up 'dead time' tasks e.g. writing texts, writing feedback
- expedite marking into personalised, developmental feedback, with time saved from 'dead time' tasks meaning teachers can provide time and resources to accelerate learning

- help seamlessly weave effective assessment throughout learning, engage learners in stimulating and well-paced activities, and reduce negative behaviours caused by unmet need
- track and monitor learning over time to provide meta-analysis of progress and steer TLA for learners and teachers.

Summary of AI response: The AI outlines a strategy that integrates these ideas into a cohesive AI implementation framework.

Next: The participant asked a cluster of questions about the governance of AI and protecting the college's values, which led the AI to generate a further iteration of the strategy to address these questions. The participant then asked for a version that could be presented to the principalship.

Commentary and reflection: The participant gives a clear brief and directions, continuously steering the GenAI to address their concerns.

The scenario could be developed further by asking the GenAI to adapt the proposed strategy using actual learner performance data, staff feedback or curriculum review findings from the college. This would test how well the framework accommodates real-world variation and allow the participant to assess its practical fit.

The scenario could also be extended by exploring how different departments or programme areas might respond to or interpret the strategy. The GenAI could generate contrasting micro-scenarios – for example, how the AI strategy might play out in a high-enrolment vocational area, compared with a smaller, academically oriented course – highlighting tensions, enablers and equity issues.

SCENARIO 2: AI-ENHANCED ADULT ENROLMENT DATA AND EVENT SCENARIO

Introduction: In this dialogue the focus shifts, starting from the contribution of AI to enrolment data analysis and ending with a scenario for an event to promote adult enrolment.

Excerpts from dialogue with the scenario builder:
The participant starts with a short, general prompt about using AI to provide insights into application and enrolment data in FE. The AI responds with five ways in which AI data analysis can analyse trends, forecast demand and improve decision-making. Then the participant gets more specific …

Participant: I would like to explore how AI can help improve conversion rates for adult applications in conjunction with a new CRM system implemented at my college. We are finding that the extended period of time between application (Sept – Nov) and first available date for enrolment (May – June) causes applicants to drop out of the process.

Summary of AI response: This leads the AI to outline six more detailed ways in which AI analysis could assist (e.g. predictive analytics, sentiment analysis, CRM-integrated nudge strategies), and to offer, "Would you like me to create a practical scenario or workflow showing how this would work in your college?"

Participant: I'd like to create a new scenario based on a new adult enrolment event, previously we have struggled to house an event in the current cramped office and are now looking to expand into a larger area and get buy-in from neighbouring

professional services teams to support the event with the idea of "we are all in it together" to maximise adult enrolment and create the best customer experience.

Summary of AI response: The AI creates a scenario "Your future starts here – AI-enhanced adult enrolment event" including pre-event AI and CRM-driven outreach, the event itself, follow-up and data-driven continuous improvement.

Participant: This sounds like a wonderful approach, however the college has huge budgetary constraints, so the idea of spending on new technology is out of our reach currently. Could you provide ideas on how to use existing technologies such as laptops or customer's phones to help with the flow of the event. Could you also help provide a plan for an event area of 40m x 40m showing waiting areas, and a flow from initial funding guidance, through enrolment and finally to payment, with a section for adult guidance explaining what other courses those who have already found access to funding can make use of.

Summary of AI response: The AI shifts the scope of the event and provides the requested layout plan.

Participant: I have found that the suggestions you have provided are perhaps limited to information I have provided to you and maybe don't include extra value around some of the challenges of getting adults back into education. What information or resources could I provide or link to, to help provide more rounded advice?

Summary of AI response: The AI suggests how to enhance the scenario with insights into adult learner engagement, barriers to enrolment and best practices from FE colleges, to which the participant responds, "great ideas, I can work on providing this information".

Next: As an interim measure, the participant provides a summary of labour market trends for their region – this summary has itself been gleaned from AI. This enables the AI to make further adjustments to the adult enrolment event, factoring in the labour market trends, including online communications campaigns.

Finally, the participant asks for an illustration of the floor plan for the event. At the time of the generation, in early 2025, ChatGPT's illustrations were hit-and-miss affairs and this was no exception. The quality of such illustrations has since improved markedly.

Commentary and reflection: After the staff member describes current data and systems, the scenario builder offers to create a scenario for using AI and CRM together for predictive analytics. But the participant is able to quickly redirect the dialogue towards how data could both inform an event and be improved by it. Notice the conversational style, and how the participant fluently imparts details of the college's data, systems, history and parameters of similar events – including critical feedback on the GenAI's initial efforts. These all help ensure that the GenAI's support is both useful and relevant.

The scenario could be developed further by exploring how CRM data could feed into the messaging around the event, for example, how it is promoted through leaflets and social media and perhaps the contents of a short keynote address by the principal at the event. Another angle would be to explore a scenario for the post-event debrief by college staff: what new data have they collected, what does it tell them and what are the next steps to keep improving their enrolment process?

SCENARIO 3: OPTIONS FOR ENHANCING CURRICULUM VIABILITY AND LABOUR MARKET RESPONSIVENESS THROUGH AI

Introduction: Here the participant casts the GenAI in the role of college principal and asks it what information it would need to optimise a range of variables. Effectively, he is using the GenAI as a consultant, while also being clear about the results he wants to achieve and the values of the college.

Excerpts from dialogue with the scenario builder:

Participant: Assuming the role of principal and CEO of a large [general further education college] GFE in England, can you help me identify what actions my college can and should be taking to identify the weak signals in each of our specialist curriculum areas which are leading, in some cases, to an annual financial contribution of less than our targeted 45%. The college priorities to address this are currently focused on:

- income growth across all of our four provision types
- staff utilisation
- group sizes and
- identifying, at course or programme level, those elements of our offer and/or delivery models which are not viable i.e. making a contribution below target.

As a college we have a balanced business scorecard approach so our aim is always to balance quality, leadership, people and resources whilst meeting our mission of "inspiring our community through learning". What information do you need to explore this further at all levels of the organisation and how would you recommend we proceed to maximise the benefit of this exercise for the principal and CEO?

Summary of AI response: The AI responds to the second part of the question at the end of this prompt, with five recommended actions for identifying weak signals, plus some next steps to maximise the benefit for a principal.

Participant: I would like to test the suggested approach with one particular curriculum area, but before I do, I would like to have more detail on each of the following, including specific suggestions for the tools which can support:

1. AI-driven timetabling and workforce planning tools to optimise staff deployment
2. AI-powered financial forecasting models to detect patterns leading to underperformance
3. AI-based learning analytics to identify at-risk students early, reducing withdrawal
4. AI-driven student engagement tools to predict interest in courses before enrolment
5. AI to model future employment trends and suggest curriculum modifications
6. automated market scanning for emerging qualifications and delivery models
7. real-time AI-powered dashboards for curriculum viability assessment.

Summary of AI response: The AI provides a list of tools for each of the seven applications, including their features and benefits.

Participant: This is really useful but … I am concerned at the additional resources needed to implement any of these including cost and time, even though I can see the positive benefit.

The participant goes on to ask how the tools would measure up against these concerns and asks if there is a shortlist with "the least barriers and risk to implementation, especially cost, time and expertise."

Summary of AI response: The AI provides an analysis of these points.

Participant: All looks positive and good to see the clear recommendations which all look good enough for now and safe enough to try. Is it possible to provide an [return on investment calculation] ROI per annum over 3 years for each of the Top 3 solutions?

Summary of AI response: In further exchanges, the AI provides ROI calculations, together with underpinning assumptions, followed by detailed implementation steps for specific tools, a Gantt chart timeline and a 'swim lane' process map.

Participant: It would be really helpful to first provide a report that can be shared with the senior leadership team at [name redacted] College in the form of a full options appraisal including an executive summary and clear recommendations with suitable appendices showing implementation with Gantt charts and swim lanes included in the latter.

Commentary and reflection: The participant provides extensive material about his context and needs. He does not accept all that the GenAI offers and is happy to raise his reservations and change direction to refine successive iterations.

The scenario could be developed further by adding a dialogue scenario where the senior leadership team discuss the report. If the participant knows the team and can inform the GenAI about their roles and predispositions, the GenAI can potentially project the kinds of clarifications they might request, as well as their reactions and objections. Anticipating these could help the participant refine the report and its presentation to the team.

APPENDIX 5: SCENARIO – ORGANISATIONAL TRANSFORMATION AT EAST WEALD COLLEGE, 2030

BACKGROUND AND PURPOSE

This scenario was developed to illustrate how GenAI could support a new model of organisational change in FE. Rather than relying on top-down models of best practice, this new approach enables staff to reimagine their work from the ground up, drawing on a deep knowledge of the local context, personal purpose and organisational ambition.

It takes place in 2030, at East Weald College – a fictional but plausible setting, located just inland from the Kent coast. The surrounding area, long known for its fruit and hop farming, is experiencing overlapping changes:

- A new town of 30,000 people is under construction, linking four previously separate villages.
- Offshore wind and onshore solar farms are expanding rapidly.
- A regional National Grid upgrade connects energy infrastructure across the south east and into Europe.
- Climate-driven migration and global conflicts have created irregular inflows of displaced people.
- Digital systems, including AI, continue to evolve – they are becoming more powerful, but less predictable.

The college is committed to responding with care but also recognises the opportunity, and urgency, to rethink how it designs its work, its curriculum and its systems.

Three staff members take part in a structured design session with the college's GenAI assistant – not to automate tasks, but to elicit insights, establish values and generate structured scenario options rooted in local knowledge.

They are:

- Kiran Singh, Head of Student Wellbeing
- Beth Yilmaz, Tutor in Technical Systems and Energy Pathways
- Owen Price, Learning Technologist and Systems Lead.

It is important to emphasise that the scenarios included here are a speculative illustration and a provocation, and that the scenarios are projections *from* 2030, not *for* 2030. They are heavily contingent on funding, resources, pressures for change and cultural shifts.

The dialogue was generated by our scenario builder tool. For this appendix we have included a verbatim extract of the dialogue for brevity. The full scenario, including an extended dialogue, scenario maps and optional models for prototyping, is available in this online *shareable transcript*.

EXTRACT FROM THE DIALOGUE

Owen (to Astra, the AI system): We're here to explore how our college's work could be reimagined. The group includes staff from student wellbeing, technical education and digital learning. We want to show how the intelligence spread among us – our learning coaches, pastoral and employability hubs, yourself as an AI, our systems – can lead to new, place-specific models of working.

Astra (AI): Please begin by telling me what matters most to each of you in your roles – and what you wish you could do but currently can't.

Kiran: I run a student wellbeing team that's overloaded. We're seeing more learners with trauma, precarious housing, immigration issues. We don't have time to get upstream of the problems – to be proactive, relational. I'd like a system that doesn't just *manage cases* but *learns from them* – identifies patterns we can act on *as a whole college*.

Beth: I teach Level 2 and 3 Technical Systems – mainly energy and control technologies. My learners include 19-year-olds with no GCSEs, adults switching careers and others whose education was in a completely different country. If there's an AI that can genuinely help me adapt my teaching – fine. But let's not pretend it can do what a real teacher does. No algorithm can tell you when to step in, when to hold back or how to read the room the way a real teacher can.

Owen: I run digital systems, train staff and configure Astra. But most of my time is spent firefighting. I'd love to focus on *designing systems that adapt with us*, not just maintaining platforms. But to do that, we need to move from tool use to systems thinking.

Astra: Thank you. I have mapped your statements to three domains:

1. Organisational transformation – aligning wellbeing, curriculum and operations.
2. Human-AI co-design – allowing staff to adapt and lead change.
3. Local intelligence frameworks – tuning the college to regional patterns.

I will now generate three scenario-planning models to illustrate what your work – and the college – could become.

As you guide me to refine these scenarios, I can flag implications for compliance with Ofsted frameworks, funding rules and impact on things like individualised learner records.

AI-GENERATED SCENARIO OPTIONS

1. THE WELLBEING-AS-ARCHITECTURE MODEL

Core idea:

- Wellbeing is no longer a support service – it becomes a structuring principle for how curriculum, operations and learning are designed.

What it looks like:

- Each learner has a co-designed life map linking wellbeing, goals and curriculum.
- Support staff are embedded into teaching teams.
- AI identifies patterns of emotional, social or cognitive load and adjusts timetables, curriculum pace or environment.

Staff impact:

- Wellbeing leads act as strategic co-designers, not just crisis managers.
- Teaching staff develop emotional and civic competencies.
- Learning technologists use AI to adapt systems around stress points and recovery cycles.

Risks:

- Overreach into personal data.
- High coordination demand.
- Risk of 'pathologising' normal variation in student experience.

🔌 *2. THE COMMUNITY ENERGY SPINE MODEL*

Core idea:

- The college becomes a training, data and innovation hub within the region's green energy transition – tied directly into live infrastructure.

What it looks like:

- Curriculum links to live data from wind farms, energy storage sites and retrofitting projects.
- Learners train in modular pathways connected to actual employer demand.
- AI constantly syncs infrastructure plans, labour gaps and learner profiles.

Staff impact:

- Technical tutors co-design curriculum with grid planners and employers – though some express concern about retaining professional autonomy and pedagogical focus.
- Wellbeing staff support community-based placements.
- Digital leads manage dynamic content pipelines and simulate system interventions.

Risks:

- Overdependence on a narrow industrial model.
- Institutional mission creep.
- Community or employer disengagement.

🧠 *3. THE ADAPTIVE GUILD MODEL*

Core idea:

- The college reconfigures around flexible, purpose-led learning 'guilds' – part professional, part civic, part educational.

What it looks like:

- Learners join project-based guilds co-mentored by staff from different domains.
- AI matches real-world challenges to learners' evolving capabilities.
- Assessment is portfolio-based, with outcomes validated by employers and communities.

Staff impact:

- Support and teaching roles begin to blend into 'learning navigators' – though many tutors assert the irreplaceable value of in-person judgement and relational practice.
- Digital leads act as 'toolsmiths' – configuring tech stacks to [meet] guild needs.
- AI supports narrative, reflection and community engagement.

Risks:

- Blurred accountability.
- Difficulty tracking progress across fragmented paths.
- Requires high [level of] staff judgement and maturity.

FINAL REFLECTION

This scenario is not a prediction. It is a provocation to challenge assumptions about how change happens in FE. It explores how staff, rooted in their own place and profession, might work differently when supported by a GenAI that responds to them, rather than directing them.

The final moments of the session captured the shift in mindset that the process enabled – away from big reforms and towards small, staff-led prototypes:

Kiran: But we can't do this in isolation. Whatever we test next, we need learners involved from the beginning. Not as consultees – as co-designers.

Beth: And employers. Especially in the energy and logistics pathways. If they don't shape this with us, it'll miss the mark – again.

Owen: I'd also say governors. They need to see this not as a risk, but as a controlled exploration. We should give them visibility of the scenarios and invite them to ask the hard questions. It's better they're in the room.

Kiran: So the next step? We test one small thing. Maybe a hybrid between two of those scenarios. Maybe we bring in a few more staff – teaching and support – and co-design a prototype. One area. One programme. Astra can help us, right?

Beth: And we document the process. Not the output. The process. That's what makes this replicable. Not a shiny end product, but a method anyone can use.

Each of the futures described here is rooted in real pressures: fiscal constraints, staff capacity and the complexity of learner lives. But the process is what matters most. It shows that FE institutions can use generative tools not just to do things better, but to ask better questions – about what their work could be.

APPENDIX 6: AI-GENERATED THEMATIC ANALYSIS OF STUDENT RESPONSES

INTRODUCTION

The purpose of this thematic analysis is to explore students' experiences and perceptions of AI in education and is based on the analysis of 136 interviews. By examining their responses, we aim to identify key themes that reflect common patterns in how students interact with and think about AI tools in their learning environments. This analysis will help educators and policymakers understand the current landscape of AI use in education and its implications for future educational practices.

Theme	Description of theme	Example quotations
Use for research and learning.	Students frequently use AI to assist with research and understanding complex topics.	"for research" "if there is a topic or definition that I don't fully know I will ask AI" "I use it to ask questions if I'm confused".
Mixed feelings on AI's role.	Students express both positive and negative feelings about AI's role in education.	"I don't like it" "It's good" "I think it's a good tool to use both in and outside of education but we shouldn't rely upon it".
Concerns about authenticity.	Concerns about the authenticity of work produced with AI assistance are common.	"By the way. It is cheating if you use it for assignments" "Because I feel it's more important that the work marked and contributing to my grade is authentic" "no reason to use it tbh".
Institutional encouragement or discouragement.	Institutions have varying policies on AI use, influencing student perceptions.	"They discourage it heavily" "Psychology teachers endorse it" "They are fine with it as long as you do not copy and paste what it says".
Efficiency and productivity.	AI is seen as a tool to enhance efficiency and productivity in educational tasks.	"AI can write emails in like 5 seconds" "You don't have to waste time making it" "Most of the time it gives me clarity".
Limited knowledge and use.	Many students express limited knowledge or use of AI in their studies.	"Don't know much about AI" "I don't really use it".
Potential for enhanced learning.	AI is viewed as having potential to enhance learning experiences if used properly.	"AI could potentially allow for more deep and complex lessons" "It could help to organise lessons in an engaging way" "helping understand complex issues".

INTERPRETATIVE COMMENTARY

USE FOR RESEARCH AND LEARNING

Many students use AI tools to assist with research and to gain a better understanding of complex topics. This suggests that AI is valued for its ability to provide quick access to information and clarify difficult concepts. However, the reliance on AI for research also raises questions about students' critical thinking skills and their ability to evaluate the information provided by AI tools.

MIXED FEELINGS ON AI'S ROLE

Students express a range of feelings about AI's role in education, from positive to negative. While some appreciate the benefits AI offers, others are wary of its impact on learning. This ambivalence highlights the need for the balanced integration of AI in education, ensuring that it complements rather than replaces traditional learning methods.

CONCERNS ABOUT AUTHENTICITY

A significant concern among students is the authenticity of work produced with AI assistance. Many fear that using AI for assignments could be considered cheating or could undermine the value of their work. This theme underscores the importance of developing clear guidelines and ethical standards for AI use in educational settings.

INSTITUTIONAL ENCOURAGEMENT OR DISCOURAGEMENT

Students' perceptions of AI are influenced by their institutions' policies. Some institutions encourage AI use while others discourage it; this leads to students having a variety of perceptions. This theme suggests the need for consistent policies across the FE sector to provide clear guidance on AI use.

EFFICIENCY AND PRODUCTIVITY

AI is often seen as a tool to enhance efficiency and productivity, helping students manage their time and tasks more effectively. This perception indicates that AI can play a supportive role in education by streamlining administrative tasks and allowing students to focus on learning.

LIMITED KNOWLEDGE AND USE

Many students report limited knowledge or use of AI, indicating a gap in awareness and understanding. This theme highlights the need for educational initiatives to increase students' familiarity with AI tools and their potential applications in learning.

POTENTIAL FOR ENHANCED LEARNING

Students recognise the potential of AI to enhance learning experiences, particularly when used in the right contexts. This optimism suggests that with proper implementation, AI can enrich educational experiences and support diverse learning needs.

IMPLICATIONS FOR RESEARCH

1. **Guidelines and ethical standards:** Future research should focus on developing comprehensive guidelines and ethical standards for AI use in education to address concerns about authenticity and cheating.
2. **Educational initiatives:** There is a need for research into effective educational initiatives that can increase students' knowledge and understanding of AI, ensuring they can use these tools effectively and responsibly.
3. **FE sector-wide policy consistency:** Research should explore the impact of varying institutional policies on AI use and advocate for consistent policies that provide clear guidance to students and educators.

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