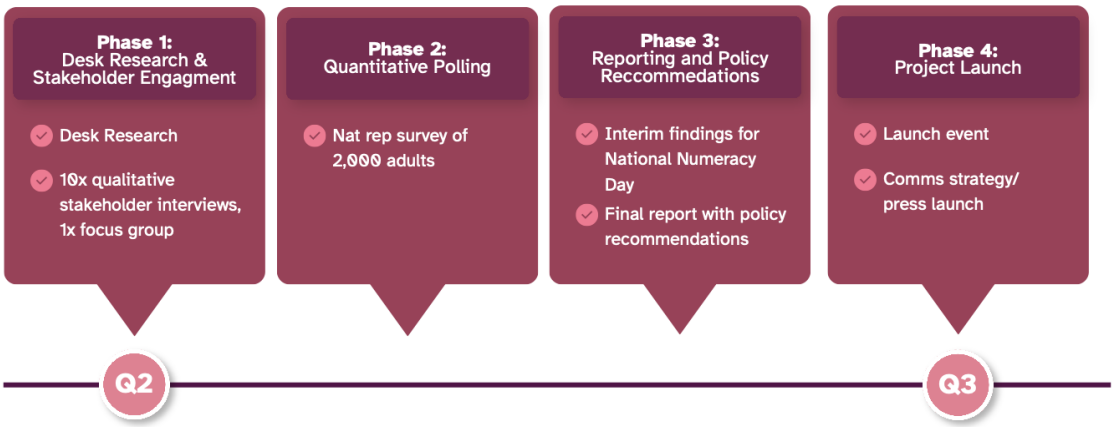
AI, Numeracy and Social Mobility

Interim Findings – May 2026

1. Research Scope and Objectives

In 2026, members of the National Numeracy Leadership Council, launched a new research project, conducted by Policy Connect and supported by KPMG, exploring what the rise of artificial intelligence (AI) means for numeracy skills and social mobility in the UK. The research examines whether people in the UK currently have the numeracy skills needed to engage with AI tools confidents and critically, and what the consequences of that gap are for education, employment and social mobility. Through a mixed-methods approach, expert interviews, desk research, and stakeholder engagement will inform the development of a nationally representative survey of 2,000 adults, with findings used to produce practical, evidence-based recommendations for policymakers, educators, and business leaders. A full repot will be published this summer.



The research addresses the following questions:

- **AI Readiness:** What specific numeracy skills do people in the UK need in order to use AI tools effectively, interpret their outputs, and apply them in deicison-making, and to what extent does the current population possess these skills?
- **Education and Employment:** How does the growing role of AI in workplaces and educational settings change the numeracy skills demanded of individuals, and who risks being left behind if those skills are in place?
- **Policy Action:** What steps should policymakers take to promote numeracy as a fundamental skill in the age of AI, across school, home, and workplace environments?

2. Policy Landscape

The Labour government's AI Opportunities Action Plan, published in January 2025, positions AI as the single biggest lever for the government's economic and public service missions.[1] The plan identifies the UK's existing strengths as world-leading research, a vibrant startup ecosystem and the presence of major frontier AI companies including Google DeepMind. To date, the government reports meeting 38 of the 50 recommendations set out in the January 2025 Action Plan.[2] This includes five AI Growth Zones being designated across the UK, reportedly generating £28.2 billion in private investment and over 15,000 jobs.[3] The government has also delivered 1 million free AI upskilling training courses through industry partners, as part of its commitment to provide free AI training to 10 million workers to reduce the current AI and digital skills gap.[4] In July 2025, the Isambard-AI supercomputer launched at Bristol University meanwhile £2 billion has been committed to expand UK compute capacity twentyfold by 2030.[5]

In October 2025, Skills England published a report highlighting the existing barriers to AI skills development.[6] It highlighted several areas to address, including inconsistent use of the term 'AI Skills', the lack of foundational digital literacy, a fragmented training ecosystem, limited curriculum responsiveness to emerging AI trends, training costs and funding fragility, and limited employer understanding of workforce skills needs. It also highlighted how SMEs face distinct challenges around capacity, cost and awareness.

Skills England presents a framework of three types of AI Skills necessary for workforce planning and training:

1. Technical skills, practical, applied competencies required to operate, monitor and guide AI systems.
2. Responsible or ethical skills, the ability to uphold ethical principles, ensure transparency and accountability, assess bias and apply legal and regulatory standards.
3. Non-technical skills, the foundational, transferable competencies necessary to understand, engage and critically evaluate AI tools for efficiency.

Reference to competencies in numeracy remains a background or indirect consideration across all government announcements regarding AI expansion. Though it is implicitly mentioned in the Skills England report on the lack of foundational skills e.g. student ability to use browsers and training model platforms, this refers more to

[1] HM Government, "AI Opportunities Action Plan", 2025, GOV.UK
[2] HM Government, "AI Opportunities Action Plan: One Year On", 2026, GOV.UK
[3] Ibid
[4] Ibid
[5] HM Government, "AIRR: Advanced Supercomputers for the UK", 2025, GOV.UK; HM Government, "UK Compute Roadmap", 2025, GOV.UK
[6] HM Government, "Barriers to AI Skills Development", 2025, GOV.UK

operational functionality than foundational numeracy skills, like critical thinking. Numeracy is never explicitly referred to as a foundational skill and is indirectly grouped into broader categories such as digital literacy and STEM skills as opposed to being a headline priority. Stakeholders across the project have suggested that within government, numeracy skills are currently viewed as an assumed prerequisite for AI upskilling while AI and digital skills dominate the policy discourse.

The latest Department for Education's (DfE) guidance on generative AI in education frames AI primarily as a tool for reducing teacher workload rather than direct learning intervention.[7] Schools have not been explicitly directed to adopt pupil-facing AI tools but are permitted to do so under strict conditions, such as close supervision, age-appropriate safeguarding, data protection compliance, and use of tools with filtering and monitoring features. The DfE remains open to the benefits of AI use in schools and is currently in a research, evidence gathering and pilot-testing phase of AI adoption in education. In April 2026, the DfE invited EdTech and AI companies to begin building and testing safe AI tutoring tools in up to 1,000 schools from Summer 2026, with the potential to scale up successful tools to target 450,000 children on free school meals in Years 9 to 11.[8]

The DfE's post-16 Maths and English conditional funding guidance sets out mandated minimum teaching hours at 100 hours per year for full-time students; delivered as stand-alone, whole-class, face-to-face teaching. Online and small group learning are permitted only as supplements, not substitutes for mandated hours.[9] This has direct implications for where AI tools can sit within post-16 maths provision: as supplements to direct instruction, not replacements for it. As part of their reforms to post-16 education, the DfE have also announced the introduction of V-levels for education, finance, accounting, data and digital from 2027. These new qualifications will run alongside existing A-level and T-level pathways to provide a third level 3 route for students. The aim of these reforms is to diversify the mix of post-16 qualifications, allowing students to take a mixture of academic, technical and vocational courses, in the hope of demystifying alternative, non-academic routes to higher education, training and employment.[10] Notably, the 'digital' V-level may have implications on AI training and offer a new pathway to bridge the current AI skills gap – though full details on course content are yet to be published.

[7] HM Government, "Generative Artificial Intelligence (AI) in Education", 2025, GOV.UK
[8] HM Government, "Edtech and AI Companies Invited to Help Build Safe AI Tutoring Tools for Disadvantaged Pupils", 2026, GOV.UK
[9] HM Government, "2026 to 2027 Academic Year: 16 to 19 Funding: Maths and English Condition of Funding", 2026, GOV.UK
[10] HM Government, "First V Levels Subjects Revealed as Part of Landmark Reforms", 2026, GOV.UK

Key Policy Announcements

January 2025: AI Opportunities Action Plan[1]

- 50 recommendations across three pillars: investing in AI foundations, driving cross-economy adoption, and positioning the UK as an AI maker

February 2025: Digital Inclusion Action Plan and AI Playbook[2]

- Digital Inclusion Action Plan addresses skills gaps, data/device poverty, and local delivery through a new Digital Inclusion Fund
- AI Playbook sets out 10 principles for public sector AI use, covering capabilities, limitations, risks, and procurement guidance

March 2025: Government Overhauls Funding for AI and Digital Projects[3]

- Shift to test-and-learn approach: small-scale pilots scaled on success

June 2025: PM Launches National Skills Drive[4]

- £187 million investment to bring AI learning to classrooms and communities; targets 1 million secondary school students
- 7.5 million workers to gain AI skills by 2030 via partnerships with NVIDIA, Google, and Microsoft

July 2025: Isambard-AI Supercomputer Launches at Bristol University[5]

- Ranked top 15 globally; part of £350 million government investment across Bristol and Cambridge by 2030

August 2025: Department for Education Commits to AI in Education[6]

- Focus on safety, reliability, and addressing connectivity barriers to AI tool use in schools

October - November 2025: Government Announces Billions in Additional Investment; Skills England Report Published[7]

- New AI Growth Zone in South Wales forecast to create 5,000+ jobs over the next decade
- Skills England Report identifies key barriers: fragmented training ecosystem, weak foundational digital literacy, curriculum lag, and funding instability

January 2026: Government Expands AI Training; Action Plan One Year On[8]

- Free AI foundations training expanded to 10 million people, including NHS and techUK; £27 million to connect communities to tech jobs
- 38 of 50 original Action Plan commitments met

February 2026: Government Backs Barnsley as UK's First Tech-Town[9]

- Bespoke government support for local schools, colleges, businesses, and NHS; Microsoft, Cisco, Adobe, and Google commit to local access to tech jobs

April 2026: Government Invites EdTech and AI Companies to Build Safe AI Tutoring Tools[10]

- £23 million investment to expand EdTech Testbeds; up to 8 companies to begin school testing from Summer 2026
- Potential to reach 450,000 disadvantaged pupils annually at scale

Figure 1: Key Policy Announcements: (1) Figure 1. 1 HM Government, "AI Opportunities Action Plan", 2025, GOV.UK, (2) HM Government, "Digital Inclusion Action Plan", 2025, GOV.UK; HM Government, "AI Playbook for the UK Government", 2025, GOV.UK, (3) HM Government, "Government to Take a 'Test and Learn' Approach with Spending on AI and Digital to Push Innovation", 2025, GOV.UK, (4) HM Government, "PM Launches National Skills Drive to Unlock Opportunities for Young People in Tech", 2025, GOV.UK, (5) HM Government, "AIRR Advanced Supercomputers for the UK", 2025, GOV.UK, (6) HM Government, "Generative Artificial Intelligence (AI) in Education", 2025, GOV.UK, (7) HM Government, "AI to Power National Renewal as Government Announces Billions of Additional Investments and New Plans to Boost UK Businesses, Jobs and Innovation", 2025, GOV.UK; HM Government, "Barriers to AI Skills Development", 2025, GOV.UK, (8) HM Government, "Free AI Training for All, as Government and Industry Programme Expands to Provide 10 Million Workers with Key AI Skills by 2030", 2026, GOV.UK; HM Government, "AI Opportunities Action Plan: One Year On", 2026, GOV.UK, (9) HM Government, " Barnsley Becomes UK;s First Government-backed Tech Town ", 2026, GOV.UK, (10) HM Government, "Edtech and AI Companies Invited to Help Build Safe AI Tutoring Tools for Disadvantaged Pupils ", 2026, GOV.UK

3. Phase 1 – Emerging Themes

The research is currently part way through its qualitative phase, with stakeholder interviews and focus groups ongoing. The themes set out below reflect the emerging picture from the first phase of the research and represent the first opportunity to draw together what stakeholders and desk research are collectively beginning to suggest.

These are emerging themes, they are intended to illustrate the direction of the findings and to highlight the areas where evidence is coalescing most clearly. Further analysis, alongside the full findings and recommendations, will be published in the final report this Summer 2026.

3.1 Stakeholders welcomed AI's potential while raising significant concerns about output reliability

Across interviews, stakeholders highlighted the potential of AI to perform tasks, including numerical tasks, quickly and to a high standard. Stakeholders noted that this potential extends beyond professional or organisational contexts into everyday life. One stakeholder pointed to the possibility of AI helping people better understand financial products, such as those offered by banks, as an example of where the tools could meaningfully support individuals in navigating complex information they might otherwise find difficult to access. A stakeholder also noted that AI has the potential to augment individual capabilities, offering confidence to those who may not feel comfortable performing tasks such as calculations independently. As with the broader potential of these tools, stakeholders emphasised that realising this benefit would depend on the existence of appropriate support structures to ensure individuals engage with AI safely and effectively.

However, stakeholders were equally consistent in raising concerns about the reliability of AI outputs. The tools sometimes present information as though it is accurate and complete, regardless of whether it is. Unlike asking another person a question, whether a professional, a friend, or a family member, AI tools do not always adequately signal uncertainty or indicate when they may be wrong. There is no consistent built-in resistance to error.

Stakeholders noted that this is compounded by other characteristics of the tools. Outputs tend to be confirmatory, reinforcing what a user already believes or expects rather than challenging it. The quality of a response also depends significantly on how a question is framed: two similar prompts can yield substantially different answers, making consistency difficult to rely on.

> *"The clarity of a prompt and the precision of the wording you are using to try and get the answer you are looking for is important as one question can come up with some very different answers."*
> Customer Education and Corporate Social Responsibility, Software Company

Several stakeholders also raised the issue of bias, noting that many AI models are trained on datasets that are themselves flawed or skewed, with documented examples of racial bias and discrimination in outputs. Stakeholders were clear that the appearance of confidence in an AI output is not a reliable guide to its accuracy.

3.2 Critical thinking is the essential skill for AI engagement, and this requires numeracy

Given the reliability concerns described above, stakeholders were consistent in identifying critical thinking as the most important capability for meaningful AI engagement, whether in professional settings, education, or everyday life. The ability to assess whether an output is reasonable, to question it, sense-check it, and recognise when something may be wrong, was seen as the basic condition for using these tools safely and effectively.

Stakeholders highlighted that this is always grounded in a basic understanding of numbers and numeracy. Even where a question appears entirely qualitative, AI tools are drawing conclusions based in part on probability and statistical inference. Being able to recognise and interrogate the numerical assumptions embedded in a response is therefore relevant across a much wider range of uses than might be immediately obvious. Stakeholders referred to the importance of numerical skills such as a sense of scale, identifying patterns, an understanding of units and proportions, and basic statistical literacy as important foundations for this kind of critical engagement. Without these, users may lack the means to identify when a figure, proportion, or numerical claim within a response warrants closer scrutiny.

> *"I think the crucial thing for people to understand is what AI is good for and what it's not. And I think one prerequisite to that is probabilistic thinking. I think it must be hard to understand what AI gives you if you think all answers are either true or false."*
> Learning and Organising Services, Trade Union

> *"I think about when calculators became the norm. They can do simple numerical operations a lot faster for you but the question was can students tell whether the answer they're getting is in the right ballpark? And that's not to do with the computer, or the calculator, but their own estimating skills. And AI is so much more powerful than a calculator."*
> Policy Manager, Further Education Sector Body

A concern raised across a number of interviews is that a limited grounding in numeracy can be difficult for individuals to recognise in themselves. Where someone lacks the numerical skills to assess an output, they may also be unaware of what they are not checking. In this sense, the gap in understanding and the gap in verification tend to compound one another.

When discussing AI use for numerical tasks specifically, stakeholders also questioned whether it is possible to meaningfully engage with an output on a process you have never worked through yourself. Understanding whether an answer is plausible may depend on some familiarity with the underlying method, not just the result. Several stakeholders suggested that even where a straightforward numerical task could reasonably be delegated to an AI tool, there remains value in continuing to work through it manually, particularly during the learning process.

> *"Actually, we humans do need to go through some steps that are not technology assisted in order to then understand what it is their asking the technology to do... Paradoxically we might need education without technology in order to be well prepared for education with technology."*
> Policy Manager, Further Education Sector Body

A related concern raised by stakeholders is that even where individuals do have the numerical skills to question an output, the transparency of AI processes can present its own barrier. There is often limited visibility into how a tool has reached its conclusion. This is sometimes referred to as the "black box" nature of AI: the model may have passed through a vast number of computational pathways to arrive at an answer, with little or no indication of the reasoning behind it. When an error is identified, tracing back through the process to understand where or why things went wrong can be difficult, even for a skilled and attentive user.

A further concern identified by stakeholders is that this dynamic may worsen over time. If people increasingly rely on AI to perform numerical tasks rather than developing those skills themselves, the capacity for critical assessment may erode. Stakeholders suggested this could create a self-reinforcing pattern: reduced engagement with numbers reduces the ability to scrutinise AI outputs, which increases dependence on the tools, which further reduces engagement with numbers.

> *"You can't turn someone who's not doing well into a high performer with AI alone. I think AI will actually exacerbate poor performance and enhance people who are already performing well."*
> Researcher, University Health Informatics Institute

> *"If we're thinking about numerical tasks if you are doing less of that yourself and instead being able to jump straight to an outcome there's risks there."*
> Policy Manager, Further Education Sector Body

3.3 Without intervention, AI risks compounding existing patterns of disadvantage

The risks described above do not manifest in the same way for all users. Stakeholders identified two distinct groups who may be particularly at risk, each facing a different consequence of the same underlying gap in numeracy and digital confidence, and both disproportionately likely to be drawn from those already experiencing disadvantage.

The first group engages with AI but may do so without the numerical grounding needed to critically assess what the tools produce. Stakeholders noted that this group may accept outputs at face value, including in contexts ranging from financial decisions to health information to educational support, without the means to identify when something is inaccurate, incomplete, or biased. The concern is less about individual judgement than about the absence of the skills needed to exercise it.

The second group does not engage meaningfully with AI tools. Stakeholders suggested that the same opacity and apparent complexity that can lead to uncritical reliance in some users produces avoidance or anxiety in others. Where confidence is low, whether in the tools themselves or in one's own ability to use them effectively, the response may be to disengage rather than defer. In everyday life, this may mean missing out on practical benefits, from accessing information and navigating services to supporting learning and managing finances. In professional contexts, the consequences as employer expectations around AI use grow, those who lack the confidence or skills to engage with the tools may find themselves at a disadvantage.

> *"It's the colleagues in administration that are concerned and worried that where systems previously existed that they knew they're now being asked to use AI without a real understanding of the purpose behind it."*
> Learning and Organising Services, Trade Union

> *"I think if you were going into a job interview now and you hadn't had any basic interface with AI that would really impact your confidence. This is especially so for people who are furthest away from the labour market. We want to make sure that there isn't a kind of a class of people that are left behind because they haven't been given the right skills that employers now want with regards to use of AI, whether that's numeracy or comfortability with digital platforms."*
> Campaign Director, Recruitment Industry Body

Stakeholders suggested that both patterns may correlate with lower levels of numeracy and prior educational attainment, though they were clear that neither group should be understood as a fixed or homogeneous category.

The question of access compounds this further. For a significant proportion of the population, barriers to AI engagement include not only skill and confidence but also the practicalities of access itself. Reliable internet access, appropriate devices, and the financial means to use paid platforms are unevenly distributed, in ways that reflect existing patterns of socioeconomic disadvantage. Stakeholders were clear, however, that providing access to more powerful tools does not, in itself, equip people to engage with them critically or effectively. Without a parallel investment in numeracy and digital skills, expanded access risks deepening rather than closing the gap between those who can use AI well and those who cannot. Both groups, and the access and skills barriers that shape their experience, represent distinct but connected challenges for policy.

> *"What AI could do is drive a greater wedge between those that have and have not. Just like we've seen with the difference on the financial side with inclusion and exclusion, we've seen it through digital inclusion and exclusion."*
> Social Innovations Lead, Financial Services firm

3.4 Structural pressures on education and workplaces are limiting the response to AI

Stakeholders were broadly in agreement that the education people receive, both in school and through workplace or adult learning, may not adequately prepare them to engage with AI critically or confidently.

The speed at which AI is developing significantly outpaces the speed at which formal education systems can respond, and reviews of curriculum content, while underway in a number of contexts, were seen as moving too slowly relative to how rapidly the tools are evolving.

> *"People can get one opportunity at an education. It's important we don't let people pass up the opportunity to develop numeracy skills on the theory that AI might be able to replace them someday, until it actually is and can."*
> Head of Policy and External Affairs, Education and Skills Charity

Several stakeholders also pointed to persistently low levels of numeracy across the population as a concern that predates AI and that shapes people's capacity to engage with it meaningfully. The challenge is not only about teaching people to use new tools but also addressing a longer-standing gap in the numerical skills that those tools now require. Stakeholders also raised questions about the way maths education is taught in the UK. A number suggested that the emphasis within school curricula on formal and academic mathematics, while valuable in some respects, may not be well suited to developing the kind of applied numerical reasoning that everyday AI engagement demands. Skills such as interpreting data, understanding probability, or recognising when a figure is implausible in

context were seen as at least as important as procedural mathematical ability, but not always well served by existing approaches to maths education.

A particular pressure point highlighted across interviews is the position of teachers and educators. Many are not yet in a position to model or teach effective AI engagement, as they themselves may not have had the time or support to develop familiarity with the tools at the pace their students are already adopting them. This gap is especially significant given that students are likely to encounter AI across a wide range of subjects and contexts, as well as in their everyday lives. It is also important to recognise that teachers are operating within a system already under considerable strain. Competing demands on time, limited access to continuing professional development, and pressures on school and college capacity mean that even where willingness to engage with AI exists, the space to do so meaningfully may not. The challenge is therefore one of system capacity and professional development as much as curriculum design, and addressing it will require investment at the level of the institution as well as the individual educator.

> *"Teachers need to be comfortable and familiar with AI first. But the trouble is of course, meanwhile students are getting comfortable and familiar with it in a different setting. We're all co-evolving in a world which is changing rapidly."*
> Policy Manager, Further Education Sector Body

> *"Teachers are in the classroom 35 hours a week doing their PPA or desperately trying to catch up with marking and other workload problems... [They] haven't got time to even really think about the size of the problem. They don't even know how big the problem is. They can't even grasp whether this is the end of education or if one of [their] students is cheating on their exam."*
> Lecturer and Head of Department, Higher Education Institution

Similar pressures were identified in workplace contexts. Stakeholders noted that many employers are also struggling to respond to the pace of AI development in any systematic way, with training and upskilling provision failing to keep pace with how rapidly the tools are being integrated into working life. This challenge was seen as particularly acute for small and medium-sized enterprises. Where larger organisations may have dedicated resource for workforce development or access to tailored training programmes, SMEs often lack the capacity, time, and budget to invest in AI literacy in any structured way. For employees in these settings, the expectation to engage with AI tools may be growing while the support to do so critically and confidently remains limited or absent.

> *"There needs to be a plan for employers to think about how do we upskill our existing employees to make sure they have the right kind of proficiency to use AI confidently."*
> Campaign Director, Recruitment Industry Body

3.5 The role of numeracy in AI readiness is not yet reflected in policy

Stakeholders expressed concern that the policy landscape has not kept pace with the scale or speed of AI development. Most felt that government policy has tended to focus on AI's potential for productivity and economic growth, and on the speed of implementation, rather than on the foundational skills and preparation that would be needed to make those gains broadly accessible. A number of stakeholders highlighted that policymakers themselves may not yet fully understand the tools or their wider implications. This applies not only to AI-specific policy but to the range of areas, including education, employment, consumer protection, and public services, where AI is already having an effect.

> *"We've got people who don't really understand what AI can already do, who need to be developing policy based on what AI might be able to do in the not too distant future."*
> Head of Policy and External Affairs, Education and Skills Charity

> *"If you look at what's in the Department for Science, Innovation and Technology's AI Skills Hub, they're all 20 minute chunks of how to use their tools. But we want to look at trustworthy AI and responsible AI. The focus is very much immediate gratification and immediate answers, rather than taking the time to actually think about it."*
> Customer Education and Corporate Social Responsibility, Software Company

A specific concern raised by stakeholders is that numeracy remains peripheral to the current policy conversation about AI. Government announcements and frameworks have tended to treat numeracy as an assumed background competency rather than a headline priority in its own right. Where foundational skills are referenced, they are typically grouped under broader categories such as digital literacy or STEM, without explicit acknowledgement of the role that numerical understanding plays in enabling people to engage with AI critically and safely. Stakeholders across the project suggested that this represents a significant gap. If people are to be equipped not just to use AI tools but to question and evaluate what those tools produce, numeracy needs to be recognised explicitly as a core component of AI readiness.

> *"The problem is low numeracy levels. With or without AI that's a baseline problem, and if we have higher levels of numeracy we'll be better equipped to use AI as well."*
> Policy Manager, Further Education Sector Body

Stakeholders also emphasised that the response to these challenges cannot rest solely on equipping individuals to engage with AI more critically and effectively. Equally important, they argued, is the role of technology companies themselves in improving the transparency and accuracy of their tools. This includes more consistent and meaningful flagging of

uncertainty, errors, and limitations in outputs. Stakeholders noted that placing the entire burden of critical assessment on the individual user is neither sustainable nor equitable, particularly given that the skills required to do so are unevenly distributed across the population and, as earlier findings suggest, are not being adequately developed through existing education and training provision. The two tracks identified by stakeholders, preparing people to engage with AI more critically and making the tools themselves more trustworthy, were seen as necessary and simultaneous responses to the challenges AI presents.

> *"Everything's moving at such a pace and individuals don't have control of what data goes into AI. That's where government has an important job to do setting up the right guardrails and having basic minimum assurance. It can't be individual countries tackling this on their own, it requires some sort of global agreement."*
> Campaign Director, Recruitment Industry Body

4. Phase 2 – Emerging Themes

The survey fieldwork has now been completed, with responses collected online from a nationally representative sample of 2,000 UK adults. The findings set out below represent an initial analysis of the headline results and reflect the first opportunity to draw together what the survey data is beginning to suggest, alongside the emerging themes from the qualitative phase set out in section 3.

These are early findings rather than final conclusions. As with the qualitative themes above, they are intended to illustrate the initial patterns emerging from the data and to highlight the areas where results are most consistent across respondent groups. Full analysis, alongside the complete findings and recommendations, will be published in the final report this Summer 2026.

It is important to note that the findings in this section can only speak to the respondents surveyed and should not be read as directly representative of the UK population as a whole. Survey panels of this kind may over-represent respondents with higher levels of education, which in turn may mean that measures such as numeracy confidence are somewhat higher among this sample than they would be across the broader population. This is a consideration that will be addressed more fully in the final report, and all findings should be interpreted with this in mind.

4.1 Numeracy confidence is high overall, but lower among groups facing wider disadvantage

Overall, 84% of survey respondents report net confidence (very confident/fairly confident) in performing everyday numerical tasks. However, confidence is not equally distributed among respondents, and the gaps follow consistent lines across socioeconomic grade, gender, and education.[i,ii]

Confidence clusters among more advantaged respondents. Early analysis of the survey data suggests that lower confidence is more common among respondents already experiencing broader socioeconomic disadvantage. Across socioeconomic grade, gender, and education level, the pattern points in the same direction:

- By socioeconomic grade: net confidence ranges from 88% among AB respondents to 78% among DE respondents
- By gender: 88% of male respondents report net confidence compared to 79% of female respondents, a nine percentage point gap
- By education: graduates report net confidence of 89%, against 81% for non-graduates; non-graduate respondents are also more likely to report low confidence (18% vs 10% - not very confident/not at all confident)

These patterns are broadly consistent with wider evidence that socioeconomic status and educational attainment are established predictors of numerical confidence across the UK population.

4.2 Confidence is lowest on calculation and magnitude tasks

When asked about specific numerical tasks, respondents feel most confident understanding charts, graphs and tables (80% net confident) and spotting implausible figures (79%). Confidence is noticeably lower among respondents on tasks involving calculation or magnitude:

- Working out percentages, fractions or proportions: 72% net confident, with 25% reporting low confidence
- Making sense of very large or very small numbers: 72% net confident, with 24% reporting low confidence

The gaps between respondent groups on these specific skills are wider still. On percentages and fractions, early analysis suggests:

- A 17 percentage point gender gap (81% of male respondents vs 64% of female respondents)
- A 20 percentage point socioeconomic grade gap (AB 80% vs DE 60%)
- AB respondents are nearly twice as likely as DE respondents to feel very confident on questions of scale (41% vs 23%)

The respondents reporting the lowest confidence on calculation and magnitude tasks are those already facing wider disadvantage across other measures. It is worth noting that several of these task types, including interpreting proportions and assessing whether a figure is plausible, were among the skills stakeholders in the qualitative phase highlighted as important for engaging critically with AI outputs. This could point to a potential concentration of risk among respondents who may be less well placed to interrogate numerical information produced by AI tools.

4.3 AI awareness is high across respondents, but use is lower among groups facing wider disadvantage

94% of survey respondents report awareness of AI tools, yet only 53% have used them, leaving 41% who are aware but have not yet done so.[iii] However, the pattern within this gap varies considerably across respondent groups.

Awareness is broadly comparable across groups; use is not. Early analysis suggests that respondents from more advantaged groups are considerably more likely to have used AI tools:

- By socioeconomic grade: awareness ranges from 97% among AB respondents to 88% among DE respondents, but the gap in actual use between these groups is considerably wider
- By education: graduate and non-graduate respondents report comparable awareness (97% vs 92%), but graduates are 21 percentage points more likely to have used AI tools (67% vs 46%); non-graduate respondents are equally likely to sit in the aware-but-not-using category as to have used AI at all (46% each)
- By working status: working respondents are considerably more likely to have used AI tools than non-working respondents (60% vs 39%), despite comparable awareness (95% vs 92%), suggesting that the workplace may be a significant driver of use among this sample

Age produces one of the clearest patterns in the data. Among respondents aged 55 to 75, only 31% have used AI tools, while 61% are aware but have not, a ratio close to the inverse of younger cohorts.

Early analysis suggests that awareness of AI tools is already high and relatively evenly distributed among respondents in this sample. The more unequal factor appears to be use, with education, socioeconomic grade, working status, and age all associated with variation in this sample. For policy, this raises the question of how to translate awareness into active and critical engagement with AI tools to ensure that respondents from groups facing socioeconomic disadvantage are not missing out on the potential benefits these tools may offer.

4.4 Personal AI use is broadly consistent across respondents; workplace use is concentrated among more advantaged groups

Among respondents who have used AI tools, 87% report doing so for personal purposes, a figure that is broadly consistent across respondent groups. Workplace use is where the variation between respondent groups is most pronounced, standing at 50% overall but ranging considerably across socioeconomic grade, education, age, and gender.[iv]

Workplace use is strongly associated with socioeconomic grade. Early analysis suggests that respondents from more advantaged groups are considerably more likely to be using AI tools professionally:

- By socioeconomic grade: workplace use ranges from 16% among DE respondents to 38% among C2 respondents, 53% among C1 respondents, and 67% among AB respondents; AB respondents are more than four times as likely as DE respondents to report using AI at work
- By education: graduate respondents are nearly twice as likely as non-graduates to use AI at work (65% vs 37%), while personal use is comparable across both groups (86% vs 88%)
- By gender: male respondents are more likely than female respondents to report workplace AI use (53% vs 45%)

Workplace usage is also correlated with age. Workplace use is highest among respondents aged 25 to 34 (62%) and 35 to 44 (59%), and lowest among respondents aged 55 to 75 (25%).

For respondents in more advantaged groups, AI engagement appears to extend into professional contexts alongside personal use. For respondents in less advantaged groups, AI engagement is more likely to be personal only. Early analysis cannot speak to causation or broader population-level patterns, but if workplace engagement is a significant route through which AI skills develop over time, its concentration among already advantaged respondents may risk deepening existing inequalities in AI readiness. This is broadly consistent with what stakeholders in the qualitative phase identified, that access to structured workplace contexts may shape the depth and confidence with which people engage with AI tools.

4.5 Only 1 in 4 respondents agree that numeracy skills are needed to use AI tools

Only 25% of survey respondents net agree (strongly agree/tend to agree) that good numeracy skills are needed to use AI tools, against 36% who actively disagree (tend to disagree/strongly disagree) and 32% who neither agree nor disagree.

The contrast with literacy is notable. 42% of respondents agree that good literacy skills are needed to use AI tools, against 25% who disagree. Respondents are therefore 17 percentage points more likely to agree that literacy is a prerequisite for AI use than numeracy, and considerably less likely to disagree that literacy matters (25% vs 36%). This gap may reflect a wider tendency to understand AI primarily as a language-based technology, an understanding that sits in tension with what stakeholders in the qualitative phase identified as the numerical skills required for critical AI engagement.

Recognition of numeracy's relevance to AI use declines with age and varies by socioeconomic grade and education. Early analysis suggests that respondents who are younger, more highly educated, or from more advantaged socioeconomic groups are more likely to agree that numeracy skills are needed to use AI tools:

- By age: agreement declines from 37% among respondents aged 16 to 24 and 25 to 34, to 25% among 35 to 44 year olds, 19% among 45 to 54 year olds, and 17% among 55 to 75 year olds
- By socioeconomic grade: 35% of AB respondents agree, against 18% to 24% across C1, C2 and DE respondent groups
- By education: graduate respondents are nearly twice as likely as non-graduates to agree that numeracy is needed for AI use (35% vs 20%)
- By gender: 30% of male respondents agree, against 20% of female respondents; female respondents are also more likely to actively disagree (40% vs 33%)

The respondents least likely to recognise numeracy as relevant to AI engagement are those in lower socioeconomic grades, those without graduate-level education, and those in older age groups. These are broadly the same groups identified in earlier findings as facing wider disadvantage across numeracy confidence and AI use. This is consistent with what stakeholders in the qualitative phase described: that a limited grounding in numeracy can be difficult for individuals to recognise in themselves, and that the gap in understanding and the gap in verification may compound one another.

4.6 Trust in AI and understanding of how it works are lower among groups facing wider disadvantage

56% of survey respondents report net trust (very trustworthy/fairly trustworthy) in AI tools in terms of the accuracy of their responses and results, against 36% who do not (not very trustworthy/not at all trustworthy).

However, trust is not evenly distributed across respondent groups and follows patterns broadly consistent with those seen in earlier findings.

Trust in AI is strongly associated with age and socioeconomic grade. Early analysis suggests that younger respondents and those from more advantaged groups report considerably higher levels of trust:

- By age: net trust ranges from 71% among respondents aged 16 to 24, to 65% among 25 to 44 year olds, 56% among 45 to 54 year olds, and 38% among 55 to 75 year olds, a 33 percentage point spread across the sample
- By socioeconomic grade: net trust ranges from 45% among DE respondents to 67% among AB respondents
- By working status: working respondents report 62% net trust against 42% among non-working respondents
- By education: graduate respondents report 62% net trust against 52% among non-graduates

It is worth noting, however, that fewer than one in ten respondents across the sample overall places strong trust in AI outputs, with only 10% of male respondents and 6% of female respondents selecting "very trustworthy."

Understanding of how AI works is lower still, and the gap between use and understanding is notable. Only 53% of respondents net agree they understand how AI systems generate answers, against 21% who disagree. This sits six percentage points below the proportion who feel confident in their ability to use AI tools (59% net agree), suggesting that among this sample, confidence in using AI does not always extend to understanding what it produces or how.

Both measures follow similar patterns across respondent groups:

- By age: understanding how AI works ranges from 66% to 67% net agreement among respondents aged 16 to 34, falling to 37% among respondents aged 55 to 75; confidence in using AI tools follows a similar pattern, from 74% to 76% among younger respondents to 40% among older ones
- By socioeconomic grade: understanding how AI works ranges from 65% among AB respondents to 39% among DE respondents, a 26 percentage point gap

Early analysis suggests that lower trust and weaker self-reported understanding of AI are concentrated among the same respondent groups identified in earlier findings as facing wider disadvantage, notably older respondents and those in lower socioeconomic grades. This suggests that respondents may feel able to use AI tools without feeling equipped to critically assess what those tools produce, a concern raised directly by stakeholders in the qualitative phase.

4.7 AI learning is predominantly self-directed; access to formal provision is lower among less advantaged respondents

Among respondents who have used AI tools, 65% report learning primarily by interacting with the tools themselves, and 35% through their own research. Formal routes account for a considerably smaller share: 14% through employer training and 6% through an educational course. Among this sample, AI competence appears to have developed largely outside structured provision.[v]

Access to formal training is lower among less advantaged respondents. Early analysis suggests that access to both employer training and educational courses is considerably more common among respondents from more advantaged groups:

- By socioeconomic grade: AB respondents are 2.6 times more likely than DE respondents to have accessed employer training (18% vs 7%); access to educational courses follows a similar pattern (10% for AB respondents against 1% for DE respondents)
- By gender: male respondents are more likely to have learned through employer training (15% vs 11%) and their own research (39% vs 30%), while female respondents are more likely to have learned through friends, family and colleagues (24% vs 19%)

Early analysis cannot speak to causation or broader population-level patterns, but among this sample, access to formal AI training appears to follow similar lines to those identified in earlier findings, with more advantaged respondents more likely to have accessed structured provision. This is broadly consistent with what stakeholders in the qualitative phase identified: that informal and self-directed learning, while widespread, may not develop the consistent or critical AI skills that more structured provision could support, and that this gap is unlikely to be evenly distributed across the population.

4.8 Respondents spread responsibility for AI skills across multiple actors

When asked who should be primarily responsible for ensuring people in the UK have the skills to use AI tools effectively, respondents were able to select all answers that applied.

Responses were spread across all actors listed, with no clear frontrunner. Schools, colleges and universities were most commonly selected (44%), followed by individuals themselves (40%), companies and organisations using AI in the workplace (39%), AI companies and technology developers (32%), government (28%), and community organisations and charities (12%), with 13% selecting "don't know." The distribution of responses across this sample suggests that responsibility for AI skills is not yet clearly attributed among respondents.

Age is associated with meaningful variation in how responsibility is distributed. Among respondents aged 55 to 75, educational institutions are most commonly selected (52%), while respondents aged 16 to 34 are least likely to select them (35% to 36%). Respondents aged 16 to 24 are least likely to select individuals themselves (22%); and more likely to select AI companies and technology developers (38%) compared to those aged 55 to 75 (29%).

Less advantaged respondents are more likely to say they do not know. Across socioeconomic grade and education, respondents from less advantaged groups are considerably more likely to have selected "don't know":

- By socioeconomic grade: 19% of DE respondents against 7% of AB respondents
- By education: 15% of non-graduate respondents against 8% of graduates

The distribution of responses across this sample suggests that public understanding of who should be responsible for AI skills development is unsettled. Government was selected by fewer than three in ten respondents (28%), which may indicate that expectations of state intervention in AI skills provision are not yet strongly formed among this sample. The higher rate of "don't know" responses among less advantaged respondents is consistent with patterns identified in earlier findings, and may suggest more limited engagement with questions of AI governance among groups already facing wider disadvantage.

5. Emerging Conclusions

Across the eight areas covered by the survey, a broadly consistent pattern emerges among respondents in this sample. Socioeconomic grade, education, age, and working status are all associated with variation across the full range of measures, from numeracy confidence and AI awareness, through to workplace AI use, trust, understanding, access to formal training, and engagement with questions of responsibility. To illustrate the scale of this variation: compared with AB respondents, DE respondents in this sample are 10 percentage points less likely to report numerical confidence (78% vs 88% respectively), more than four times less likely to report using AI at work (16% vs 67% respectively), 22 percentage points less likely to report trusting AI outputs (45% vs 67% respectively), and 26 percentage points less likely to report understanding how AI systems work (39% vs 65% respectively). A similar picture

emerges when comparing graduate and non-graduate respondents, and working and non-working respondents.

This early analysis cannot speak to causation or broader population-level patterns. However, the consistency of the pattern across this sample is worth noting, and it broadly reinforces what stakeholders identified in the qualitative phase. Stakeholders described two groups at particular risk: those engaging with AI without the numerical grounding to critically assess what it produces, and those who are not engaging meaningfully at all. Both groups, stakeholders suggested, were more likely to be drawn from those already experiencing wider disadvantage. The survey data, while indicative rather than conclusive, points in a similar direction.

Taken together, the qualitative and survey findings suggest that the challenge is not simply one of expanding access to AI tools or awareness of them. The groups least likely to be using AI critically and confidently are broadly the same groups with lower numeracy confidence, lower trust in AI outputs, and less access to formal training. This sits in a policy context where, as set out in section 2, government investment has focused primarily on the speed and scale of AI adoption, and where numeracy is not yet explicitly recognised as a foundational component of AI readiness in any major policy framework. The Skills England report identifies a fragmented training ecosystem and limited foundational digital skills as barriers to AI skills development, but does not name numeracy as a headline priority. Addressing the patterns emerging from this research will likely require responses that work across awareness, use, skills, and confidence simultaneously, and that explicitly account for the role of numeracy within them. These questions will be explored in greater depth in the final report, drawing on the full qualitative and quantitative analysis.

[i] References to socioeconomic grade throughout this report use the National Readership Survey (NRS) classification system, a standard UK demographic framework based on the occupation of the chief income earner in a household. Six categories are used, typically grouped as AB (higher and intermediate managerial, administrative, or professional), C1 (supervisory, clerical, or junior managerial), C2 (skilled manual workers), and DE (semi-skilled and unskilled manual workers, state pensioners, and those on lowest grade or casual work).

[ii] References to education level throughout this report distinguish between graduate and non-graduate respondents. Graduate respondents are those who hold a university degree or equivalent higher education qualification. Non-graduate respondents are those who do not hold such a qualification, regardless of other educational attainment.

[iii] Use figures reflect respondents' self-reported awareness of their own AI tool use. As AI functionality is increasingly embedded within mainstream platforms and services, some respondents may be engaging with AI tools without recognising them as such, meaning actual use across the sample may be higher than these figures indicate.

[iv] Respondents who identify as working make up 66% of the survey sample, compared to approximately 75% of the UK working-age population. Non-working respondents are therefore somewhat overrepresented in this sample, and gaps between working and non-working respondent groups should be interpreted with this in mind.
[v] See above.