Generative AI Consultation Survey

Preliminary results

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Introduction and background

The following report represents a preliminary analysis of the Generative AI Consultation Survey launched in November 2023. The survey represents the first stage in a wider consultation of practitioners on AI use in education, with a particular focus on response to SQA's position on the use of generative AI in assessment.

The report draws from both quantitative and qualitative data provided by survey respondents. Where quotes have been provided, these have been drawn from free text survey answers and have been edited where necessary to correct typos or to maintain anonymity. Quotes have been selected from a wider collection of comments in order to exemplify particular themes or ideas expressed by the sample as a whole.

Respondent profile

A total of 519 respondents completed the SQA Generative AI Consultation Survey between 9 November and 8 December 2023.

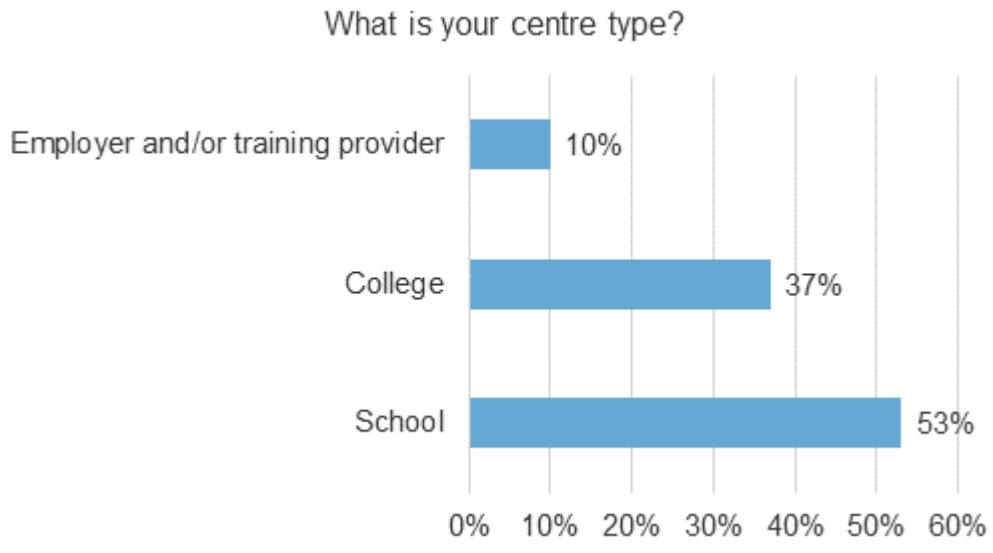
Local authority

About 20% of respondents indicated that they worked in Glasgow and 10% in Edinburgh. A further 6% of respondents worked within each of Fife, North Lanarkshire and the city of Aberdeen. The other local authority areas each contributed fewer than 5% of the respondents.

Centre type

In answer to what their centre type was, over half of respondents selected school, 37% of respondents selected college and 10% selected employer or training provider (Figure 1). Five respondents skipped this question.

Figure 1



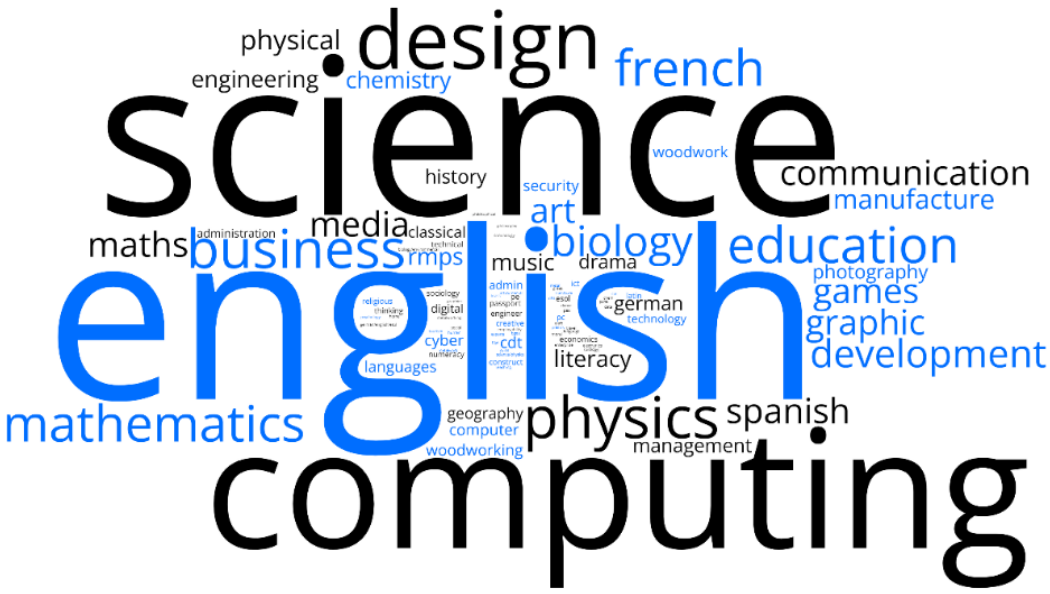
Role or position

The two most common roles of respondents were teacher (151 respondents) and lecturer (118). There were also 49 respondents who identified themselves as principal teachers, 29 heads of department or faculty heads, 23 curriculum managers, 20 assessors or verifiers and 19 senior leaders (headteacher, deputy or acting headteacher). Other job roles included learning technologists or e-learning specialists, education officers, coordinators, directors, consultants, managers and support or assistant roles. Note that since this data was entered as free text, these results are approximate.

Subject area

Respondents were asked to provide their subject area as free text. Responses are summarised in the word cloud below (Figure 2). Science, Computing and English teachers are most common in the sample, with a range of other subjects represented. Note that since this data was entered as free text, these results are approximate.

Figure 2

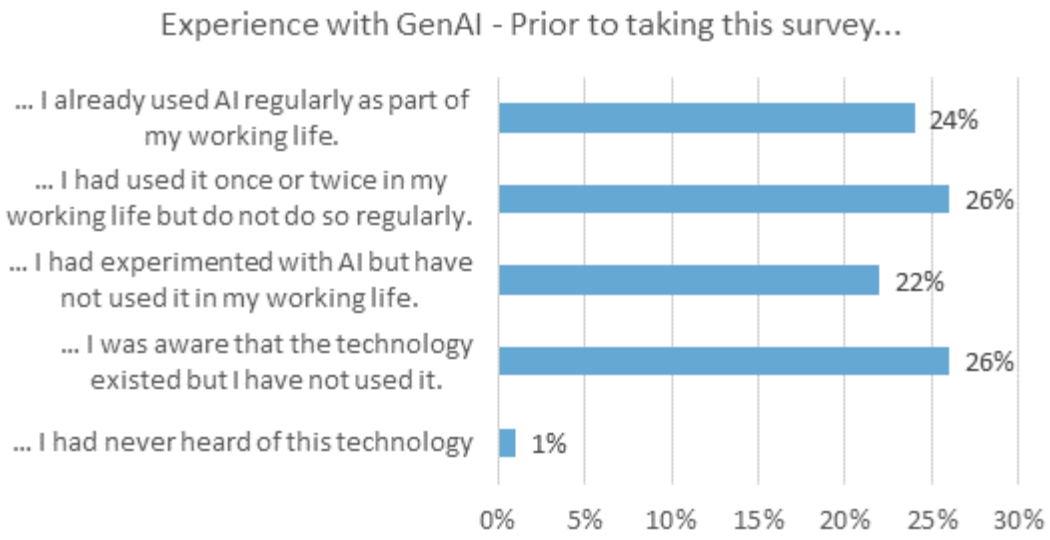


Generative AI: Experience and knowledge

Respondents were asked to select the statement that best described their level of knowledge and experience with generative AI. The 515 responses to this question were widely spread across four of the five statements, as can be seen in Figure 3. Only about 1% of respondents had never heard of this technology.

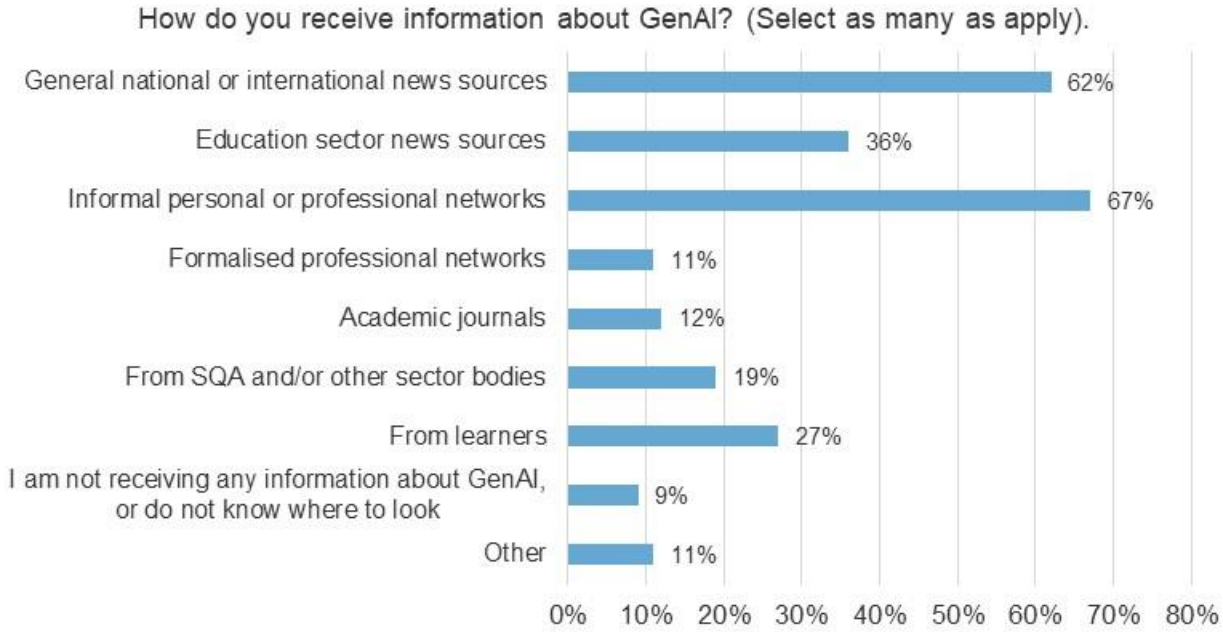
By far the most popular AI tool mentioned by respondents was ChatGPT, appearing in 39% of the lists of AI tools known to each respondent. Other tools mentioned were Bard (7%), Bing (5%), and DallE (4%). A range of specialist tools were also mentioned, each appearing in fewer than 2% of respondents' lists. This indicates that while many practitioners have awareness of the most popular generative AI tools, a smaller number have more extensive specialist knowledge.

Figure 3



In terms of how respondents generally receive information about AI, about two thirds of respondents said from informal, personal or professional networks (Figure 4). Respondents were able to select more than one option for this item. Almost two thirds of respondents also receive information from general, national or international news sources. Over a third of respondents said they receive information from education sector news sources and about 27% of respondents said they receive information from learners. Almost 19% of respondents receive information from SQA or other public sector bodies.

Figure 4

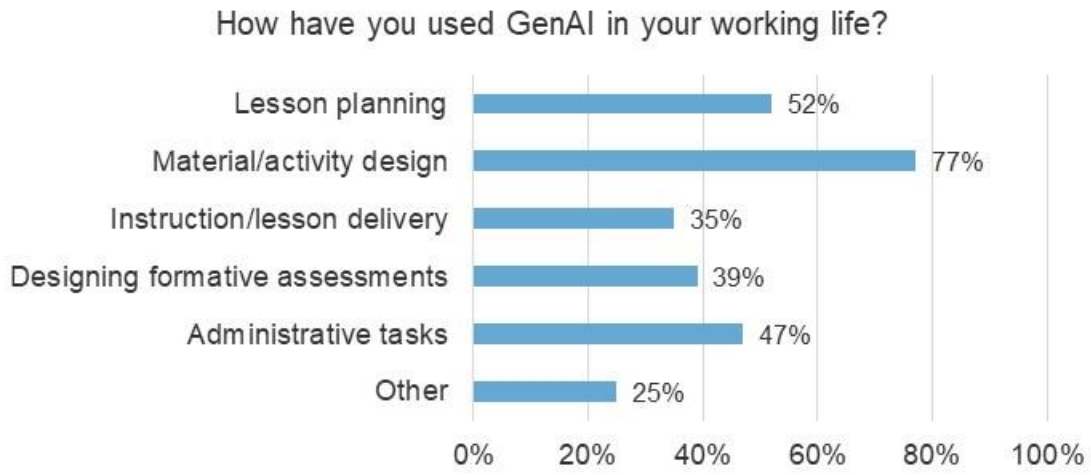


Current uses of AI by practitioners

257 respondents indicated areas in which they have used AI in their working lives. Materials and activity design was the most popular option, chosen by around 77% of respondents.

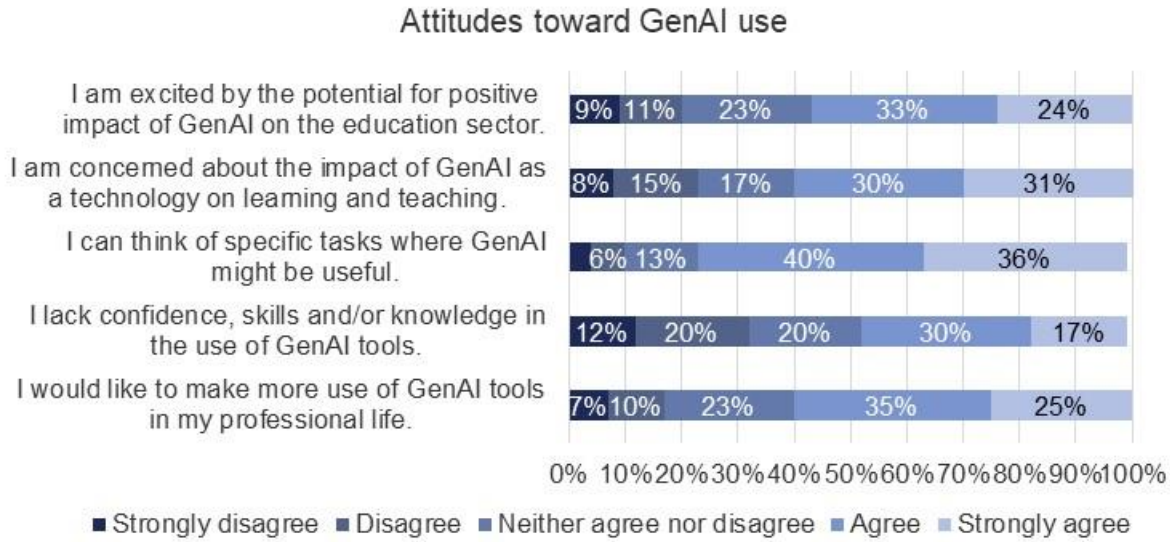
Just over half of respondents said they have used AI for lesson planning (for example in lesson structuring) and just under half of respondents have used AI for administrative tasks, such as writing emails (Figure 5).

Figure 5



515 respondents also indicated the extent to which they agree or disagree with statements related to AI use (Figure 6). About 35% of respondents agreed that they would like to make more use of AI tools in their professional lives, while 25% strongly agreed. About 76% of respondents could think of specific tasks where AI might be useful, though about 47% indicated they lacked confidence, skills or knowledge of AI. While over half (57%) of respondents indicated that they were excited about the potential for AI to have a positive impact on the education sector, 61% indicated that they had concerns about its impact.

Figure 6

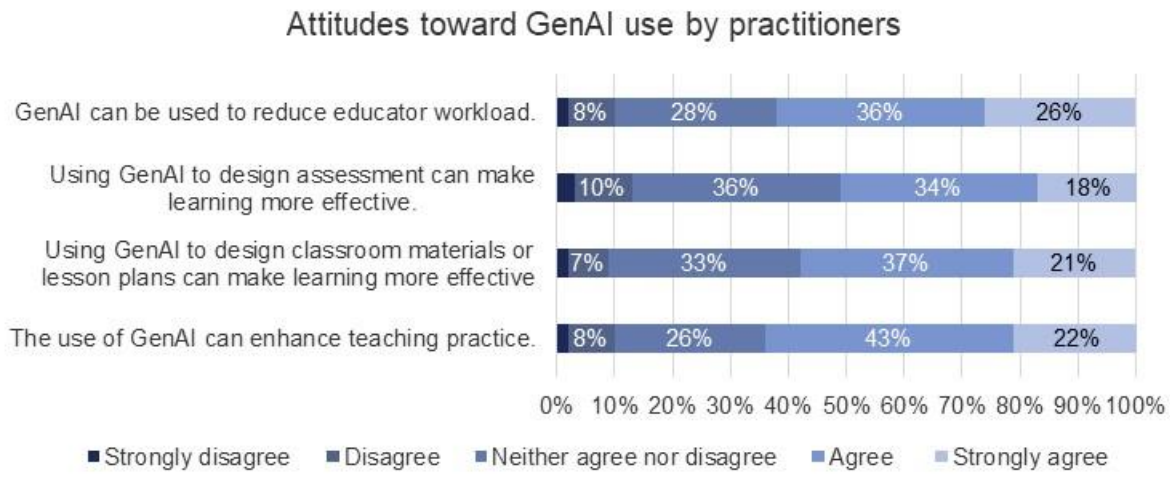


Respondents were asked to select the most urgent options from a list of areas which need to be addressed for generative AI to be suitable for widespread use in Scottish education. The top three choices were: the ability to detect AI-produced content (68% of respondents); personal lack of understanding or knowledge (62%); and lack of guidance from the education system (53%).

Attitudes towards AI use in education: Use by practitioners

Respondents were asked to indicate the extent to which they agreed or disagreed with statements related to AI use by practitioners (Figure 7). In general, respondents agreed with the statements, with a neutral stance being the next most common response. Almost two thirds (65%) of respondents agreed that AI can enhance teaching practice.

Figure 7



Use by practitioners: Free text responses

Participants were invited to expand on their responses to questions on their experience with or attitudes towards generative AI, and to describe ways in which they are already using the technology in their working lives. Responses were in line with quantitative results reported above, in that they revealed a range of familiarity with generative AI and the various tools which are available to use, and a range of enthusiasm for the use of the technology in education. Overall, people providing free text were positive about the potential of the technology to impact education, although signalled an awareness of — and caution regarding — risks associated with its too rapid adoption. These risks were particularly associated with the acquisition of metaskills by learners.

Current uses of AI by practitioners

Respondents reported that they had experience using AI in a variety of work-related tasks, and that it had had a positive impact on, for example, the time taken to complete common teaching or administrative tasks:

> AI has made the process of creating formative assessments and practice questions vastly faster. It has also greatly improved my workflow when writing proposals for outreach events and helped me consider aspects I would not have otherwise considered. AI has also helped to quickly create example answers to share with students to illustrate the type of work / answers that could be accepted, and sometimes helps me to see a different angle on what answers could be provided for the assessment.

> Great for coming up with lesson ideas, quizzes, homework exercises and cuts down hugely on workload.

In line with the quantitative results, while some participants seemed to have already incorporated AI into their workflow, for others its use was explicitly experimental. While some respondents indicated a positive response to the results of these experiments, others were more guarded, indicating that generative AI output still takes work to make it useful in a classroom setting:

> I have been experimenting with AI. I have used it to proofread, find typos and fix them, change the localisation of the language, translation for parents who have English as an additional language. I have used it to make language more concise, to differentiate for pupils, generation of quizzes, production of flashcards. I have used it to write articles for the school website and for Twitter. I have also experimented with prompts for report writing, although have never used the output in a report.

> I've tested ChatGPT's ability to design lesson plans around specific tasks, create teaching packs and generate formative assessments. I found these to be not quite good enough for use in most cases but really close to being suitable overall. I think they will have the capacity to be used in this manner very quickly if not already in some situations.

In terms of uses, practitioners report using generative AI to assist with a number of activities related to teaching and learning: lesson and resource design; grading and feedback; and general admin (including reference writing). These areas are expanded on below.

Practitioner use: Lesson and resource design

Practitioners report that generative AI has some use in lesson planning, although find that it is most useful in providing a starting point that can be subsequently adjusted, whether for a multi-week lesson plan, or an outline for an individual lesson:

> I personally like to have control of teaching in class. I like to bring the impromptu / anecdotal side of my experience into the lesson and use this to guide the lesson and questioning from learners. However, as a tool to get a 12-week lesson plan to tweak, AI works wonders. In the realms of audio and music there are fantastic creative AI tools available and can be used with great purpose within formative assessment (at present).

> I find it a good way to pull together lots of different topics I want to cover and give an overview of the lesson.

While many practitioners who have used AI for this purpose are comfortable with having to adjust or adapt AI output, some find the need to extend lesson plans produced by AI makes the tool less worthwhile to use:

> I have experimented using this for lesson planning to see what it was like but found what it produced was not great and not specific to classes' needs and requirements.

In terms of the production of resources, AI seems to be a powerful tool for the rapid production of a wide variety of lesson materials — including quizzes and other forms of formative assessment — for classroom discussion or work:

> Useful to create new resources, generate questions, scenarios, examples, revision sheets etc.

> Useful / quick to take an exam question and ask for another five similar questions which can be used in class lesson.

> I typically use AI to generate example text: prompts are usually created using the success criteria given to students. I tend to use the AI-generated text as a blueprint for model writing or to created 'flawed' examples of responses to a task. Other uses include using AI to generate comprehension questions on a piece of text or video, or to transcribe audio or video to text.

> I encourage staff to use Diffit to create differentiated texts or questions for students.

Some practitioners report more direct use of AI in the classroom, as part of a lesson itself. Computing lessons may seem an obvious application for this, where an understanding of AI, or its application in producing or reviewing code, may be regarded as useful knowledge for learners, which can sit alongside their existing knowledge:

> Very useful tool to help pupils identify errors in coding, as explanations given and alternative solutions shown. Pupils need some knowledge already to see if code matches algorithm, or uses expected constructs etc.

> As a Computing teacher I use generative AI to show pupils what this kind of tool is capable of and educate them on the basics of artificial intelligence. This is a growth area in the computing industry and I would like to see a NPA in Artificial Intelligence in the near future.

The classroom use of AI to teach learners about AI is not restricted to computing however, and practitioners in other subject areas report an interest in enhancing learner knowledge or equipping them with new skills:

> It has been a great tool to give pupils a stimulus for composing and also has allowed pupils to identify structure and lyrics for a chosen topic to base a song on.

> I started to include it around two years ago and am slowly ramping that up across many of the areas across design and animation. It is also very useful as an aid to help students with their written work as well allowing them to explore different approaches in structure very quickly to obtain a cohesive flow and to allow greater iteration there also. The generative side is now being implemented in 2D animation, 3D animation and general design work through a variety of products.

> I feel that [it] is important to teach students about AI and the ethical use of it. We discuss it in class often and look at examples of how it can be used as part of the creative process, business modelling, etc.

Practitioner use: Grading and feedback

A small number of responses indicate that some practitioners are using (or are considering using) AI to assist with formative grading and feedback:

> Can be used to provide formative feedback on pupils' written work.

> Automated grading: AI can save teachers considerable time by automating the grading of multiple choice and fill in the blank tests for example practice sets in Google Classroom. Some advanced systems are even capable of assessing short written answers.

Among these responses are some that indicate practitioners are using generative AI tools to detect the inappropriate use of AI by learners:

> Using it to check for plagiarism — AI seems to be proud to admit to its own work.

> Used GPTZero to check a candidate's knowledge questionnaire for misuse of AI.

While these are the only two responses that indicate generative AI tools (like ChatGPT) are being used to directly test for malpractice, they perhaps indicate a need for clear guidance and advice on what tools can / should be used to detect AI use, and the limits of those.

Practitioner use: General admin

Participants report using generative AI to assist with a variety of administrative tasks, and an overall positive impact of doing so:

> AI has cut down on my admin workload considerably and gives me more time to concentrate on teaching.

> It is really useful in general to write documents / information where you can tell it the specifics of the task / event, and it will take care of all the details in drafting a response. It is a great time saver.

> Useful for policy writing, thinking about how to structure and then personalisation required.

One response indicates that AI can be used to manage workload, for example by producing to-do lists and checking work, and that this might be particularly useful for neurodivergent practitioners:

> I’ve found it helpful to compartmentalise as someone with ADHD, having a clear plan set for you that has minimised workload massively. It can be good to give feedback on work you have already completed, for example grammatical errors or changes in sentence structure.

Two comments suggest that AI is being deployed to write UCAS references:

> I have not used it but only realised that colleagues are using it. I was only told earlier by a colleague that they were using [it] to fill out the UCAS reference forms.

> Writing UCAS references.

Other uses include assisting with the production of other types of content (such as for marketing or blogs) or for practitioners' own (for example academic) writing.

> I use Google's Bard regularly, to rephrase and simplify blocks of my own writing, to summarise and pick out keywords from my own writing and other texts, and to generate questions relating to blocks of text. I do not use it to create or write text, but I find it indispensable for managing my own writing.
>
> I use it to reword sections of text that I am not happy with or need to be in academic language.
>
> It is good to help reword something you have already written, also helps generate ideas.

Practitioner use: Limitations and need for training.

Not all practitioners who have experimented with generative AI have been happy with the results produced. There is a strong sense that it is useful for producing a starting point for any given task that may still require substantial work to make it useful:

> Have used AI to generate banks of problems eg numerical questions. Have noticed that there is a lack of progression in the questions and that the solutions can be 'unreliable' (ie inaccurate). It is not a substitute for a well-considered selection of problems designed to develop depth of understanding.
>
> I think it provides a really good starting point to build from. It could never replace planning but definitely gives you a starting point.
>
> Use of AI for lesson structure / planning can give a good starting position but requires 'paring down' to create a meaningful lesson, otherwise tasks can be somewhat repetitive.

Relatedly, there are calls for the need for guidance or training in the use of AI so that practitioners can make good use of it:

> I am aware there are many ways I could be using AI. Some of my colleagues are using it for many different purposes. Without any guidance / resourcing / advice / training, this seems to be only possible where teachers have a personal interest and motivation to explore the tools.
>
> There is little to no guidance for how AI should be used / not used for learning and teaching. This tech is now built into the Edge browser so is probably available to most education staff and students. Policy and pedagogy need to catch up!

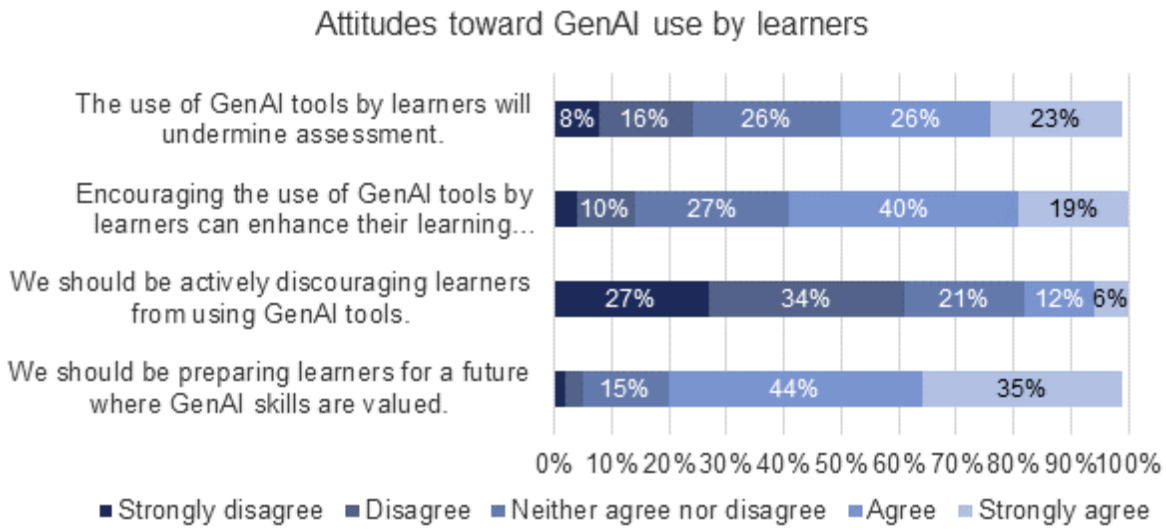
Some practitioners are stepping forward to address this knowledge gap and are setting up peer-to-peer networks for knowledge exchange:

> I am building a website which is designed to help teachers in Scotland go through a four-phase process in relation to AI and its use in education [URL provided].
>
> We are setting up a working group to advise staff and students on use of AI.

Attitudes towards AI use in education: Use by learners

Respondents were asked how far they agreed or disagreed with statements about AI use by learners (Figure 8). About 79% of respondents felt learners should be prepared for a future where AI skills are valued. Despite this figure, there was a percentage of respondents (18%) who felt learners should be actively discouraged from using AI tools, pointing to the need for further qualitative inquiry. Around 59% of respondents agreed that encouraging the use of AI tools by learners can enhance their learning experiences, while almost 27% neither agreed nor disagreed. Almost half (49%) of respondents agreed that use of AI tools by learners will undermine assessment.

Figure 8



Use by learners: Free text responses

Practitioners take a range of positions on the use of AI by learners. Some view the acquisition of skills relating to AI use as an important component of preparing their learners for their future careers. Often these views emphasise the importance of AI literacy, alongside an awareness of ethical and responsible use:

> I would like my students to be AI literate, as it will become increasingly important as they progress into the world of work.
>
> I believe we have to show young people how to use it responsibly as a referencing tool not a plagiarism tool.

Others express caution in this area, highlighting the potential of AI to impact education positively, while flagging concerns about the development of metaskills in learners:

> I have been using AI for a while now and it is without a doubt a powerful tool with the capability [to] transform education for the better. That said, its implementation within the classroom should be given due care and consideration as there is also a real risk that developmental harm could be done, such as stunting the development of core metaskills.

> I think AI is exciting and can potentially take a lot of the drudge out of lesson prep, allowing time for creativity and enthusiasm. I think students need to learn how to use it and need to be assessed in ways that AI cannot just replicate — critical analysis and application of theory to real experience, for example.

One comment highlights the potential of AI to widen access to information and knowledge, while also flagging the ways in which access to AI may already be inequitable:

> I encourage pupils to used AI engines such as ChatGPT at home (blocked by council at school). At home pupils can use ChatGPT to support them in understanding problem solving. Here, pupils are able to use AI to produce a step-by-step solution of Physics questions showing intermediate steps and justifications. The pupils are therefore able to enter into a dialogue to tease out understanding regarding why a particular justification in the analysis is correct. This effectively places a personal tutor in the hands of every child rather than just those who are able to afford a personal tutor.

These broad areas of concern are explored in more detail in the following section.

Concerns: Malpractice, metaskills and access

A substantial number of comments take a negative view of the potential of AI to impact learners, largely focusing on the facilitation of plagiarism, suggesting that this ‘undermines learning’:

> I worry that students will turn towards AI instead of thinking for themselves.

> I do not feel AI is a positive for people in education. It deters them from reading material and learning literacy skills related to this. AI is useful in the least for students as from what colleagues have reported AI ‘does the work for the student’ by creating assignments, and content. Not at all helpful.

> I am concerned that teachers use AI to set tasks, pupils use it to generate answers and nobody has actually taught or learned anything. As an English teacher I am concerned about assessment of writing and how we verify what is a pupil's own work.

> Students appear to have no qualms about passing off, as their own work, material which has been generated via AI. It's almost as if they don't even recognise that such a practice is unethical.

Others are concerned about the ethics of AI itself, or bias which exists within the technology:

> It’s essential that all IT users understand the ethical, technological and social issues associated with AI. Full provision for this must be made at national level.

> I think it could be useful for generating lesson plans but would be concerned about bias (race / gender sexuality etc).

Some practitioners are particularly concerned about unequal access to AI tools. Some tools are already unavailable to learners because of decisions by certain local authorities to ban or block AI use on their networks:

> Where generative AI usage comes with a cash price there will be inequities which will reflect those in the culture.

> Is this going to widen the poverty related attainment gap? Pupils without access to IT will be negatively impacted.

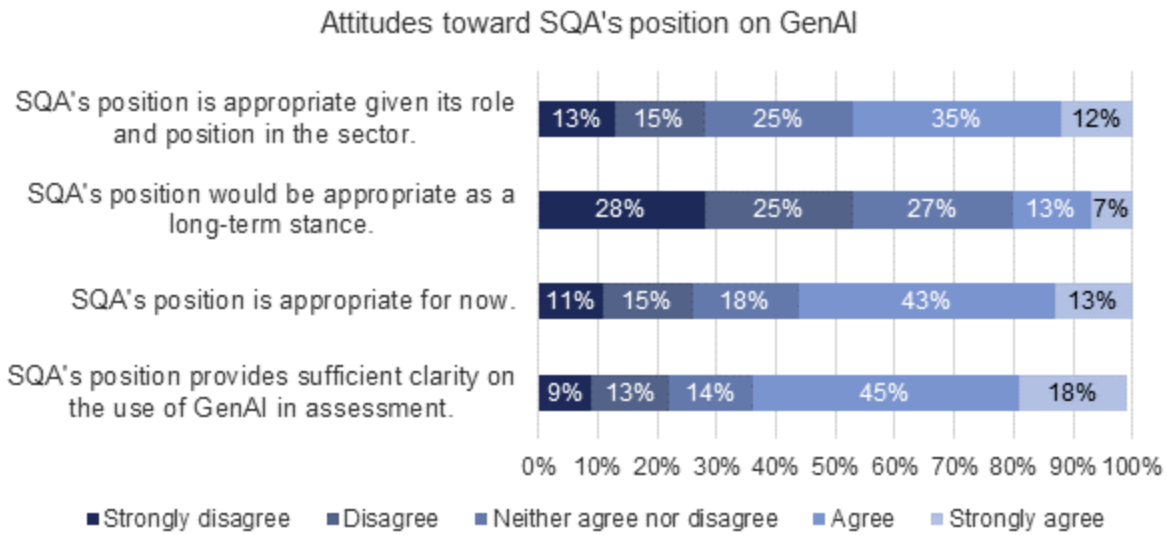
> …paperwork from local authorities [is] making use of ChatGPT prohibitive. Both my deputy head teacher and I have given up trying to wade through the paperwork that the council says we have to do one tiny part of in order for them to open up ChatGPT

> [Named local authority] currently block access to Glow, Google Classroom, Google Drive, Bing (search engine). We are not allowed to use Scratch online or other resources that require pupils to register. I believe it is therefore only a matter of time until AI websites are blocked by [named local authority], which would, once again, put employees and learners at a disadvantage compared to others across Scotland.

Attitudes towards SQA's position

Respondents were asked to indicate their level of agreement with statements regarding SQA's position on AI use (Figure 9). Almost two thirds of respondents (63%) felt that SQA's current position provides sufficient clarity. Over half (56%) of respondents felt that SQA's position is appropriate for now, though only 20% felt it would be appropriate as a long-term stance. Under half (47%) of respondents agreed that SQA's position is appropriate given its role and position in the sector.

Figure 9



Attitudes towards SQA's Position: Free text responses

Respondents' comments fall under a number of themes, and demonstrate a range of opinions about SQA's current position on AI. Before describing these, the first two sections below focus on the level of awareness of SQA's current position, and the interpretation of it as an 'AI ban'.

Lack of knowledge

Comments indicate that some practitioners were unaware of SQA's position on AI use in assessment. The number of responses expressing this is small, but since they may relate to wider issues of communication all are reproduced below:

> I don't know SQA's stance.
>
> I was looking for guidance on AI on SQA website and never came across the documents referred to above (an age old comment on the website that it's not unusual to not be able to find key documents on SQA given the complexity of content and the way that SQA codifies things from an SQA-centric viewpoint rather than a user viewpoint). Given its newsworthiness any guidance should probably be given more prominence?
>
> I have never seen this statement previously and when I asked an EV about SQA's position she said there wasn't currently one so if this is your position it has not been clearly documented.
>
> This needs to be communicated better as I've been asking for clarity on this for over a year and this is the first I've heard of a policy.
>
> I do not know anything about SQA's position on AI.

'The position is a ban'

A substantial number of responses indicate that many practitioners have interpreted SQA's position as an out and out ban on AI use by learners, although they vary on whether they view this as a positive or negative step:

> I think a strong clear ban is good.
>
> Having a blanket ban is wise while the general understanding of AI is limited, especially considering the imbalance in knowledge levels between educators and students favours the students.
>
> SQA should explicitly call for a complete ban on the use of AI for the foreseeable future. The whole concept that between a point in time (ie currently) and looking to the future, AI can change and be useful, is disturbing.
>
> I agree with SQA. How can we assess our learners work if AI is used, if the work isn't their authentic doing? It doesn't allow a level playing field for our learners.

A ban on the use of AI in assessments is unworkable and is not in line with others in the education sector.

When I first read the statement, my reaction was to think that the SQA advocates a total ban on the use of AI. It comes across as authoritarian and almost fear inducing. A further reading indicates that this is for session 2023–24 only, but without any indication of thought to the future, I felt the statement came across as very backward.

This stance is due to a lack of understanding of AI and more akin to an outright ban due to a lack of expertise on this currently. As a qualifications authority, the outright ban demonstrates a lack of effort on bringing in appropriate expertise in this area to create policy and share knowledge on this.

[The position] effectively says that [AI] shouldn't be used at all which is at odds with the position of many academic institutions where we are trying to harness positive aspects of AI use and encourage responsible and critical use.

Wider opinions on the position

Other than this, opinions on SQA's position vary between those who think the position is good and fit for purpose; those who think the position is fundamentally inadequate; and those who think the position is fine for now, but will need to be updated as the technology develops. Example quotes for each are given below:

The position is good and fit for purpose

I think it's been the right stance by the SQA and I fully stand by it.

I think it is as it should be. The technology is so new that I am not sure how we should deal with it.

I think that it is fine as is. We need to question whether we are assessing a learner's individual ability levels or whether we simply want to see how good they are at using AI prompts? If it is the former, then AI should not be used for assessment purposes. However, perhaps separate units to train students in the use of AI might be of benefit to them

The position is inadequate

SQA provides the framework for courses and how they are delivered and as such, its AI policy needs to provide guidance beyond merely 'please do not use it to cheat in assessments'. It should be looking at advice for how AI should or should not be used in the classroom or by students generally as a learning aid.

The current position is too simplistic and outdated by events. A lone voice shouting from the bottom of a well.

I read the full guidance document at the immediate time of release and felt let down by the position held by SQA, as did many of my peers who like me were

> involved in crafting a future focused strategy, guidance and training around the utilisation of tools like generative AI in our institution.

The position is fine for now

> It's a huge challenge for SQA of course, as the technology is changing at such a fast pace. So the current stance across the board is really the only one that's possible, albeit with the view to keeping this under constant review.
>
> I think that more clarity is needed. ‘For now’ is sensible, given the comparative newness, but future use and development needs much closer consideration.
>
> The SQA's stance on AI is the best it can be in the current situation but needs to adapt to meet future needs.
>
> SQA need to see how AI develops within the education sector in Scotland (and rest of UK). It is a clear stance at moment.
>
> SQA’s guidance for this period is good but we need to work on the longer term.

Challenges with implementation

Other comments draw attention to difficulties in implementing the current position, given the difficulties with detecting AI work:

> The statement is fine, but it is simply impossible to enforce. There is no way to prove malpractice by students in assessments.
>
> Stopping learners using AI for assessed course work that is unsupervised is impossible.
>
> SQA’s position fails to allow for the use of AI to aid the assessment process. In addition, the lack of efficiency of tools that [identify] AI generated content makes the policy virtually unenforceable. I am very concerned that pupils could be falsely identified as having used generative AI due to the limitations of the software.
>
> How will the SQA monitor this going forward? The situation will potentially become impossible to police, leading to wholesale abuse of exam / assessment arrangements and therefore devaluing any qualification associated [with] the process.
>
> We are unable to properly detect when AI is used in lot of report writing situations, therefore this position may be difficult to enforce. Perhaps referencing of AI material used in the same way websites and books are referenced might be more appropriate going forward. Many other educational institutions are embracing the use of AI.

A number of comments call for more guidance and support for practitioners attempting to implement SQA’s position:

Not enough stringent advice has been given to practitioners. I understand that the technology is fast paced but advice is needed at ground level.

Further guidance needed on how to monitor the use of AI by students. Students are likely currently using AI but it is difficult to spot in some cases. Assessment strategies will need to change to facilitate the use of AI.

I think further guidance must be given on how we can verify if a student has used AI or not.

There needs to be more guidance on appropriate use of AI by learners. Also, demonstrations by educators using AI on pedagogical advancements.

SQA must provide guidance as to how we prove that pupil work is AI generated. There are already difficult conversations with pupils and their parents when we suspect the work is not a pupil's own. Plagiarism from online sources is easy to spot but help from AI is unprovable. There is no support for schools in how this should be addressed.

Calls for change: Increasing clarity, allowing referencing

Some responses call for SQA's position to be made clearer in future revisions. In particular, many comments suggest that AI use should be allowed if it is appropriately referenced, and that there should be an awareness of subject-specific differences:

There are so many nuances of AI that this does not cover. Can students use it as a grammar and spelling correction? Are you able to use it to help debug code? There needs to be a consideration for what AI can be used for acceptably in the work environment and the policy developed from this point.

Obviously a completely AI generated solution is unacceptable, however, if I take computing, using AI for more boiler plate tasks can be time saving. Often the code generated can't just be copied and pasted, rather it needs to be modified to work, requiring a degree of understanding. I understand this isn't the same in all subjects.

Specifically within my [subject], I see value in using AI to create images that can be used as a direct comparison to a student's own 'analogue' or 'traditional' digital work (photoshop etc). I see no reason to disregard any images created [by AI] as they are not being submitted as standalone pieces but as proof of the student being aware of up to date practice and possibilities (and all clearly labelled as to how they were created).

Plagiarism rules effectively cover the use of AI. Citing it as a reference should not impact the integrity of a body of work if the writer follows protocol.

Not allowing learners to reference use of generative AI tools is a backward step. It is essential that learners reference all that they use in preparation of assessments.

The situation may change if students are permitted to use AI but must acknowledge that as they would when referencing non-AI sources. Even if just

adding another tick box on Statement of Originality will be a start. Students already use AI, they just need defined parameters.

Need to adapt qualifications

A substantial number of practitioners in the sample feel that SQA needs to adapt its qualifications in light of AI developments in order to maintain their integrity. These comments fall into two broad categories based on what that adaptation should look like: either a radical rethink and change to assessment, or an emphasis on more 'traditional' methods of assessment, such as in-person exams:

> The evolution of AI, among other advancing technologies, means that learners hoping to be successful today require a much different skillset than the learners of 10 to 20 years ago. The SQA must bear in mind the purpose of education, which is to prepare learners for life outside education. If the required skillset necessary to engage in the world effectively is evolving, then the desired outcomes of education should change to reflect this. This may mean a significant change in learners' course assessment.

> I think it's inevitable that these tools will become part of everyday life. We need to think of new ways of assessing learning where the assessment tool forces learners to prove their understanding.

> AI should be avoided during use of assessments. However, I would repeat that the onus is on the SQA to design appropriate assessments where AI could not pass them.

> The use of AI should be embraced and assessment activities changed to reflect the fact that students are using AI, ie assessment tasks designed with AI in mind.

> I think the SQA need to act quicker on this. The integrity of qualifications is at risk if students are able to write essays and submit them as part of a folio for external SQA assessment. The guidance alone will not stop students using AI. What else can be done to address this. The only way I can see is to remove written folios and move to exams.

> The whole exercise of folio will become meaningless and no real assessment of students' own writing skills. Far better to scrap coursework or replace with an exam-based assessment for fairness.

> Perhaps writing should only be produced in exam conditions, or portfolio should have less weight.

Concluding remarks: AI is here to stay

Alongside the various concerns raised by practitioners in their comments, a repeated theme is the idea that 'AI is here to stay' and that the education sector must now adapt to its potentially revolutionary impact. Practitioners expressing this view are generally positive about the potential impact of AI, but express caution. They call variously for the acceptance

of AI use as a new core skill, for adapting qualifications to ensure their continued integrity, and for the rapid production of training, guidance and policy to support practitioners as they move forward:

> I think AI could revolutionise and support our learners in their education. It is not going to go away and we need to prepare our learners for a world where AI is in use. But we also need to balance this with the integrity of the qualifications being studied for. The current approach is unmanageable, certainly within the college sector, and we need realistic guidance quickly.

> I think AI should be embraced and used to support learning and teaching, but tools and strategies need to be developed to identify times when students' work is written by AI. Standardised methods of dealing with AI would be beneficial for staff to know how to support students to use AI appropriately and to help staff to deal with AI cheating effectively.

> The opportunities outweigh the threats if handled correctly. The genie is out the bottle and learners / teaching practitioners should not be expected to ban all use of AI tools. Rather citizens should be equipped with the skills to make best use of new technology to enhance learning and teaching, to free up time for other more human analytical and emotional tasks that AI cannot yet deliver.

> I have found it greatly beneficial for myself and pupils. More training on how to use it effectively is required to improve the outcomes of adopting this technology.

> AI is here to stay we must find a quick way to embrace and monitor its usage in education to support workplace productivity [and] wellbeing whilst maintaining integrity and quality of learning, teaching and assessment. I am both excited and concerned about AI however conclude that I need to educate myself more before making any assumptions.