

Appendix 1: Themes, subthemes, and codes from FGs

Themes	Subthemes	Codes	Example excerpts
Reasons driving the start to use GAI or not to	Drivers	• Friend/peer influence	"I think also I got introduced to ChatGPT at the end of First Year because I saw a friend using it." FG-clinical_Tina
		• Catching up with students/others	"More and more, there's a sense that people try and use it in their work and in their studies, so we are having to be more aware of it." FG-faculty_Will
	Inhibitors	• Lack of trust	"So it's weird to incorporate it into your life when you haven't used it before. It seems too easy, it seems too good. Sometimes you think oh there must be a catch to it, but I don't know, maybe it's all good." FG-preclinical
		• Lack of clear regulations	"I think one of the reasons that I don't use it is because for work I'm not sure what would be allowed and what wouldn't ..." FG-preclinical_Andrea
		• Faculty's resistance to GAI	"I think a lot of the lecturers are scared of it. When we turned up to our group work the other week, the guy was like, 'oh, I've been on a training session. Don't use AI, guys. I know I can pick it up when you've used it.' He wasn't aware that people use it for lots more than just cheating on exams." FG-clinical
GAI use experiences	Use of different GAI tools		"I use ChatGPT and Copilot for summarising things." FG-preclinical_Mia
	Use frequency		"For me for using AI, I haven't really used it much." FG-preclinical_Andrea "I use it every day (for learning)." FG-clinical_Tina
	Use purposes	• Organising notes	"during class, I just type down whatever the lecturer is saying, so my notes are usually a mess. Then after I have it, I just put it in ChatGPT, I'm like organise it better and then it organises the entire thing I typed in based on objectives, based on sub-categories and everything ..." FG-preclinical_Jasmine
		• Improving writing	"If an assessment objective point says, you need to do this in a certain way. Then you can ask ChatGPT to give you an example of what that would look like. Then, you can use that to guide your own writing." FG-clinical_Adam
		• Generating timetables	"I was going to say even things like sticking in, like, oh, I've got this amount of hours in a week to study. I need to fit in these things. Can you create a timetable for my week?" FG-clinical_Tina

		• Generating images	"I can't draw very well, so if I'm thinking of something, a really complex idea that's in my head, getting an AI to make something resembling that can be really useful I think. ... [Facilitator: So have you used a GAI tool for generating images for your learning?] Yes, a few times for certain mnemonics and stuff." FG-preclinical_Brandon
		• Translation	"if I was looking at a research paper but it was originally in French, I can put it into Chat GPT and it will translate it into English for me. ... It's better than copy and pasting everything in Google Docs and in Google Translate, because ChatGPT makes it more coherent and readable basically." FG-preclinical_Jasmine
		• Simulation	"I've done a couple of times where ... I've asked it to make me a medical case. ... it's not obviously the same as actually doing a simulated with a real person, a real person who is like acting, a real actor or whatever, but it's a nice way of getting a baseline I'd say, which is quite nice because it means that it's more accessible."
		• Summarising	"I use ChatGPT and Copilot for summarising things. I find it quite useful, ... what I do is I ask it to explain it in really simple words, if there's a concept that I don't understand in like a lecture or something, I just go "can you explain this in 20 simple words". It will just simplify it so much and then I understand it immediately, so that's what I use." FG-preclinical_Mia
		• Writing codes	"I don't really use ChatGPT too much, but recently for our [ENQUIRE] which is basically like a research project, we have to use Stata, ... It's like a data analysis thing and ... I don't understand it. But if you literally like ask it to write code for you, you can just copy and paste it and it just extrapolates all the data that you need for you without you having to come up with the code yourself, which is really helpful." FG-preclinical_Chloe
		• Preparing for examinations	"Last year for our exams, I did this thing where I copy pasted a lot of my notes into ChatGPT and I asked it to general multiple-choice questions, that was really helpful." FG-preclinical_Zoe
		• Preparing teaching materials	"Well, ... like finding an image for your slides. It's just something that might have taken an hour. It's going to take not very long." FG-faculty_Amber
Perceptions of GAI	Perceived capabilities	• Saving time	"It's so much quicker than Googling it because you have to search through loads of websites. It literally will just give you the answer straight away. I often like - you can treat it a bit like an assistant. You can be like, say it more concisely or expand on it

			more. What do you mean by that? You can question it, and then it'll delve in deeper." FG-clinical_Adam
		• Reducing language barriers to medical education	"English isn't my first language and stuff, so I ask ChatGPT to grammar check some of my work before I send out the emails or general essays and stuff. So I think it's making medicine education more accessible to certain people." FG-preclinical_Jasmine
		• Making medical education resources more accessible	"That might save resources, ... using generative AI. It's a bit like a simulated patient so it was like a talk-back thing. Because obviously, simulated patients are expensive, so maybe those earlier students, maybe not those ones that need to be preparing for an exam, but to get them into that idea, you could potentially give them a resource that they could practice themselves, I suppose." FG-faculty_Amber
		• Good for explaining things	"It's really good for explaining things, and I think... more in-depth ... I think it's quite good because it can give you a full description or a summary table at the end comparing different things." FG-clinical_Tina
		• Motivating learning and increasing productivity	"I really find how ChatGPT makes me want to do my work more because it really made it easier for me, I can just write out ideas and it can turn into coherent sentences. ... I feel like it really made it a lot easier and a lot less intimidating and it really increases my productivity in that way." FG-preclinical_Jasmine
	Perceived limitations and ethical challenges	• Content bias	"Another thing I mentioned as well to a different (student) group ... I did a lecture on bias – part of that was about bias in generative AI..." FG-faculty_Amber
		• Content inaccuracy	"The problem with that is it does miss some important diagnoses ... It's not a straightforward thing in terms of just saying, let's get some AI involved. ... You don't want it doing things you can't understand." FG-faculty_Will
		• Superficial learning	"Because it can definitely elevate things, but again, it can 100 per cent make somebody actually just not understand anything at all because they use it as a crutch. I think that you need to have a good balance of using it as a tool and then also being separated from it as well because if you can't do it independently you need it, then you're not actually learning anything." FG-preclinical_Brandon
		• Plagiarism (academic integrity)	"There's probably a very big question with respect to integrity of work that's being generated by students on a literally day-by-day basis." FG-faculty_Will
		• Equitable access	"it would be a bit unethical if some people have complete understanding of it and then some people don't really know anything. Then it's kind of doing the opposite of what it should be doing." FG-preclinical_Zoe

		• Data security	"I personally wouldn't put patient information into ChatGPT." FG-clinical_Tina
		• Copyright of outputs	"if you use generative AI for example to generate an image and use it, there's an entire debate in art society and it's like you're using someone else's work, you actually don't get the copyright. Even though you wrote the prompt and everything, it's still not your work, it's the AI's. That's why for even medical textbooks, they can't use generative AI, like art, to put it on there, because it's still iffy." FG-preclinical_Jasmine
		• Environmental sustainability	"I don't know how true this one is, but I read somewhere that one search on ChatGPT uses a lot of water and energy and people tend to not know about that. ... so it uses a lot of energy and the climate implications are really bad, but people aren't aware of this." FG-preclinical_Kayla
	Perceived impact	• On learning	"in terms of our learning as in uni work and all that, we do still have a lot. For example, we have, I think, around 300 conditions to learn this year, but it's not that we're not as busy. It's more efficient with the tools." FG_clinical_Leo
		• On teaching	"One of the things I was reading about teachers liking [in terms of] AI was that you can say what's the most common misconceptions about something in this topic, so then they get very specific points about where students normally go wrong with their understanding on learning ... So then they can really tailor their presentation to making sure those points of misconception get addressed straight away and that it's clear right from the start." FG-preclinical_Chloe
		• On assessment	"Well, the one that I talked about them the most was the introduction to this new assessment. We changed an assessment because of AI." FG_faculty_Amber
		• On equal access	"I think everyone nowadays is quite tech-savvy." FG_clinical_Adam
	Suggestions on the integration of GAI in curriculum and assessment	• Critical thinking	"I think it's moving away from acquisition of knowledge - storing knowledge. Since we started using the internet, anyone can find anything, can't they? But it's about being able to look at something critically and enhancing those skills." FG_faculty_Amber
		• Background knowledge of the subject matter	"it'd be good if they actually know how to do it first before you let a machine do it." FG_faculty_Will
		• Faculty understand the GAI capabilities and limitations	"for faculty ... I think ... they should be aware of its implications and its capabilities, because without that then it's difficult to be able to engage with a lot of students who use it." FG_preclinical_Brandon

	Supportive resources and activities needed	• Training for students	"Then for students I put the main one as having skills training on understanding what capacity ChatGPT has to help you with revision." FG_preclinical_Mia
		• Training for faculty members	"we need to understand it for ourselves before we then start teaching everyone else what's going on ... You don't have to know everything there is to know, but I think informatics/AI training is becoming more essential in terms of us being aware of how these things work so that, at the very basic level, we're all literate. Because unfortunately, the future may be that it'll go up yet another degree, and if we're not ready for it." FG_faculty_Will
		• Advice from some advisory body	"From that, maybe some advisory body that you could go to for advice around things like that ...There's no way of proving that somebody's used it inappropriately, and what is inappropriate use anyway? Who decides? Me? You? Nobody really knows." FG_faculty_Amber
		• Faculty's open mindset for GAI	"I said quite similar stuff, but also the faculty members making sure that they have quite an open-minded outlook on AI ... a lot of people in the older generation ... see it as a shortcut or even some people I think see it as being lazy if you use AI. So making sure that professors and the people that teach us don't think that, would be quite helpful. Because then I think if your teachers think you're lazy for using AI, then you might have quite a lot of guilt and shame around it, which is complicated to deal with when you're just obviously trying to make your life easier." FG_preclinical_Zoe
		• Clearer regulations and guidance	"Probably, although we've got a policy around AI use, I suppose it really just basically says leave it up to you. Do what you think's right, essentially, and you're like, how do I decide what's right?" FG_faculty_Amber
		• Checks and audits of AI in medical education along with AI development	"I think as time goes on, I think that there needs to be more checks and audits with AI in medical education, because it's changing so rapidly. So I think there just needs to be more checks if that makes sense." FG_preclinical_Brandon

Appendix 2: Online Questionnaire – Students

Demographics

1. How do you identify your gender?
 - ☐ Male
 - ☐ Female
 - ☐ Non-binary
 - ☐ Prefer not to say
2. In what year were you born? (Please provide 4 digits of the year, e.g. 1980)

3. Please choose the student group that you belong to.
 - ☐ Preclinical-level MBChB students
 - ☐ Clinical-level MBChB students
 - ☐ PGT students
 - ☐ PGR students

Your experiences about GAI in medical education context

4. How often have you used GAI in medical education learning this academic year?
 - ☐ Never (branching – go to Question 8)
 - ☐ Rarely
 - ☐ Sometimes
 - ☐ Often
 - ☐ Daily
5. What drove you to start to use GAI?
 - ☐ University's instruction
 - ☐ Friend's recommendation
 - ☐ Promotion on social media
 - ☐ Other (please specify) _____
6. Which of the following GAI tools do you use most often in your learning? (multiple choices allowed)
 - ☐ Copilot
 - ☐ ChatGPT
 - ☐ Claude
 - ☐ Bard/Gemini
 - ☐ Other (please specify) _____

7. What have you used GAI for in your learning? (Please tick all that apply) (branching – go to Question 9)

- ☐ Organising notes
- ☐ Improving writing
- ☐ Time management
- ☐ Generating images
- ☐ Translating language
- ☐ Simulating medical cases
- ☐ Summarising specific topics
- ☐ Generating codes for data analysis
- ☐ Generating questions/items or stations for revision
- ☐ Other (please specify) _____

8. What inhibits you from using GAI? (Please tick all that apply)

- ☐ I don't trust GAI enough
- ☐ I don't have related training
- ☐ I don't have time to explore GAI
- ☐ I am not sure about the regulations
- ☐ Other (please specify) _____

Your confidence in your GAI knowledge and skills in medical education context

9. How would you rate your overall confidence in your GAI knowledge and skills for your learning?

	Not confident at all	Slightly confident	Moderately confident	Quite confident	Extremely confident
Overall confidence					

Your perceptions about the use of GAI in medical education context

10. To what extent do you agree/disagree with the following statements about the capabilities of GAI in medical education?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
1) It saves time.						
2) It helps reduce language barriers to medical education.						
3) It makes some otherwise expensive medical education resources more accessible.						
4) It makes medical concepts more understandable.						
5) It motivates learning.						
6) It increases learning productivity.						

11. Do you have any other thoughts about the capabilities of GAI in medical education?

12. To what extent do you agree/disagree with the following statements about the limitations, challenges, and ethical concerns about using GAI in medical education?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
1) It can generate biased content.						
2) It can generate inaccurate content.						
3) It encourages superficial learning.						
4) It brings threats to academic integrity.						
5) It lacks emotional intelligence and empathy.						
6) The access to GAI tools is inequitable in the world.						
7) The access to GAI technology is inequitable amongst students at the School.						
8) It increases data security risks.						
9) It causes copyright concerns.						
10)It lacks transparency on its sources of training data and algorithms.						
11)Its development lacks consideration of environmental sustainability.						

13. Do you have any other thoughts about the limitations, challenges, and ethical concerns about using GAI in medical education?

14. How do you feel GAI is impacting on the following aspects of medical education?

	Very Negative	Negative	No Impact	Positive	Very Positive	Don't Know	Not Applicable
1) Learning methods							
2) Teaching methods							
3) Curriculum content							
4) Assessment methods (i.e. how we assess)							
5) Assessment content (i.e. what we assess)							
6) Assessment programme design							
7) Authenticity of assessment							
8) Academic integrity in summative assessment							
9) Fairness of summative assessment							
10)Professionalism development							
11)Equal access							
12)Career preferences							

15. Do you have any other thoughts about the impact of GAI on medical education?

Your suggestions

16. To what extent do you agree/disagree that each of the following knowledge and skills are important for students in using GAI effectively in their learning?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1) Critical thinking					
2) Understanding GAI capabilities					
3) Understanding GAI limitations					
4) Understanding how to craft prompts					
5) Understanding ethical issues about GAI					
6) Background knowledge of the subject matter					

17. Do you have any other thoughts about the important knowledge and skills needed for students to use GAI effectively in learning?

18. What resources and activities would support effective, responsible, ethical, and equitable use of GAI in medical education? (Please tick all that apply)

- ☐ Education sessions on how to use GAI for students
- ☐ Education sessions on how to use GAI for faculty members
- ☐ Education sessions on GAI-related ethical issues for students
- ☐ Education sessions on GAI-related ethical issues for faculty members
- ☐ Clear regulations and guidance at the institutional level on using GAI in medical education
- ☐ A national advisory body providing advice and expertise support on using GAI
- ☐ Open communication between students and educators on using GAI
- ☐ Continuous evaluation and updates of GAI-related policies along with GAI development
- ☐ Other (please specify) _____

19. Do you have any other comments that you would like to share with us?

Thanks for completing this questionnaire!

Appendix 3: Online Questionnaire – Faculty

Demographics

1. How do you identify your gender?
 - ☐ Male
 - ☐ Female
 - ☐ Non-binary
 - ☐ Prefer not to say
2. In what year were you born? (Please provide 4 digits of the year, e.g. 1980)

3. Which programme(s) are you involved in this academic year? (Please tick all that apply)
 - ☐ MBChB
 - ☐ Intercalated BSc
 - ☐ Physical Associates
 - ☐ PGDip Clinical Education
 - ☐ Doctoral Education
 - ☐ Other (Please specify) _____

Your experiences about GAI in medical education context

4. How often have you used GAI in medical education context (i.e. in teaching and learning in medical education) this academic year?
 - ☐ Never (branching – go to Question 8)
 - ☐ Rarely
 - ☐ Sometimes
 - ☐ Often
 - ☐ Daily
5. What drove you to start to use GAI?
 - ☐ University's instruction
 - ☐ Friend's recommendation
 - ☐ Promotion on social media
 - ☐ Other (please specify) _____
6. Which of the following GAI tools do you use most often in medical education? (multiple choices allowed)
 - ☐ Copilot
 - ☐ ChatGPT
 - ☐ Claude
 - ☐ Bard/Gemini
 - ☐ Other (please specify) _____

7. What have you used GAI for in medical education? (Please tick all that apply) (branching – go to Question 9)

- ☐ Improving writing
- ☐ Translating language
- ☐ Designing learning plans
- ☐ Simulating medical cases
- ☐ Marking students' assignments
- ☐ Generating codes for data analysis
- ☐ Generating questions/items or stations for exams
- ☐ Writing feedback on students' assignments
- ☐ Preparing teaching materials (e.g. slides, images)
- ☐ Other (please specify) _____

8. What inhibits you from using GAI? (Please tick all that apply)

- ☐ I don't trust GAI enough
- ☐ I don't have related training
- ☐ I don't have time to explore GAI
- ☐ I am not sure about the regulations
- ☐ Other (please specify) _____

Your confidence in your GAI knowledge and skills in medical education context

9. How would you rate your overall confidence in your GAI knowledge and skills for medical education?

	Not confident at all	Slightly confident	Moderately confident	Quite confident	Extremely confident
Overall confidence					

Your perceptions about the use of GAI in medical education context

10. To what extent do you agree/disagree with the following statements about the capabilities of GAI in medical education?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
1) It saves time.						
2) It helps reduce language barriers to medical education.						
3) It makes some otherwise expensive medical education resources more accessible.						
4) It makes medical concepts more understandable.						
5) It motivates student learning.						
6) It increases learning productivity.						
7) It makes teaching more engaging.*						

* Item 7 was not included in the analysis of comparing faculty and students.

11. Do you have any other thoughts about the capabilities of GAI in medical education?

12. To what extent do you agree/disagree with the following statements about the limitations, challenges, and ethical concerns about using GAI in medical education?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
1) It can generate biased content.						
2) It can generate inaccurate content.						
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6) The access to GAI tools is inequitable in the world.						
7) The access to GAI technology is inequitable amongst students at the School.						
8) It increases data security risks.						
9) It causes copyright concerns.						
10) It lacks transparency on its sources of training data and algorithms.						
11) Its development lacks consideration of environmental sustainability.						

13. Do you have any other thoughts about the limitations, challenges, and ethical concerns about using GAI in medical education?

14. How do you feel GAI is impacting on the following aspects of medical education?

	Very Negative	Negative	No Impact	Positive	Very Positive	Don't Know	Not Applicable
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2) Teaching methods							
3) Curriculum content							
4) Assessment methods (i.e. how we assess)							
5) Assessment content (i.e. what we assess)							
6) Assessment programme design							
7) Authenticity of assessment							
8) Academic integrity in summative assessment							
9) Fairness of summative assessment							
10) Professionalism development							

11)Equal access							
12)Career preferences							

15. Do you have any other thoughts about the impact of GAI on medical education?

Your suggestions

16. To what extent do you agree/disagree that each of the following knowledge and skills are important for students in using GAI effectively in their learning?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1) Critical thinking					
2) Understanding GAI capabilities					
3) Understanding GAI limitations					
4) Understanding how to craft prompts					
5) Understanding ethical issues about GAI					
6) Background knowledge of the subject matter					

17. Do you have any other thoughts about the important knowledge and skills needed for students to use GAI effectively in their learning?

18. What resources and activities would support effective, responsible, ethical, and equitable use of GAI in medical education context? (Please tick all that apply)

- ☐ Education sessions on how to use GAI for students
- ☐ Education sessions on how to use GAI for faculty members
- ☐ Education sessions on GAI-related ethical issues for students
- ☐ Education sessions on GAI-related ethical issues for faculty members
- ☐ Clear regulations and guidance at the institutional level on using GAI in medical education
- ☐ A national advisory body providing advice and expertise support on using GAI
- ☐ Open communication between students and educators on using GAI
- ☐ Continuous evaluation and updates of GAI-related policies along with GAI development
- ☐ Other (please specify) _____

19. Do you have any other comments that you would like to share with us?

Thanks for completing this questionnaire!