UNIVERSITY OF LONDON

CENTRE FOR ONLINE & DISTANCE EDUCATION

Top tips for supporting online student critical engagement

Are you a Higher Education academic or teacher?

Do you teach students online or contribute to online course design?

If so, this is a handy introduction to supporting student critical engagement when teaching online. Read on to get the top tips of the Centre for Online and Distance Education (CODE), including a practical introduction to using Generative AI for developing critical thinking online.

What do we mean by 'critical'?

- To think critically is to examine ideas, evaluate them, and assess their merit.

- Critical thinking involves looking at evidence and assessing its strengths and weaknesses.

- When thinking critically, it is important to consider multiple perspectives, including direct critiques of our own position, in order to assess all sides of an argument or approach.

- Critical engagement with theory and literature provides us the opportunity to consider the applicability, appropriateness and relevance of theories, frameworks and proposals presented by authors.

What do we mean by 'student engagement'?

- Student engagement can be interpreted in different ways.

- One useful definition is 'A set of positive student behaviours' (UCL, 2021). This can include completing work, involvement in learning activities, and interactions with fellow students, teachers, and the wider university.

- The term 'active' engagement is sometimes used, but students don't necessarily need to be 'seen' to be engaging in order to be participating.

Why is student engagement important?

- Through it, students can better assess evidence, literature and theory, synthesise their own thoughts, and create their own arguments.

- Students can develop dialogic skills enabling them to engage with confidence in critical debates and discussions with peers and with tutors.

- It helps students to foster the human specific skills which (currently) GenAI is not so good at, which are likely to be important for employability moving forward.

- The critical thinking skills students learn can be applied more generally, including outside of their studies (for instance, when assessing the validity of a news item) as well as in their future careers.

Top tips	How does this apply online?
Clearly set out the rationale	Ensure clear messaging about why you want students to engage critically, and what they will gain from taking part, and embed it into your VLE/online.
Provide scaffolding and support to students	Make sure any online critical engagement tasks set out the key steps students need to undertake. Break the task into chunks and provide a structure for each one; your first 'chunk' could be exploring what critical engagement is! Visual aids like a graphic organiser can be helpful – this could be embedded into an online tutorial presentation, or on the VLE.
Teach information evaluation: give students the opportunity to explore different sources and develop an understanding about what is and isn't a reliable source	A big part of being critical is understanding the information at hand, and whether or not it is reliable. You could ask students to read a source and assess its validity against set criteria, with answers posted on a forum for peer review or peer discussion. You could provide an example in which you illustrate approaches to evaluation of information. Or, you could ask them to spot the 'fake news' during an online tutorial discussion – their answer could take the form of a vote. You also need to take into account learner use of generative AI (see the section below).
Set tasks and assessments which involve thinking critically: build it into the learning outcomes	Make it clear to students from the start that a particular task or assessment is focused on critical thinking. Not only highlight it in the overall course (or programme) learning outcomes (which should be available on the VLE), make it clear during the specific activity by, for instance, highlighting it during an online tutorial or on a forum.
Encourage a 'questioning culture'. This can lead to active participation in critical thinking tasks and build confidence	Student curiosity should be encouraged. Encourage them to ask questions, and to question the material. Promote a 'safe' questioning environment. An online activity could pose an open-ended question with no clear right/wrong answer, and students could debate their responses in real-time (whether during an online activity, or on a text based platform).
Foster discussions between students and between the tutor and student(s)	Students not only need the confidence to speak out, they need the ability to listen to others and handle constructive criticism (as both the recipient and the giver). Build discussion points into online activity, encouraging different viewpoints and normalising differences of opinion – this could be text or speech based, and synchronous or asynchronous. This will help build critical thinking skills.
Promote reflection	A key part of critical thinking is reflection. Students not only need to learn how to critically reflect, they need to be given the space and opportunity to do so. Asynchronous text-based activities can be good for this, as an immediate response is not required. In a live tutorial they could respond anonymously to a poll or write on the online whiteboard.
Set problem solving activities, utilising project based learning	Problem solving activities can help foster critical thinking. One way of doing this is to use project based learning, where students think about 'real-world issues.' These real-world issues can ask students to analyse, propose alternative solutions, and make decisions. In doing so they can critically assess evidence. They can do this individually or in a group. They could be presented with a scenario (you could play a news item in an online tutorial or post a link to a newspaper report, journal article, data set or policy paper on a discussion board) and ask them to make a decision and outline the reasons for that decision. Alternatively, you could invite students to consider a theory/framework/model from literature and consider its applicability in their context.
Get students to work together to critically assess	Working together involves dialogue over and about differences, being open to hear and reflect on the position and arguments of a different stance, as well as peer review and peer discussion which may prompt someone to reconsider their argument/position. Asking students to work together to solve a problem or assess evidence not only helps to develop critical thinking skills, it can also help students to engage with others and with their confidence. If your students are in different time zones or are not available at the same time, they can do this asynchronously.

Top tips	How does this apply online?
Encourage students to present and share work	By presenting and sharing their work online, and receiving and giving comments and feedback, students can better understand how to critically reflect on their own work and others. Providing a framework for comment to peers is useful, to ensure best practice is applied.
Encourage use of multi-media - images, videos, concept mapping, podcasts etc.	Students do not only need to critically engage via text or speech format. Online activities are a great opportunity for students to critically engage via video or image format, or to embed these formats into their critical responses. For instance, you could ask students to watch a news video and critically assess the policy response. Or, you could ask students to incorporate creative elements into a critical thinking assignment such as images in a presentation.

Criticality and Generative AI

When using Generative AI tools (such as ChatGPT, Gemini etc.), it is important that students are made aware that they should critically engage with its content. This is because:

- Gen AI tools are different to the generic search engines (such as Google or Bing) they may be more familiar with.

- Gen AI tools generate outputs on the basis of stochastic probability (so, the output generated involves randomness and has some uncertainty).

- The output generated is constrained by the data used for training – which is constantly changing and is unknowable.

- Gen AI tools scrape the internet for information with no regard to copyright, attribution or bias.

- There may be variation and inaccuracies in response to prompts; Gen AI tools do not operate by human principles of conversational relevance.

- Participants may generate conflicting or different outputs from use of different prompts or different platforms.

Practical ways to encourage student criticality when using Gen AI include:

- Create 'lightbulb moments': the speed of interaction with Gen AI can allow students to experiment with alternative prompts and sources. Through this exploratory practice they can rapidly realise the significance of different types of questions and prompts, and the variability in responses.

- Discuss tendencies to "absolutism" or "relativism" in response to Gen AI outputs: encourage students to critically evaluate strengths and limitations of their Gen AI outputs, rather than automatically accepting the outputs as 'true' or 'the only answer'.

- Explore belief in credibility of certain sources: certain types of source – for example peer reviewed journals or tutors – may be perceived as valid and reliable, and other outputs unreliable: this can be unpicked with students.

- Create opportunities for shared critical discussion: encourage students to discuss and evaluate their Gen AI outputs with others (students and tutors).

- Design criticality into Gen AI related tasks: ask students to critically engage with their Gen AI outputs as part of an assessment.

Further reading

For more information about encouraging online student engagement generally, check out CODE's **'Top tips for student engagement' guide**.

Contact

This guide has been produced by the **Centre for Distance and Online Education (CODE)** 'Student Engagement' Special Interest Group, and the **'resetting the discussion form' CODE project**.

To contact us, please email: **code@london.ac.uk** or find us on X: **X.com/CODE_UoL**

References

UCL (2021). Encouraging student engagement with blended and online learning. Available at: **https://www.ucl.ac.uk/teaching-learning/publications/2021/oct/encouraging-student-engagement-blended-and-online-learning** (accessed 30/01/2023)