

The ICEBERG principles

Quick guide and prompts

The ICEBERG principles were created in 2016 and reviewed in 2024 to ensure their ongoing relevance and applicability to educational contexts. The seven principles support the design of learning experiences which can help minimise student withdrawal rates.

We've created a quick guide to the principles and some prompts for applying them. You can find the full principle descriptions and prompts in the [ICEBERG Health Check document](#).



Learning that is designed for retention should be:

Design Tips

Integrated

Learning materials are constructively aligned. All elements are accessible and inclusive. Essential skills are woven through the curriculum. A consistent design approach is used.

- Show how activities and assessments link to learning outcomes.
- Contextualise skills development opportunities.
- Keep media and platform switching to a minimum to reduce cognitive load.

Collaborative

Students are given opportunities for meaningful collaboration to help build community and feelings of belonging. Consider student diversity by providing choice, structure, and support.

- Collaborative activities are scaffolded gradually to build student confidence.
- Activities have a clear purpose and the context, benefits, and wider skills development opportunities are communicated.

Engaging

Students have opportunities to see themselves reflected in curriculum content and make connections with lived experiences, interests and educational or career aspirations. Student's assessment and feedback literacies are actively developed.

- Include a variety of activity types.
- Use authentic and relevant assessments, activities, and resources.
- Ensure assessment processes and strategies are clearly explained.

Balanced

Workload is manageable and evenly distributed. Unevenly distributed workload between study weeks may make it difficult for students to plan their study.

- Clearly communicate expected workload to help students plan their study time.
- Build in reflection and catch up time.
- Take into consideration the complexity of learning materials and activities and their impact on workload.

Economic

Learning materials are efficient in delivering the learning outcomes without including too much additional material. The curriculum is mindful of the number of online tools students are expected to learn or engage with.

- Clearly identify, reinforce, and prioritise the key concepts and ideas that students need to grasp to be successful.
- Provide clear signposting to help students find their way through the learning materials.
- Ensure any optional content is clearly labelled and expectations about independent study communicated.

Reflective

Include opportunities for regular reflection to help students test their understanding, track progress and consider their wellbeing. Support and guidance to help develop student's reflective skills are provided.

- Provide regular summaries in the learning journey.
- Offer opportunities for students to test their learning.
- Allow students space to reflect on their wellbeing and emotions at key points in their study.

Gradual

Materials build knowledge and skills gradually, helping students grasp the basics before exploring more complex concepts. To reduce the cognitive burden of upskilling provide clear instructions, communication of expectations and useful resources.

- Ensure students are provided with time and access to resources to help them (re) connect with assumed/prior knowledge or skills.
- Scaffold new concepts and skills and provide low-stakes opportunities for students to practice them.