

Designing for student retention

**ICEBERG Health Check**





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In addressing the ongoing challenge of **student retention**, especially in **online and distance learning environments**, it is crucial to carefully consider **how to best design learning experiences** to **minimise dropout rates**.

In 2015 the Open University (OU) developed the ICEBERG model, a set of principles - Integrated, Collaborative, Engaging, Balanced, Economical, Reflective, Gradual - aimed at guiding curriculum design and improving retention rates. After a recent review, these principles have been found to remain highly relevant and applicable in the current educational context at the OU.

To support OU staff in embedding these principles effectively, we have developed the ICEBERG Health Check. This checklist can be used proactively as a reflective tool during content creation or retrospectively when looking back at what has been created.

# Integrated

A well-integrated curriculum constitutes a coherent whole where all parts work together in a meaningful, cohesive way. This means that there is constructive alignment between learning outcomes, assessments, activities, and support materials, which all contribute effectively to helping students be successful during study. Furthermore, all elements are accessible and inclusive, ensuring that all learners can fully engage with and benefit from the curriculum.

An integrated curriculum also incorporates opportunities for students to develop essential skills such as employability, digital literacy, sustainability awareness, and study skills. These are thoughtfully woven into the curriculum in relevant contexts instead of being treated as standalone add-ons. Their value is also clearly communicated to students.

Additionally, an integrated curriculum ensures a consistent design, structure, and use of study materials across modules on the same qualification. This consistency will help reduce confusion and cognitive load that can arise when materials are inconsistently named, located, or omitted altogether. A consistent approach will allow students more time to engage with learning materials and activities.

# Integrated *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Ensure constructive alignment between learning outcomes, assessment, and learning activities and materials |  |  |  |  |
| Ensure accessibility, inclusivity, and sustainability are seamlessly integrated into all elements of the curriculum |  |  |  |  |
| Ensure that skills development is well-integrated and contextualised to the module content |  |  |  |  |
| Use a consistent VLE module structure compared to other modules on the same qualification |  |  |  |  |
| Ensure that switching between different media and platforms (e.g. VLE, print, software, simulations, etc.) is kept to a minimum |  |  |  |  |

# Collaborative

Meaningful student collaboration and communication helps students to engage in deep learning and to make concepts and ideas their own. It also serves as a mechanism for social support, where students feel part of an active academic community of learners and helps to develop feelings of belonging that make it more likely students are retained.

Approaches to collaborative activities that consider student diversity and promote equitable participation are more likely to lead to productive interactions. To help build student confidence and reduce feelings of anxiety when collaborating, activities should be scaffolded gradually, and task information should be provided to students as early as possible. Integrating collaborative activities by connecting them to learning outcomes and ensuring the context, benefits, and wider skills development opportunities (e.g. employability) are clearly communicated can also support student engagement.

It is important to recognise that some students dislike having to collaborate with other students and study with the OU purely because they want to study on their own without input from others. Nonetheless, although not all students want to engage in collaboration, research by the OU’s Institute of Education Technology (IET) has found a positive correlation between the amount of collaborative activity and student completion and pass on modules.

# Collaborative *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Create meaningful opportunities for student communication and collaboration |  |  |  |  |
| Ensure that communicative and collaborative activities are well-structured and have a clear purpose |  |  |  |  |
| Provide guidance and ground rules for participation and interaction in communicative and collaborative activities |  |  |  |  |
| Encourage students to engage in supportive interaction and mutual exchange of ideas |  |  |  |  |
| Take into consideration how tutorials, tutors and meaningful activities can be used to build the students’ skills and confidence to engage in collaboration |  |  |  |  |
| Provide choice in how students interact with one another (e.g. via different asynchronous and synchronous spaces) |  |  |  |  |
| Take into consideration and encourage students to engage who would prefer to study on their own |  |  |  |  |
| Scaffold collaborative activities to help build students’ confidence and teamwork skills, thus encouraging engagement |  |  |  |  |

# Engaging

A curriculum that is engaging will be interesting and meaningful to students. Students should have opportunities to see themselves reflected in curriculum content and to make connections with their lived experiences, interests, and educational or career aspirations. This can be achieved by using a variety of authentic and relevant assessments, activities, or resources (such as case studies) where students are supported to make connections to their lives and goals and develop applicable skills.

Providing opportunities to be part of a community can support student engagement and retention by helping to build belonging and counteracting isolation. Students who feel like they belong are also more likely to see the value of required work.

Providing students with choice, when well-scaffolded and supported, of assessment topics, formats, pathways of learning across a module, or activities can contribute to an engaging curriculum. Developing students’ assessment and feedback literacies can also increase their engagement with assessment processes and remove their barriers to learning.

# Engaging *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Include a variety of different activity types |  |  |  |  |
| Support students to make connections between learning materials and activities and their lived experiences and educational and career aspirations |  |  |  |  |
| Make the academic team visible to students so that students have a sense of connection with the academic voice behind the module |  |  |  |  |
| Ensure that the tone of the curriculum is enthusiastic and supportive of students as self-directed learners |  |  |  |  |
| Ensure assessment processes and strategies are clearly explained and students are supported to develop their assessment and feedback literacy |  |  |  |  |
| Take into consideration choice and flexibility of assessment and activity topics or formats to allow students the opportunity to work to their strengths and to personalise learning to their individual goals |  |  |  |  |

# Balanced

Balanced in this context refers to workload that students face when studying the curriculum and the extent that this workload is well-paced and evenly distributed. Research has pointed out a negative correlation between average weekly workload and student outcomes, including satisfaction and pass rates, making it particularly important we do not overload students while keeping the workload appropriate for the level of study. Where there is an unevenly distributed workload between different study weeks, a negative impact on student outcomes has also been found. Students can be supported to balance their studies by providing clear indications of weekly workload and leaving space in the study calendar for them to consolidate, reflect on or catch up.

# Balanced *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Ensure the weekly workload is reasonable and manageable for all students |  |  |  |  |
| Ensure that the workload is evenly spread across the different weeks of the module |  |  |  |  |
| Take into consideration the complexity of different learning materials and activities, and their impact on student workload |  |  |  |  |
| Take into consideration the other modules students might be studying concurrently and how this will impact on workload (e.g. during assessment deadlines) |  |  |  |  |
| Actively support students in building effective study and planning skills which can help them keep on top of their workload |  |  |  |  |
| Ensure that students know on a week-by-week basis exactly what they are expected to do |  |  |  |  |
| Cater for students who fall behind, by, for example, building in reflection and catch-up weeks |  |  |  |  |

# Economical

Economical refers to the extent to which a module or qualification is efficient in delivering the learning outcomes without providing too much additional material that is not key to achieving the defined learning outcomes.

There might be a temptation to provide students with an array of interesting facts, ideas, theories, and concepts in a given subject area; however, this can lead to overwhelm and high workload particularly where it is not clear what to prioritise. Providing students with a clearly signposted path that delivers the required learning aims without unnecessary digressions will support them to manage their workload and continue with their studies.

Making it clear to students exactly what they will learn, and providing a clear set of learning activities and learning documents that enable them to achieve the required learning aims, will contribute to students’ success.

An economically designed curriculum will also be mindful of the number of online tools or software students are expected to learn or engage with. Where possible, tools will be streamlined to only include those appropriate to the subject, employability, or skills development context and their relevance will be communicated to students.

# Economical *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Clearly identify, reinforce, and prioritise the key concepts and ideas that students need to grasp to be successful |  |  |  |  |
| Ensure that students are not overwhelmed with a plethora of interesting learning materials and activities that do not contribute to achieving key learning outcomes |  |  |  |  |
| Ensure that materials are clearly aligned to the learning and assessment aims |  |  |  |  |
| Provide clear signposting to help students find their way through the materials and clearly indicate where content supports or links to assessment |  |  |  |  |
| Take into consideration the number of online tools and software students are expected to learn to use and engage with |  |  |  |  |
| Ensure that any optional reading or learning is clearly labelled and expectations around independent study communicated to students |  |  |  |  |

# Reflective

For students to effectively pass a module and engage in deep learning, it is important that they reflect on their learning and study progress and have the time and space to do so. Module materials that continually prompt students to reflect on what they are learning and how this is supporting them to develop knowledge and skills, will help students to situate content in the broader context of their study. This can help students to connect their learning to the context of a global, diverse, and sustainable world. It can be achieved through incorporating regular summaries in the learning journey and providing opportunities for students to test their understanding through, for instance, self-assessment questions, formative quizzes, and iCMAs.

As students approach summative assessments, it is important they are provided with suitable opportunities to reflect on their learning and understanding. This reflection should extend to the feedback they have received on prior assessment, fostering a continuous learning loop that informs future study strategies. It is also important that students are provided opportunities to reflect on their wellbeing and emotions at key time points through their academic journey. This can help address any academic challenges and stressors that may be having a detrimental impact on their learning and study experience.

Overall, embedding opportunities for reflection and feedback in the curriculum will help keep students engaged with the curriculum; this makes it more likely for them to be retained.

# Reflective *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Take into consideration and incorporate suitable approaches to reflection |  |  |  |  |
| Ensure that materials reflect back to students what they are learning (i.e. through regular summaries) |  |  |  |  |
| Provide students opportunities to test their understanding, for example, through self-assessment questions, formative quizzes, iCMAs |  |  |  |  |
| Provide students sufficient opportunities and time for consolidation, revision, and reflection before each assessment point |  |  |  |  |
| Ensure that time for self-directed learning has been considered and built-in |  |  |  |  |
| Ensure students are provided with support and guidance to help develop their reflective skills |  |  |  |  |

# Gradual

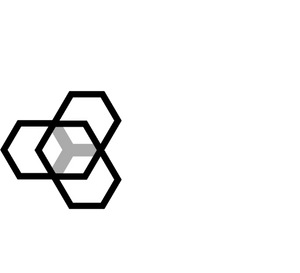
In an effective learning journey, students will gradually encounter increasingly complex and challenging concepts, ideas, materials, tasks, and skills development.

Throwing students in at the deep end can result in students struggling to keep up or losing confidence. Knowledge, skills, activities, and assessments should occur over a manageable gradient (often referred to as scaffolding), connect back to and build upon what students already know, provide timely opportunities to learn and practice relevant skills, and prepare students to achieve defined learning outcomes. These approaches make it more likely that students will not be overwhelmed and, therefore, are more likely to be retained.

Not all students will have equal prior educational experiences, knowledge, or skills (e.g. digital skills, knowledge of academic conventions, and understanding of language used in assessment feedback). Therefore, where prior knowledge or skills are assumed, students should be given dedicated time and access to relevant resources before they are needed. Providing clear instructions and communication of expectations, alongside resources such as primers, skills audits, dedicated tutorials, or additional support sessions, can help reduce the cognitive burden of upskilling.

# Gradual *cont.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To what extent does your module … | **To a great extent** | **To some extent** | **Not at all** | Please give a brief explanation of how this is being met and if any actions will be taken to improve this area |
| Ensure students are introduced gradually to increasingly complex and challenging concepts, ideas, tasks, and skills development |  |  |  |  |
| Ensure the assessment strategy and module learning tasks gradually build up confidence and skills for assessment |  |  |  |  |
| Ensure student learning is scaffolded to prepare them for the current and next level of study |  |  |  |  |
| Ensure students are supported in progressing from more directed to more independent forms of learning |  |  |  |  |
| Ensure that students are provided with time and access to resources to help them (re)connect with assumed/prior knowledge or skills |  |  |  |  |





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