Powerful Design: Sequence, connect and recycle for success

A powerful design structures the entire curriculum and its assessments in a coherent and cohesive way. It creates a curriculum which makes sense to all participants.

Why

The sequencing of the curriculum and the connections made between all its various components are important. A coherent curriculum progressively develops understanding, enabling students to take best advantage of the learning opportunities and be successful.

How

You can create a coherent curriculum that supports and enables learning and success in a number of ways.

Create a logical sequence

Build a logically sequenced curriculum which grows knowledge in a step by step fashion. Do this in both your delivery of the content and the learning activities.

1. Logically sequence delivery of the content and skills

   Logically sequencing the teaching of content and skills in the unit includes all forms of delivery such as your lectures, readings, videos, and aspects which tell, explain, and demonstrate. Structure the content like a well-written book with tightly composed chapters or essays.

   Start the unit by setting the broader context. This might be the conceptual framework, approach, or perspective. It might be a historical or contemporary context. Use this broader context as the base for launching into detail of the unit. Sequence the delivery from week to week in a logical way, building and developing ideas, concepts, and skills. Where appropriate, add in activities that help keep students on track during delivery such as a quick multiple choice activity or short exercise. Make sure that these activities are related to the preceding information and they lead on to the next set of ideas in the delivery sequence.
2. Logically sequence your learning activities

Many components of your unit will involve learning activities such as practice exercises, discussions, or research. This may occur through the tutorials, laboratory sessions, pre-class preparation, study guides etc. These also need careful sequencing so that each activity builds on what came before.

Start with an activity that checks the students’ current level of skill or understanding. For example activities such as a brainstorm exercise, a quick quiz, or a mind-mapping exercise. These activities allow staff to check that students are on track, and to see where students may need some help or direction. Create activities that build on and extend from this. End your sessions with an activity that draws everything together and corrects any misconceptions that may have arisen. Activities may include short group presentations or students providing short and sharp reflections on particular topics.

Build connections

1. Connect the delivery with the learning activities

Structure your curriculum so that various components of your unit have a logical relationship to each other. Ensure the activities in your tutorials, Blackboard Collaborate sessions, and laboratory sessions relate to the most recent lecture, video, and/or readings, allowing students the opportunities to discuss and practise what has been presented and explained. Place your field trips and practicums carefully according to their purpose in the curriculum. Are students to gain experiences for discussion in the formal setting? Or are students to apply what has been taught? How you intend to use these experiences determines whether you place them early in the sequence, or later when the students have gained and practised certain skills and knowledge.

2. Connect the teaching program to the assessments

Make sure that your teaching program aligns with the assessment structure. All the necessary delivery and the learning activities need to occur in enough time for students to apply these in assessments. If you have developed an assessment for learning structure, then design and sequence your teaching program around the assessment structure.

3. Connect the teaching program to professionals or discipline experts in the area

It can also be useful to connect the teaching program with professionals or discipline experts in the field. This is particularly important for students who come from families with little experience of or with your subject area or profession. At the right place in the curriculum, incorporate guest speakers who can show students how they have done things and what works out in the field, as well as site visits that help students to make sense of what they are learning.
Recycle and extend

When developing your curriculum, be mindful that students don’t always understand immediately. Make sure that students have opportunities to engage with knowledge and skills in different ways and multiple times by asking students to reformulate, experiment with, and draw together the various pieces of the puzzle (Biggs & Tang, 2007).

1. **Powerfully set the scene with the delivery**

   Start the process by presenting information in the most powerful ways identified in educational research. Hattie (2012) suggests that you:
   - sequence associated ideas close to each other
   - use verbal and visual cues, and multimedia for maximum impact
   - link facts, skills, procedures, and deep concepts
   - minimise distracting and irrelevant material
   - do not overload working memory and keep the amount of content manageable
   - incorporate stories and case examples.

   Ensure that your resources such as the readings and videos you select also adopt these powerful principles.

2. **Recycle and extend the learning activities**

   When designing learning activities for tutorials, laboratories, Collaborate sessions, study guides, etc., recycle and extend student understanding using the most powerful ways identified by the educational research for interacting with knowledge. Hattie (2012) suggests that you:
   - include activities for outlining, integrating, and synthesising information
   - include problems for students to solve as well as strategies for solving them
   - include activities that create cognitive dissonance, and strategies for addressing and working with this dissonance
   - link activities to the big ideas or overarching concepts
   - include multiple and varied exercises
   - show the value and purpose of practising.

**Develop opportunities for feedback**

Make space in your curriculum for immediate feedback to be given to students. Feedback is one of the most powerful tools you can use to progress student learning. Feedback allows students an opportunity to see whether or not they are on the right track and allows them to adjust or to seek some help or direction where needed. Ensure that you incorporate opportunities for feedback at every session with the students. This will help prevent students from falling behind or going down the wrong path. Feedback can come from teaching staff, from automated computer exercises, and from fellow students.
Also incorporate activities that heighten the students’ awareness of feedback, and that teaches them how to effectively evaluate and use the feedback (Vardi, 2012).

In summary
Logically sequencing, connecting, and recycling the various parts of your curriculum will help students to develop a deep understanding of your subject, improve their competence, and raise their confidence over the course of the session.

Find out more
