



**HIBERNIA
COLLEGE**

Case Study: UDL in New Online Digital Content

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What is UDL?

‘Universal Design for Learning (UDL) is a set of principles for curriculum development that give all individuals equal opportunities to learn, including students with disabilities.

UDL aims to improve the educational experience of all students by introducing more flexible methods of teaching, assessment and service provision to cater for the diversity of learners.’ (AHEAD, 2017)

Digital Learning Department (DLD)

- In Hibernia College, the Digital Learning Department (DLD) are responsible for developing the digital content in the asynchronous online sessions that students engage with in their programmes.



AHEAD UDL course

- In 2021 and 2022, 12 members of DLD received a digital badge for completing the CPD course 'Universal Design in Teaching & Learning', run by AHEAD and UCD Access & Lifelong Learning and hosted by the National Forum for the Enhancement of Teaching & Learning.



UNIVERSAL DESIGN IN
TEACHING AND LEARNING

Issued on: 01/19/2022

Implementation of universal design principles in Teaching & Learning promotes inclusivity and equity while also 'future-proofing' your teaching.

As our classrooms and lecture theatres become increasingly diverse, our practices must also adapt to reflect the changing landscape of higher education.

Universal Design for Learning (UDL) is an educational framework based on research in the learning sciences, including cognitive neuroscience, which guides the development of flexible learning environments that can accommodate individual learning differences and cater for the wide range of diversity in our lecture rooms. This CPD course will give you an introduction to the concept of Universal Design for Learning and invite you to review and update your own Teaching and Learning practice.

Issuer



National Forum for the Enhancement of Teaching and Learning in Higher Education
info@teachingandlearning.ie

Undertaking this course increased our awareness of the importance of embedding UDL practices in our content development process.

New online digital content development

New programmes

- BSc (Hons) in Nursing
- Postgraduate Diploma in Science in Business Data Analytics

Revalidation of existing programmes

- PME in Primary Education
- PME in Post-Primary Education



Opportunity to examine how we develop content and look at new ways of developing creative and innovative content

New digital tools

- Articulate Rise
- Articulate Storyline
- Vyond
- H5P



Develop more engaging, interactive and creative content

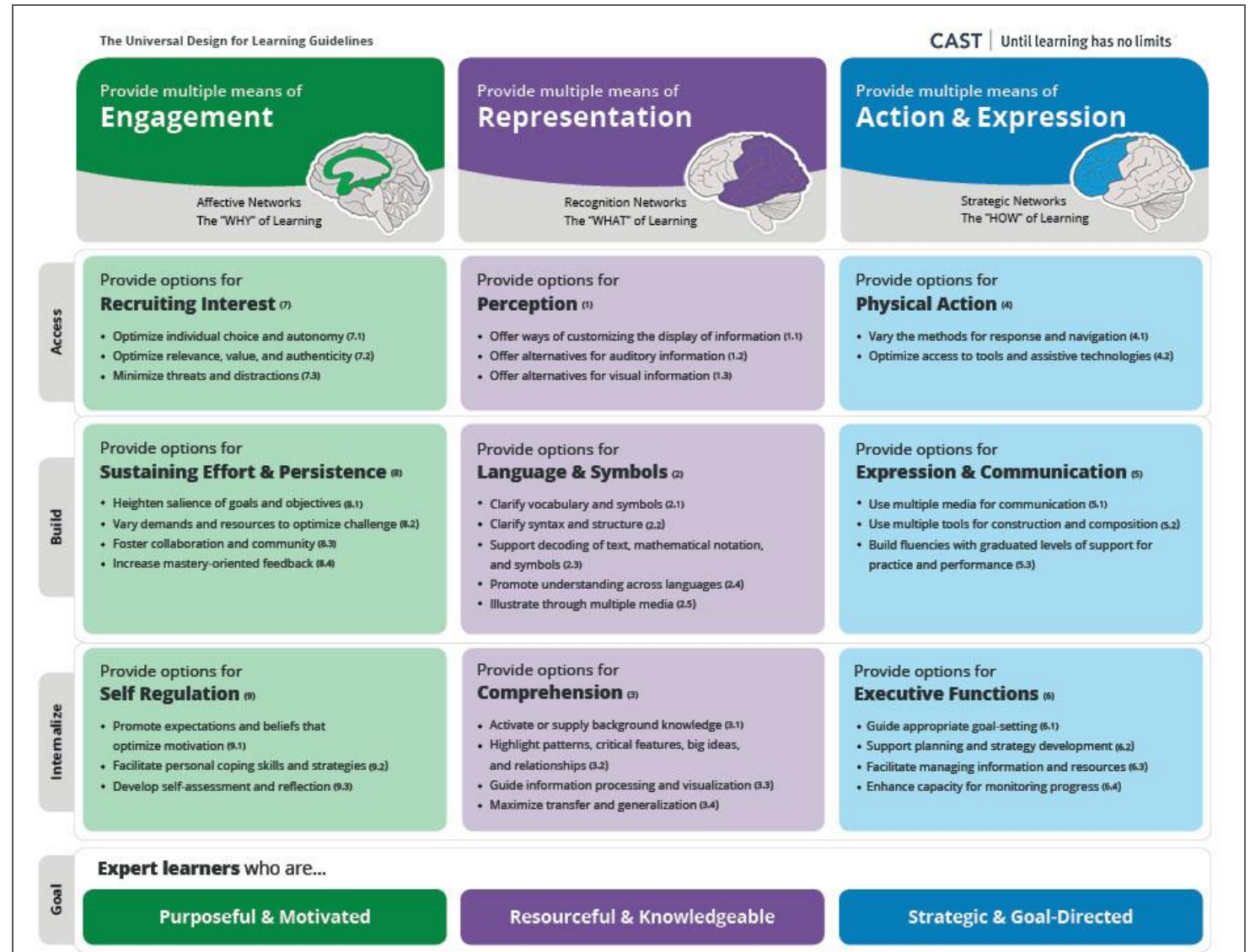
Support inclusive practices and provide flexibility in the way information is presented and how learners engage with the content, ensuring that content is accessible to all learners

Principles of UDL

Hibernia College's blended learning model adheres to the principles of UDL, incorporating multiple means of:

- Engagement
- **Representation**
- Action and Expression

into our teaching, learning and assessment.



(CAST, 2018)


Focus on 'Representation'

The WHAT of learning

Presenting content in a variety of ways to:

- Give learners different ways of acquiring information, knowledge and skills
- Support understanding by students with different learning styles and/or abilities

Provide multiple means of
Representation



Recognition Networks
The "WHAT" of Learning

Provide options for

Perception ⁽¹⁾

- Offer ways of customizing the display of information (1.1)
- Offer alternatives for auditory information (1.2)
- Offer alternatives for visual information (1.3)

Provide options for

Language & Symbols ⁽²⁾

- Clarify vocabulary and symbols (2.1)
- Clarify syntax and structure (2.2)
- Support decoding of text, mathematical notation, and symbols (2.3)
- Promote understanding across languages (2.4)
- Illustrate through multiple media (2.5)

Provide options for

Comprehension ⁽³⁾

- Activate or supply background knowledge (3.1)
- Highlight patterns, critical features, big ideas, and relationships (3.2)
- Guide information processing and visualization (3.3)
- Maximize transfer and generalization (3.4)

Resourceful & Knowledgeable

Using alt text for images

- Alt (alternative) text is used to describe the appearance and function of all images in content.
- Our learners with visual impairments who use screen reading tools rely on alt text to provide context for the images presented in our content.

Example



Good alt text

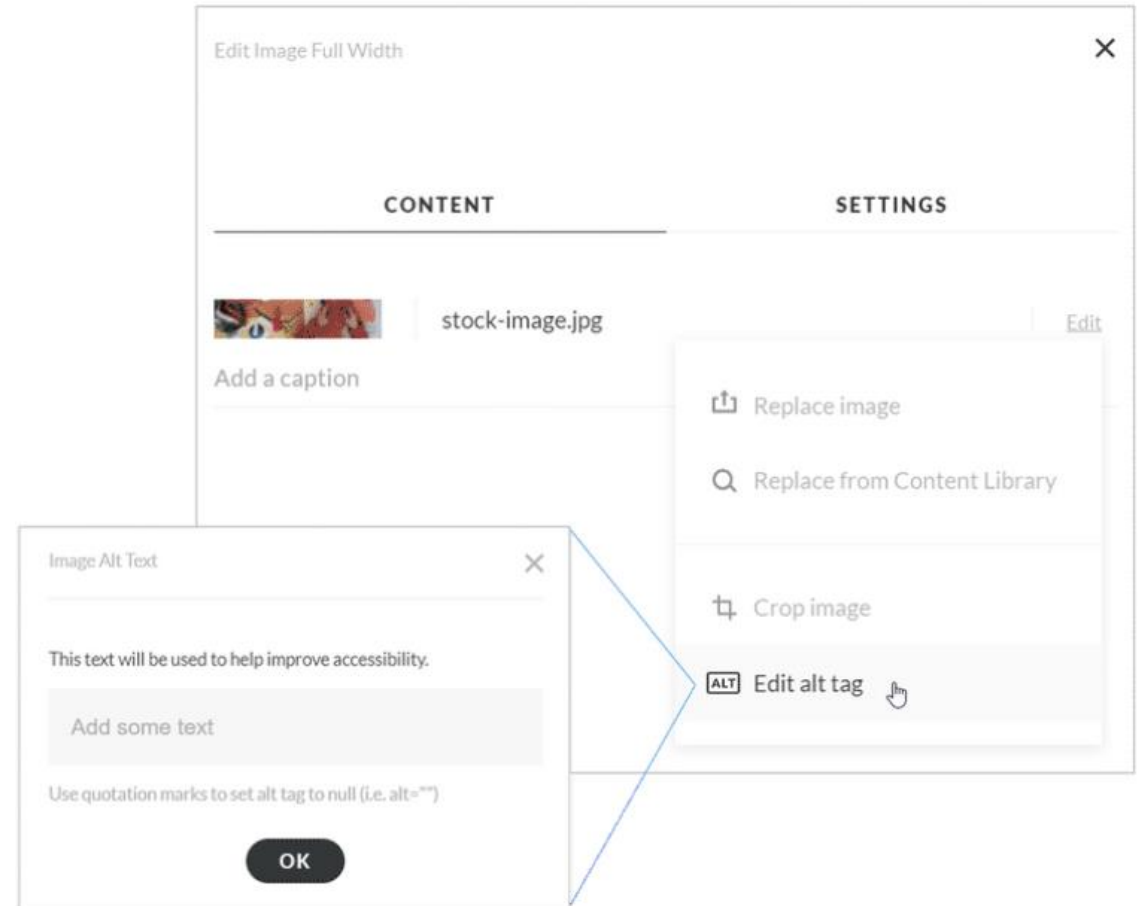
- Describe the image as specifically as possible.
- Keep it (relatively) short.
- Don't include "image of," "picture of," etc.

Ok:

```
<img alt="pancakes">
```

Good:

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<img alt="Stack of pancakes topped with blueberries, syrup and powdered sugar">
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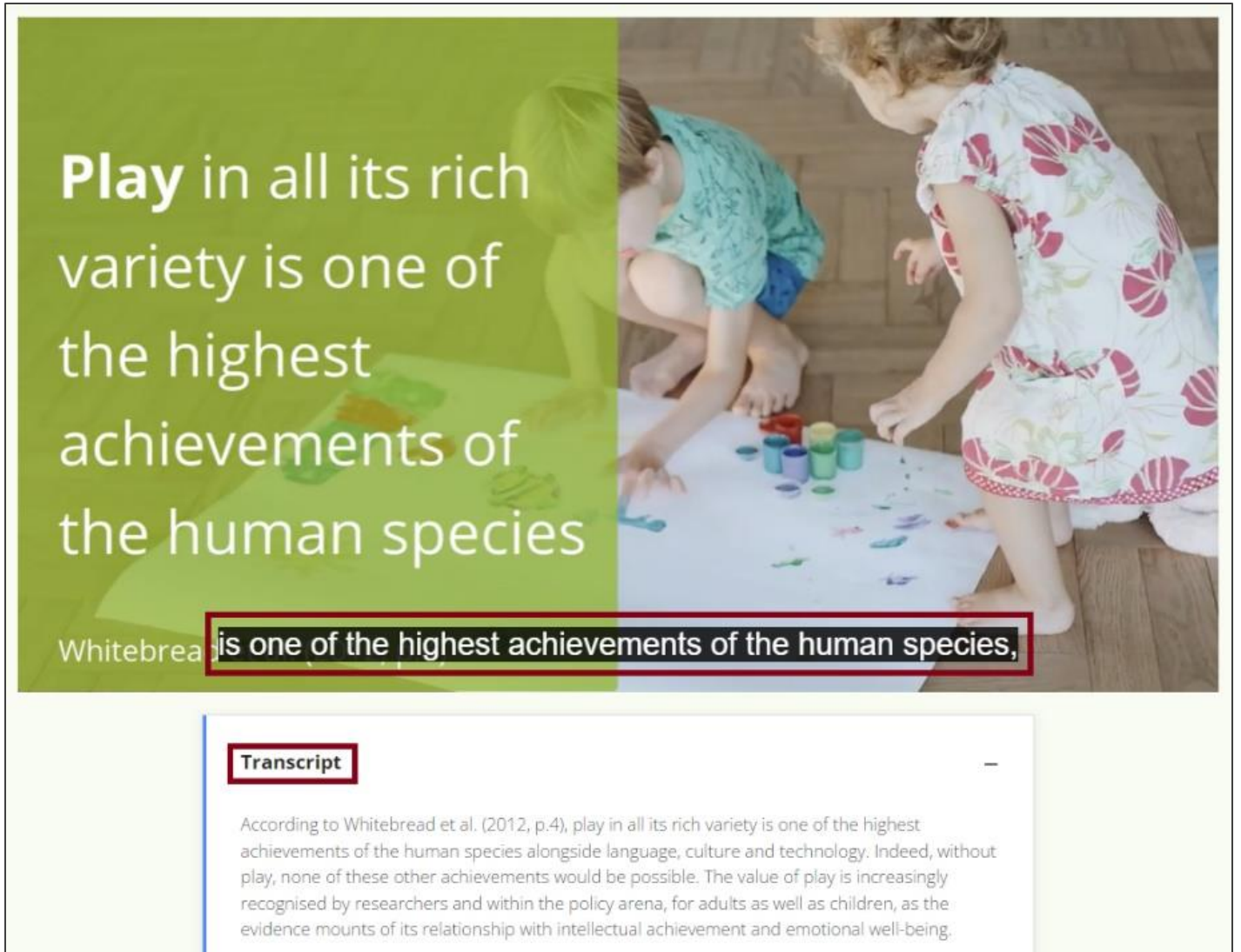


Providing transcripts & closed captions

Allows all learners alternative ways of engaging with visual and auditory information provided in our content.

Closed captioning is beneficial for all learners as it:

- Makes videos more accessible
- Allows deaf and hard of hearing people watch videos
- Helps learners to focus on and remember information more easily
- Allows learners watch videos in sound-sensitive environments



Play in all its rich variety is one of the highest achievements of the human species

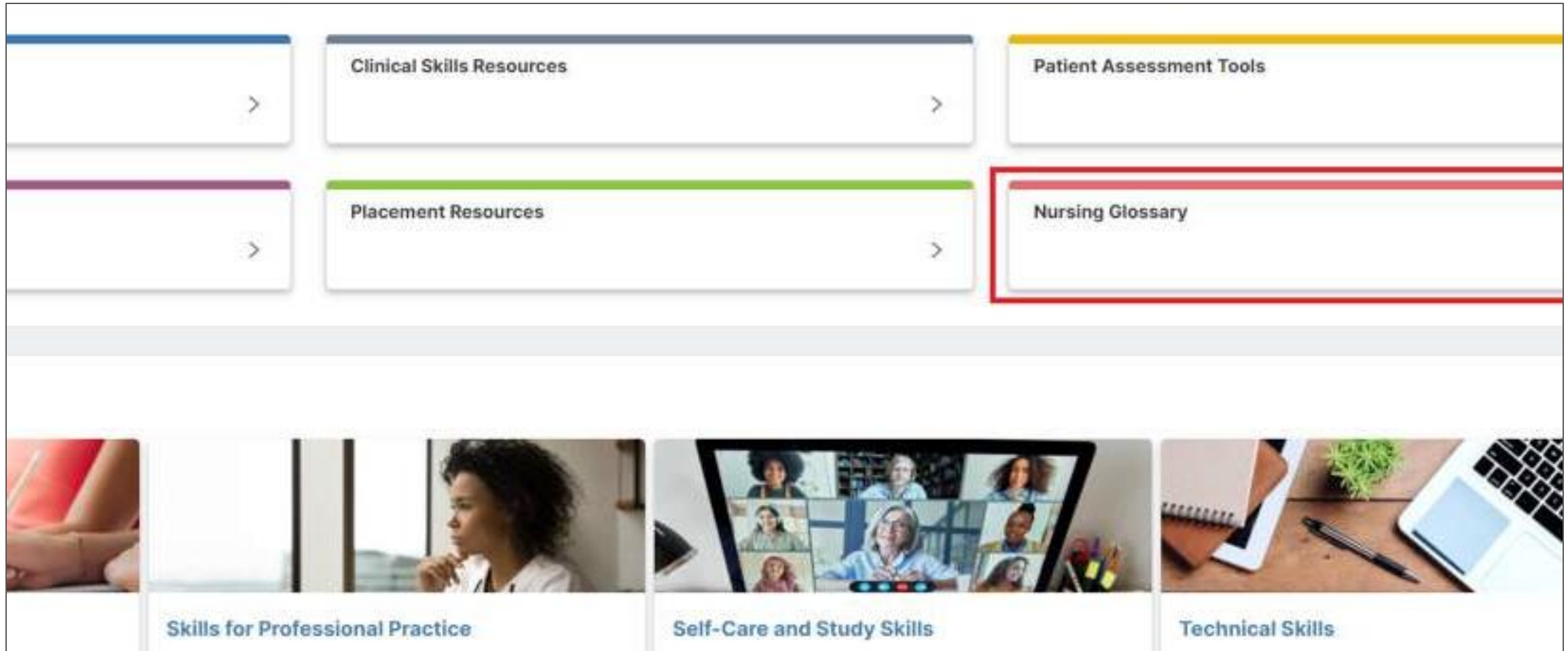
Whitebread **is one of the highest achievements of the human species,**

Transcript

According to Whitebread et al. (2012, p.4), play in all its rich variety is one of the highest achievements of the human species alongside language, culture and technology. Indeed, without play, none of these other achievements would be possible. The value of play is increasingly recognised by researchers and within the policy arena, for adults as well as children, as the evidence mounts of its relationship with intellectual achievement and emotional well-being.

Clarifying vocabulary

- To clarify unfamiliar vocabulary for all learners, we provide glossaries at the programme, module and session level in our LMS.




The screenshot displays a Learning Management System (LMS) interface. At the top, there are five resource category tiles arranged in two rows. The first row contains three tiles: an empty tile with a blue header and a right-pointing chevron, a 'Clinical Skills Resources' tile with a grey header and a right-pointing chevron, and a 'Patient Assessment Tools' tile with a yellow header. The second row contains three tiles: an empty tile with a purple header and a right-pointing chevron, a 'Placement Resources' tile with a green header and a right-pointing chevron, and a 'Nursing Glossary' tile with a red header. The 'Nursing Glossary' tile is highlighted with a red border. Below these tiles is a horizontal separator line. At the bottom, there are three skill area tiles, each with a representative image and a caption: 'Skills for Professional Practice' (image of hands), 'Self-Care and Study Skills' (image of a video conference), and 'Technical Skills' (image of a desk with a laptop and pen).

	Clinical Skills Resources	Patient Assessment Tools
	Placement Resources	Nursing Glossary

Skills for Professional Practice	Self-Care and Study Skills	Technical Skills
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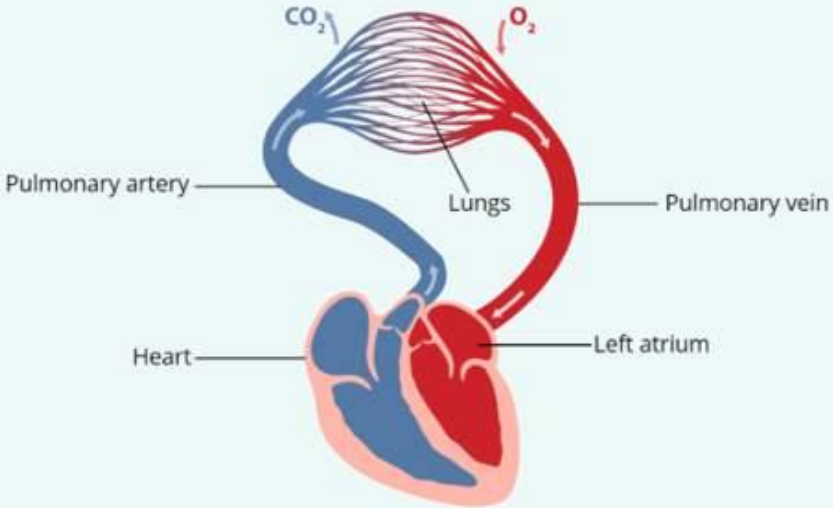
Activating prior knowledge



Linked learning

A word of caution

It is commonly assumed that arteries carry oxygenated blood and veins carry deoxygenated blood. This is not entirely true! The pulmonary artery carries deoxygenated blood away from the heart to the lungs and the four pulmonary veins return the oxygenated blood from the lungs to left atrium of the heart.



One easy way to remember the direction of blood to and from the heart is **Veins Enter, Arteries Leave**. If you'd like to revisit pulmonary circulation, follow this link:
[The respiratory system](#)

- Activate relevant prior knowledge in our content by:
 - Linking to content previously covered
 - Providing preparatory activities to allow learners to bring previously learned knowledge to their current studies
- We do this by using visual imagery such as icons and headings, so learners are aware of the purpose of the learning activity.

Prepare

Complete this activity before you move on to explore the units of learning:



Prepare for Session 1

Guiding information processing & comprehension (1)

When developing online content, we ensure that:

- Content is presented to learners in a logical and meaningful manner
- Patterns and ideas are highlighted
- Key points are emphasised
- Content is 'chunked' into smaller sections
- Headings, lists and instructional text are included to guide learners through the content

The screenshot shows a course interface. On the left, a blue sidebar contains the course title 'Introduction to Sociology and Social Policy in Ireland' and a progress indicator '0% COMPLETE'. Below this is a table of contents with four items: 'What is sociology?', 'Overarching sociological theories and theoretical approaches', 'Social policy, equity and inclusion in the delivery of healthcare', and 'References'. The first item is highlighted with a red border. The main content area on the right has the heading 'What is sociology?' and a background image of colorful, crumpled paper.

[Introduction to Sociology](#)

Guiding information processing & comprehension (2)

Environmental systems: Bronfenbrenner

After reading this, you may be asking yourself how or where we fit in as individuals in our society, culture and norms.

Bronfenbrenner (1979) explains four environmental systems in his Bioecological Model of Human Development:

- Microsystem
- Mesosystem
- Exosystem
- Macrosystem

Take some time to study this diagram. To learn more about each system, select each + icon:

Bronfenbrenner's bioecological model of human development



Think about...

Can you think of anything historically that had to change within our healthcare system due to sociological issues?

Linking the theory to associated sociologists

So, let's look at some of the sociologists who espouse the various theories.

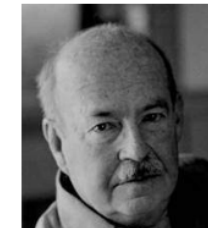
To learn about the theories and sociologists, select each tab below.

[FUNCTIONALISM: PARSONS](#)

[CONFLICT THEORY: MARX](#)

[SYMBOLIC INTERACTIONISM: MEAD](#)

The work of American sociologist Talcott Parsons (1952–1979) is relevant to the sociology of health and illness. Parsons advanced the notion of the 'sick role' to 'describe the patterns of behaviour which the sick person adopts in order to minimize the disruptive impact of illness' (Giddens, 2006, p.267). This functionalist thought, for instance, holds that society usually operates in a reasonable manner. Illness is, therefore, a disruption to this operation.



Additional ways of embedding UDL principles

- Asynchronous online content is released on our LMS, is available 24/7 and can be re-visited at any stage throughout a programme.
- Learners can go through the content at their own pace.
- Learners can pause/rewind audio, videos and presentations. Certain videos can also be speeded up/slowed down.
- There are no time limits on quizzing activities.
- When completing activities in digital tools such as Padlet or Mahara, students can record responses via audio or video.

