Open Educational Resources for Teaching and Learning at TUS

OPEN EDUCATIONAL RESOURCES FOR TEACHING AND LEARNING AT TUS

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CONTENTS

Teaching, Learning and Assessment OER

ACKNOWLEDGEMENTS

This collection would not have been possible without the generous support of the National Forum for the Enhancement of Teaching and Learning (National Forum). The work was funded under their Strategic Alignment of Teaching and Learning Enhancement (SATLE) Funding in Higher Education 2022/23 as part of the Developing Open Educational Resources (DOERs) Project.

This web book was inspired by McMaster University's OER by discipline guide. We are most grateful to them for sharing their work and we hope that our OER compilation and related OER index will benefit other institutions, including other HEIs in Ireland.

We would like to acknowledge the artists and creators who openly licensed their art, which we utilised to create the cover art of this web book, namely:

Background image: White and black abstract painting image by Kseniya Lapteva Unsplash License

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Top right image: Black smartphone near person image by Headway Unsplash License

Bottom left image: Group of plus size employees in a modern, bright open office working on computer image by AllGo – An App For Plus Size People. Unsplash License

Bottom right image: Woman in black sweater holding white and black VR goggles image by Maxim Hopman Unsplash License

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INTRODUCTION

About

Open Educational Resources (OER) can be defined as: "learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others." [1]

This compilation of OER was curated for teaching staff in the Technological University of the Shannon: Midland and Midwest (TUS), Co. Westmeath, Ireland, by library staff. This book provides a selection of teaching and learning OER, primarily OER published within the last five years, which we deem to be of high quality.

To locate content within this book, users may browse the contents or use the search box located in the top-right of each page. We recommend using this resource in tandem with our

1. UNESCO (2021) The Paris OER declaration 2012. Available at: https://en.unesco.org/oer/paris-declaration

OER index, which has been created based on our faculties, for the benefit of our university community.

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://tus.pressbooks.pub/oerforteachingandlearning/?p=4#h5p-2

Purpose

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://tus.pressbooks.pub/oerforteachingandlearning/?p=4#audio-4-1

Listen to the audio file to learn more about the purpose of the book, or continue reading.

This pressbook fulfils two aims:

- to support our teaching staff by providing a selection of high quality and timely OER in areas used by our institution to enhance teaching and learning, such as 3D printing, team based learning and lightboard technology.
- to showcase the capabilities of the pressbooks publishing platform, in creating accessible, interactive web books using a variety of media types.

TUS library holds a pressbooks license for our institution, which enables TUS staff and students to create and publish web books and interactive digital learning resources. Contact TUS library to get started using TUS pressbooks or explore the pressbooks directory to learn more.

WHY OER?

Unique characteristics of OER

OER include resources in any format (video, textbook, lesson plans etc.), which are:

- openly licensed, using for example Creative Commons licensing,
- and those which are in the public domain,
- and those which are no longer within copyright.

Therefore OER are not subject to the same restrictions as other teaching and learning materials which means that they can be widely used, adapted and reused. The rights afforded by OER to users are known as the 5Rs, as they empower users to:

Retain – make, own, and control a copy of the resource (e.g. download and keep your own copy)

Revise – edit, adapt, and modify your copy of the resource (e.g. translate into another language)

Remix – combine your original or revised copy of the resource with other existing material to create something new (e.g. make a mashup or a collection)

Reuse – use your original, revised, or remixed copy of the

resource publicly (e.g. on a website, in a presentation, in a class)

Redistribute – share copies of your original, revised, or remixed copy of the resource with others (e.g. post a copy online or give one to a friend)[1]

Image credit: 5R permissions of OER snipped from Go open: a beginners guide to open education by Farrell, O. et al. CC BY 4.0

1. Section 1.2 Open Educational Resources (OER) of Using OER and OEP for Teaching and Learning by the National Forum for the Enhancement of Teaching and Learning. Available at: https://open.teachingandlearning.ie/oer/ CC BY 4.0.

The National Forum has produced a very useful open licensing toolkit, which provides very practical advice on how creative commons (CC) licenses can be used to create OER. Similarly, McMaster University, Canada, provide a very concise and informative overview of creative commons and other open licensing options.

Advantages of OER

Potential advantages of OER are well documented and are succinctly summarised by Jhangiani et al.[2]:

- reducing economic barriers
- equity and inclusion
- accessibility and data privacy
- participatory learning and student engagement
- pedagogical flexibility and innovation
- student enrolment, persistence, and performance
- alignment with institutional mission and strategy

2. Jhangiani, R., Farrelly, T., Ó Súilleabháin, G. (2024) Open Education Practices in Higher Education: Focusing on Responsiveness, Innovation & Inclusivity. N-TUTORR. ISBN: 978-1-7395019-2-1 Available at: https://www.transforminglearning.ie/publications/open-education-practices-in-higher-education

Thus, OER has the potential to be a flexible, sustainable resource utilised by higher education in Ireland to enhance student experience and diversify curriculum resources.

OER IN IRELAND

History of OER

The concept of OER has long been advocated for, as is evident from the publication of the Cape Town Open Education Declaration (2007), the UNESCO Paris OER Declaration (2012), the UNESCO Ljubljana OER Action Plan (2017), the UNESCO OER Recommendation (2019) and the establishment of the UNESCO OER Dynamic Coalition in 2020, to support the implementation of the areas identified in the 2019 Recommendation.

Similarly, in Ireland, the National Forum has advocated for open education, which encompasses OER, since 2014. It has created a suite of tools and resources to empower HEIs in Ireland to adopt, adapt and create OER, which are available on their website.

Jhangiani et al. (2024) provide an excellent overview of OER in Ireland, in their recently published sectoral white paper from N-TUTORR. They provide a series of OER recommendations, including the importance of: improving OER discoverability; supporting OER publishing; and investing in dedicated staffing positions, such as OER

librarians [1]. Ireland has also been included as a good practice model in recent UNESCO OER implementation guidelines.

An Irish university, Munster Technological University, also hosted the 15th annual OER conference in March 2024, in association with the Association for Learning Technology (ALT). The conference keynote presentation, by Catherine Cronin and Laura Czerniewicz, is available to view here:

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=208#oembed-1

Video credit: Catherine Cronin and Laura Czerniewicz (2024) Conference Keynote: The future isn't what it used to be: open education at a crossroads. Video recording available at: https://www.youtube.com/live/d_SjjZYiTE8?si=9ARhUdqT8iWFPe3D&t=1403 CC

1. Jhangiani, R., Farrelly, T., Ó Súilleabháin, G. (2024) Open Education Practices in Higher Education: Focusing on Responsiveness, Innovation & Inclusivity. N-TUTORR. ISBN: 978-1-7395019-2-1 Available at: https://www.transforminglearning.ie/publications/open-education-practices-in-higher-education

BY4.0. Additional resources available at: https://catherinecronin.net/conferences/post-oer24-keynote/.

Ireland undoubtedly has a strong and vibrant OER community, to which TUS is a proud contributor. We have created an OER library guide to promote OER awareness and an OER index which provides high quality and recently published OER in alignment with our faculties. TUS library staff have also collaborated on a number of national and international OER projects. Contact us if you would like to discuss potential OER projects.

Let's start exploring OER!

This web book is a living document, which will evolve during the 2024/2025 academic year.

The content is organised into three broad thematic areas: digitally enhanced learning OER; inclusive curriculum design OER; and teaching, learning and assessment OER. There is some thematic cross-over

amongst entries, as some OER could be included in more than one subject area. Users can browse the contents of the book and also use the search box in the top-right of each page to navigate this resource. We recommend using this resource in tandem with our TUS OER index.

Image credit: three men laughing while looking in the laptop inside room photo by Priscilla Du Preez. Unsplash license.

DIGITALLY ENHANCED LEARNING OER

3D PRINTING

Evolution of 3D printing

3D printing involves using a digital model to create a physical object, layer by layer. Having evolved significantly since its inception in the 1980s, 3D printing has immense potential to revolutionise industries and drive efficiency and innovation.

Openly licensed 3D models are available from websites such as Thingiverse. Thingiverse is a community which contains more than 2.5 million 3D printable things and encourages users to license their works under CC licenses to facilitate reuse.

Book chapters

3D printing and the art world: current developments and future prospects

This chapter, from the book Advances in 3D Printing, provides an overview of the technologies that enable and influence the 3D reproduction of artworks, including technologies necessary to capture an artwork's materials on a chemical and physical level, artificial intelligence (AI), 3D printing technology itself, and the rise of the non-fungible token (NFT).

Date published: 2022 | License: CC BY 3.0

3D printing for tissue regeneration

Tissue engineering is an interdisciplinary field and 3D bioprinting has emerged to be the holy grail to fabricate artificial organs. This chapter gives an overview of the latest advances in 3D bioprinting technology in the commercial space and academic research sector. This chapter features in the book Advances in 3D Printing.

Date published: 2022 | License: CC BY 3.0

Collections

3D printing collection from the make-IT place

This collection of 16 resources includes projects related to 3D printing, Tinkercad, Thingiverse, and other 3D modeling software. Curated by Maryland Library.

Date published: Varied | License: Varied

Guides

3D printing repair guide

This guide takes readers through the 3D printing for repair (3DP4R) process. It consists of guidelines and tools to create a 3D printable version of spare parts needed for product repair. Published by Delft University of Technology, Netherlands.

Date published: 2022 | License: CC BY 4.0

Projects

Biological science 3D modelling

This project creates 3D printable models that instructors can use to illustrate lecture content, and students can manipulate the models to better facilitate understanding of the physical space and relationships of biological systems, organs, and cells. It supports experiential learning for biological science courses and increases access to enhanced learning for diverse groups of students. The project offers a library of 3D-printable files for significant biology models. These files can be used to both augment textbook content and improve hands-on learning in the lab. This project was produced by the OE Lab at Ontario Tech University, Canada.

Date published: 2024 | License: CC BY-NC-ND 4.0

Textbooks

Designing the digital world

This book touches on design thinking, virtual reality, and 3D printing, and their applications in our world. Published by the University of Galway.

Date published: 2021 | License: CC BY 4.0

3D printing at TUS

The Polymer, Recycling, Industrial, Sustainability and Manufacturing (PRISM) Research Institute at TUS provides state-of-the-art on-site prototyping and manufacturing facilities, including 3D printing technologies.

Did you know that TUS library is in the process of developing a 3D printing service to support teaching and learning? Contact your local TUS library to learn more.

Additional OER which may also be of interest can be found in the immersive technology OER chapter and content within our OER index, such as animation and product design.

Image credit: custom made orthoses printed on a 3D printer being corrected by a orthopedist by Tom Claes. Unsplash license

ARTIFICIAL INTELLIGENCE (AI)

AI in education: friend or foe?

Artificial Intelligence (AI) and large language models (LLMs) have the potential to transform education, work and indeed society, addressing key challenges and fostering innovation. However, they also create challenges and pose significant risks, which require policy, regulatory and educational frameworks to be effectively managed.

Animation

Detecting deepfakes: how can we ensure that generative AI is used for

good?

3 minute animation and related article. This animation outlines how due to AI, deepfakes – manipulated pieces of media using generative AI technology and designed to trick their viewers – are becoming more convincing, prevalent and problematic. This animation and related article explore the potential of deepfake detection technology and also deepfake forensic methods to combat the potential harms of deepfakes. These resources were created by academic staff from the University at Buffalo, The State University of New York in the US.

Animation credit: detecting deepfakes: how can we ensure that generative AI is used for good? by Dr Siwei Lyu and Futurum. CC BY-NC 4.0

Date published: 2024 | License: CC BY-NC 4.0

Articles

AI for equity: unpacking potential human bias in decision making in higher education

The purpose of this study is to show how AI can serve as an assessment tool to detect potential human bias in decision making for students in higher education. This article was published in the journal AI, Computer Science and Robotics Technology.

Date published: 2023 | License: CC BY 4.0

Emotions and artificial intelligence

This collection of 11 articles explores emotion and AI, as there is increasing interest in the incorporation of emotional intelligence into machines. Natural language processing, computer vision, and affective computing techniques, among others, are becoming involved in the detection and analysis of human emotions. The main aim is to allow machines to properly recognise, interpret, and respond to human emotions, enhancing their ability to interact with us in more meaningful ways, especially in multimodal and multimedia settings. Published by Frontiers.

Date published: 2023 and 2024 | License: CC BY 4.0

Book chapters

Applications of machine learning in healthcare

This chapter examines a brief history of machine learning, some basic knowledge regarding the techniques, and the current state of this technology in healthcare. This chapter was published in the book: Smart Manufacturing – when Artificial Intelligence meets the Internet of Things.

Date published: 2021 | License: CC BY NC 4.0

The razor's edge: how to balance risk in artificial intelligence, machine learning, and big data

This chapter is guided by the question, how can an educational system take advantage of rapid technological advances in a safe and socially responsible manner while still achieving its mandate of fostering and supporting learner success? This book chapter resulted from a co-design project in a class in the Masters of Education programme at the University of Calgary, Canada.

Date published: 2021 | License: CC BY 4.0

Briefing papers

Evaluating malicious generative AI capabilities: understanding inflection points in risk

This CETaS Briefing Paper examines how generative AI (GenAI) systems may enhance malicious actors' capabilities in generating malicious code, radicalisation, and weapon instruction and attack planning. It synthesises insights from government practitioners and literature to forecast inflection points where GenAI could significantly increase societal risks. Published by the Centre for Emerging Technology and Security, UK.

Date published: 2024 | License: CC BY 4.0

Checklists

The Generative AI checklist

This 1 page guide provides recommendations on how to use AI effectively:

C – Clarify context/objectives

H – Hone your requests

E – Evaluate responses

C – Cross-check and verify
K – Expand your Knowledge
L – Link concepts
I – Implement responsibly
S – Study skills development
T – Track and log progress
Created and shared by Sue Beckingham (Sheffield Hallam University) and Peter Hartley.

Date published: 2024 | License: CC BY-SA 4.0

Courses

DAILy curriculum

The DAILy-AI workshop, designed by MIT educators and experienced facilitators, features hands-on and computer-based activities on AI concepts, ethical issues in AI, creative expression using AI, and how AI relates to your future. Users will experience training and use machine learning to make predictions, investigate bias in machine learning applications, use generative adversarial networks to create novel works of art, and learn to recognize the AI you interact with daily and in the world around you.

Date published: Not specified | License: CC BY NC 4.0

Guidance and guides

A people's guide to teach AI

This education-inspired guide breaks down and contextualises AI technologies with specific focus on equity and provides hands-on exercises to help us imagine beyond, and dream up alternate and ideal futures with AI. Curated by Allied Media Projects.

Date published: 2018 | License: CC BY NC SA 4.0

Guidance for generative AI in education and research

UNESCO's first global guidance on GenAI in education aims to support countries to implement immediate actions, plan long-term policies and develop human capacity to ensure a human-centred vision of these new technologies.

Date published: 2023 | License: CC BY-SA 3.0

Journals

The new reel

This journal emerged from the experiential AI research theme

and group, it conducts research on the following themes: creative AI for good, human-centred creative AI, next generation intelligent experiences and public XAI and socio-technical literacy. Published by the University of Edinburgh, via Edinburgh Diamond.

Date published: 2023 to current | License: CC BY 4.0

Presentations

101 creative ideas to use AI in education

This collection captures where we are, at this moment in time with our collective thinking about potential alternative uses and applications of AI, that could create new learning opportunities. The collection is based on an open invitation to all educators and students to share ideas on how AI tools could be used in inventive ways for learning, teaching and scholarship. A PDF of this slide collection is available at this link: 101 creative ideas to use AI in Education: A crowdsourced collection. (wichita.edu).

Date published: 2023 | License: CC BY-NC-SA 4.0

AI text and student words: how can we best distinguish?

Compiled by Anna Mills, a US based educator, as an invited presentation for Auburn University, US.

Date published: 2024 | License: CC BY NC 4.0

AI text generators: sources to stimulate discussion among teachers

Compiled by Anna Mills. Included as part of a larger resource collection: AI and Teaching Writing: Starting Points for Inquiry.

Date published: 2024 | License: CC BY-NC 4.0

Reports

Artificial intelligence and intellectual property: an economic perspective

The emergence of AI has profound implications for intellectual property (IP) frameworks. While much of the discussion so far has focused on the legal implications, we focus on the economic dimension. This report dissects AI's role as both a facilitator and disruptor of innovation and

creativity. From patentability dilemmas to copyright conundrums, the authors explore the delicate balance between fostering innovation and safeguarding societal interests amidst rapid technological progress. Published by the WIPO.

Date published: 2024 | License: CC BY 4.0

Textbooks

AI supercharged learning: pragmatic teaching with artificial intelligence

Discover how AI can revolutionize your classroom, transforming students from passive recipients into active participants in their own education. Dive into real-world case studies, ethical pitfalls, and exciting possibilities, guided by hands-on advice for teachers to navigate the complexities of AI in education. Published by A7technology Inc.

Date published: 2023 | License: CC BY 4.0

Toolkits

Getting the innovation ecosystem ready for AI: an IP policy toolkit

As AI technologies evolve at an exponential pace there are many questions and challenges for IP and the IP system. The purpose of this IP policy toolkit is to provide policymakers with a framework to understand the state of play of AI innovation right now and to think about the future as AI becomes increasingly autonomous. Published by the WIPO.

Date published: 2024 | License: CC BY 4.0

Discovering the power of AI for teaching

Related OER selections which may also be of interest include the chapter on assessment and also the academic writing OER shared in our index.

CPID also provide support for TUS staff to harness AI effectively for teaching and learning.

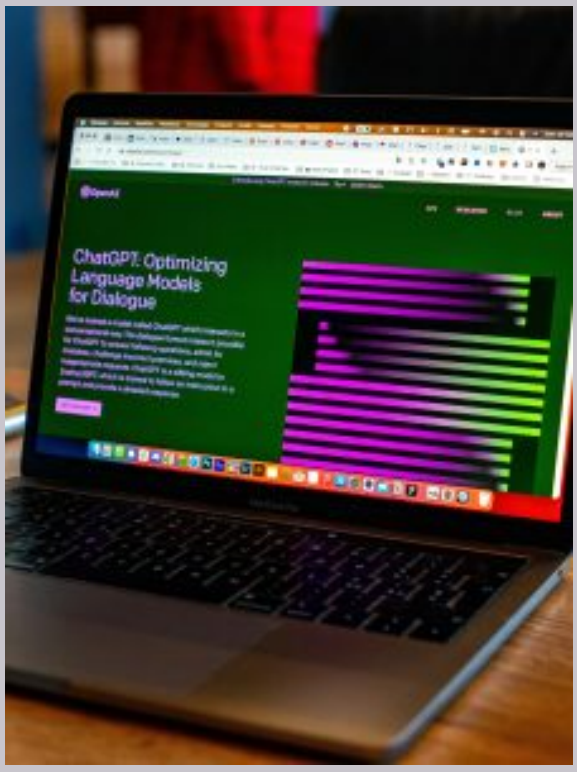


Image credit: photograph of Mac Book displaying Chat GPT by Emiliano Vittoriosi. Unsplash license

IMMERSIVE TECHNOLOGY

Harnessing the potential of immersive technology to create multi-sensory learning experiences

Immersive technology facilitates learning in engaging, participatory and exciting ways, utilising extended reality, virtual reality, simulations, gamification, 360 video and other immersive applications.

Articles

Extended reality vocational training's

ability to improve soft skills development and increase equity in the workforce

With the rise of the metaverse, extended reality (XR), which includes virtual, augmented, and mixed reality, has emerged as a key alternative education medium alongside more traditional online and onsite approaches. This article examines an XR development plan through a diffusion of innovation framework coupled with social capital theory. A literature review reveals organisations' ability to capitalise on soft skills development while expanding global accessibility options for adult learners to improve learning equity opportunities. Article in a special issue of AI, Computer Science and Robotics Technology.

Date published: 2023 | License: CC BY 4.0

The metaverse—an alternative education space

This article explores the merits of the metaverse as an alternative education space that fosters universal design for learning and reviews platforms that support multiple entry points for engagement, representation, action, and expression. Published in the journal AI, Computer Science and Robotics Technology.

Date published: 2022 | License: CC BY 4.0

The metaverse, immersive virtual reality and its implications on human behaviour

This concise collection seeks to analyse the effects of the metaverse on human behaviour and in particular to understand under what conditions it is possible to make the metaverse's effects on human behaviour controllable in order to prevent forms of deviance and crime. Published by Frontiers.

Date published: 2023 and 2024 | License: CC BY 4.0

Prisms of neuroscience: frameworks for thinking about educational gamification

This article examines technology as an extension of cognition, where gamification emerges as a fundamental rather than supplemental tool for educators to co-construct knowledge with students. Published in the journal AI, Computer Science and Robotics Technology.

Date published: 2023 | License: CC BY 4.0

Book chapters

An investigation of virtual reality

technology adoption in the construction industry

This chapter examines the acceptance and adaptation of people using VR technology in the construction industry and to identify factors that prevent VR technology from being adopted more widely in that sector. Semi-structured interviews were conducted among 15 students and academic staff members at two universities. The chapter shares barriers to adoption and suggests solutions. This chapter was published in the edited volume: Smart Cities and Construction Technologies, by Intech Open.

Date published: 2020 | License: CC BY NC 4.0

Playful practicals: breaking free from educational norms with online escape rooms

This chapter shares experiences in designing and delivering online escape rooms, using tools such as an Insta 360 camera and the platform Thinglink, to develop practical skills in healthcare education and considers further playful applications across Higher Education. Book chapter published in From lab to laptop: case studies in teaching practical courses online by the Active Learning Network through University of Sussex Open Press.

Date published: 2024 | License: CC BY 4.0

Image credit: From lab to laptop: case studies in teaching practical courses online by the Active Learning Network. CC BY 4.0

Courses

Designing quality tech-enabled learning experiences – a self directed study

The overarching objective of this 4-module course will be to facilitate the development of any person who seeks to create quality, technology-enhanced learner experiences. Learners

will leave the course able to take the best resources and experiences and apply them to the design and structures of their own courses. Created by academics across a number of Canadian universities.

Date published: 2022 | License: CC BY-SA

Interactive textbooks

360 essentials: a beginner's guide to immersive video storytelling

This resource will walk you you through the essential steps in creating compelling and engaging 360 video experiences. Created by staff from Ryerson University in Toronto, Canada.

Date published: 2021 | License: CC BY 4.0

Inclusive peer learning and augmented reality in higher education: a technology-enhanced learning (TEL) perspective

This book serves as a comprehensive guide for educators and instructional designers, with the aim of revolutionising pedagogy through the integration of peer collaboration and augmented reality technologies in the classroom or online. By

providing a wealth of literature reviews, research findings, and illuminating case studies, it offers a detailed roadmap to a novel and more engaging approach to teaching and learning. Published by the iPEAR Project and Power Learning Solutions.

Date published: 2023 | License: CC BY 4.0

Using virtual gaming simulation: an educator's guide

This open access textbook was developed as a resource for educators and simulationists who are using virtual gaming simulations with their nursing students and potentially other healthcare students. This book includes interactive content and videos and is therefore best viewed using the online pressbooks format. Published by Centennial College, Toronto, Canada.

Date published: 2022 | License: CC BY-NC-SA 4.0

Lesson plans and assignments

Nonfiction immersive visual storytelling (360, VR, AR, spatial audio, photogrammetry)

This resource is a guide to teaching immersive nonfiction storytelling, including assignments and readings. Content includes 360 filming and editing, immersive storytelling, immersive and spatial audio, augmented reality, photogrammetry, 6DoF & volumtric video, social VR and the future. Shared by Craig Newmark Graduate School of Journalism at CUNY, US.

Date published: not dated | License: CC BY-NC-SA 4.0

Presentations

XR: what is immersive technology?

This short presentation provides an overview of what augmented reality and virtual reality are, including examples. Shared by CUNY Academic Works. Published by Open Oregon Educational Resources.

Date published: 2020 | License: CC BY-NC-SA 4.0

Tutorials

A collection of ready-to-use virtual reality-based interactive tutorials for chemistry and biochemistry courses

This series of interactive learning modules uses the multi-functional nanome environment in VR. These tutorials span a range of chemistry and biochemistry topics that are documented in the literature to be particularly challenging for student learners. These modules can be used by any instructor who has the necessary VR hardware without any additional cost and with a minimal amount of advance preparation. Created by York University, Canada.

Test your knowledge of immersive technology!

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=42#h5p-5

Drag and drop the correct definition for these immersive technology concepts H5P activity created by Maura Flynn. CC BY NC 4.0

CPID provide support and guidance to TUS staff who wish to explore immersive technology in their teaching.

LIGHTBOARD TECHNOLOGY

Lightboard: the new chalk and talk?

Lightboard technology features a glass writing surface embedded with LED lights, allowing instructors to face the camera while creating engaging, personalised instructional videos. It facilitates the creation of a dynamic lecture-recording method for online, blended and flipped classrooms. This tool can be useful to demonstrate complex processes, equations and diagrams.

Articles

Blended learning: an effective approach for online teaching and learning

This article, from the journal of engineering education transformations, features the use of lightboard in a numerical methods and differential equations (NMDE) course at second year biotechnology course.

Date published: 2022 | License: CC BY 4.0

Book chapters

Lightboard instructional video

This short chapter provides guidance on how to use this technology and includes a link to a video created using lightboard. Book chapter in Democratising Online Learning in Postsecondary Education: Instructional Design Plans.

Date published: Not specified | License: CC BY-NC-SA 4.0

Guides

Lightboard studio guide

A quick start user guide to the USask lightboard studio managed by media production. This guide describes the available recording configurations in the room, what equipment is available, some step-by-step instructions for getting started with your own DIY recordings and some tips and tricks for pre-production and post-production planning that will help you make the most out of your session time. Published by University of Saskatchewan, Canada.

Date published: Not specified | License: CC BY-4.0

Podcasts

The not-so-distant learning podcast: the lightboard with Dr. Kristine Weglarz

In this episode of the not-so-distant learning podcast, Terry Greene chats with fellow eLearning designer Dr. Kristine Weglarz about an exciting piece of equipment that Trent Online has at its disposal: the lightboard. Their discussion covers how the technology works and what it can do. The

The podcast is 25 minutes in duration and the lightboard discussion starts at 2:00. Published by Trent University, Canada.

Date published: 2020 | License: CC BY-4.0

Repositories

Teaching online pedagogical repository

This repository features short articles on enhancing course content, interaction and assessment. Shared by the teaching online pedagogical repository, University of Central Florida.

Date published: 2017 | License: CC BY-NC-SA 4.0

Videos

How to use a lightboard and OBS studio to effectively teach online

Recording of a webinar on how to use lightboard for educational purposes. Shared by Teacholine Canada.

Date published: 2022 | License: CC BY-NC-SA 4.0

Websites

Lightboard lecture pedagogy and best practices

This webpage features a description of this technology and outlines benefits for faculty and students. It then links to lightboard examples and tips for using the technology. Shared by the teaching online pedagogical repository, University of Central Florida.

Date published: 2017 | License: CC BY-NC-SA 4.0

Lightboard use in TUS

Related OER selections which may also be of interest include the chapter on STEM and universal design for learning.

CPID empowers TUS staff to utilise lightboard to enhance teaching.

Image credit: lightboard by Jordan Epp. CC BY 4.0

INCLUSIVE CURRICULUM DESIGN OER

EQUALITY, DIVERSITY AND INCLUSION (EDI) IN EDUCATION

Celebrating diversity and difference to cultivate an inclusive, participative environment

TUS is committed to cultivating a inclusive environment for our university community. This section provides a small collection of diverse OER on this topic, including resources to support students' mental health.

Collection of essays

Advancing racial equality in higher education

This collection of essays follows on from the 2021 RACE.ED event "racial equity work in the university and beyond: the race equality charter in context", which explored what racial equality means in higher education and was organised following publication of the report of a largescale review of the race equality charter. Published by the University of Edinburgh.

Date published: 2023 | License: CC BY 4.0

Colouring books

We have great women in STEM: colouring book volume 3

This edition celebrates and showcases the inspiring women in STEM at the University of Edinburgh.

Date published: 2023 | License: CC BY 4.0

Compendia

Compendium of approaches to internationalisation of the home curriculum

This compendium, featuring contributions from colleagues across TUS, aims to capture examples of internationalisation of the home curriculum, some of which are not explicitly documented elsewhere. It includes cases of internationalised modules; teaching and assessment practices that promote inclusive learning by making purposeful use of cultural diversity in the classroom; mutually beneficial collaborative learning and teaching projects, both in-person and virtual, involving RUN-EU and other international partners; co-curricular intercultural competence and awareness-raising initiatives; and activities that create opportunities for engagement with and by our international students. Published by TUS.

Date published: 2024 | License: CC BY 4.0

Guides

Capacity to connect: supporting students' mental health and wellness

This adaptable training resource, which includes handouts and presentations, covers foundational mental health and wellness knowledge for post-secondary faculty and staff and ways to support students in distress. It can be used for two-hour online or in-person training or for self-study. Published by BCcampus.

Date published: 2021 | CC BY-4.0

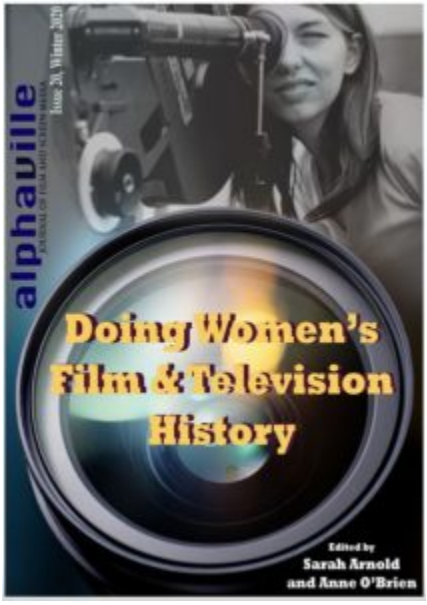
Journals

Alphaville journal of film and screen media

Alphaville is a film and screen media peer-reviewed online journal. It explores all aspects of film and screen media history, theory and criticism through multiple research methodologies and perspectives. It is published by the Department of Film and Screen Media at University College Cork, Ireland. A related podcast has also been created to complement particular

issues, which is embedded within the journal. A number of journal issues celebrate diversity in screen media, including:

Issue 24 – fostering diversity on and off screen



Issue 20 – doing women's film and television history

Issue 16 – queer media temporalities

Issue 13 – screening race

Image credits: Alphaville Journal of Film and Screen Media issue covers by the Department of Film and Screen Media at University College Cork, Ireland. CC BY-NC 4.0

Date published: 2011-to current | License: CC BY-NC 4.0

Interactive self-directed learning resources

Equity, diversity and inclusion in

practice

This interactive self-directed learning resource provides a hybrid learning strategy responding to an identified gap for students participating in experiential learning activities. It serves as a preparatory tool for students before encountering difficult real-life scenarios in their workplaces they may be unsure of how to navigate. Published by the Toronto Metropolitan University, Canada.

Date published: 2022 | License: CC BY-NC-ND 4.0

Podcasts

Frida's fight: examining the gender gap in the art industry

This podcast explores gender inequity in the art market, including undervaluing of artwork created by women. It was recorded by two MBA students. and shared by the University of Oxford Podcasts.

One or more interactive elements has been excluded from this version of the text. You

can view them online here: https://tus.pressbooks.pub/oerforteachingandlearning/?p=25

Podcast credit: Frida's fight: examining the gender gap in the art industry (future of business podcast series, University of Oxford). Created by: Brooke Reese and Susheel Siram. CC BY-NC-SA 2.0

Date published: 2023 | License: CC BY-NC-SA 2.0

Projects

The matilda project: an initiative to raise awareness of inequality and gender bias towards women in science

The matilda project is an educational initiative strategically crafted to cultivate an environment that acknowledges the frequently overlooked contributions of marginalized women scientists facing widespread sex-linked biases. It is time we learn the stories of these brilliant individuals and stop it when we see it happen. Created by academics from Canadian universities.

Resource collections

EDI facilitator training and resource list

Selection of EDI resources from CCCOER, US. Includes pedagogical resources and images.

Textbooks

Diversity and inclusion: are we nearly there yet? Target setting in the screen industries

This book provides the first compact knowledge base on diversity inclusion targets in the UK screen industries. Drawing on new, in-depth industry research and progressive theoretical voices, the book will help readers understand what targets are and what they could be in the future. Written by Doris Ruth Eikhof of the University of Glasgow, UK.

Enhancing inclusion, diversity, equity and accessibility (IDEA) in open educational resources (OER) Australian edition

This practical guide provides a framework and tips to enhance inclusion, diversity, equity, and accessibility in OER. Edited by Nikki Andersen of University of Southern Queensland, Australia.

Date published 2022 | License: CC BY-NC-SA 4.0

Humanising learning: a student-generated framework

Co-designed by students, recent graduates, educational developers, librarians, and instructors, this work explores what humanising learning is – and isn't – while centering student voices and the student experience. This is a resource meant for instructors, and is filled with quotes from students and instructors alike. Published by University of Toronto, Mississauga, Canada.

Date published: 2022 | License: CC BY 4.0

Toxic parliaments and what can be done about them

This book shows how the #MeToo movement and revelations

of sexual harassment and bullying have spurred on reform of the parliamentary workplace in four Westminster countries – Australia, Canada, New Zealand and the UK. Edited by Johanna Kantola, University of Helsinki, Helsinki, Finland and Sarah Childs, University of Edinburgh, Edinburgh, UK.

Date published: 2024 | License: CC BY-NC-ND 4.0

Wellbeing in educational contexts

This book focus on wellbeing promotion in educational contexts, including promoting understanding of diversity, endowing people with a shared purpose and meaning and the skills and behaviours to create a more inclusive, healthy, and positive future. Published by the University of Southern Queensland.

Date published: 2023 | License: CC BY-NC 4.0

Videos

Virtual learning communities

Educational institutions are spaces for learning, but more specifically, they are spaces for social learning. And so our role as educators and administrators of educational institutions has to be focused on building community in addition to offering

courses, designing curriculum, and credentialing. Video shared by Jesse Stommel of University of Denver. Learn more about Jesse's work at his website.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=25#oembed-1

EDI at TUS

TUS provides opportunities for students and staff to thrive through the promotion of positive identities and abilities, the celebration of diversity and

difference, and the provision of an inclusive, participative culture and environment. Learn more at our statement on mission for equality, diversity and inclusion in TUS.

Our OER content relating to universal design for learning may also be of interest, as it focuses on enhancing accessibility.

Image credit: poster by Brittani Burns. Unsplash license

TEACHING, LEARNING AND ASSESSMENT OER

ASSESSMENT

Assessment approaches: exploring alternative options

These resources provide diverse approaches to assessment, from educators in Ireland and further afield, exploring topics such as active learning, academic integrity considerations and renewable assessments.

A related selection of OER are available on the topic of academic writing in our OER Index.

Books

Undoing the grade: why we grade, and how to stop

This book represents over 20 years of thinking and writing about grades. The work of ungrading is to ask hard questions, point to the fundamental inequities of grades, and push for structural change. Written by Jesse Stommel of the University of Denver, US.

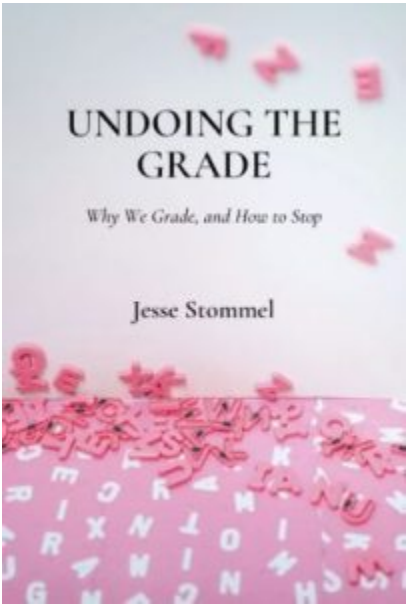


Image credit: Book cover of Undoing the Grade by Jesse Stommel. CC BY NC 4.0

Date published: 2023 | License: CC BY NC 4.0

Collections

Teachers as learners: exploring the impact of accredited professional development on learning and assessment in Irish higher education

The works presented in this volume exemplify the practice of assessment explored through accredited professional development (APD) across Ireland and the impact this has had on individual lecturers, students, modules and programmes. Taking part in an accredited programme and completing the associated assessment engages lecturers in practical strategies for change. The second impact of assessment is the impact of the experience of assessment – the experiential learning about assessment that lecturers do as part of the accredited APD – has on their work as lecturers. Lecturers assess differently having considered assessment in theory and having experienced it in practice. The experience gives lecturers the language to engage in professional dialogue about assessment with themselves, their programme teams and most importantly the students. Published by AISHE. Edited by: Moira Maguire, Nuala Harding, Gina Noonan and Tamara O'Connor.

Compendia

Compendium of active learning and assessment for student engagement. Volume.2

This compendium features 44 submissions from academic practitioners in TUS on active learning and innovative assessment initiatives.

Guides

A guide to alternative assessments

This guide is designed to help instructors design and implement alternative assessments. Each of the 35 alternative assessments highlighted in this document contains a description, the benefits, challenges and solutions, examples, rubrics, and additional resources. Learn more about alternative assessment approaches at York University, Canada.

Date published: 2020 | License: CC BY-NC 4.0

Assess for success guides for staff and students

Maynooth University has developed on topics that staff had identified as priorities regarding assessment and feedback. Many of the guides have companion videos/animations which can be accessed in the relevant topic section. Staff guides were developed on the topics of: approaches to assessment; feedback and feedback literacy; designing authentic assessment; a principles based toolkit for effective assessment design; self and peer assessment; and using rubrics to promote learning. Student guides are also available.

Date published: 2022 | License: CC BY-NC-SA 4.0

Lesson plans

Academic integrity lessons: practical ideas for teaching, learning, and assessment

This OER provides 24 comprehensive lesson plans that focus on instilling skills and values related to academic integrity. It features lesson plans with a positive orientation to academic

integrity, focusing on building skills and competencies, rather than focusing on consequences for committing academic misconduct. It was compiled by the University of Calgary with contributions from authors from Canada, the UK, Finland, and Qatar.

Date published: 2023 | License: CC BY NC SA 4.0

Posters

10 ways to ensure online assessment is accessible and inclusive

This poster was developed by the National Forum, in partnership with AHEAD, to support the Irish higher education community in the initial weeks of the move to online/remote teaching and learning in March 2020, but the principles remain relevant today.

Date published: 2020 | License: CC BY 4.0

Toolkits

Beyond the exam: an alternative online assessment toolkit

This resource was created to help reduce barriers educators experience in creating and adopting alternative assessment strategies. The toolkit contains a bank of exemplars, resources and instructions as well as a space for users to share back adapted or newly-designed assessment approaches that have proven successful for their learners and context. Published by McMaster University, Canada.

Date published: 2022 | License: CC BY-NC-SA 4.0

Course development toolkit: renewable assignments

This library guide provides a brief overview of renewable assignments and open pedagogy, including practical tips on how to make assignments more renewable, so that they have a life beyond the end of the students' module. Published by Excelsior University, US.

Date published: 2024 | License: CC BY-NC-SA 4.0

Reflection

Any audio files created are accessible only to you.

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=392#h5p-6

Reflection H5P activity created by Maura Flynn. CC BY NC 4.0

IRISH HIGHER EDUCATION JOURNALS

Openly licensed journals: supporting sustainable and collaborative open scholarship

A number of journals are published as OER in Ireland, across a range of disciplines, including: Aigne: the Online Postgraduate Journal of the College of Arts, Celtic Studies and Social Sciences, at University College Cork, Irish Journal of Agricultural and Food Research and the Irish Journal of Applied Social Studies.

Below are a selection of openly licensed journals

which support teaching, learning and professional development for those in Higher Education.

Journals

All Ireland Journal of Higher Education

AISHE-J is an open-access, peer-reviewed, journal of scholarly research into teaching and learning. Submission of manuscripts presenting original scholarly work or commentary in any aspect of teaching and learning in higher education are welcome relating to Ireland and international issues and perspectives.

Date published: 2009 – current | License: CC BY-NC-SA 3.0

The Irish Journal of Academic Practice (IJAP)

The IJAP is a peer-reviewed journal that welcomes scholarly and practice-based articles, case studies, opinion, reflective pieces and reviews relating to learning, teaching, assessment and technology within higher education. It is is published online annually at Technological University Dublin.

Date published: 2024 – Current | License: CC BY-NC-SA 3.0

The Irish Journal of Technology Enhanced Learning

This open access, peer reviewed journal is published by the Irish Learning Technology Association (ILTA). It is an interdisciplinary journal dedicated to scholarly excellence and to the promotion of research in the Irish educational technology community.

Date published: 2014 – Current | License: CC BY-4.0

research output from TUS, Atlantic Technological University and South-East Technological University.

OPEN EDUCATION

Collaborating to create and share knowledge to benefit all

Open education is a movement and philosophy which encompasses open resources and practices, to broaden access to high quality educational experiences and resources by removing barriers, such as costs.

Open education includes open research, open science and OER, but also extends to “embrace strategic decisions, teaching methods, collaboration between individuals and institutions, recognition of non-formal learning and different ways of making

content available" (EU Science Hub, European Commission, 2016, CC BY).[1]

Articles

The power of peer engagement: exploring the effects of social collaborative annotation on reading comprehension of primary literature

This article reports qualitative findings explaining why online peer engagement using social collaboration annotation (SCA) with embedded prompts supported critical reading of reading primary literature in a broader mixed-methods intervention study with doctoral participants in spring 2022. Published in the journal AI, Computer Science and Robotics Technology.

Date published: 2023 | License: CC BY 4.0

1. What is open education? by the EU Science Hub. Available at: https://joint-research-centre.ec.europa.eu/what-open-education_en License: CC BY 4.0: licencehttps://creativecommons.org/licenses/by/4.0. /

Books

Higher education for good: teaching and learning futures

After decades of turbulence and acute crises in recent years, how can we build a better future for HE? Thoughtfully edited by Laura Czerniewicz and Catherine Cronin, this rich and diverse collection by academics and professionals from across 17 countries and many disciplines offers a variety of answers to this question. It addresses the need to set new values for universities, trapped today in narratives dominated by financial incentives and performance indicators, and examines those "wicked" problems which need multiple solutions, resolutions, experiments, and imaginaries.

Date published: 2023 | License: CC BY NC 4.0

Open at the margins: critical perspectives on open education

This book represents a starting point towards curating and centering marginal voices and non-dominant epistemic stances in open education. It includes the work of 43 diverse authors whose perspectives challenge the dominant hegemony. Published by the City University of New York.

Date published: 2023 | License: CC BY-SA 4.0

Contextualised open educational practices: towards student agency and self-directed learning

This book covers original research on the implementation of open educational practices through the use of open educational resources at the university level. The emphasis on open education in this book is on contextualising resources, supporting student agency and fostering self-directed learning specifically within a South African milieu.

Date published: 2022 | License: CC BY 4.0

Collections

Student-led pressbook collection

This collection features open pedagogy projects: student-authored OER that empower students to be involved in the creation of their course. These projects range from collections of essays to design portfolios, personal stories, research projects, student guides, and more. Compiled by pressbooks.

Date published: 2024 | License: Individual licenses are provided for each pressbook

Podcasts

OE global voices

This podcast invites educators to share their motivations and interests in an informal, conversational way. Listeners can explore a map of OEG Voices contributors to locate contributors in their area, including contributors from Ireland and the UK. Listen to the Catherine Cronin's podcast episode or read the podcast transcript.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=275#audio-275-1

Toolkits

The open pedagogy student toolkit

This toolkit is intended as a guide for students who are engaging in open pedagogy. The toolkit defines open pedagogy, the benefits of open pedagogy, and the rights and responsibilities that come with being a student creator. Instructors may wish to use this toolkit as a resource to scaffold conversations about open pedagogy with their students and to appropriately prepare them for working in the open. Published by the Open Education Network.

Date published: 2024 | License: CC BY 4.0

using pressbooks and support open access journal publishing.

Image credit: person using black tablet computer by Brooke Lark Unsplash license.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)

Using diverse approaches to enhance STEM engagement

The OER included here provide examples of technology-enhanced learning STEM resources, active learning and resources to support inclusive inclusive and equitable learning environments.

Poster abstracts

Enhancing chemistry education through technology-enhanced

learning: impact on student outcomes

This scientific poster abstract highlights the student-led feedback and modifications made to improve chemistry subjects, including the use of lightboard technology, along with the subsequent impact on student outcomes. 2023: ASCILITE 2023 conference companion materials.

Date published: 2023 | License: CC BY-4.0

Projects

The matilda project: an initiative to raise awareness of inequality and gender bias towards women in science

The matilda project is an educational initiative strategically crafted to cultivate an environment that acknowledges the frequently overlooked contributions of marginalised women scientists facing widespread sex-linked biases. It is time we learn the stories of these brilliant individuals and stop it when we see it happen. It was co-founded by Shehroze Saharan of University of Guelph, Canada and Shehryar (Shay) Saharan, University of Toronto, Canada.

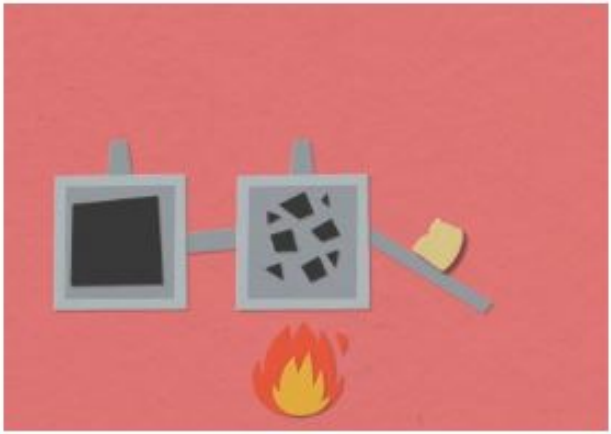
Date published: 2024 | License: CC BY-NC-ND 4.0

Resource collections

Futurum STEM careers resources

Futurum is a free online resource and magazine aimed at introducing 14-19-year-olds worldwide to the world of work in STEM (science, tech, engineering, maths, medicine) and SHAPE (social sciences, humanities and the arts for people and the economy). This resource features an impressive range of podcasts, animations, activity sheets, slides etc.

A sample 3 minute animation (and script), and related article, is provided here:



Animation credit: concrete change: the innovative chemistry of sustainable cement by Dr Theodore Hanein of the University of Sheffield. Shared by Futurum. CC BY-NC 4.0

Date published: 2024 | License: CC BY-NC 4.0

Pedagogy in action: connecting theory to classroom practice

The goal of the pedagogic service is encourage educators to

reflect critically on their own teaching practices and to support them in exploring new pedagogies particularly to support STEM teaching. This project is supported by the National Science Foundation as part of the National Science Digital Library.

Date published: 2007 onwards | License: CC BY-NC-SA 3.0

Textbooks

Fostering communities of transformation in STEM higher education: a multi-institutional collection of DEI initiatives

This scholarly work examines transformative initiatives from Virginia Tech, Radford University, Trinity Washington University, and Towson University, showcasing their role as catalysts in cultivating inclusive excellence across diverse STEM disciplines. A sample chapter is: creating impactful moments: using peer role models to build community and sense of belonging in STEM. Take inspiration from their projects and guidance from their lessons learned with this collection. Published by Virginia Tech, US.

Date published: 2024 | License: CC BY-4.0

Organic chemistry and chemical biology for the students by the students!

This textbook was created by students and faculty at McMaster University. It addresses organic chemistry and chemical biology topics at a level taught in introductory chemistry II at McMaster university. This text also includes an array of practice questions and solutions, interactive videos, highlights of chemists from equity deserving groups, and academic trees to link students to both the highlighted chemists and others discussed in the text.

Date published: 2024 | License: CC BY-SA 4.0

The science of inclusion – making our lab based courses more inclusive

This resource provides general guidance on how to enhance the accessibility of lab-based courses in STEM, with a particular focus on supporting the learning of students with physical disabilities. Published by the University of Ottawa, Canada.

Date published: 2022 | License: CC BY-NC-SA 4.0

Workshops

Design thinking <> STEM thinking

This interactive workshop aims to teach instructors how to use the design thinking framework to teach STEM courses through active learning strategies. This resource is a powerpoint with instructions and embedded videos to cover content as well as an accompanying workbook for participants. A facilitator can use the slides to hold the workshop, where key information is explained by instructors in the embedded video, allowing anyone without prior knowledge to be a facilitator. Created by the University of Toronto, Canada.

Date published: 2023 | License: CC BY-NC-ND 4.0

Exploring the transformative potential of STEM

STEM content in our OER index, including: biology,

chemistry, mathematics for engineering and science, and physics may also be of interest.

Image credit: photo of woman looking at a piece of electrical equipment. Created by This is Engineering. Unsplash license.

TEAM BASED LEARNING (TBL)

Could this team based strategy transform your teaching?

TBL, a structured group learning approach, has many potential benefits, including high levels of learner engagement, preparation and participation. Use these OER to explore the TBL process and opportunities if affords.

Articles

Improved learning outcomes and teacher experience: a qualitative study of team-based learning in secondary

schools

Based on the benefits of team-based learning (TBL) in higher education, our project investigated possible benefits of TBL in secondary education. We found that, despite challenges, the benefits of using TBL in secondary schools make it worth teachers' time and effort. We conducted a year-long qualitative study with 13 teachers from Ireland, Spain and UK. While teachers found preparation time, institutional requirements, and managing student team dynamics challenging, challenges were outweighed by benefits including improved student engagement, quality of learning, skill development, and teacher job satisfaction. We recommend further TBL training for secondary-level teachers and further research into this topic. Published in Social Sciences and Humanities Open Journal.

Date published: 2023 | License: CC BY-NC-ND 4.0

Book chapters

Team-based learning (TBL)

This chapter provides an overview of how to conduct TBL. It including a video which demonstrates the process and features comments from facilitators and learners about their TBL experience. This chapter is published as part of a book entitled:

Educational Psychology. Published by Hudson Valley Community College, New York, US.

Date published: 2020 | License: CC BY NC SA 4.0

Conference symposium

European Team-Based Learning (TBL) symposium 2022

This document provides an overview of this symposium which was held in TUS in 2022, including presentation abstracts. This event was hosted by the European Team Based Learning community and TUS.

Date published: 2022 | License: CC BY-NC-ND 4.0

Guides

Facilitating TBL – tools to succeed: pre class preparation

Traditionally, the pre-class preparation phase of TBL involved students covering readings prior to a session, but we are no longer confined to "text", we can also provide access to content electronically e.g. through learning management systems

(LMSs). This guide outlines 5 technology-related tips to keep in mind when we are considering how to design the pre-class preparation phase. Published by TUS.

Date published: 2020 | License: CC BY-NC-SA 4.0

Groupwork in higher education: a practitioner's guide

This resource is therefore designed to support TUS staff and higher education practitioners more generally, to successfully integrate group-based approaches, including team based learning, as part of their pedagogical toolbox.

Date published: 2022 | License: CC BY 4.0

Team based learning facilitator guide

This workshop is designed to introduce participants to the basics of team-based learning. Published by TUS.

Date published: 2020 | License: CC BY 4.0

Technology for team based learning tools

This guide provides an overview of technology which can be used to support TBL. Published by TUS.

Date published: 2020 | License: CC BY-NC-SA 4.0

Technology for team based learning: peer evaluation

This guide outlines the importance of peer review and evaluation to TBL and provides tools to support same. Published by TUS.

Date published: 2020 | License: CC BY-NC-SA 4.0

Facilitating team based learning – tools to succeed: application exercises

This short guide features how digital technology can be utilised to transform the type of application exercise that can be used for TBL. Published by TUS.

Date published: 2020 | License: CC BY-NC-SA 4.0

Enhancing team based learning (TBL) with technology – 5 tips: online TBL

This guide shares five tips to consider when planning online TBL. Published by TUS.

Date published: 2020 | License: CC BY-NC-SA 4.0

Videos

Exploring team-based learning

This 35 minute video invites you to explore TBL and glean what might be helpful to you in your discipline. The first 20 minutes is a presentation and the remainder of the video is discussion with attendees. This video has been shared by Plymouth State's (US) Open Learning and Teaching Collaborative.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=125#oembed-1

Team-based learning: group work that works

This 12 minute video is recommended by the Team-Based Learning Collaborative. It clearly outlines and captures the TBL process, including input from students regarding their experience of TBL. Shared by the Centre for Teaching and Learning, US.

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=125#oembed-2

Learn and grow together

The TUS OER index provides additional OER which may be of interest, including OER relating to communication and professional development. A sample OER from our index is: the LEARN method: an interactive guide for effective learning. LEARN stands for: listen; elaborate; association; retrieval; and night.

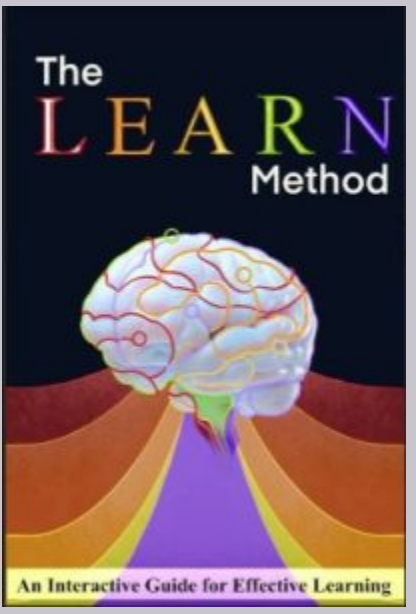


Image credit: the LEARN method: an interactive guide for effective learning book cover by Dr. Karla Lassonde. CC BY NC 4.0.

UNIVERSAL DESIGN FOR LEARNING (UDL)

Designing to foster accessibility, inclusivity and learner engagement

The importance of providing diverse means of engagement, representation and expression to our learners is increasingly being recognised. UDL seeks to give all learners an equal opportunity to learn, providing inclusive education for all.

Articles

Universal design for learning as a framework for designing and

implementing learner-centered education

In this article, UDL is reviewed as a framework to guide the design and implementation of learner-centered approaches. This framework can be applied by teachers, administrators, and communities when designing innovative learning systems that support the needs and goals of 21st century learners. Article published in the journal: AI, Computer Science and Robotics Technology.

Date published: 2023 | License: CC BY 4.0

Charters

ALTITUDE – the national charter for universal design in tertiary education

The ALTITUDE charter, and the associated toolkit and technical report, build on significant existing work on UD in the Irish tertiary education landscape and through these outputs, provides a clear roadmap for institutions to make progress

Date published: not dated | License: CC BY-NC

Collections

You can UDL it! Applying Universal Design for Learning Contents Introduction at DkIT

This collection brings together case studies from educators across Dundalk Institute of Technology, who have successfully implemented UDL in their own practice.

Date published: 2024 | License: CC BY-NC 4.0

Guidelines

Reaching out to all: a set of guidelines and resources for a universal design for learning approach to learning, teaching and assessment in higher education

With funding for a learning enhancement project from the National Forum, this guide and associated resources have been developed to support all staff to understand and apply the principles of UDL to create and deliver a more inclusive curriculum and approach to learning and teaching. Published by TUS.

Date published: 2021 | License: CC BY SA 4.0

Workbooks

A comprehensive guide to applying universal design for learning

Content includes strategies for blended and online learning and assessment design using UDL. University of Regina, Canada.

Date Published: 2022 | License: CC BY-SA 4.0

Reflect and connect

Reflect

You are invited to pause and reflect on what you have learned from the OER above about UDL. You can use the text-based note-taking space provided below.

Any notes you take here are visible only to you. Use the navigation buttons on the left of the tool to download a text copy of your notes before leaving this page.

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=130#h5p-3

Take a moment to reflect H5P activity created by Maura Flynn. CC BY NC 4.0

Connect

CPID provide support and guidance to TUS staff who wish to explore immersive technology in their teaching.

OER REPOSITORIES

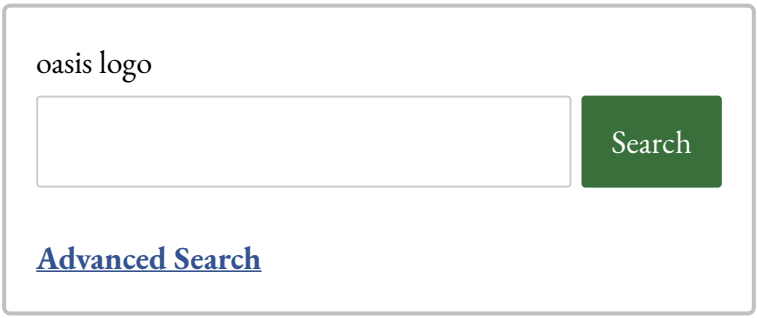
OER can be sourced using a large range of repositories and other websites. Of particular importance is Ireland's national resource hub, which is maintained by the National Forum. This hub is a searchable collection of OER for teaching and learning from across the Irish HE sector. Using this hub, you can search, browse and submit creative commons licensed OER. This collection is continuously growing, so it's a great resource to contribute to, and consult, regularly. Learn more about this resource using this video:

One or more interactive elements has been excluded from this version of the text. You can view them online here:
https://tus.pressbooks.pub/oerforteachingandlearning/?p=436#oembed-1

Video credit: National Resources Hub by the National Forum for the Enhancement of Teaching and Learning. CC BY 4.0

Listed below are a selection of other OER repositories that we recommend:

- BC Open Collection: a curated selection of OER textbooks and courses from Canada.
- Mason OER metafinder: a tool that performs a simultaneous search across 22 different sources of open educational materials. Created by George Mason University, US.
- OASIS: searches open content from over 100 sources. Developed by SUNY Geneseo's Milne Library, New York.



- OER Commons: a searchable public digital library of open educational resources, features predominantly North American OER.
- OERSI: this tool searches a number of OER repositories simultaneously. It features predominantly European

material as the project was initiated in Germany in 2020.

- OpenStax: a collection of peer-reviewed open licensed textbooks for many different subjects with additional learning resources.
- Open Textbook Library: a searchable resource where authors upload their OER textbooks. It features over 1,500 open textbooks on a range of topics.
- Research@THEA: an Irish open access repository containing research from Atlantic Technological University, South-East Technological University, and TUS.

FEEDBACK

Contact us

We welcome feedback and invite readers to share OER for inclusion. Please email TUS library or use the form below. We also welcome opportunities to work with TUS staff and students to source relevant and high quality OER, contact us to book an OER consultation.