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Open Education Practices in Higher Education:

Focusing on Responsiveness, Innovation & Inclusivity

N-TUTORR Stream 3, May 2024

Dr Rajiv Jhangiani¹, Dr Tom Farrelly², Dr Gearóid Ó Súilleabháin³, and Darragh Coakley²

¹ Brock University, Canada

² N-TUTORR Project Office, Munster Technological University, Ireland

³ Department of Technology Enhanced Learning (TEL), Munster Technological University, Ireland

Sectoral White Paper



N-TUTORR
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About this document

This document is an output of Stream 3 of the National Technological University TransfOrmation for Recovery and Resilience (N-TUTORR) project. N-TUTORR is an innovative collaboration across the technological higher education sector in Ireland. It aims to transform learning, teaching and assessment by focussing on transforming the student experience and developing the capabilities of all staff, to address a sustainable pedagogical and learning environment, informed by the UN Sustainable Development Goals.

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This document is a white paper, designed for discussion rather than as a final policy statement, and intended to serve as a foundation for dialogue and collaboration. We welcome and value feedback and suggestions in shaping the evolution of the concepts and ideas presented here.

Any updates to this green paper will be made available at www.transforminglearning.ie/publications

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List of Abbreviations

ATU	Atlantic Technological University
DkIT	Dundalk Institute of Technology
EDI	Equality, Diversity and Inclusion
HEA	Higher Education Authority
HEI	Higher Education Institution
IADT	Dún Laoghaire Institute of Art, Design and Technology
ICT	Information Computer Technology
IUA	Irish Universities Association
MTU	Munster Technological University
NRRP	National Recovery and Resilience Plan
N-TUTORR	National Technological University Transformation for Recovery and Resilience
OEP	Open Educational Practices
OER	Open Educational Resources
QQI	Quality and Qualifications Ireland
ROAR	Registry of Open Access Repositories
SETU	South East Technological University
THEA	Technological Higher Education Association
TU	Technological University
TU Dublin	Technological University Dublin
TUS	Technological University of the Shannon
UDL	Universal Design for Learning

Executive Summary

1

1 Executive Summary

The document explores the concept of openness in higher education, focussing particularly on topics such as responsiveness, innovation, and inclusivity. The paper advocates for the adoption of Open Educational Practices (OEP) and Open Educational Resources (OER) as strategies to address current and future challenges in the sector.

Section 2, the introductory context section, discusses the influence of strategic documents like the *National Strategy for Higher Education to 2030*. It provides an overview of the consolidation process leading to the establishment of five technological universities which in conjunction with Dún Laoghaire Institute of Art, Design and Technology (IADT) and Dundalk Institute of Technology (DkIT) constitute Ireland's Technological Higher Education sector. The section goes on to explore the subsequent policy responses to changing societal needs and challenges, locating the purpose of this document in relation to the N-TUTORR programme.

Section 3 highlights the significance of OEP and OER; emphasising the role of both areas in widening access to education and facilitating collaborative learning. The discussion on OEP underscores its transformative potential in teaching and learning, focusing on three axes: from content-centric to process-centric, from teacher-centric to learner-centric, and practices that are predominantly pedagogical to practices that are social justice-focused.

Section 4 delves into the substantial effects of OEP on higher education. It highlights the contribution of these practices to diminishing economic barriers and fostering equity and inclusion. The section also examines how OEP enhances accessibility and data privacy, promotes participatory learning and student engagement, and supports pedagogical flexibility and innovation. Furthermore, it considers the influence of OEP on student enrolment, persistence, and performance.

Section 5 explores OEP and its implementation within Irish higher education institutions. Despite the absence of an official national policy document on open education in Ireland, various reports and initiatives have highlighted the importance of developing open education principles and institutional repositories for research outputs and teaching resources. The literature identifies multiple obstacles hindering the adoption of Open Educational Resources (OER) and Open Educational Practices (OEP). These challenges encompass poor Information and Communications Technology (ICT) readiness, lack of priority in policy, insufficient institutional backing, and limited awareness of open education. Reported enablers include clear policy priorities, awareness-raising initiatives, capacity-building efforts, and grassroots communities. Additional research emphasises concerns about resource quality, copyright issues, recognition, and sustainability. Institutional fragmentation and technical challenges also impact OER and OEP implementation. The authors undertook a mapping exercise of higher education institutions involved in the N-TUTORR programme and found there was a varied level of commitment to open practice, with limited explicit mention of OER provision in strategic plans and policy documents. While positive developments such as dedicated open research support units and OA policies exist, there is a lack of uniformity across institutions, with repositories mainly focused on sharing research outputs rather than OER.

Section 6 presents two key recommendations for enhancing Open Education Practice (OEP) within the Technological University Sector in Ireland:

- **Recommendation 1** encompasses five elements that emphasise the need for a National OEP Strategy aligned with UNESCO's Recommendation on Open Educational Resources. Such a strategy should focus on building stakeholder capacity, developing supportive policies, ensuring equitable access to quality OER, creating sustainability models, and fostering international cooperation. Individual technological universities, institutes of technology, the Technological Higher Education Association (THEA), and associated groups are encouraged to join UNESCO's OER Dynamic Coalition and initiate national conversations to develop a comprehensive OEP strategy. Elements of this strategy may include a national OER policy, shared services, collective advocacy, and a common recognition framework.
- **Recommendation 2** encompasses 12 elements and highlights the importance of supporting institutional capacity-building for OEP. This involves assessing institutional maturity in supporting OEP, investing in technology and infrastructure, providing education, and training opportunities, aligning incentives, establishing partnerships, and aligning institutional policies with OEP objectives. The recommendation underscores the need for leadership commitment, cross-functional steering groups, and explicit integration of OEP into institutional strategies.

Both recommendations emphasise leveraging existing momentum, consensus, and past successes, such as the National Action Plan for Open Research 2022-2030 and institutional Open Access policies, and practices to advance the OEP agenda effectively and consistently.



Introduction

2

2 Introduction

2.1 'Openness'

While there is much to commend in terms of current higher education policy and practice in Ireland, there is a need for the Irish higher education sector to reflect on the lessons from the pandemic and consider how the sectors can become more responsive, innovative and inclusive by adopting new or adapting and expanding existing strategies, policies and initiatives. One such strategy in meeting current and future challenges is the wholesale adoption of Open Educational Practices (OEP) as a general principle and the specific adoption of Open Educational Resources (OER) within and across institutions.

The promotion of Open Educational Practices (OEP) through effective open pedagogies and improving digital skills to create, reuse, and remix Open Educational Resources (OER) also provides opportunities for the development of crucial educational technology and digital literacy skills. It is an approach that also offers a concrete demonstration of inclusion, sustainability, and the enhancement of student engagement.

2.2 Context

The National Strategy for Higher Education to 2030, also known as the 'Hunt Report' (Department of Education and Science, 2011), sets out key strategic goals. The document *Towards a Future Higher Education Landscape* (HEA 2011) suggests ways to achieve these goals. Consequently, these documents have significantly influenced the discourse surrounding Irish higher education provision for the past twelve years. At the time when the Hunt report was written, the higher education landscape was a diverse mixture of publicly funded traditional universities, teacher training colleges and fourteen geographically distributed Institutes of Technology (IoT) along with several independent privately funded colleges. Aiming to have a more coherent framework across the IoT sector, one of the recommendations made by the Hunt Report was that, "A process should be put in place to allow institutes of technology that have emerged from a process of consolidation to apply for designation as a technological university" (Department of Education and Science, 2011, p.23).

This consolidation process formally began in December 2015 with the publication of the Technological Universities Bill followed by the passing of the Technological Universities Act in March 2018. This opened the way for the establishment of five technological universities following a merger process involving twelve of the fourteen IoTs, with Dundalk Institute of Technology (DkIT) and the Dún Laoghaire Institute of Art, Design and Technology (IADT) remaining as stand-alone institutions. The new TUs are:

- Technological University Dublin (January 2019)
- Munster Technological University (January 2021)
- Technological University of the Shannon (October 2021)
- Atlantic Technological University (April 2022)
- South East Technological University (May 2022)

These five TUs, in conjunction with DKIT and IADT, are now referred to as the Technological Higher Education sector. However, in terms of representative coherence at national level, TU Dublin is a member of the Irish Universities Association (IUA) while the remaining institutions with the exception of MTU are members of the Technological Higher Education Association (THEA).

In addition to the reconfiguration of the sector, Irish higher education and the Irish Government have responded to changing conditions and new priorities with a series of policies, strategies and initiatives as highlighted in Table 1. This list is not intended to be exhaustive but rather it is indicative of the evolving landscape of Irish higher education, characterised by efforts to adapt to changing societal needs and challenges, technological advancements, and global trends.

Table 1. Higher education policies and initiatives responding to evolving Irish Higher Education landscape.

Focus	Policy or Initiative
Quality Assurance and Accreditation	Establishment of Quality and Qualifications Ireland (QQI) in 2012
Internationalisation and Mobility	Irish Educated Globally Connected an International Education Strategy for Ireland, 2016-2020 (Department of Further and Higher Education, Research, Innovation and Science, 2020)
Research and Innovation	Impact 2030 - Ireland's Research and Innovation Strategy (Department of Further and Higher Education, Research, Innovation and Science, 2022)
Improved Access	National Access Plan: A Strategic Action Plan for Equity of Access, Participation and Success in Higher Education 2022-2028 (Higher Education Authority, 2022a)
Skills and Workforce Development	Ireland's National Skills Strategy 2025 – Ireland's Future (Department of Further and Higher Education, Research, Innovation and Science, 2021)
Diversity and Inclusion	Race Equality In The Higher Education Sector Implementation Plan 2022-2024 (Higher Education Authority, 2022b)

A major development in the Technological Higher Education sector was the establishment of the National Technological University TransfORMation for Recovery and Resilience (N-TUTORR) programme in 2022 which is supported by the Higher Education Authority (HEA) and co-ordinated by THEA. Operating under the terms of the Irish Government's National Recovery and Resilience Plan (NRRP) the programme is funded by the European Union's NextGenerationEU initiative. N-TUTORR is guided by six core themes which reflect many of the issues highlighted in the previous list of priorities and strategies:

- Digital Transformation
- Universal Design for Learning (UDL)
- Education for Sustainability
- Academic Integrity

- Equality Diversity and Inclusion (EDI)
- Employability

The N-TUTORR programme is organised around three streams: student empowerment; staff capabilities; and digital ecosystems. Within each stream there are three work packages. This document has been developed as part of work package 3.2 of the programme “N-TUTORR Digital Campus” with specific reference to the following deliverable:

- R1.5.1. White paper confirming sector-wide approach to use and reuse of open educational resources and adoption of open educational practices.

2.3 Outline of Paper

In addition to this introduction and an executive summary, this document includes a further five sections. Section two provides an overview of Open Education Practice (OEP) and Open Education Resources (OER). Section three provides a comprehensive outline of the implications and benefits of adopting OEP. The fourth section sets out the context of Irish higher education in terms of OEP and OER policies and practices. Section five sets out two sets of recommendations for the Technological University Sector in Ireland, with some concluding remarks being offered in section six.



Overview of Educational Practices

3

3 Overview of Educational Practices

3.1 Open Education

The concept of ‘openness’ in education is a wide-ranging and abstract one (Cronin, 2017; Skidmore & Provida, 2019). The diverse essence of openness as a concept becomes apparent through its various manifestations, encompassing legal tools, technological specifications, pedagogical approaches, and social contracts, and understood variously as an expression of participatory democracy, a counter-current to neo-liberalism, a means to transcend the constraints of geography and time or even a strategy to support national and economic development (Costello, Huijser, & Marshall, 2019; Tait, 2008). Nevertheless, an emphasis on widening equitable access to education is arguably a defining characteristic of open education. This includes open education in the form championed by open universities such as the University of South Africa or the UK’s Open University (Perraton, 2000) or indeed the proliferation of open educational resources (Creative Commons, 2021). However, as the Cape Town Open Education Declaration (2007) properly asserted:

Open education is not just limited to open educational resources. It also draws upon open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. It may also grow to include new approaches to assessment, accreditation and collaborative learning.

Mirroring these themes is the European Commission’s (EU Science Hub, European Commission, 2016) definition of open education as:

A way of carrying out education, often using digital technologies. It aims to widen access and participation to everyone by removing barriers and making learning accessible, abundant, and customisable for all. It offers multiple ways of teaching and learning, building and sharing knowledge...

As Huitt and Monetti (2017) observe, the term “open education” often implies a contrast with more traditional approaches to education, whether in terms of learning resources (e.g., proprietary and expensive vs. openly-licensed and free), learning assessments (e.g., artificial and product-focused vs. authentic and process-focused), or even underlying teaching philosophy (e.g., information transmission and control vs. consciousness-raising and empowerment). In this light, it becomes clearer that open education is a political and social project as much as an educational or technological one. This is also why the concept of open education is often aligned with broader national and international social and political commitments and initiatives, including the United Nations Sustainable Development Goal #4 – “...to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” – and Article 26 of the Universal Declaration of Human Rights (1948), which asserts the right to an education and that “higher education shall be equally accessible to all on the basis of merit.”

3.2 Open Educational Resources

While there are several definitions as to what constitutes Open Education Resources (OER), one of the most commonly used definitions is that of UNESCO (UNESCO, 2019):

Open Educational Resources (OER) are 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 licence, that permit no-cost access, re-use, repurpose, adaptation and redistribution by others.

As this definition outlines, although free access is a vitally important feature of OER, it is a broader set of freedoms (unfettered access) that distinguishes this type of teaching and learning materials. In practical terms, the release of content as OER confers a set of rights to downstream reusers. These rights are collectively referred to as the “5R framework” (Wiley 2014) as they enable one to:

- **Retain** - to make, own, and control a copy of the resource (e.g., download and keep one’s own copy)
- **Revise** - to edit, adapt, and modify a copy of the resource (e.g., update or translate into another language)
- **Remix** - to combine an original or revised copy of the resource with other existing material to create something new (e.g., make a mashup)
- **Reuse** - to use an original, revised, or remixed copy of the resource publicly (e.g., on a website, in a presentation, in a class)
- **Redistribute** - to share copies of an original, revised, or remixed copy of the resource with others (e.g., post a copy online or give one to a friend)

The most commonly used set of legal tools to support the sharing of OER are the Creative Commons licences. These licences permit creators to freely and easily communicate the terms under which their works may be reused. Whereas all Creative Commons licences require proper attribution of the creator’s work, variations of the licences may be used to limit reuse in specific ways (e.g., only for non-commercial purposes). In the two decades since the Creative Commons licences were released, over 2 billion pieces of content have been freed from restrictive standard copyright. This includes the products of OER initiatives at the international (e.g., Commonwealth of Learning, Open Education for a Better World program, Open Educational Resources Universitas), national (e.g., Norwegian Digital Learning Arena, United States Department of Education’s Go Open initiative, Polish Council of Ministers’ Digital Schools Pilot Program), state or provincial (e.g., British Columbia Open Textbook Project, State University of New York OER Services, Open Oregon Educational Resources), and institutional (e.g., MIT OpenCourseWare, Kwantlen Polytechnic University, University of Southern Queensland) levels.

3.3 Open Pedagogy

Whereas OER are highly relevant to the question of learning content, open pedagogy has much more to do with the nature of the learning process. This includes cases in which educators adopt OER-enabled pedagogy, understood as “teaching and learning practices that are only possible or practical in the context of the 5R permissions that are characteristic of OER” (Wiley & Hilton, 2018, p. 135). For example, educators may create, adapt, or remix OER with their students, including by designing course assignments that involve public scholarship, whether more formally by improving the openly-licensed articles in Wikipedia in partnership with the Wiki Education Foundation or more informally by simply sharing openly-licensed instructional videos on the public web.

However, the concept of open pedagogy isn’t always tightly bound to the use of OER. As Hegarty (2015) observed, open pedagogy is associated with a broader set of attributes such as the use of participatory technologies, an emphasis on people, openness, and trust, the development of a connected community, and learner-generated content. As DeRosa and Jhangiani (2017, p. 13) note, “open pedagogy invites us to focus on how we can increase access to higher education and how we can increase access to knowledge—both its reception and its creation.” Hence, they suggest that one way to think about open pedagogy is as:

an access-oriented commitment to learner-driven education AND as a process of designing architectures and using tools for learning that enable students to shape the public knowledge commons of which they are a part.

For example, educators may facilitate student-created and student-controlled learning environments, including by co-creating learning policies, rubrics, or schedules of work with students or involving students in the curation of course content. They may also design authentic assessments in which, for example, students may digitally annotate and enrich course readings or write and submit for publication op-ed pieces that share evidence-based approaches to tackling a local social problem. While neither of these examples necessitates the use of open licensing, both exemplify the use of “non-disposable assignments” in which the fruits of student intellectual labour enjoy a wider audience than the instructor, a longer life than the instructional term, and support a greater impact than individual learning (Seraphin et al., 2019).

3.4 Open Educational Practices

Cronin and MacLaren (2018) note several evolving definitions of OEP but notes “all four conceptualisations of OEP focus on both OER and collaborative pedagogical practices as a means of transforming education” (p. 137) and that:

expansive conceptualisations of OEP acknowledge the complex, actual and situated practices of teaching and learning – where context influences the choice and use of OEP, where OEP may emerge before the use of OER, and where critical approaches to open education may be realised.

Within the wider current contexts, the concept of OEP is closely aligned with the use of digital technologies and digital pedagogies as a means of supporting the historical aims of open education. This digital element is reflected by DeRosa and Robison (2017, p.118) who identify OEP as “[using] OER as a jumping-off point for remaking our courses so that they become not just repositories for content, but platforms for learning, collaboration and engagement with the world outside the classroom” and who refer to the concept of “critical digital pedagogy” set

forth by Stommel (2014) which examines the extent to which Critical Pedagogy translates into digital space.

As with open pedagogy, OEP consistently focuses on fostering learner activity and agency; however, OEP may be considered to extend along three axes: from content-centric to process-centric; from teacher-centric to learner-centric; and from primarily pedagogical to primarily social justice-focused (Bali, Cronin, & Jhangiani, 2020). For example, an educator who adopts OER may help reduce the cost burden on learners while nonetheless reinforcing what Freire (1970, p. 53) described as the “banking concept of education” in which “education. . . becomes the act of depositing, in which the students are the depositories, and the teacher is the depositor.” In short, the use of OER, while positive in economic terms, may still largely be a teacher-centric practice. For a more process-centric example, consider an educator who works with their students to engage in collaborative knowledge creation through editing Wikipedia articles to improve the representation of women scientists. However, even in the latter case, it is important to consider whether learner agency is being respected, whether minoritised students are protected from the unevenly distributed risks of open scholarship, whether student labour is being exploited, and whether dominant perspectives are being reproduced. As may be gleaned from this case, OEP does not automatically advance economic, cultural, and political justice. Rather, it requires critical reflection and dialogue to ensure that equitable access, learner agency, and social justice are prioritised in the design of learning spaces.

Finally, it is important to acknowledge the fuzzy boundaries encasing the term OEP and to point to the host of related open practices that often underpin, overlap, or interplay with OEP. This includes Open Access Publishing (which intersects with the body of scholarship available as OER), Open Science (including open data and open research materials), Open Source Software (including the many open educational technologies that support the publication of OER and student engagement in open pedagogy), and Open Collaboration (including the building of community among students and educators).

Implications of OEP for Higher Education

4

4 Implications of OEP for Higher Education

Although OEP also carry important implications for primary and secondary education – e.g., more easily updated curriculum, customised content, and more efficient use of public funding; (Tang, Lin, & Qian, 2020) – it is within the higher education sector that OEP have arguably had the greatest impact in the two decades since the publication of the Creative Commons licences.

4.1 Reducing Economic Barriers

Over the last half century, the cost of commercial textbooks has risen at a rate far in excess of inflation, leading a growing number of students to seek alternatives to purchasing expensive required course materials, including renting, pirating, or even not accessing these materials (e.g., Florida Virtual Campus, 2022). This problem has been compounded by the pivot in the business model of commercial textbook publishers towards digital learning resources (e.g., online quizzing, virtual simulations, and digital textbooks), something that only accelerated at the onset of the COVID-19 pandemic (Lederman, 2022). By adopting OER, educators and post-secondary institutions have helped alleviate a cost burden that is disproportionately affects students from marginalised backgrounds, including low-income, racialised, and first-generation students (Jenkins et al., 2020; Nusbaum, Cutler, & Swindell, 2020), a form of redistributive justice (Lambert, 2018).

In many cases higher education institutions have supported the development of entire courses of study or degree programs that utilise OER (or other strategies that eliminate the cost of course materials for students, such as the strategic use of library resources and institutional digital resource licences). For example, Kwantlen Polytechnic University in British Columbia, Canada has launched eight zero textbook cost (ZTC) programs since 2018. Since then, more than 24,000 students enrolled in more than 2,750 course sections taught by nearly 500 instructors have saved nearly \$10 million.

4.2 Equity and Inclusion

In addition to supporting redistributive justice by reducing costs for students, OEP may also be harnessed to advance other principles of social justice, including recognitive and representational justice (Lambert, 2018). With recognitive justice, educators may create OER or avail of the affordances of open licensing to enhance the socio-cultural diversity of the curriculum. In doing so they help recognise diverse views and experiences as legitimate and foster a more inclusive learning environment wherein more learners may see their identities reflected in their texts (Kelly, Laurin, & Clinton-Lisell, 2022). With representational justice, educators may challenge classroom power dynamics and academic gatekeeping to ensure equitable representation and political voice. This may include, for example, the co-construction of OER “about learners of colour by learners of colour, about women’s experiences by women, about gay experiences by gay-identifying people. Facilitation to ensure quiet and minority views have equal air-time in open online discussions” (Lambert, 2018, p. 228).

4.3 Accessibility and Data Privacy

In contrast to commercial digital learning platforms that often hamper assistive technologies through the imposition of digital rights management, OEP enable the prioritisation of accessibility, including by supporting platform interoperability, content modification, and legal sharing (Zhang et al., 2020). Advancing equity through OEP also necessitates considering technical openness, including that the technologies and platforms that underpin OER and open pedagogies do not themselves erect significant barriers to future reuse related to cost or expertise, nor do they disregard privacy, information security, or intellectual property ownership. Given the prevalence (and even dominance) of platform capitalism and venture capital-funded educational technologies that appear to show little regard for such ethics (Srnicsek, 2016; Zuboff, 2019), OEP represents an increasingly valuable strategy to protect the rights of students in a fraught technology ecosystem.

As Gilliard (2017) writes:

While we can do our best to inform students, the black box nature of the web means that we can never definitively say to them: "This is what you are going to be a part of." The fact that the web functions the way it does is illustrative of the tremendously powerful economic forces that structure it. Technology platforms (e.g., Facebook and Twitter) and education technologies (e.g., the learning management system) exist to capture and monetize data. Using higher education to "save the web" means leveraging the classroom to make visible the effects of surveillance capitalism. It means more clearly defining and empowering the notion of consent. Most of all, it means envisioning, with students, new ways to exist online.

4.4 Participatory Learning and Student Engagement

The predominance of the banking model of education positions OEP as a potentially radical pedagogical shift, away from inflexible policies, an emphasis on content delivery, and traditional high-stakes assessments to co-creation of the learning environment, an emphasis on process and growth, and authentic assessments. In short, a democratising shift away from industrial classrooms of control to justice-oriented communities of possibilities (Wallis & Rocha, 2022). Consequently, learning environments that embrace OEP not only involve more active and collaborative learning but also scaffold metacognitive development and the raising of critical consciousness. Students often perceive OEP as more engaging as a result of the greater autonomy and control they enjoy over their own learning process, the opportunity to exercise creativity and the perception that their work carries meaning beyond the classroom (Ashman, 2023).

As noted by Delia Steverson (2021), a faculty member from the University of Alabama who uses Wikipedia assignments in her courses:

My students wrestled with their status as quasi-gatekeepers to particular information. I believe this revelation made their commitment to and belief in free and accessible information even more poignant. We used this project to reconsider power and privilege in the academy and exercised our positionality as a driving force in contributing to the Wikipedia article.

4.5 Pedagogical Flexibility and Innovation

By supporting any desired customisation and unfettered sharing of open content, OEP removes the constraints imposed by traditional copyright and provides far greater pedagogical flexibility to educators. For example, educators may revise or remix OER to better serve local program learning outcomes and even reflect their personal teaching style. Students may be invited to co-create the structure of the course (including the syllabus and course policies), via an open pedagogical approach (DeRosa & Robison, 2017). Learning activities and assessments may be designed to position students as partners in the curation, annotation, adaptation, or co-creation of OER, including through engaging in forms of public scholarship.

As DeRosa and Robison (2017, p.117) suggest:

We can capitalize on this relationship between enrolled students and a broader public by drawing in wider communities of learners and expertise to help our students find relevance in their work, situate their ideas into key contexts, and contribute to the public good. We can ask our students — and ourselves as faculty — not just to deliver excellence within a prescribed set of parameters, but to help develop those parameters by asking questions about what problems need to be solved, what ideas need to be explored, what new paths should be carved based on the diverse perspectives at the table. Open pedagogy uses OER as a jumping-off point for remaking our courses so that they become not just repositories for content, but platforms for learning, collaboration, and engagement with the world outside the classroom.

4.6 Student Enrolment, Persistence, and Performance

A growing body of empirical research shows that students enrolled in courses that use OER achieve improved educational outcomes. This includes higher course enrolment (sometimes known as enrolment intensity), greater course persistence, and improved learning performance, especially among learners from marginalised backgrounds (Bol et al., 2021; Colvard, Watson, & Park, 2018; Fischer, Hilton, Robinson, & Wiley, 2015; Jhangiani, Dastur, LeGrand, & Penner, 2018; Neu-Stephens, 2020). This is especially true in the context of institutions that make it possible for learners to identify courses that utilise OER or that do not involve costs for required course materials (Hare, Kirschner, & Reed, 2020) and when institutions offer OER or ZTC programs (Jhangiani & Pakkal, 2023).

4.7 Alignment with Institutional Mission and Strategy

The benefits of OEP for students and educators outlined above allude to the many ways in which OEP are likely to align well with the mission and strategic plans of many if not most higher education institutions. This includes commitments associated with access, student success, teaching and learning innovation, and equity, diversity, and inclusion. However, OEP also supports institutional initiatives related to accessibility, including the adoption of universal design for learning (UDL), and frameworks such as the United Nations Sustainable Development Goals (SDGs). For example, Montgomery College spearheaded the creation of an award-winning international open pedagogy fellowship that involves educators from different institutions and disciplines working collaboratively to design learning assessments that focus on one or more SDGs. For example, in one case students in Urban Ecosystems, Sustainable Horticulture, and Anthropology helped advance SDG #2 (Zero Hunger) by

contributing high-quality data concerning the edible weeds on the campuses of their respective institutions to a public database.

OEP and Irish Higher Education

5

5 OEP and Irish Higher Education

5.1 Open Education Policy and Practice

The European research paper, “Policy Approaches to Open Education - Case Studies from 28 EU Member States (OpenEdu Policies)” (Inamorato Dos Santos et al, 2017) noted that no official national policy document on open education has been developed in Ireland. While no such policy has been developed in Ireland there are a number of relevant national publications.

The 2014 report *Building Digital Capacity in Irish Higher Education* from Ireland’s National Forum for the Enhancement of Teaching and Learning in Higher Education (the National Forum) for example calls for the development and adoption of “a statement of open-education principles for Irish education that links to EU policy” (National Forum, 2014, p.12). Additionally, in practical terms, this same document states that the adoption of these principles needs to be accompanied by the “development of institutional repositories for research outputs and teaching and assessment resources” (p. 21). Recognising the importance of inter and intra-institution collaboration, the National Forum document highlighted the National Digital Learning Resources (NDLR) service which operated from 2006 to 2012 as an example of a nationally-agreed repository, while at the same time acknowledging issues around the long-term sustainability of such initiatives. Unlike many institutional repositories that focus on providing access to research outputs such as theses, reports and journal papers, the NDLR “was developed as an open-access system supporting excellence in teaching and learning, facilitating collaboration of academic staff and sharing of teaching resources” (National Forum, 2014, p.19). The report goes on to note that the “NDLR demonstrated the need for a specific space to enable teachers to share teaching resources and approaches to learning design” (ibid. p.19).

The NDLR ceased to exist in 2012 due to the withdrawal of funding (Risquez et al. 2020), but as part of the National Forum’s 2019-2021 strategy, the Forum went on to launch a new National Resource Hub (National Forum, n.d.). The Hub includes OER that have been created, adapted and/or used to enhance teaching and learning across Irish higher education. At this point the Hub has over 800 resources with, as per August 2023, over 650,000 visitors from some 173 countries. The National Resource Hub was awarded the 2022 UNESCO ICT in Education Prize (National Forum, 2023).

5.2 Challenges, Barriers and Enablers with OER and OEP

Aside from prosaic issues such as the provision of repositories and nationally agreed standards, another major issue in the advancement of the OER agenda is the level of recognition afforded to those teachers and lecturers who take the time to produce OER. The effective and sustained use of OER and OEP can only be realised through achieving critical mass and the normalisation of its use in regular academic practice whereby “the long term value of OER release and use in 'normal' practice remains one of the most significant actions for sustainability” (McGill et al. 2013, p.5). For example, Inamorato Dos Santos et al. (2017, p.77) suggested that “especially within the universities [one of the barriers] is the lack of parity of esteem between research, on the one hand, and teaching and learning on the other... Academics tend to be assessed and promoted based of (sic) the quality of their research rather than their teaching excellence”.

An additional source of information that provides insight into the barriers to OER and OEP usage within an Irish context is the report, *Learning Resources and Open Access in Higher*

Education Institutions in Ireland (Risque et al, 2015) which distinguishes between challenges for institutions and challenges around teaching and learning. This distinction is also made in a report undertaken by Risque et al (2020). Their 2020 report, *Towards a devolved model of management of OER?* provides a range of useful insights into the context of OER(s) and OEP(s) in Irish Higher Education. However, while the report notes that there is a lack of an agreed national policy regarding OER/OEP, it does identify a devolved model towards open access in research in Ireland which "from 2007 following a national movement that ensured their interoperability using common metadata standards" (p.102). The report also highlights several concerns raised by Irish educators around OER and OEP use, which relate to questions about quality, resourcing and the recognition of teaching outputs.

Of particular relevance to the N-TUTORR programme, the Inamorato Dos Santos report (2017) indicates a number of both barriers and enablers to OER and OEP adoption:

Barriers (pp. 142-144)

- Low ICT-readiness
- Broader institutional issues
- Low policy priority assigned to open education
- Fragmentation of initiatives
- Lack of institutional support
- In the university sector, the primacy of research over teaching
- Resistance to cultural change
- Lack of awareness about open education, "and about OER, copyright and open licences"
- Low open education capacity within the teaching population
- Absence of open licences recognition

Enablers (pp. 144-145)

- Clear policy priority assigned to open education
- Awareness-raising on open education, targeting leaders and educators
- Capacity-building in open education for educators and other stakeholders
- Empowering educators: Self-organisation of teachers (IT)
- Broader issues e.g. wider economic forces
- Online platforms were mentioned only once as enablers
- Grassroots communities

Research by Cronin (2017), Czerniewicz & Rother (2018) and IFLA (2020) indicates several additional core barriers and challenges around the use of OEP in general and OER in particular. Some of the most commonly cited concerns regarding OER in HE relate to: concerns about the quality of the resources developed, a lack of clarity around copyright issues and associated ownership and intellectual property claims, a lack of awareness around how to license and a lack of recognition on the part of the developer and discoverability issues (Kruger & Abramovich, 2019; Skidmore & Provida, 2019, McGill et al., 2013). Andrade et al. (2011), along with the Risque et al. (2015) provide a comprehensive outline of barriers to OER usage, which are summarised below:

Challenges for Institutions

- The initial costs involved in developing mechanisms, processes and procedures and balancing those costs against anticipated or actual use of OER.
- Evidence of impact thus far is mixed.

- The development of methodologies for evidencing impact.
- Functional complexity.
- Choosing appropriate production and sharing models.
- Inadequate technical infrastructure.

Challenges for Teaching and Learning

- Ambiguity around definitions of ‘open’ confuses both educators and students. Some of the ‘big stories’ in digital education (e.g. MOOCs) are at best ambivalent about ‘open’. At the same time, the term OER is little known and grappling with the pedagogical, technical and legal aspects can be complex.
- Lack of institutional support, strategy and/or investment.
- Cultural issues around sharing, leading to reluctance by educators to engage.
- Concerns about intellectual property rights and copyright procedures.
- Lack of sufficient evidence to support the perceived value and benefits of OER.
- Achieving a critical mass of resources, particularly in some discipline/subject areas; this leads to problems finding relevant OER and ultimately to lack of engagement.
- Time taken to search for and adapt OER, and to prepare and upload resource.
- Employment conditions e.g. part-time status may not provide the time or space necessary to engage in OER projects or develop open practice, for a number of reasons (see e.g. Coughlan, 2015; EDIN and HECA, 2015).
- Gaps in discourse between learning technologists and the majority of academics.
- Gaps in technology and digital literacy skills amongst staff and students.
- Lack of reward and recognition.
- Lack of confidence (in many cases, “perfect as the enemy of the good”).
- Contextualisation/localisation. This relates to what Wiley refers to as the ‘reusability paradox’: the more context a resource has, the less pedagogical value it has in terms of reuse. While students need context to make learning meaningful, OER should have as little context as possible to enable their reuse.

Institutional fragmentation is another issue that is considered to be a considerable barrier. Research by Santos-Hermosa et al (2020) indicates that most OERs are held by individual HEIs in institute-specific repositories, rather than in more open or national repositories. Coyne & Fitzpatrick (2021) noted, “As such, the majority of the material within these OER collections will be concerned with materials produced by and at the higher education institution.” In addition to the above points, which are drawn from research focused specifically on OER and OEP, there are broader technical challenges which impact heavily upon this area. As noted by Czerniewicz & Brown (2013) and Czerniewicz & Rother (2018), digital inequality and accessibility - which can range from access to technology to people facing disabilities - must be central considerations around the effectiveness of OER(s) and OEP(s). As noted by Skidmore & Provida (2019), to be truly effective, a focus on accessibility is imperative for OER and OEP usage.

5.3 Open Research

While “Ireland lacks OER policy in higher education institutions and has no national policy” (Coyne & Alfis, 2021, p.2) the drive towards an open research agenda has had a more assured trajectory. This is very evident with the establishment of the National Open Research Forum (NORF) in 2017 and the subsequent publication of the National Framework on the Transition to an Open Research Environment (NORF, 2019) and National Action Plan for Open Research 2022-2030 (NORF, 2022). The progressive advancement of Open Access (OA) for research

outputs is especially evident with the establishment of the IReL consortium. Initially founded in 2004, it has continued to expand its membership, as of 2022 the consortium facilitates nationwide publicly funded higher education open access, with all eight traditional universities and the seven N-TUTORR institutions now included in the scheme.

5.4 Mapping Provision

In preparation for this White Paper, a desk search by the authors of the higher education institutions that constitute the N-TUTORR programme was undertaken that drew on their strategic plans, Quality and Qualifications Ireland (QQI) institutional reviews (CINNTE or Annual Quality Reports (AQRs); Open Access Policies and the provision of an institutional repository. In framing the context of the Technological sector, we need to be mindful that the five technological universities, fashioned out of the amalgamation of twelve separate institutions, have only come into existence relatively recently and therefore, their limited opportunity to articulate strategic plans and fashion the necessary policies and infrastructure must be acknowledged.

While acknowledging these limitations, the review underscores a restricted level of clear dedication to Open practice commitments as outlined in the strategic plans, with only one of the N-TUTORR partner's strategic plans containing a concrete Key Performance Indicator (KPI). The QQI reviews do report several positive developments such as the establishment of dedicated open research support units and the articulation of OA policies in some of the partners, but again these developments are not uniform and in general, appear to be more focussed on OA research outputs with a number of the institutions referring to IReL and publisher agreements but less so about OER. The policy examination highlights a similar level of consistency across the different institutions with only two of the institutions referring explicitly to the provision and support of OER, locating policy direction under the auspices of OA library and research outputs rather than teaching and learning. All the partners have institutional open access repositories but in the main, these appear to be concentrated on providing access to research outputs in the form of theses and journal papers with little evidence of the provision of OERs. An examination of the Registry of Open Access Repositories (ROAR) indicates that 28 Irish repositories are registered with four of N-TUTORR partners' repositories registered. A similar examination of Jisc's Directory of Open Access Repositories (OpenDOAR) indicates that there are 33 Irish repositories with the same four N-TUTORR institutions registered along with THEA's repository which provides a very useful meta-search facility across six N-TUTORR institutional OA repositories.

5.5 Summary

In summary, an examination of international, national and institutional policies found little evidence of a coherent approach which is consistent with Open Education Practice as it applies to OER in Ireland. What consistency there is, appears to align with the OA provision of research outputs and is generally aligned within institutional library provisions and policies. Challenges and barriers to OER and OEP adoption include low ICT readiness, lack of policy priority, institutional support, and awareness about open education. Enablers include clear policy priorities, awareness-raising initiatives, capacity-building efforts, and grassroots communities. The mapping of OA/OER/OEP provision across the seven higher education institutions involved in the N-TUTORR programme reveals a varied level of commitment to open practice, with limited explicit mention of OER provision in strategic plans and policy documents. While positive developments such as dedicated open research support units and

OA policies exist, there is a lack of uniformity across institutions, with repositories mainly focused on research outputs rather than OER.

Recommendations for the Technological University Sector in Ireland

6

6 Recommendations for the Technological University Sector in Ireland

6.1 Recommendation 1- A National OEP Strategy

Building on the 2012 *Paris OER Declaration* (UNESCO, 2012) and the *Ljubljana OER Action Plan* (UNESCO, 2017), the UNESCO Recommendation on OER was adopted in 2019. The recommendation identifies five areas of action, including:

1. Building capacity of stakeholders to create, access, re-use, adapt and redistribute OER
2. Developing supportive policy
3. Encouraging effective, inclusive and equitable access to quality OER
4. Nurturing the creation of sustainability models for OER
5. Promoting and reinforcing international cooperation

Although a national strategy for OEP would extend beyond the slightly narrower question of the implementation of the UNESCO recommendation on OER in Ireland, these objectives are closely related, so it makes sense to build the former atop the foundation of the latter. Consequently, it is advisable for individual technological universities and institutes of technology, THEA, and other associated groups such as the IReL to join UNESCO's OER Dynamic Coalition, a collective that has been supporting the implementation of the first four areas of action since March 2020. Moreover, these member institutions should convene a series of forums, akin to those coordinated by the Canadian Association of Research Libraries (McNally & Ludbrook, 2023), to initiate a national conversation with a view to developing a national OEP strategy that is in line with the objectives of the UNESCO recommendation and that meets the specific needs of the sector. Without foreclosing the nature of the resulting national strategy, this may include such elements as a national policy on OER, shared services for OEP, collective advocacy, and a common recognition framework that may be endorsed by individual institutions. Figure 1 presents a graphical representation the five elements of the proposed National OEP Strategy.



Figure 1. OEP National Strategy Elements

6.2 Recommendation 2 - Supporting Institutional Capacity-Building

Flowing from and extending beyond the associated objective of the UNESCO recommendation is the broader objective of building the capacity of individual technological universities to support OEP. Institutions may draw on self-assessment instruments developed in Canada (e.g., Morgan et al., 2021; Jhangiani, Luke, Lachaine, & Pakkal, 2024) and the Netherlands (van Rossum & Schuwer, 2022) to evaluate the maturity of their current capacity to support OEP and identify specific areas that require investment and development. A sector-wide analysis may also be commissioned to support benchmarking and to identify areas ripe for mutual capacity-building. The following is a set of operational objectives associated with institutional capacity-building (reproduced in graphical form in Figure 2) for OEP.

1. Improving OER **discoverability** (e.g., developing library guides, integrating MARC records into library catalogues, etc.).
2. Supporting OER **publishing** (e.g., investing in the necessary technologies, expertise, and project management, potentially through shared services for the sector).
3. Providing **education and training** (e.g., ample professional development opportunities for educators who wish to learn about and embrace OEP).
4. Supporting **system integration** (e.g., with campus bookstore systems for OER adoption reporting, student information systems for course marking, learning management systems to support instruction, etc.).
5. Acquiring **necessary technology and infrastructure** (e.g., open educational technology tools that are commonly used to support OEP).
6. Aligning **incentives** (e.g., recognizing the creation of OER during the tenure and promotion process and recognizing and celebrating OEP champions).
7. Investing in **dedicated staff positions** (e.g., OER Librarian, instructional design support for OEP, etc.).
8. Developing **partnerships with student associations** and advocacy groups (e.g., raising campus awareness of student affordability and engaging in shared national advocacy).
9. Engaging with **external networks** (e.g., joining international organizations that support institutional capacity building such as Open Education Global and the Open Education Network).
10. Aligning **institutional policies** (e.g., intellectual property and open licensing, curriculum development or review, professional development, etc.).
11. Establishing **leadership** (e.g., senior academic leadership oversight and a cross-functional OEP steering group).
12. Explicitly articulating OEP in **institutional strategy** (e.g., setting specific goals related to advancing OPE and committing to evaluating and reporting on progress).





Figure 2. Capacity-building elements for Open Educational Practices.

In advancing both major recommendations, it will be important to recognize areas where support for OEP aligns with and may benefit from existing momentum and consensus (e.g., the National Action Plan for Open Research 2022-2030 and institutional Open Access policies), past successes (e.g., NDLR), and collaboration beyond the sector.

Concluding Remarks

7 Concluding Remarks

The significance of Open Educational Practices (OEP) and Open Educational Resources (OERs) transcends local initiatives, relating to tangible commitments to both institutional objectives and broader societal needs. A commitment to OEP resonates with the UNESCO recommendation on OER and advances efforts toward Sustainable Development Goal #4 – Quality Education – positioning itself as a catalyst for transformative change.

The rationale behind prioritising OEP is rooted in its ability to provide wide-ranging benefits across various stakeholders. From students seeking accessible and inclusive learning experiences to educators striving to enhance pedagogical approaches, and institutions aiming for academic excellence, OEP offers a pathway to foster inclusive and equitable education.

However, realising the full potential of OEP necessitates the recognition of numerous challenges and impediments and the development of strategies to address or mitigate them. Issues such as the lack of institutional support, strategy, and investment, along with cultural barriers around sharing, hinder educator engagement with OER. Additionally, concerns regarding intellectual property rights, insufficient evidence demonstrating the value of OER, and difficulty in aggregating resources within certain disciplines present significant hurdles. Time constraints, employment conditions, and a gap in discourse between learning technologists and academic faculty further impede progress.

Addressing these challenges necessitates a unified effort to close gaps in understanding, boost capacity, foster a culture of openness, and devise customised strategies that cater to the distinct requirements and situations of both institutions and learners. In essence, the advancement of OEP not only reflects an institutional commitment to excellence but also underscores a collective endeavour toward fostering accessible, innovative, and inclusive learning environments.

Through strategic collaboration and a shared commitment to the articulation of a comprehensive policy framework and the provision of digital infrastructure, the vision of OEP as a cornerstone of educational transformation can be realised, shaping the future of learning for generations to come. Recognising its potential, the adoption of an OEP agenda demands deliberate attention, substantial investment, and robust structural support within higher education institutions. The Irish Technological Higher Education sector, through collaborative efforts, has the opportunity to lead by example, inspiring transformative change and unlocking new possibilities for learners, educators, and communities alike.

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