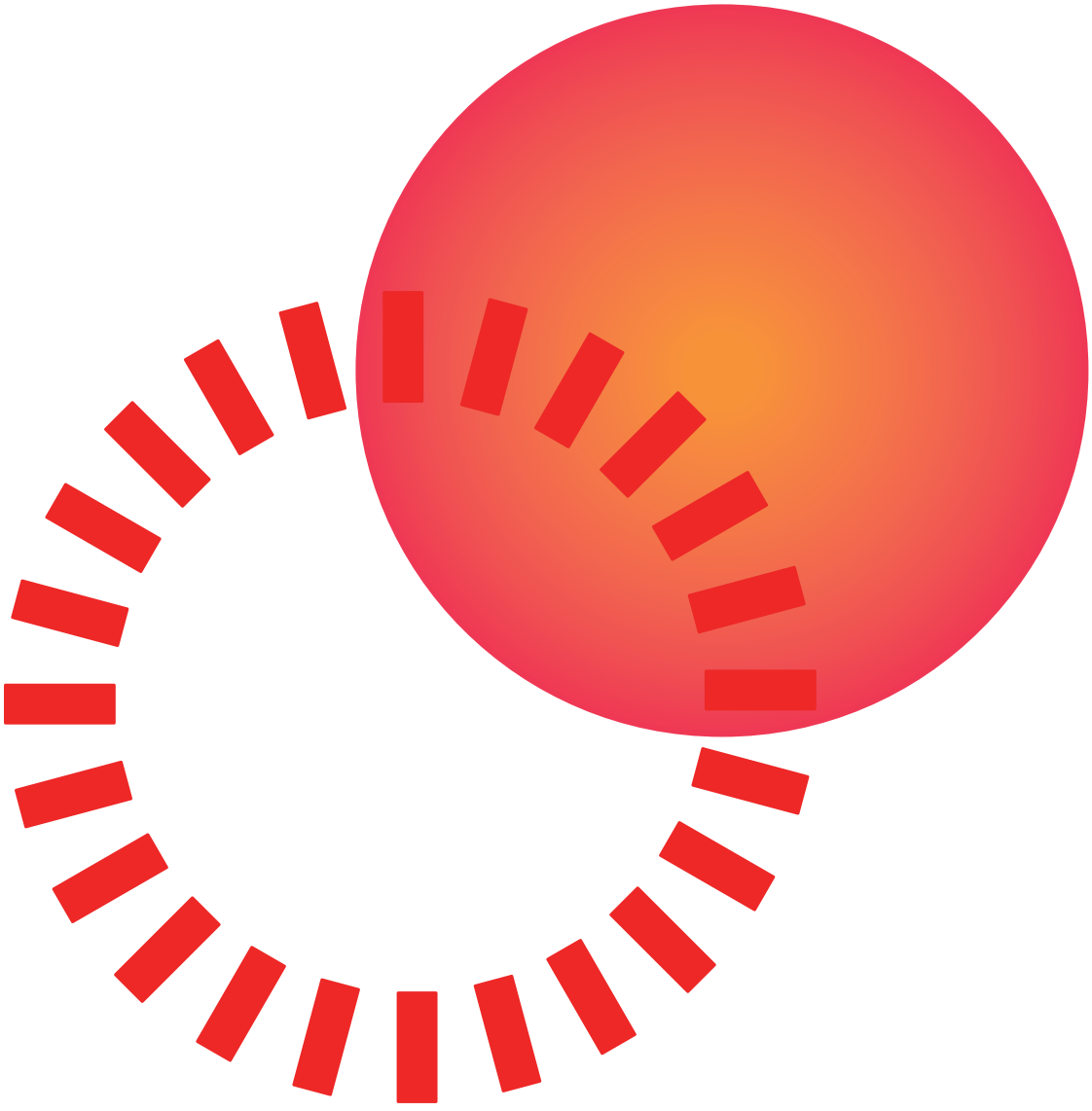
A Conceptual Framework of Universal Design for Learning (UDL) for the Irish Further Education and Training Sector



Where Inclusion is Everybody's Business

SOLAS learning works

etbi Education and Training Boards Ireland *Boird Oideachais agus Oiliúna Éireann*

ahead

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Where Inclusion is Everybody's Business

Contents

Glossary of Terms

There is a common language and terminology that underpins the ideas and philosophies which are used in the context of this document that are listed below. This publication recognises that each practitioner in FET approaches the ideas explored within it with their own knowledge and understanding, their own expertise and terminology.

Term	In the context of this publication
Accessible Education and Training	Education that is accessible to most learners without the need for add-on supports.
Active Inclusion	Enabling every individual to fully participate in all aspects of society - including education, training, and employment.
Community of Learning	A group who share learning with each other.
Disability	Disability is defined by the Disability Act 2005 as "a substantial restriction in the capacity of the person to carry on a profession, business or occupation in the State or to participate in social or cultural life in the State by reason of an enduring physical, sensory, mental health or intellectual impairment".

Diversity	Diversity is that each individual is appreciated for their uniqueness and appreciated for their individual difference (e.g., age, ethnicity, disability).
Inclusion (including inclusive education and inclusive pedagogy)	Inclusion involves the recognition that all people, whatever their individual differences, should be full participants in all aspects of society. Educational inclusion includes the development of inclusive learning environments where all learners can be supported to achieve their potential. Inclusive pedagogy is a pedagogical response to individual differences among learners that avoids marginalisation that can occur when support strategies are limited solely to individual learners.
Reasonable Accommodation	An adaptation made to the learning process so that a learner with a disability can access their learning successfully (e.g., may be structural, technological, provision of a support assistant, or alterations to learning or assessment materials).
Universal Design (UD)	UD is the design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability (National Disability Authority, 2019).
Universal Design for Learning (UDL)	UDL is a framework with a set of principles for learning and teaching, based on scientific insights into how humans learn. The Centre for Applied Special Technology's (CAST) framework is outlined through three key learning guidelines: (i) to provide multiple means of engagement, (ii) to provide multiple means of representation, and (iii) to provide multiple means of action and expression.

Table 1 Glossary of Terms

Foreword

Active inclusion – enabling every citizen, notably the most disadvantaged, to fully participate in society, including having a job – is a European and Irish Government priority. Active inclusion was a key goal of the Further Education and Training (FET) Strategy (2014-2019), which states that **"The FET sector will seek to increase levels of active inclusion through the provision of high quality, more accessible and flexible education and training programmes and supports suited to the identified needs of the individual"**. SOLAS, as the agency responsible for funding, planning and coordinating FET, working with ETBI and Education and Training Boards (ETBs) as the main providers of FET, have progressed a series of actions to support this goal, including the development and roll-out of a series of good practice guidelines to promote excellence in active inclusion throughout the FET system. SOLAS intends to remain committed to this goal and will continue to support active inclusion during the period covered by the forthcoming (2020-2024) FET Strategy. Thus, developing good practice guidelines on inclusive practices that are embedded in Universal Design for Learning should be seen as consistent with the ongoing endeavours by the FET sector to tailor learning and appropriate supports in order to meet the needs of learners.

The concept of Universal Design for Learning (UDL) is key to inclusion because it increases access to equal learning opportunities within the mainstream teaching environment, including for learners with disabilities. UDL is a framework, based on scientific insights into how humans learn, to improve and optimise teaching and learning for all people. It is a set of principles, first laid out by the Centre for Applied Special Technology (CAST) in the 1990s, which is rooted in the learning sciences, including neuropsychology, human development, and education research. UDL provides flexibility in the way information is provided, in the way learners respond or demonstrate knowledge and skills, and in the way learners are engaged. In addition, UDL reduces barriers for all learners, including those with disabilities, with literacy or numeracy difficulties, and with limited English proficiency.

To fully promote inclusive FET SOLAS, in consultation with ETBI, commissioned AHEAD to conduct research and develop guidelines on inclusive learning environments using a Universal Design for Learning approach. This work will involve broad consultation with FET practitioners and decision makers and will benefit from the valuable oversight and guidance of the Universal Design for Learning (UDL) for FET National Advisory Committee, which brings together a wide range of relevant expertise. This paper represents the outcomes from the first phase of this work. By building on its own knowledge of this field, an international literature review, and consultation with members of the Advisory Committee, AHEAD has set out the background to this project, explaining Universal Design as a concept, discussing theoretical approaches and highlighting theoretical concepts and frameworks which underpin the delivery of Universal Design for Learning approaches.

The report is therefore intended to serve as a platform to facilitate detailed consultation with stakeholders and analysis within the FET system to facilitate the development of practical guidelines which can inform the development of UDL approaches by ETBs and other FET providers. The development of these guidelines forms the focus of the next phase of AHEAD's work. FET in Ireland is incredibly diverse, providing community-based education and training opportunities using a variety of settings, programmes and approaches. It is therefore critical that the guidelines that are ultimately produced reflect this diversity and can influence provision across all types of further education and training and the involvement of FET practitioners in their development will be pivotal to ensuring that this is the case. The guidelines will build on existing good inclusion practices already in place, aiming to develop ingrained systems and learning networks across the FET system which will ultimately benefit all FET learners and potential learners.

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Executive Summary

SOLAS, in consultation with ETBI, commissioned AHEAD to conduct research and develop practical guidelines on inclusive learning environments using a Universal Design for Learning (UDL) approach. This publication, 'A Conceptual Framework of Universal Design for Learning (UDL) for the Irish Further Education and Training Sector – Where Inclusion is Everyone's Business' is the product of the research undertaken and in consultation with the National Advisory Committee (NAC) on UDL for FET. Its purpose is to propose a UDL conceptual framework for the Irish Further Education and Training (FET) sector, which will provide the backdrop against which UDL practical guidelines for FET will be developed. This collaboration between SOLAS, ETBI, and AHEAD is in further pursuit of 'active inclusion', a European and Irish government priority and a core aspect of the FET Strategy 2014-2019.

The Foreword by SOLAS and ETBI sets out the rationale for promoting a UDL approach that will support the active inclusion agenda. This publication explores the history and theory of inclusion and UDL and details the review of literature undertaken by AHEAD, which forms the basis of the UDL conceptual framework for the Irish FET sector that it proposes. It first traces the source of the concept of Universal Design (UD) in the built environment and its application as a concept in the learning environment. It then provides an understanding of the theoretical concepts that underpin the delivery of UDL approaches. Finally, a UDL conceptual framework for the Irish FET sector is proposed.

The UDL conceptual framework that this publication proposes for the Irish FET sector is based on the CAST Universal Design for Learning (UDL) framework (Meyer & Rose, 1998). UDL seeks to ensure that the learning and training environment is inclusive of the greatest diversity of learners from the get-go. It does not, however, negate the need for add-on supports, or minimise quality, and is continuously evolving to reflect the needs of all learners. The Conceptual Framework of UDL for FET identifies 3 key stages:

STAGE 1

Understand that both the philosophy and practice is one of inclusion

The Inclusive Education Pyramid reminds us that a UDL approach is for all learners - not just those who have a disability, and that learners require differing levels of support.

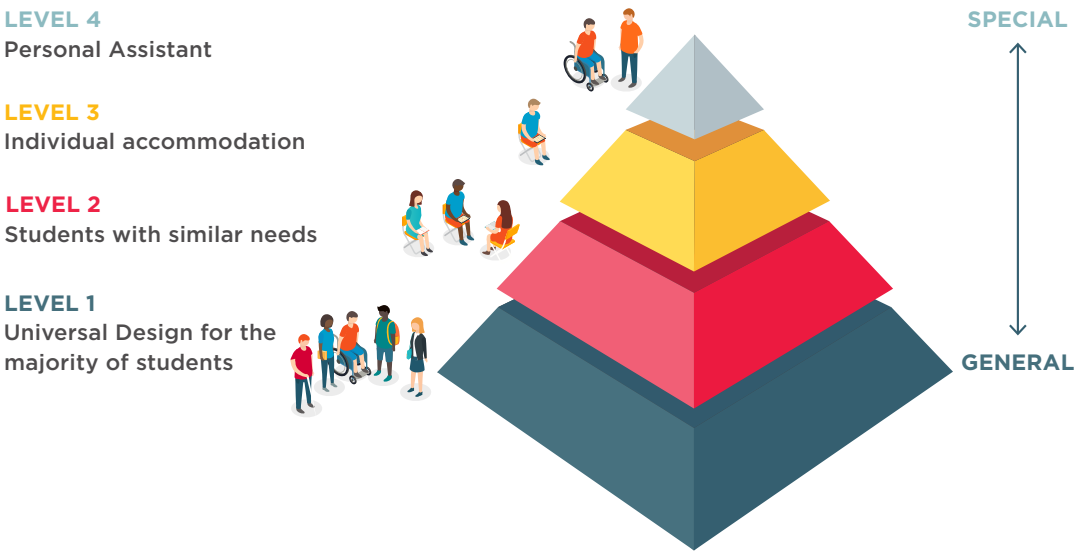


Figure 1. Inclusive Education Pyramid
(adapted from Basham, Israel, Graden, Poth, & Winston, 2010; Robinson & Hutchinson, 2014; UDLL/NTNU, 2016, p. 63).

From a UDL perspective, it is evident that most attention should be focused on the mainstream learning environment (Level 1 of the Inclusive Education Pyramid) as it is this space that seeks to be inclusive of most learners.

STAGE 2

Appreciate the application of UDL

When designing or redesigning learning and using CAST's model of UDL, this stage encourages practitioners to examine:

- **The 'Why' of Learning** – Provide Multiple Means of Engagement
- **The 'What' of Learning** – Provide Multiple Means of Representation
- **The 'How' of Learning** – Provide Multiple Means of Action and Expression

STAGE 3

Identify ‘who’ needs to be involved

Within the FET sector in Ireland, the practitioner leads the learning process and is central to the experience of the learner. The key aim of this UDL conceptual framework is to recognise the multidisciplinary and collaborative environment in FET and the diversity of provision within it; where UDL will be every practitioner’s approach. The goal is to make UDL **intentional** in the design and implementation of all practice and work towards a system of FET ‘where inclusion is everyone’s business’.

Four values are adopted as a foundation for continued development of high-quality, relevant, and inclusive courses that encompass a UDL approach. This is with the intention of ensuring engagement from all practitioners, a greater awareness of UDL, and a preparedness to explore inclusive methods whereby everyone contributes to a sustainable UDL conceptual framework for FET. The four values that are identified here are:

- **Inclusion**
- **Intentionality**
- **Appreciation**
- **Acceptance**

In essence, what the UDL framework sets out to achieve is to support the inclusion of every learner in the Irish FET sector, as well as the inclusive engagement of all practitioners.

Introduction

Context

In recent years there has been growing diversity in the profile of the learner population across the Irish education system. Whilst this trend is positive, it generates challenges for everyone involved in education. Active inclusion, a European and Irish government priority, is a core aspect of SOLAS' FET Strategy 2014-2019.

The Irish Further Education and Training (FET) sector delivers a variety of education and training services for a diverse demographic of learner, in terms of gender, marital status, family status, age, disability, sexual orientation, race, religion, and membership of the Traveller community, as well a diversity of social backgrounds and levels of literacy and numeracy skills attained. Ensuring a high standard of inclusive teaching and learning is a vision that requires, not just an understanding of how to accommodate a diversity of learners, but also the openness to adopt and adapt the best pedagogical approaches available.

Universal Design for Learning

The theory and practice of Universal Design for Learning (UDL) is central to the conceptual framework proposed in this publication. The concept of Universal Design (UD) was originally developed as an inclusive approach to architecture, design, and the built environment, and its underlying principles propose that any inclusive practice or environment needs to be considered from the very outset to ensure its success.

Over time, the values underpinning UD have been applied to the creation of a number of educational frameworks - including UDL.

Purpose and Audience

This publication explores the theories and principles of inclusion and UDL. Its purpose is to identify a UDL conceptual framework for the Irish FET sector. This conceptual framework will then provide the backdrop against which good practice guidelines will be developed. The guidelines will identify current case examples of best practices and will support FET managers and practitioners in further developing an inclusive culture and inclusive pedagogical practices, which will benefit all learners, including those with disabilities.

Process

The process for developing these guidelines included the following stages:

1 Development of Literature Review

Development of a literature review to explore the history and theory of inclusion and UDL as a basis to develop a UDL conceptual framework for the Irish FET Sector. The literature review development process was supported by the organisations represented on the Universal Design for Learning (UDL) for FET National Advisory Committee (NAC) (see Appendix 1).

2 A Proposed Conceptual framework of UDL for FET (i.e., this publication)

Proposal of a UDL conceptual framework for the Irish FET sector, with accompanying pull-out poster for ease of dissemination, based on the literature review and in collaboration with the NAC.

3 UDL Guidelines for the FET Sector

Development of UDL guidelines for the Irish FET Sector, based on the literature review, conceptual framework, identified examples of best practices already in place, broad consultation with FET practitioners and managers, and the NAC.

Where we are now

This publication is not a stand-alone document. It represents one stage in the process outlined above and its role is to inform discussion on the development of UDL best practice guidelines for the FET sector in pursuit of SOLAS' strategic aim of active inclusion. Stages 1 and 2 have now been completed. As the project has moved into stage 3 AHEAD is engaging practitioners and decision-makers across the various learning environments represented in the FET sector. This process of dialogue and consultation is expanding and refining the understanding of UDL in FET, making it crucial to ensuring that the resultant best practice guidelines are a useful tool for further embedding a culture of active inclusion in FET.

Section 1:
Moving towards inclusion – why now?

Encouraging active inclusion in practice necessitates appreciation of the philosophy of inclusion and inclusive education. At its most basic, the philosophy of inclusion seeks to enable individuals who have a disability to participate in all activities that are available to their non-disabled peers. The view is taken that individuals are not disabled, but that it is society that disables the individual in terms of opportunities to participate equally in all aspects of society.

As an example, within contemporary education, we seek to include children and young people who have a special educational need and/or a disability in the classroom and learning process with their peers. Rather than simply "integrating" these learners, they are "included" in the educational experience and provided with any reasonable accommodations that are required to enable equitable access to the learning process and experience. Thus, whilst special education was previously perceived of as being the sole responsibility of dedicated professionals who looked after the needs of learners with disabilities, the advances made within the active inclusion agenda sees these learners being educated within mainstream settings and ". . . have become the responsibility of everyone in the education system" (Griffin & Shevlin, 2007, p. 3).

Until relatively recently, learners who have a disability were considered to be amongst the most marginalised within the education system. As noted above, inclusive education is about more than simply placing a learner who has a disability in a mainstream setting and providing additional support (French & Swain, 2004) and is about more than simply "being" in a setting (Clough & Nutbrown, 2005). Rather, it is about valuing everyone for who they are, regardless of the nature or source of that diversity (Kinsella, & Senior, 2008). Inclusion demands major changes within society itself and should not be viewed in a

vacuum (French & Swain 2004). It is, therefore, essential to recognise that what happens within all aspects of education and training is integral to achieving authentic inclusive education and practice.

Consequently, equality of access cannot stop once a learner gains entry to the setting; learners also require equality of condition and equality of outcome (Baker, Lynch, Cantillon, & Walsh, 2004) to ensure that equal opportunities and success criteria are achieved. Factors of marginalisation and exclusion can relate to all aspects of the curriculum, school or classroom organisation, assessment, cultures, policies, and practices (Petrou, Angelides, & Leigh, 2009).

Inclusivity is not always a guiding ethos within educational institutions (Hopkins, 2011). Rather it is sometimes affixed to a 'disablist curriculum' - a curriculum that discriminates against people with disabilities as a response to an excluded learner (Hopkins, 2011). Davies, Schelly, and Spooner (2013) suggest that it is the curriculum rather than the learner that is disabled. Consequently, it is paramount that educators are cognisant of how teaching and learning methodologies impact the educational experiences of all learners, including learners who have a disability.

Disability, diversity, and inclusion are key components of any inclusion agenda. UD principles offer both a philosophy and a practical approach to addressing these issues from the outset. The common goal is to offer any learner an experience that affords an equality of opportunity. This may appear to be rather complicated – but it is being achieved in many instances - perhaps incidentally rather than by intentional design.

While the origins of inclusion may have been associated with the disability/inclusive education discourse, other factors have also converged that have not just contributed to, but emphasised, the need to bring inclusion into the conversation for everyone engaged in the learning process.

The UDL conceptual framework for FET, proposed in this publication, has considered these issues and identifies them as follows:

1 **Timely** - the conceptual framework has been developed as part of the approach globally to modernise FET through the adoption of UDL Principles.

2 **Valuable** - it seeks to contribute to the quality of FET programmes and the experiences of everyone engaged in the sector.

3 **Inclusive** – it seeks to play a positive role in the further development of inclusive strategies in FET.

4 **Equitable** – it is designed so that all practitioners are respected and all aspects of education and training are considered. It will be most successful when implemented in a quality assured system that encourages collaboration - thus having a positive impact on challenges that confront practitioners engaging in an ever-evolving system.

5 **Responsive** – it aims to inspire, encourage debate, and support the continuous development of inclusive practices so that all practitioners can actively use their experiences with an ever-increasing diversity of learner to effect improvements, in line with the SOLAS strategy and the active inclusion agenda.

1 The time for UDL is now (Timely)

Inclusive education represents part of a global agenda requiring national governments and their agencies to produce and implement policies that promote inclusion (Wright, 2010). Ireland has witnessed substantial developments in how we think about, and respond to, issues related to equality, disability, and active inclusion in educational settings (Rose, Shevlin, Winter, & O'Raw, 2010).

The continued desire is to uphold the rights of learners who have a disability to an education that is appropriate to their needs. It is recognised that these developments are both challenging and complex, and necessitate that environments are created that can support active inclusion. This requires **". . . a multi-tiered approach that involves leadership, teaching and learning, assessment and a Universal Design for Learning (UDL) approach"**
(Quirke, McCarthy, & Mc Guckin, 2018, p. 18).

Thus, there is a recognition that an integral component of a successful approach to active inclusion involves a move towards a UDL environment, within which the needs of all learners are met in the most appropriate manner. It is time.

2 The Quality Agenda (Valuable)

Improving and maintaining the quality of any education and training course is a key factor for providers. In Ireland, Quality and Qualifications Ireland (QQI) oversee the quality process. QQI agrees institutional procedures under the policy and criteria for the provider to access initial validation of programmes leading to QQI Awards (QQI, 2013). The standards are in place to ensure that all learners have confidence in not just the learning process, but also in the learning environment, and the standards are continuously reviewed, maintained, and improved (QQI, 2016a,b).

Education and Training Boards (ETBs) have a statutory obligation to have regard to QQI Quality Assurance (QA) guidelines when establishing their QA procedures, which include procedures related to programme development and approval, teaching and learning, learning environments, and assessment of learners and supports for learners (among other areas). Furthermore, all courses provided by ETBs that lead to an award within the National Framework of Qualifications (NFQ) must be validated by QQI (in line with QQI Policies and Criteria for Validation) and QQI is also the awarding body for all ETB awards recognised within the NFQ.

This guarantees standards of learning so that both employers and professional bodies have confidence in learners accessing the workplace upon completion of education or training. It is recognised that **"Key to the development of QA guidelines is collaboration and consultation with the education and training community and stakeholders in the qualifications system."** (QQI, 2016a, p. 4).

An important factor to acknowledge when considering inclusive education and training are concerns with respect to fairness to all learners, including learners with a disability, and the maintenance of QA standards. While a UDL approach may change how education and training is delivered, quality is maintained and the learning experience is often enhanced by the implementation of such an approach.

The growing diversity that now exists within all realms of education means that the learner experience with respect to quality has become increasingly pertinent. There are systems in place to ensure that the content of programmes demonstrate advances in the relevant disciplines and that the pedagogic style includes national and international effective practice (QQI, 2016b). Accordingly, the learning environment respects the diversity of learners and facilitates flexible learning pathways. It recognises the use of different modes of delivery and, where relevant, utilises a range of flexible pedagogical methods **". . . that are evaluated and monitored and adjusted accordingly"** (QQI, 2016b, p. 14).

When UDL is applied within a learning system it ensures that learners feel more included and experience a greater feeling of belonging within that system. This inevitably results in greater equality and successful outcomes for all involved – thus contributing to the quality agenda.

3 The Inclusive Agenda

In terms of recent policy and legislation, Ireland has manifestly adopted an inclusive position and the rights of children and adults with disabilities are increasingly recognised in legislation. Ireland's adoption in 1994 of the Salamanca Statement and Framework for Action on Special Needs Education (United Nations Educational, Scientific and Cultural Organization: UNESCO, 1994) was central to these changes. This framework promotes a move from integrated to inclusive education and advocates the need to provide opportunities for equal participation for all learners. Furthermore, it called on governments to **"adopt as a matter of law or policy the principle of inclusive education, enrolling all children in regular schools, unless there are compelling reasons for doing otherwise"** (UNESCO, 1994, p. ix).

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations General Assembly: UN, 2007) maintains that states shall guarantee that persons with disabilities receive the requisite supports within the general education system to promote their education. It also affirms that effective individualised supports are available within settings that **"maximize academic and social development, consistent with the goal of full inclusion"** (UN, 2007, Article 24[e]). The UNCRPD asserts that state parties shall **"ensure that persons with disabilities are able to access general tertiary education, vocational training, adult education and lifelong learning without discrimination and on an equal basis with others"** (Mc Guckin, Shevlin, Bell, & Devecchi, 2013, p. 15).

As Ireland has recently ratified this convention it is imperative that effective systems are established at all levels of the education system to facilitate access, transition, and progression to all levels of education which ensures that people with disabilities can achieve their potential within whichever educational trajectory they pursue.

4 The Equitable Agenda

At a national level, Ireland has seen a proliferation of legislation introduced since the 1990s that is pertinent to equality and inclusion in education. This legislation introduced measures prohibiting discrimination in society on nine grounds (gender, marital status, family status, age, disability, sexual orientation, race, religion, and membership of the Traveller community) and promotes the maximum possible level of inclusion for those with special educational needs and/or disabilities within mainstream settings with the provision of the required supports. The relevant legislation includes the Education Act (1998), the Equal Status Act (2000), the Equality Act (2004), the Education for Persons with Special Educational Needs (EPSEN) Act (2004), and the Disability Act (2005).

The Education for Persons with Special Educational Needs (EPSEN) Act 2004 represents an important landmark in education legislation for learners with special educational needs and/or disabilities. The fundamental purpose of the Act is to ensure the provision of inclusive education, unless there are specific reasons why a specialised placement is needed for an individual (Griffin & Shevlin, 2007). The ultimate aim of inclusive education is to facilitate full participation in adult life and all of the opportunities available in society. The National Council for Special Education (NCSE) was established under the Act. The Act also:

- Outlines procedures for the assessment of special educational needs and for ensuring provision of appropriate intervention, services, and reviews;
- Gives parents a key role in decision making;
- Established an appeals board to which decisions relating to the education of people with special educational needs can be appealed.

A critical component of the EPSEN Act (2004) is the statutory obligation on schools to introduce a system of Individual Education Plans (IEPs) (Rose et al., 2010). However, no such system has yet been introduced. This poses difficulties when developing a feasible framework for transition planning (Mc Guckin et al., 2013).

Section 7 of the Equal Status Act (2000, 2004) broadly defines "educational establishment" in a manner that ensures that all educational establishments, both public and private, from preschool facilities through to third level institutions are included within the definition of an "educational establishment". Kinsella and Senior (2008) articulated that under this legislation educational establishments are required to provide reasonable accommodations for persons with disabilities in their education, examination, and accreditation systems so as to facilitate equality of participation and to ensure that they achieve their optimal learning outcomes.

Collectively this legislation has enshrined in Irish law the rights of people with disabilities to equal educational opportunity and promotes equality of opportunity in education for all individuals.

5 A Collective Approach (Responsive)

The SOLAS Corporate Plan 2017-2019 set out clear targets in terms of high quality, flexible, adaptable learning environments for a diversity of learners. It sets an agenda for education and training that is equitable and inclusive, and will **"Support ETBs to expand delivery options, using ICT and technology enhanced learning as appropriate, to facilitate access and participation for a diverse group of individuals"** (SOLAS, 2017a, p. 15).

Learners with a disability require a learning environment to be flexible and responsive. UDL approaches have been found to provide solutions in a resourceful and innovative manner. It has been found that applying UDL principles and practices can address and circumvent numerous challenges faced by learners with disabilities, while simultaneously improving learning for all learners (Ostrowski, 2016).

A UDL approach takes cognisance of the design of the curriculum, teaching practices, assessment methods, support services, and the physical environments – all in a manner that can accommodate the ever-increasing diversity of learners (Quirke et al., 2018). From this UDL perspective, it is recognised that every learner is different, that learning or training needs to be adaptable and responsive and, that in fact, there is no such thing as the average learner (Burgstahler, 2009).

Section 2:
Exploring the Language of Universal Design for FET

The theory and core principles of UD emerged from the fields of architecture and product design which represents the ongoing ambition for products and spaces to be accessible to every individual (Story, Mueller, & Mace, 1998). The primary objective of the UD approach has been for designers to employ seven core principles in product development so as to ensure an end result that could meet the needs for the greatest diversity of individuals.

The focus of UD in any environment, including education, is to eliminate barriers through initial designs rather than having to later overcome barriers through individual adaptation (Chandler, Zaloudek, & Carlson, 2017; McGuire, Scott, & Shaw, 2006; Rose & Meyer 2006; Story et al., 1998). The underlying principles of UD are integral to the concept of UDL, as are the acceptance of individuality and the need to ensure that accessibility, inclusion, and opportunity are its binding values (Quirke et al., 2018).

Both UD and UDL share the same common goal of universal access. However, whilst UD is focused on the eradication of barriers in the built environment, UDL extends this by also having a focus on the elimination of barriers that extend beyond physical learning spaces (e.g., curriculum and pedagogical practices) (Burgstahler, 2009). Thus, such designs are neither unique nor personal, but universal and inclusive.


AIRSHIELD

Section 3
Steps Towards Identifying the Conceptual Framework of UDL for FET

The UDL framework promotes the philosophy of inclusive education and advocates for the need to provide equal opportunities for all. It seeks to ensure that learners will feel more included and will experience a greater sense of belonging.

UDL is based on the **". . . concept of creating spaces where all students can be educated, to the greatest extent possible, without the need for adaptation"** (Novak, 2017, p. 43). It should be a given that inclusion is a collective matter for all staff within an organisation **". . . rather than the exclusive responsibility of a particular group of specialists."** (Smith & Bell, 2015, p. 155). These points underpin the philosophy and practice of UDL and recognise that there is variety in the learning environment, that every learner is different and that there is no such thing as the "average learner". The word "universal" in UD does not serve to mean that there is only one optimal solution for every learner - it indicates an awareness of the unique nature of each learner and the need to accommodate differences, creating learning experiences that meet the needs of the learner, and maximise their ability to progress (Rose & Meyer, 2002). Ostrowski (2016) reminds us that

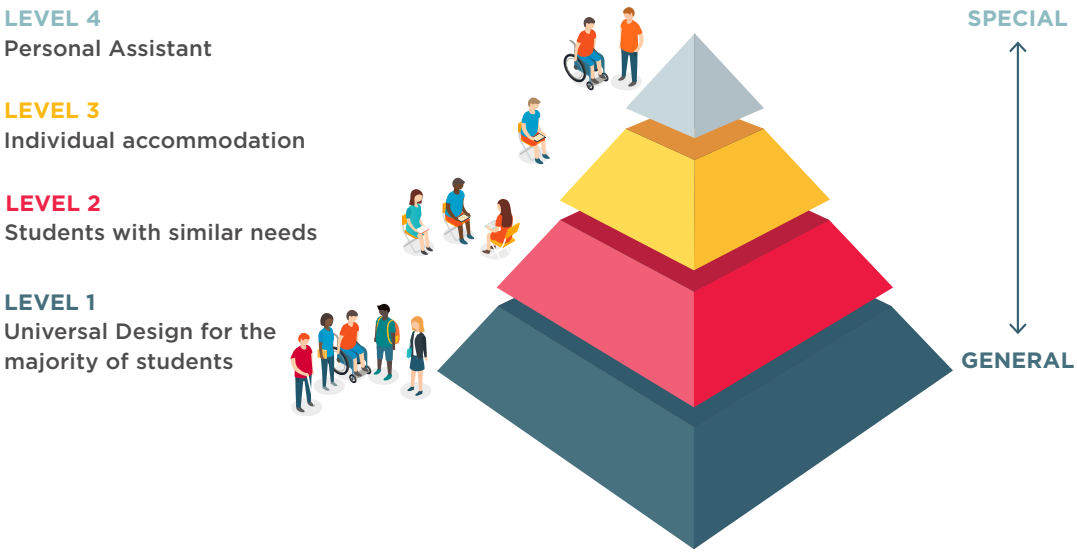
> **"Applying Universal Design for Learning can address and circumvent numerous challenges faced by students with disabilities while simultaneously improving learning for all students"** (p. 18).

Step 1

The first step towards a UDL environment for FET is to focus on the core principle of inclusion.

Inclusion is the participation and sense of belonging learners feel in an education and training environment.

The Inclusive Education Pyramid presents a conceptualisation of how we can understand inclusive practice across four levels.



The tiered approach of the Inclusive Education Pyramid illustrates the different levels of learner support required within an inclusive education environment model in line with UD principles.

A continuum of support:

- **Level 1 – Support for all**
  UD for the majority of learners - the base layer of the pyramid demonstrates how the majority of learner supports are to be facilitated as part of mainstream learning environment.

- **Level 2 – Support for some**
  Learners with similar needs - seeks to facilitate support for groups of learners that require similar additional supports.

- **Level 3 – Support for a few**
  Individual accommodation - relates to learners who require a needs assessment from specialist services (e.g., Disability Support Services). This may involve assistive technology or some other reasonable accommodation to enable the learner to participate fully in the learning experience.

- **Level 4 – Support for the individual**
  Personal Assistant - relates to the smallest number of learners who might require more personal and professional supports (e.g., use of a Personal Assistant, a reader or scribe during examinations).

The Inclusive Education Pyramid reminds us that a UDL approach is for all learners - not just those who have a disability. From a UDL perspective, it is evident that most of our attention should be focused on Level 1 of the Inclusive Education Pyramid as it is this space that seeks to be most inclusive for most learners. Level 2, 3, and 4 supports will not be required by the majority of learners. Robinson and Hutchinson (2014) identified that 80% of learners would not require such supports. They further identified that 15% of learners required targeted interventions, and only 5% required intensive individual support.

Step 2

Having directed our attention to the importance of inclusion and Level 1 of the Inclusive Education Pyramid, the second step is to explore the theories that underpin UDL. This will enable the development of a conceptual framework for the FET sector in Ireland.

UD, which originated from an architectural design approach, has been adopted for many environments, including learning. It is more than just a practice – it is a philosophy and an ethos that is continually evolving.

The core principles of UDL and how they relate to the learning environment and pedagogical practices have attracted much attention. UDL is thought to be a solution for more positive engagement with an increasingly diverse learner population. Much of the theoretical discussions regarding UDL have their origins in pedagogy or neuroscience - which is different to that of UD and architecture. In fact, many of the current UDL frameworks were developed on the premise that a professional with pedagogical training is the driver and that the curriculum (be it development or delivery) is the focus.

The FET sector in Ireland represents an ever-changing community of learners and educators alike. A UDL approach offers a theoretical and practical approach to the development of active inclusion strategies and supports the mission of the sector to **“. . . deliver excellent outcomes for learners, enterprise and communities”**. (SOLAS, 2017a, p. 8). Such a model must embrace the very nature and ethos of FET - whether the learning process is classroom based or community based, or whether it is practitioner led or industry expert led, or indeed whether the curriculum is physical or virtual.

To develop a UDL conceptual framework for the FET sector in Ireland, a review of the pertinent literature was conducted. The objective of the review was to develop a Conceptual Framework of UDL that would be flexible and workable for practitioners engaged in planning the learning process (education and training). The review of the various

theories and models of UDL identified common and overlapping themes that are useful to the development of a UDL approach to the FET sector in Ireland. The review examined the evolution of the original UD philosophy and principles (from an architectural and built environment perspective) to the more recent conceptualisations of UDL (e.g., UD for Transitions: Best, Scott, & Thoma, 2015). The review also considered UDL frameworks and their application to different learning environments and learner populations.

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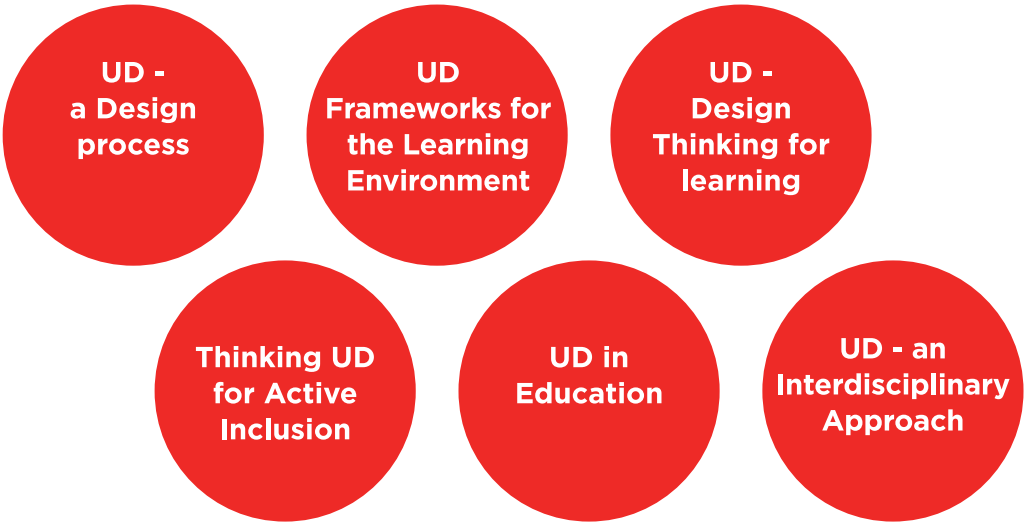

Figure 2: 6 themes identified from the literature on UDL

1 Universal Design: a design process

The UD approach to learning was influenced by the seven core principles of UD – a design approach that originated in the fields of architecture and the built environment (Story et al., 1998):

- **PRINCIPLE ONE:** Equitable Use.
- **PRINCIPLE TWO:** Flexibility in Use.
- **PRINCIPLE THREE:** Simple and Intuitive Use.
- **PRINCIPLE FOUR:** Perceptible Information.
- **PRINCIPLE FIVE:** Tolerance for Error.
- **PRINCIPLE SIX:** Low Physical Effort.
- **PRINCIPLE SEVEN:** Size and Space for Approach and Use.

As a design approach, whilst UD can be considered in terms of frameworks and core principles, it represents a way of thinking about inclusion, rather than a prescriptive list of tasks to be accomplished. Thus, much like the concept of inclusion, UD is about the journey rather than a destination. UD is more than just an approach to practice. It is an approach that requires a developing attitude and a new way of thinking. Similar to any design process, UD requires that one knows the intended user and appreciates the purpose of the "end product". When applied to the built environment, the end product of a UD approach is easily recognised - doorways are wider, there are lesser or no steps to enable access, there is good signage, and the environment is structured in a manner that allows for easy navigation. When applied to a service, the application of UD may be a bit more complex, because in education it involves relationships, interactions, and experiences that extend beyond accessibility to also align with usability. Usability can be measured on the basis of a person's perception of the efficiency, effectiveness, and satisfaction of an interaction.

The field of education and learning has embraced the UD concept quite readily and a number of frameworks have been developed. UD presents an opportunity to develop educational tools and approaches that can accommodate the greatest diversity of learners (Rose & Meyer,

2000). In this context, UD can be easily developed as a central part of an active inclusion strategy.

The HE sector in Ireland has recognised the importance of inclusion and Level 1 of the Inclusive Education Pyramid by embracing UDL as a concept, with Disability Officers and Access Officers championing its application. As a practical solution, this application of UDL provides for the increasing numbers of learners who have a disability, whilst also providing a practical solution that reduces the need for add-on supports to the wider learner population. UDL for FET also needs to provide an approach that offers real opportunities for a diversity of learners seeking equality of success. In reviewing the literature on UDL, it was recognised that approaches which might be readily applicable to the HE sector may not be as congruent to the needs of the FET sector.

2 UD: Frameworks for the Learning Environment

UD can be developed for the learning environment in a number of ways. Up until recently, developments were focused primarily on educational materials, curriculum, and pedagogical practices (Rao, Ok, & Bryant, 2014). Previous applications and knowledge can be easily extrapolated to the requirements of the FET sector to support a Conceptual Framework of UDL for FET.

As an example of the developments in UD thinking for the learning environment, the table below brings together various conceptualisations of UD in an easy to compare manner (the list below has been developed and expanded from McGuire, 2014).

Table 2. A representation of UD frameworks across education and their origins.

1. Universal Design for Learning (UDL)

CAST Model

Meyer and Rose (1998)

- Multiple methods of presentation;
- Multiple methods of expression;
- Multiple options for engagement.

3 principles based on neuroscience and learning – **"Grounded in emerging insights about brain development, learning, and digital media"** (Edyburn, 2010, p. 34).

2. Universal Design in Education (UDE)

Bowe (2000)

7 principles of UD:

- Equitable use;
- Flexibility in use;
- Simple and intuitive;
- Perceptible information;
- Tolerance for error;
- Low physical effort;
- Size and space for approach and use.

7 principles developed from the original UD principles and adopted for teaching staff in HE settings.

3. Universal Design for Instruction (UDI)

Scott, McGuire, and Shaw (2001)

7 principles of UD:

- Equitable use. Instruction is designed to be useful to, and accessible by, people with diverse abilities;
- Flexibility. Instruction is designed to accommodate a wide range of individual abilities;
- Simple and intuitive. Instruction is designed in a straightforward and predictable manner - regardless of the learner's experiences, knowledge, language skills, or current concentration levels;
- Perceptible information. Instruction is designed so that necessary information is communicated effectively to the learner regardless of ambient conditions or the learner's sensory abilities;
- Tolerance for error. Instruction anticipates variation in individual learner learning pace and prerequisite skills;
- Low physical effort. Instruction is designed to minimise non-essential physical effort in order to allow for maximum attention to learning;
- Size and space for approach and use. Instruction is designed with consideration for appropriate size and space for approach, reach, manipulation and use regardless of a learner's body size, posture, mobility, and communication needs.

2 additional principles:

- Community of learners. The instructional environment promotes interaction and communication among learners and between learners and faculty;
- Instructional climate. Instruction is designed to be welcoming and inclusive.

7 principles developed from the original UD principles (Story et al., 1998) with 2 additional principles - designed for faculty on a HE campus.

"The application of UD to instruction provides faculty with a framework to anticipate and support the multiplicity of ways in which a broad range of students will experience and learn from college instruction" (Scott, McGuire, & Shaw, 2003, p 47).

4. Universal Instructional Design (UID)

Higbee (2003)

8 principles based on the original UD principles (Story et al., 1998) - and encompassing the work of Chickering and Gamson (1987).

- Create a climate that fosters trust and respect;
- Determine the essential components of the course;
- Provide clear expectations and feedback;
- Explore ways to incorporate natural supports for learning;
- Provide multimodal instructional methods;
- Provide a variety of ways for demonstrating knowledge;
- Use technology to enhance learning opportunities;
- Encourage faculty-learner contact

Developed for teaching faculty at undergraduate level in HE.

5. Universal Instructional Design

Palmer and Caputo (2003)

7 principles based on UD:

- Be accessible and fair to all parties;
- Be straightforward and consistent;
- Provide flexibility in use, participation and presentation;
- Be explicitly presented and readily perceived;
- Provide a supportive learning environment;
- Minimise unnecessary physical effort or requirements;
- Ensure a learning space that accommodates both learners and instructional methods.

7 Principles of UD adopted across 9 courses were evaluated.

Aligned faculty training with principles.

6. Universal Design of Instruction (UDI)

Burgstahler (2007)

7 principles of UD used to inform UDI.

Very much grounded in UD, UDI and UDL – a hybrid approach.

> **"UDI can be defined as the design of instruction, of products and environments to be usable by all students, to the greatest extent possible, without the need for adaptation or specialised design."**
> Burgstahler (2007, p. 2).

One of the challenges for UD and its application to the learning environment is that it is not as easy to understand as is thought. This may be because most of the frameworks for UD in education and learning environs work on the premise that the intended audience are professional educators and/or faculty with a knowledge of curriculum development, learning theory, and pedagogy. Many of the frameworks also presume that learning is the domain of the classroom and belongs exclusively to the teaching professional.

As can be seen from Table 2, there are various interpretations of how the original UD principles might be interpreted for a UDL learning environment. Rather than being problematic, the ability of these perspectives to co-exist presents a richer and deeper appreciation of how UDL can be applied to different learning circumstances.

As represented in Table 2 a UDL approach continues to be developed by the Center for Applied Special Technology (CAST: www.cast.org). CAST approaches UD from a neuroscientific background. The development of their framework (which originated from the work of Meyer and Rose 1998) has involved a variety of professionals and has been developed around three key principles from a "learning" base as opposed to a "teaching" or "instructional" base.

The CAST model of UDL is focused around a set of principles with the objective of offering all learners equal opportunities, including learners with disabilities. The objective of the CAST framework is to improve the learning experience of all learners, whereby flexibility is a primary concept in terms of teaching, assessment, and environs - thus catering for a multiplicity of learners – again recognising the importance of Level 1 of the Inclusive Education Pyramid.

The CAST model (see Figure 3 below) is based around three core principles that need to be considered from the design stage of learning programs.

1 **The 'WHY' of learning** - Multiple Means of Engagement:
   – This is to enable learners to engage positively with their learning.

2 **The 'WHAT' of learning** – Multiple Means of Representation:
   – This is focused around offering choice around learning.

3 **The 'HOW' of learning** - Multiple Means of Action/Expression:
   – This relates to assessment – ensuring that learners can demonstrate their understanding.

Multiple Means of Engagement	Stimulate motivation and sustained enthusiasm for learning by promoting various ways of engaging with material.
Multiple Means of Representation	Present information and content in a variety of ways to support understanding by students with different learning styles/abilities.
Multiple Means of Action/Expression	Offer options for students to demonstrate their learning in various ways (e.g. allow choice of assessment type).

Figure 3. CAST model of UDL (udlguidelines.cast.org)

The UDL model proposed by CAST has been utilised successfully within further and higher education in Ireland. For example, AHEAD together with the Cork Education and Training Board (AHEAD, 2018) piloted a model of training based on the principles of UDL for staff which was very well received.

The Universal Design for Learning – License to Learn (UDLL) project (UDLL, 2016), a network of organisations from across the EU (including Ireland) explored UDL as an approach to be adopted across the campus community of HE. To ensure consistency of experience, a systems approach was proposed. The project examined UDL from a variety of perspectives in HE – senior management, faculty, learner, and disability officer. The project identified that if UDL was to be successfully adopted by a community; each part of the community needed to reflect upon their role, their understanding of UDL, and how they could become UDL agents. Also, each person needed to understand the UDL approach and how it could be incorporated into their approach on campus.

Within the FET sector in Ireland, the practitioner that leads the learning process is central to the experience of the learner; be they a trainer or an industry led expert, an employer or involved in learning support – therefore, the framework adopted for FET needs to be both "designed" and "adapted" with that in mind from the very outset.

The CAST model of UDL allows all practitioners engaging with it to approach learning with a degree of flexibility while allowing them to build on their own knowledge and expertise. It affords all to take a fresh look at their practices and redesign their thinking with the objective of including most learners.

Theory relating to this is explored in the next section.

3 UD – Design Thinking for Learning

The idea of redesigning learning materials for the greatest diversity of learners originated when educators considered alternatives to print texts for learners who had difficulty accessing the material (e.g., learners who are blind / visually impaired). Rose and Meyer (2000 p. 13) recognised that **". . . there is not one 'typical' learner with a limited number of variants but instead a great variety of learners"** and began to explore the idea of designing highly malleable environments that provide the right level of support and challenge for every individual learner.

CAST and David Rose (one of the pioneering theorists of UDL) at that time had the good fortune to be introduced to Ron Mace, the architect who developed UD. Together they identified parallels between designing accessible buildings and designing accessible learning and curriculum materials. Importantly, Rose and Meyer (2000) reported that

> **"The ultimate educational goals will no longer be about the mastery of content (content will be available everywhere, anytime, electronically) but about the mastery of learning. At commencement, we will graduate learners who are "expert learners".** (2000, p. 20)

And so the term "Universal Design for Learning" was developed with the attention being on learning rather than access.

When applying UDL principles to the learning process, it is presumed that it is about creating a new product that will work for all learners. This differs to the physical environment where a UD design results in a product that is usable by most people. In learning, it is more about the approach, in that it is about flexibility and alternatives (Rose & Meyer, 2000) rather than a set of fixed procedures (Rose & Meyer, 2006) about practitioner pedagogy, classroom environment, and curriculum design (Rao et al., 2014), or clear goals where effort is recognised and rewarded (Hitchcock, Meyer, Rose, & Jackson, 2002). It can be a challenging concept to give a clear definition to as it can be

interpreted very broadly. Furthermore, it can be difficult to determine the efficacy of UDL. As Rao et al. (2014) asserted “To give definition and shape to the broader construct of UD in education, it is important to articulate what exactly constitutes an intervention that is universally designed by describing UD principles applied within an intervention.” (p. 155). The challenge is, therefore, to develop a conceptual framework that can be adopted by a diverse community while acknowledging that in some way they can measure the impact of such an approach.

A further challenge is that many educators believe that they already take a UDL approach - in that they do not see a UD approach as a particularly new concept or anything different to what they already know or practice. However, it is important, and particularly in the context of FET, that UDL be seen as an approach that can be applied and adopted by all practitioners and become a shared philosophy. It is very much about teamwork and taking a multidisciplinary approach. McGuire et al. (2003) noted that the adoption of a UDL approach in the HE environment where not all faculty were trained teachers and were engaging with an increasingly diverse learner population, there was “notable enthusiasm”.

In adopting and adapting a CAST approach to UDL for FET practitioners - an approach that can be measured in terms of efficacy - it is apparent that such an approach must be formal and adopted with intent and planned consideration. Furthermore, developing such an approach may require a shift in thinking, whereby a multidisciplinary team can share a vision and goals and create a holistic UDL environment. The conundrum is deciding where learning starts and stops, where UDL becomes UD or vice–versa, as each are interchangeable, notably in the FET environment.

However, what is clear from the existing knowledge base of UDL is the importance of establishing a “shared” thinking of UD and UDL, while ensuring consistency and authentic inclusion. This necessitates a clear understanding of what “thinking UDL” might be. It necessitates a “mind-shift”.

In the next section, this “mind-shift” in terms of “thinking UDL” for active inclusion is explored.

4 'Thinking UDL' for Active Inclusion

Terms and phrases such as 'active inclusion', 'inclusive practice', and 'social inclusion' are increasingly utilised. There are very clear international agendas with respect to diversity and inclusion and it is increasingly important that all products, services, spaces, and buildings are accessible for all individuals.

As mentioned earlier, the adoption of UDL into practice can be understood as a continually evolving process rather than an end result. Steinfeld and Maisel (2012) broaden the perspective to be **". . . process that enables and empowers a diverse population by improving human performance, health and wellness, and social participation"** (p. xi). Whilst Torkildsby (2018) further explores the idea of designers being **". . . universal design thinkers"** (p. 2), Edyburn (2010) reminds us that UD(L) is such a broadly defined concept that it can be a challenge to recognise what "thinking UD(L)" means in practice.

As UD originated with the goal of ensuring accessibility for people with disabilities – in the most inclusive manner possible - from the inception of any idea; it can be argued that to "think UDL", one has to anticipate the barriers people with disabilities experience. Barriers that are not just physical - they can be tangible or intangible. In the learning environment, Black, Weinberg, and Brodwin (2015) note that it is necessary to develop an understanding of whether the needs of learners with disabilities are being met. These needs go beyond the classroom and should be extended to other areas and services that relate to the learner's education and experience.

Furthermore, while both UD and UDL have their origins in inclusive experiences for individuals with disabilities, the central principle that good design includes everyone has been explicit from the very beginning. A useful starting point when considering a UDL conceptual framework for any learning environment is to explore the experiences of all stakeholders to date, and ascertain what can be developed or refined further.

This theory is explored in the next section.

5 UDL in Education – the experience

To explore the experience of the learner, one must be able to define what in fact UDL is and where the practice was implemented. A reoccurring theme in the research literature is the importance for all involved to adopt a UDL philosophy and adapt practices accordingly – ***with intent***. However, what is the philosophy?

As outlined earlier, the frameworks developed for learning have - in the most part - been developed for practitioners to contribute to the work that they do when developing inclusive curriculum and pedagogical practices, so that most learners can be included from the beginning (Hartmann, 2015). Rodesiler and McGuire (2015) found that where there is an understanding of inclusive pedagogical practices, the principles of UDL provided educators with a framework of consistent terminology and a 'scaffold' for thinking and acting beyond their current practice in an intentional manner.

Identified here is the central importance of planning a UDL approach in an intentional and collaborative manner. Many educators believe that they have always practiced UDL. This may be true for some parts of their practice - and may have been largely unintentional. The concern is that **". . . UDL gets trivialised when reduced to a 'same thing we've always done' narrative."** (Lowrey, Hollingshead, & Howery, 2017, p. 6).

Padden and Ellis (2015) outlined how a UDL approach was more workable when the shared philosophy was one of inclusion. There is a risk that while UDL has its origins in the discourse of disability and accessibility, it should not be dismissed as purely this. As the Inclusive Learning Pyramid (Level 1) and Burgstahler (2007) remind us,

> **"Universal design is an approach to teaching that addresses diversity during all stages of course design and delivery, minimizing the need to make special arrangements for individuals"** (p. 1).

An important issue in preparing for a UDL approach is for practitioners to remember that there is no such thing as a "typical learner" and that UDL recognises the desire of all learners to succeed. It is therefore a concept, that when implemented well, has demonstrable benefit for all learners, and most importantly, will enable those who have previously been on the margins (Hartmann, 2015; Shaw, 2011). Moreover, David Rose acknowledged that UDL puts the label 'disabled'" where it belongs - on the curriculum - rather than on the learner. This implies that the curriculum and practice is disabled when they fail to meet the needs of diverse learners (Davies et al., 2013).

UDL (similar to the other frameworks for the learning environment) is foremost an educational framework that takes account of the diversity of learners in relation to; the design of learning goals and materials; teaching and learning methods, and assessment regimes (Meyer & Rose, 1998; Rose & Meyer, 2002). The implementation of UDL ensures that the curriculum is designed to accommodate the inclusion of a diversity of learners while maintaining expectations (Rao, Smith, & Lowrey 2017; Rose & Meyer, 2005). Furthermore, it is apparent that the implementation of such an approach enables educators to plan and create learning environments that are beneficial to learning for all learners **". . . for designing flexible instructional environments and proactively integrating supports that address learner variability"** (Rao & Meo, 2016, p. 1). Johnson and Fox (2003) assert that as it is more cost-effective to take account of accessibility in the design phase of a new build, it is also time efficient ". . . to consider the flexibility of learning materials when designing a course than in trying to provide individual accommodations after the fact" (p. 14).

In an environment that engages a variety of practitioners and a diverse curriculum, it is important that UDL is adopted across the community of practitioners. While there has been much said about practitioners and pedagogy, some theory is emerging in relation to the multi-disciplinary learning community and the interdisciplinary team involved within.

This theory is explored in the next section.

6 UDL – a multidisciplinary and interdisciplinary approach

The key to implementing UDL successfully means acknowledging that it takes a "learning community" to meet the needs of a diversity of learners. As Chandler et al. (2017) note, it **". . . requires interdisciplinary and collaborative solutions from people committed to educational equality"** (p. 166). The CAST approach to UDL itself was designed by a multidisciplinary and interdisciplinary team, with the collaboration of educators, course designers, neuroscientists, and researchers. This multidisciplinary approach is central to the ethos of UDL, and this should be embraced as the UDL framework is adopted by a community that is also diverse (Quirke, McCarthy, Treanor, & Mc Guckin, 2019).

Chandler et al. (2017) further discusses how implementing a UDL framework in an increasingly diverse HE environment can present challenges as well as the promise of successful outcomes. Davies et al. (2013) found that where HE faculty had training or professional development in the concept of UDL, that as little as five hours of group instruction on the use of UDL principles and teaching strategies effectively increased the implementation of those strategies.

Two frameworks that have been used in HE are UDI and UDL. This is in many respects because either were thought to work best for the rapidly increasing diversity of learners – while much of the focus was on the curriculum and classroom (McGuire, Scott & Shaw, 2003). However, there has been an increasing voice for the 'other professionals' on campus to have their say in this new inclusive approach, including learner services (Burgstahler, 2009), libraries where information is stored and shared in many formats (Robinson, 2017), and professional clinical staff engaged in placement and education (Heelan, Halligan, & Quirke, 2015; UDLL, 2016).

Having reviewed the important issues from the UD and UDL approaches, it is evident that inclusion is a key principle in any framework of UDL. The more inclusive that a learning environment seeks to be from the outset, the easier it is to adopt a consistent practice of UDL. The CAST framework of UDL is identified here as a useful foundational model of UDL for the FET sector in Ireland - not only because of its origins in learning and neuroscience, but also because of its focus on an approach that lends itself to a multidisciplinary community of practice. The idea that engagement needs to be wider, that pedagogy is increasingly innovative and it can be difficult to identify when it is more UD or UDL can be a challenge in and of itself, when adopting any framework including CAST's version.

The next step of this work had to be innovative as the very concept of UD itself was applied to 'design' and adapt a conceptual framework that would work for the FET sector in Ireland. After all, the very idea that anything would be prescriptive and just applied contradicts the very origins of UD itself. This also sought to overcome any challenges with regard to UD and UDL discourse.

Step 3

The third step - combining theory and practice to identify a Conceptual Framework of UDL for FET.

The central aim of this review was to identify a UDL framework that recognises the multidisciplinary and collaborative environment of FET; where UDL would be every inclusive practitioner's approach.

To recap, according to the international literature, UDL can trace its roots to architecture and the intentional purpose to make the built environment accessible for individuals with mobility difficulties and, by extension, for every individual. UDL extended this thinking to the learning environment and offers a framework for practitioners to explore how their practice can be adapted. Various models for UDL have been identified and explored in this publication. The framework that demonstrates a best approach to the FET sector in Ireland is that proposed by CAST.

The CAST framework readily recognises the diversity within and across various groups of learners, and provides the building blocks to achieve sustained and intentional practice that supports active inclusion:

- Multiple means of engagement;
- Multiple means of representation;
- Multiple means of action and expression.

Adopting and adapting this UDL framework for FET not only places the learner at the centre of the design process, but also allows all practitioners to engage in a planned and coherent manner to support the learner. Simply put - it considers the "why", the "what", and the "how" of learning for all (Rose & Meyer, 2006).

Section 4
A Conceptual Framework of Universal Design for Learning (UDL) for the Irish Further Education and Training Sector

The objective of this conceptual framework is to provide all practitioners working across FET with a mechanism that will encourage reflection on current good practices and to enable consideration of new UD strategies that could be enacted in practice. As noted, many practitioners may already be implementing UDL principles in their approach to supporting learners. Whilst some of these may have been designed intentionally, some may have been unintentional – yet still successful. **The goal is to make UD intentional in the design and delivery of education and training.**

Figure 4. Representation of the different FET practitioners with the learner at the centre of the learning relationship

The FET environment is a community of diverse practitioners made up of many that are engaged with not just a diversity of learners, but furthermore in a diversity of settings (Figure 4). The Further Education and Training Professional Development Strategy 2017-2019 (SOLAS, 2017b) notes that "The FET practitioner can be defined as anyone working in the sector who is involved in working directly with learners or in supporting or influencing the learner experience in FET." (p. 16).

These practitioners seek to deliver flexible and adaptable education and training that is responsive to the needs of each learner, while also ensuring equitable and valuable outcomes.

An important shift is occurring whereby the UDL framework is being redesigned to accommodate its new user – the FET practitioner – with the learner being the primary beneficiary.

In addition to the CAST model, whereby the focus is on the 'what', 'how', and 'why' of learning - the FET UDL conceptual framework also seeks to acknowledge each FET practitioner and their engagement.

It will recognise the 'who' in the delivery of education and training.

The 'who' of learning will be an added principle for FET, recognising the unique structure of FET and the diversity of practitioners and provision within it. This shift advocates for a collaborative approach that brings practitioners together to reflect upon and share their knowledge, understanding, and innovative practice. This approach furthermore welcomes support from practitioners and builds a greater awareness of UDL, allowing them to identify current good practice and, more importantly, a preparedness to try out new inclusive methods that may lead to sustainability and a consistent implementation of UDL across the sector.

The next step is to further explore the position of the FET practitioner in this conceptual model.

The FET Practitioner (the "Who")

A UDL approach is already evident in many aspects of the FET system; but it is imperative to recognise that adopting a UDL approach must be 'intentional' and collaborative. When all adopt UDL across the sector - a shared approach is assured. This 'shared' approach means the learner can expect a certain standard and UDL is more visible in terms of efficacy and active inclusion.

The starting point (Figure 5) for each practitioner in FET is to recognise where they are at in terms of their UDL thinking and practice.

Figure 5. Acknowledging the different perspectives of each practitioner as they engage in the conceptual framework.

Professional educators and practitioners may be familiar with the language and approach of UDL. In fact, some of the approaches, including 'differentiation', can be confused with a UDL approach. As pedagogical practices and the language of curriculum may not be familiar to all practitioners in the FET system; the philosophy and practice of inclusion can be an easier starting point. It is worth reiterating that it is the principle of inclusion that UD was originally developed from and is the common influence for all UD frameworks in learning, including UDL.

Moreover, when considering inclusion in education the Simple Inclusion Pyramid (Figure 6) is a useful starting point.

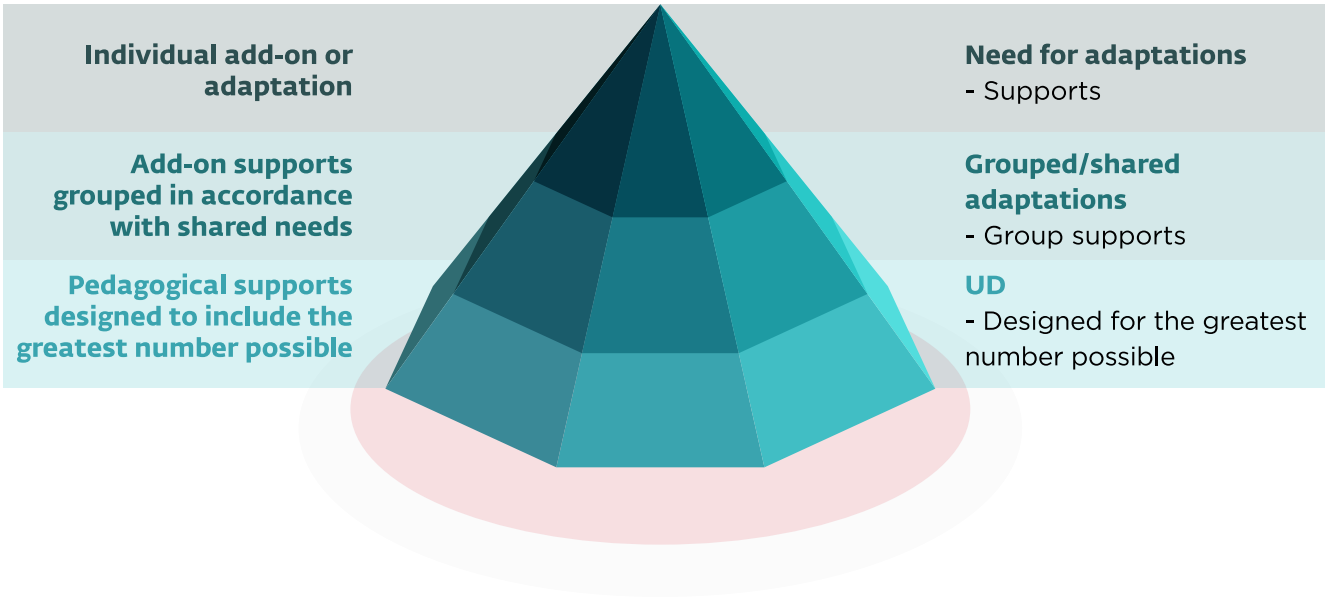

Figure 6. Simple Inclusion Pyramid

The Simple Inclusion Pyramid (Figure 6) is about designing the learning environment so that learning is accessible for 'most' of the population of learners. By implementing UDL in the mainstream, it reduces the need for add-on support. However, and importantly, it never negates the need for adaptation or individual support.

When considering a wider community of practitioners – the shift is that the image is now being used by more than one audience and the various perspectives need to be reflected. That is, every practitioner has a different starting point in their 'inclusion' and 'UDL' journey.

Each are approaching 'inclusion in education and training' from different starting points - each will engage with UDL differently and their understanding may vary.

Moreover, it is important to note that if UDL and this shift in thinking needs to be continuously developing, the conceptual framework needs to not just involve the wider community, but be inclusive in and of itself on a continuous basis.


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To reiterate, the conceptual framework is intended to engage and respect a different range of professionals that work closely together for the benefit of the learner. The conceptual framework does not set out to encourage a 'silo' or individual approach. Rather, it seeks to be both interdisciplinary and multidisciplinary, recognising a diversity of inputs from its very formation.

The conceptual framework is inclusive in and of itself.

The conceptual framework is designed so that all practitioners are included and empowered, even when each individual might be at different stages of professional or practice development.

In such a system, the engagement of every individual results in the ability to provide both influence and support to each other. This approach can have a positive impact on the learners' experiences of active inclusion. Thus, the UDL pyramid of inclusion shifts to become a UDL Wheel for FET (Figure 7) – a representation that easily allows the image of the FET community of practitioners to evolve around the learner at the centre.

The UDL Wheel for FET

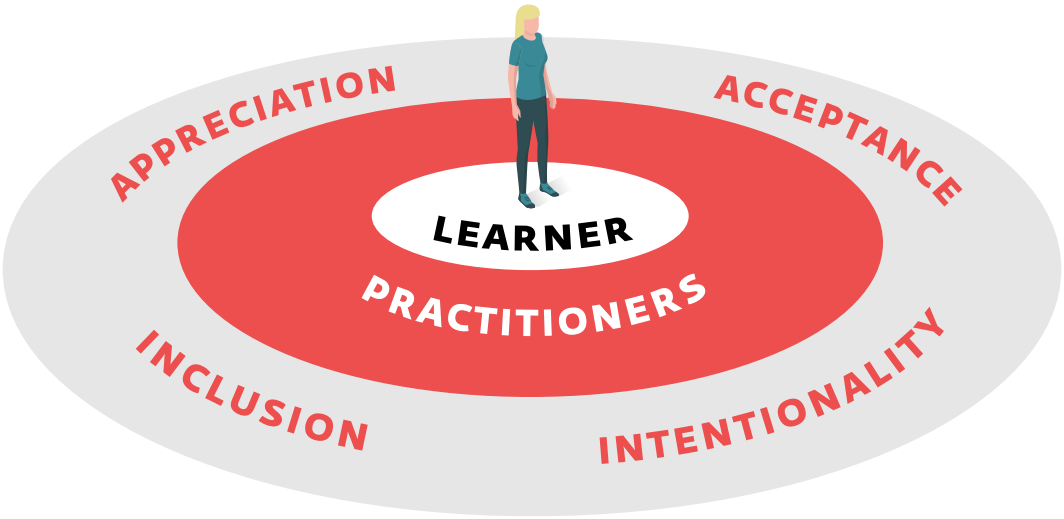


Figure 7. The Wheel of UDL for FET

The learner is at the core of the wheel and while there is a common understanding that the ultimate aim is the inclusion of every learner, this is also subject to the inclusive engagement of all practitioners. Collaboration is key. It is also worth stating that each practitioner has 'agency' and a different experience to contribute to the FET learning environment.

There are also common values inherent to the philosophies of UDL and inclusion which have emerged repeatedly as recurring themes across the review of literature that should be adopted.

These values include:

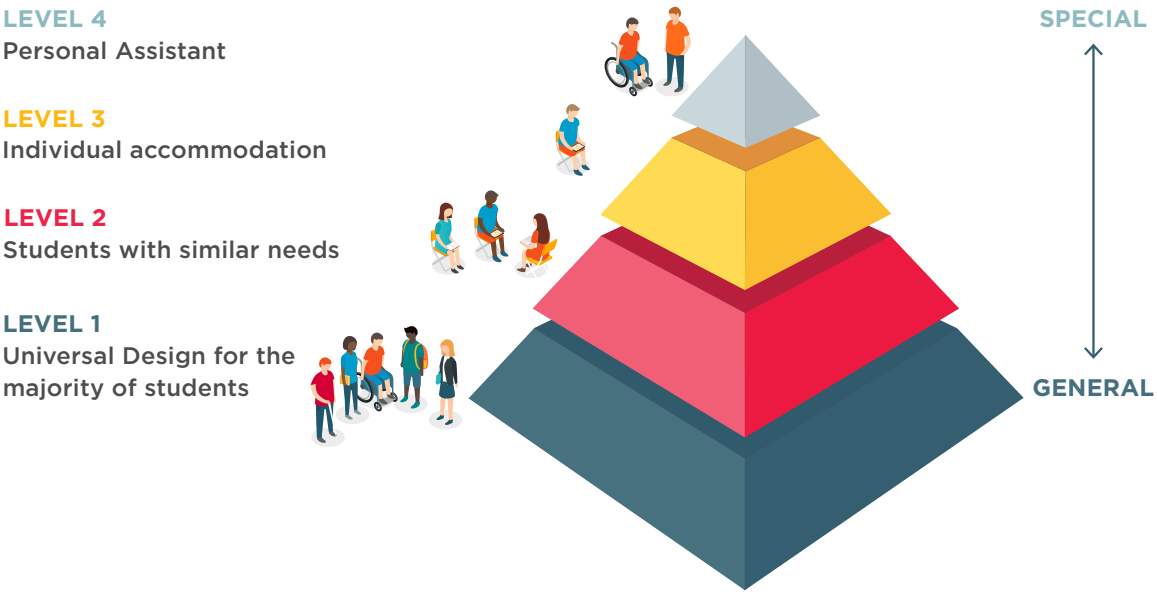
- **Inclusion** – recognising that the core philosophy is one of inclusion.
- **Intentionality** – intending to adopt and practice inclusion and UDL.
- **Appreciation** – recognising the value of being interdisciplinary and multidisciplinary on a shared inclusive agenda.
- **Acceptance** – that the philosophy and practice needs to be instinctive, thus believing that it is ever-changing and reactive to the audience it seeks to engage with.

Working together with an inclusive and UDL ‘shared mindset’ will enhance the learning environment with the benefits of the various insights to be gained from a multidisciplinary approach. However, as reiterated earlier, this does not, nor ever should, negate the possible need for add-on supports, group supports, or more individualised supports.

Summary of the Conceptual Framework of UDL for FET

In summary, implementing UDL seeks to ensure that the learning and training environment is as inclusive of the greatest diversity of learners as possible from the get-go. It does not negate the need for add-on supports, or minimise quality, and is continuously evolving to reflect the needs of diverse learners. The Conceptual Framework of UDL for FET identifies 3 key stages:

STAGE 1 - Understand that both the philosophy and practice is one of Inclusion



The Inclusive Education Pyramid reminds us that a UDL approach is for all learners - not just those who have a disability - and that diverse learners require differing levels of support. From a UDL perspective, it is evident that most of our attention should be focused on the mainstream learning environment (Level 1 of the Inclusive Education Pyramid) as this is this space that seeks to be most inclusive for most learners.

STAGE 2 - Appreciate the Application of UDL

It starts when designing or redesigning learning and using CAST's model of UDL. This stage encourages practitioners to examine:

– The 'Why' of Learning – Provide Multiple Means of Engagement
– The 'What' of Learning – Provide Multiple Means of Representation
– The 'How' of Learning – Provide Multiple Means of Action and Expression

STAGE 3 - Identify 'Who' needs to be involved

Within the FET sector in Ireland, the practitioner leads the learning process and is central to the experience of the learner. The key aim of this UDL conceptual framework is to recognise the multidisciplinary and collaborative environment in FET and the diversity of provision within it; where UDL will be every practitioner's approach.

The goal is to make UDL intentional in the design and implementation of all practice and work towards a system of FET 'where inclusion is everyone's business'.

Values Underpinning the Conceptual Framework

Common values inherent to the philosophies of UDL and inclusion that will support the three stages are:

- **Inclusion** – recognising that the core philosophy is one of inclusion.
- **Intentionality** – intending to adopt and practice inclusion and UDL.
- **Appreciation** – recognising the value of being interdisciplinary and multidisciplinary on a shared inclusive agenda.
- **Acceptance** – that the philosophy and practice needs to be instinctive, thus believing that it is ever changing and reactive to the audience it seeks to engage with.

Section 5
The Introduction of UDL to FET – taking a 'modern' step forward...

The FET Sector in Ireland

This section sets out the scope of FET in Ireland within the context of this publication and highlights the importance of the philosophy of 'inclusion in the operation of this definition.

FET provides

". . . education and training and related supports to assist individuals to gain qualifications at Levels 1-6 on the NFQ or equivalent, to attain and refresh economically-valuable skills to access and sustain all types of employment, tackling skills shortages and boosting the future growth and competitiveness of the Irish economy."
(SOLAS, 2014, p. 51).

At the core of this definition are the aims, values, and diversity of courses available to learners within the sector. Central too is the learner profile. SOLAS (2014) report that their overall aim is the development of **". . . a world class integrated system of further education and training in Ireland, which will promote economic development and meet the needs of all citizens."** (p. 55).

A central principle for this strategy is one of active inclusion - **". . . enabling every citizen, notably the most disadvantaged, to fully participate in society and this includes having a job"** (p. 12). This is unequivocally endorsed with further values of "quality", "accountability", "inclusion", and "diversity" as **". . . reform is focussed on creating the right opportunities for Irish adults."** (p. 5).

FET Provision in Ireland

FET is comprised of 10 main types of provisions, delivered through 16 ETBs, 22 state agencies and bodies, and 34 voluntary secondary and community comprehensive schools (Mooney & O'Rourke, 2017). Whilst a significant amount of FET provision is administratively positioned within the post-primary system, particularly the Post-Leaving Certificate (PLC) courses, being taught by post-primary teachers registered with the Teaching Council in Ireland (O'Sullivan, 2017), there is an increasing number of industry led experts and employers engaged in the delivery of many FET courses.

FET provision covers a wide range of curricula and learning for a diverse population of learners through a broad range of FET Programmes. These programmes offer skills to those seeking to engage with the contemporary workplace. The learner profile includes those individuals who are entering the sector for the first time, individuals who are seeking a new career direction, and those who have been previously excluded and are seeking to re-engage in education and training. At the core of FET is an approach that is both flexible and reactive to the changing needs of its learning community and the workplace. This approach adds to the richness and diversity of the sector and creates a wide range of opportunities and experiences for all involved.

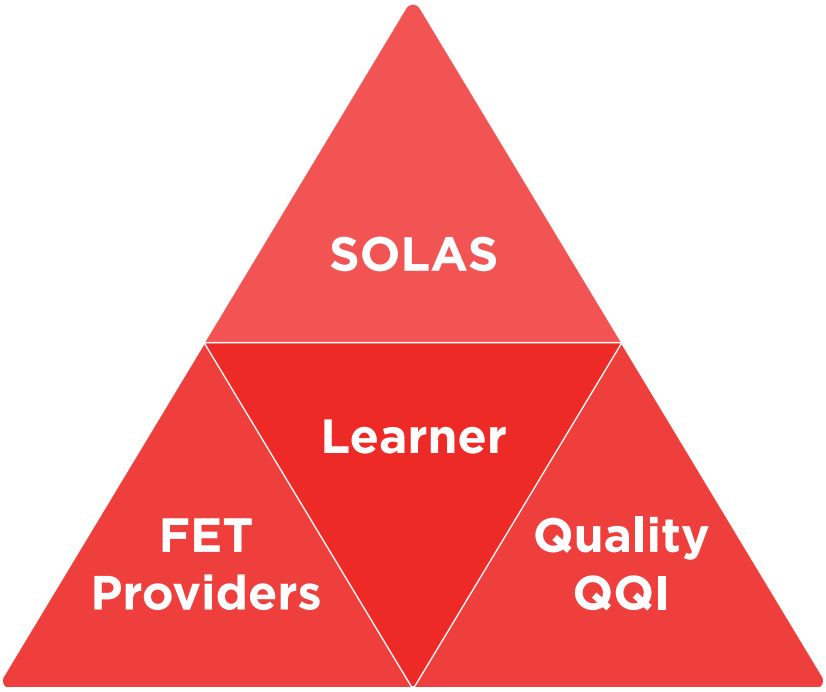


Figure 8. The FET Sector in Ireland and its Stakeholders.

Education and Training Boards (ETBs)

In establishing SOLAS, 33 Vocational Education Committee's (VECs) were amalgamated to form 16 new ETBs, and represented by the newly formed ETBI. This new structure brought together vocational schools and colleges, education providers, and the former FÁS training centres.

The result has been a range of programmes and courses that are broad in terms of content, delivery, and qualifications. FET provision encompassed approximately 30,300 courses which served 323,308 beneficiaries across 28 different programme titles (SOLAS, 2016).

Quality (QQI)

As previously mentioned, QQI was established in 2012 by the Qualifications and Quality Assurance (Education and Training) Act 2012 and is an independent state agency. It is responsible for promoting quality and accountability in education and training services.

Learners

There is a significant diversity in the profile of learners accessing FET. Similarly, there is an increasing diversity in HE and it is useful to explore the data and experiences of both. Although the diversity profile of learners is defined across many variables, analysing a specific group of learners and their experiences can spotlight how accessible both sectors are. This supports the fact that changes must be both intentional and operationalised through all aspects of provision if they are to accommodate a variety of needs.

An example of this is evident in terms of both the increase in the number of learners with disabilities accessing HE, which continues to increase annually, and the experiences of these learners. Between 2009/2010 and 2016/2017, the number of learners with disabilities accessing HE increased from 6,321 (3.3% of the learner population) to 12,630 (5.7% of the learner population) (Quirke et al., 2019).

The expansion of post-compulsory education opportunities for learners with disabilities has become both a national and an international priority. Many factors have influenced this, all stemming from a changing international philosophy that no longer views individuals with disabilities from a 'medical model' perspective, but from a more inclusive 'social model' perspective. Societal, legislative, and policy changes have sought to reduce the systemic barriers that obstruct learners with disabilities from gaining access to the same academic benefits as their non-disabled peers (Wendelborg & Tøssebro, 2010).

As economies become increasingly more knowledge based, acquiring a post-secondary education becomes increasingly crucial (Sanford et al., 2011). While the number of learners with disabilities pursuing post-secondary education have increased significantly in recent years, they are still less likely to do so than their able-bodied peers (AHEAD, 2015; Sanford et al., 2011). Newman (2005) found that 76.7% of learners with disabilities in second level education aspired to go to post-secondary education. However, two years after leaving only 19% were attending post-secondary education. This demonstrates that significant work remains to be done to enhance the transition opportunities of this section of the population (Shaw, Madaus, & Banerjee, 2009).

Findings from this research also indicated that the post-school outcomes for young adults with intellectual disabilities (ID) are among the poorest of any disability group (Newman et al., 2011). The NLTS2 study identified that irrespective of disability, all learners with disabilities were more likely to have enrolled in 2-year programme or community colleges and were less likely to have ever enrolled in 4-year college courses. This contrasted with learners in the general population who were more likely to have enrolled in a 4-year college course (Sanford et al., 2011). The significance of this study was that it was longitudinal in nature and followed learners over a number of years and mapped not just transitions but experiences, retention, and outcomes.

It is anticipated that within an Irish context, learners with disabilities want to, and will be, encouraged to pursue FET as they seek to access the employment market and improve their quality of life. A FET sector based on UDL will be welcoming to not just learners with disabilities – but all learners. The roles of those practitioners involved in the transition process, including the Guidance Counsellor/Practitioner, will further contribute to helping learners understand the role of FET as a dynamic, inclusive, and quality learning sector.

Section 6
Going Forward - Taking a Collective Approach

This publication explored the theory and practice of UDL from an active inclusion perspective. Proposed for the FET sector in Ireland is a Conceptual Framework of UDL for FET based on the work of CAST. The proposed conceptual framework provides for the diversity of the FET sector and the wide-ranging population that constitute FET practitioners, with the inclusion of the learner as the central focus. Utilising the core principles of inclusion and UD, the UDL for FET conceptual framework proposed will lead to successful inclusive approaches across education and training from the very outset.

The Framework identifies 3 key stages:

STAGE 1: Understand that both the philosophy and practice is one of I inclusion.

STAGE 2: Appreciate the application of UDL.
It starts at the design and/or re-design stages of learning and encourages practitioners to examine:

- The 'Why' of Learning – Provide Multiple Means of Engagement
- The 'What' of Learning – Provide Multiple Means of Representation
- The 'How' of Learning – Provide Multiple Means of Action and Expression

STAGE 3: Identify 'Who' needs to be involved.

The framework recognises the multidisciplinary and collaborative environment in FET and the diversity of provision within it; where UDL will be every practitioner's approach and **'where inclusion is everyone's business'**.

Furthermore, it advocates that four values are adopted as a foundation for continued development of high-quality, relevant, and inclusive courses that encompass a UDL approach. This is with the intention of ensuring engagement from all practitioners, a greater awareness of UDL, and inclusion and a preparedness to explore inclusive methods whereby all contribute to a sustainable UDL conceptual framework for FET. The four values that are identified here are:

- **Inclusion**
- **Intentionality**
- **Appreciation**
- **Acceptance**

These are represented in the UDL Wheel for FET in Figure 9.

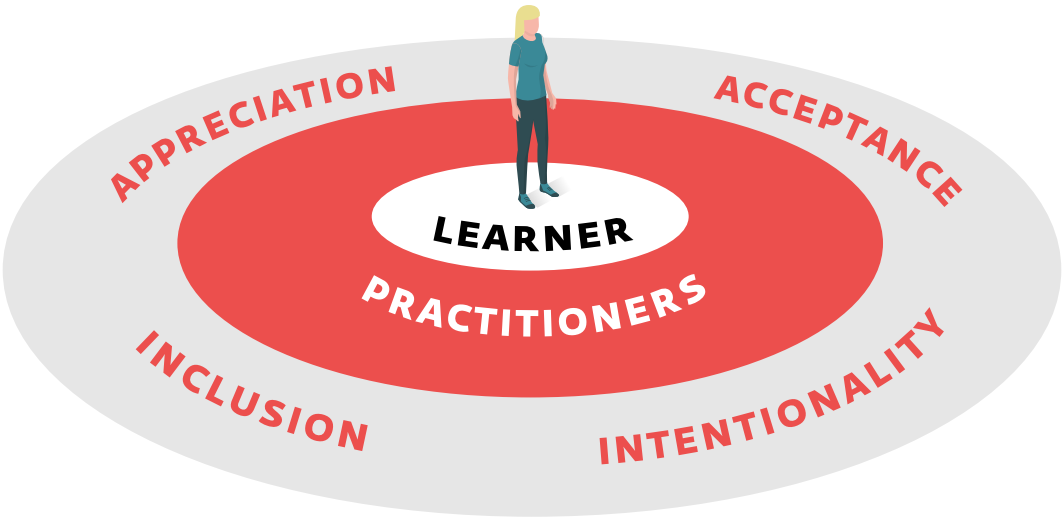


Figure 9. The UDL Wheel for FET

A comprehensive description of the Conceptual Framework of UDL for FET is included at the end of Section 4 of this publication.

In seeking to make the conceptual framework relevant and enable all practitioners to map their current work to the UDL approach; it is much simpler when inclusion and its underpinning philosophy is everyone's business. Thus, the new conceptual framework is 'most responsive' to the very community engaging with it - including the learner. The learner is considered from the earliest stages (course design) and is actively consulted and encouraged to feel that they belong as an inclusive philosophy emerges while it is recognised that there are multiple ways of being a UDL FET practitioner.

FET management and practitioners can engage with this conceptual framework as they seek to build a high-quality and best-practice inclusive culture and ethos. To inform 'intentional' practice it will act as a foundation from which to develop guidelines for practitioners across the sector to design and re-design their pedagogical practices, thus ensuring inclusion for the majority of learners without additional accommodations.

Going forward, the next step is to develop a set of guidelines for the Irish FET sector from the UDL conceptual framework specified in this publication. These guidelines will incorporate examples of best practice, explore ideas that can be customised to local situations, and be applied in implementing UDL across the FET Sector. The guidelines will aim to support the development of intentional, high-quality, inclusive learning experiences for all FET learners, including those with a disability.

To conclude, the purpose of this publication was to identify a UDL conceptual framework for the Irish FET sector with the aim of making UDL intentional in the design and implementation of all practice and to facilitate collaborative practice that can work towards a system that will support the inclusion of every learner and the inclusive engagement of all practitioners.

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Appendices

Universal Design for Learning (UDL) for Further Education and Training (FET) National Advisory Committee (NAC)

National Advisory Committee for Universal Design for Learning Guidelines for FET (NAC UDL)

Name	Organisation
Andrew Brownlee	SOLAS (Co-Chair)
Fiona Maloney	Education and Training Boards Ireland (Co-Chair)
Michael Phillips	City of Dublin Education and Training Board
Liz Moynihan	Cork Education and Training Board
Stacey Cannon	Department of Education and Skills
Dr Jennifer Van Aswegen	Disability Federation Ireland
Siobhán McEntee	Education and Training Boards Ireland
Conor Kennedy	Health Service Executive
Derek Chambers	Health Service Executive
Caitríona Ryan	Higher Education Authority
Dr Raasay Jones	Higher Education Authority
Neil McDermott	Higher Education Authority
Catherine O'Sullivan	Joint Managerial Body & Association of Community and Comprehensive Schools

Maureen Conway	National Association of Principals and Deputy Principals
Mary Stokes	National Centre for Guidance in Education
Colm Manley	National Council For Special Education
Dr Liam Coen	National Council For Special Education
Dr Ger Craddock	National Disability Authority & Centre for Excellence in Universal Design
James E. Hubbard	National Disability Authority & Centre for Excellence in Universal Design
Dr Ross Woods	Quality & Qualifications Ireland
Roisin Doherty	SOLAS

Appendix 2:
List of Acronyms and FET Programmes

2.1 List of Acronyms

BTEI	Back to Education Initiative
CPD	Continuous Professional Development
ETB	Education and Training Board
ETBI	Education and Training Boards Ireland
FÁS	Irish National Training and Employment Authority (now dissolved)
FET	Further Education and Training
HE	Higher Education
NCSE	National Council for Special Education
PLC	Post-Leaving Certificate
QQI	Quality & Qualifications Ireland
SOLAS	An Tseirbhís Oideachais Leanúnaigh Agus Scileanna
VEC	Vocational Education Committee (now part of ETBs)
VTOS	Vocational Training Opportunities Scheme

2.2 List of Educational and Training Boards (ETBs)

CDETB	City Of Dublin Education and Training Board
CETB	Cork Education and Training Board
CMETB	Cavan and Monaghan Education and Training Board
DDLETB	Dublin and Dun Laoghaire Education and Training Board
DETB	Donegal Education and Training Board
GRETB	Galway and Roscommon Education and Training Board
KCETB	Kilkenny and Carlow Education and Training Board
KETB	Kerry Education and Training Board
KWETB	Kildare and Wicklow Education and Training Board
LCETB	Limerick and Clare Education and Training Board
LMETB	Louth and Meath Education and Training Board
LOETB	Laois and Offaly Education and Training Board
LWETB	Longford and Westmeath Education and Training Board
MSLETB	Mayo, Sligo and Leitrim Education and Training Board
TETB	Tipperary Education and Training Board
WWETB	Waterford and Wexford Education and Training Board

2.3 FET Programmes

Full Programme Name	Acronym (if applicable)
Adult Literacy Groups	-
Apprenticeship	-
Blended Training	-
Bridging and Foundation Training	-
Back to Education Initiative	BTEI
Community Education	-
Community Training Centres	CTCs
English for Speakers of Other Languages	ESOL
Evening Training	-
Family Literacy	-
FET Cooperation Hours	-
Intensive Tuition in Adult Basic Education	ITABE
Justice Workshop	-
Local Training Initiatives	LTIs
Post-Leaving Certificate	PLC
Refugee Resettlement	-
Skills for Work	-
Skills to Advance	-
Specialist Training Providers	-
Specific Skills Training	-
Traineeship Employed	-

Traineeship Training	-
Voluntary Literacy Tuition	-
Vocational Training Opportunities Scheme	VTOS
Youthreach	-
eCollege	-

Appendix 3: AHEAD

AHEAD, founded in 1988, is an independent non-profit organisation. Its central mission is creating inclusive environments in education and employment for people with disabilities. Through its work AHEAD has built up extensive knowledge on inclusive practices on inclusion and diversity across disability, education and employment.

Since its inception AHEAD has been both an advocator of change and also a conductor of research on the impact of the widening of access on the higher education sector and on learners themselves.

The transition of learners with disabilities into, within and out of education are core strategic strands of the work of AHEAD. Listening to the voices of both grass root professionals and learners with disabilities themselves along with collaboration, networking and shared learning with key external stakeholders inform the strategic vision of AHEAD ‘shaping an inclusive future where learners and students with disabilities can succeed’.

Thank you

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