



Centre for  
Excellence in  
Universal Design

**NDA**  
Údarás Náisiúnta Michumais  
National Disability Authority



# Research to inform the development and delivery of Continuous Professional Development in Universal Design that is suitable for promotion by the RIAI

## Executive Summary



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**Note:**

This document contains the Executive Summary of ‘Research to inform the development and delivery of CPD in Universal Design that is suitable for promotion by the RIAI’. For the full version of the report please refer to the the National Disability Authority’s Centre for Excellence in Universal Design website <http://www.universaldesign.ie/>.

**Cover page:**

The images on the cover page of this report are of buildings that received the RIAI Universal Design Award from 2013 to 2017:

- Top left: Elizabeth’s Treehouse (Children’s Dining Hall), Co. Kildare, by McCauley Daye O’Connell Architects
- Top middle: Central Bank of Ireland, Dublin, by Henry J Lyons Architects
- Top right: Linn Dara, Child and Adolescent Mental Health Inpatient Unit, Dublin, by A&D Wejchert and Partners Architects
- Bottom left: St. Mel’s Cathedral, Longford, by Fitzgerald Kavanagh and Partners
- Bottom middle: A Family Dwelling – residential extension and adaptation, Dublin, by Justin O’Callaghan, Architect
- Bottom right: UCD Student Centre, Dublin, by Fitzgerald Kavanagh and Partners

## Disclaimer

The Center for Excellence in Universal Design (CEUD) at the National Disability Authority (NDA) working in partnership with the Royal Institute of the Architects of Ireland (RIAI) contracted the School of Architecture at the University of Limerick, and the IDeA Center at the University at Buffalo - State University of New York, Buffalo to conduct this research. The views expressed in the report are those of the authors and do not necessarily reflect the views of the NDA or the RIAI.

# Executive Summary

## Introduction

Universal Design is a process of design to make environments accessible, understandable and usable, leading to improved human performance, health and wellness and social participation. The ultimate intention of Universal Design is to make “... life easier, healthier, and friendlier”<sup>1</sup>. In Ireland Universal Design has a statutory definition within the Disability Act 2005, relating to environments that can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability or disability<sup>2</sup>. Embedding this process within the education and Continuing Professional Development (CPD) of architectural professionals can cement their role as agents for creating a built environment that affords widespread social participation. In recognition of barriers to access and use of the built environment by persons of diverse abilities, the context of ageing populations across European countries, and an increased prevalence of instances of health conditions such as diabetes and obesity, the Universal Design approach can explicitly support these ever-growing segments of the population, while benefiting the whole population.

This summary presents recommendations for the development of new CPD in Universal Design for Architects and Architectural Technologists practising in Ireland. These recommendations are based upon the findings from two stages of research conducted between August 2015 and August 2016 which include:

- a review of existing literature and resources
- stakeholder engagement

## Project Outline

This research was a collaborative project between the Center for Inclusive Design and Environmental Access (IDeA Center) at the University at Buffalo—State University of New York and the School of Architecture at the University of Limerick. It was commissioned by the Centre for Excellence in Universal Design (CEUD) at the National

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<sup>1</sup> Steinfeld and Maisel, *Universal Design*, 29.

<sup>2</sup> CEUD, "What Is Universal Design," NDA, <http://universaldesign.ie/What-is-Universal-Design/>.

Disability Authority working in partnership with the Royal Institute of the Architects of Ireland (RIAI). The RIAI is the Registration and Support body for Architects in Ireland. The Centre for Excellence in Universal Design works across the built environment, products and services and technology to promote Universal Design in standards and education and professional development. It has a specific statutory remit to liaise with professional bodies, such as the RIAI to encourage education and training in Universal Design. The purpose of this research was to inform the development and delivery of Universal Design CPD for Architects and Architectural Technologists practising in the Republic of Ireland\*.

## **Review of Literature**

Over the course of a year, the research team conducted a comprehensive review of available literature and engaged in extensive interactive exercises with Architects, Architectural Technologists, clients, architectural educators, and other Universal Design stakeholders. The review of the literature examined the following areas of knowledge:

- Drivers for implementing Universal Design in the built environment
- Legislative, policy, and cultural context for Universal Design CPD
- Universal Design in architectural practice
- Identifying and addressing gaps in Universal Design knowledge within the architectural profession
- Resources for Universal Design CPD across a range of countries including the Republic of Ireland

## **Stakeholder Engagement**

The stakeholder engagement process included four key strands:

- **Interviews with experts in Universal Design** which provided insight into the efficacy of educational delivery and content
- **Online survey** which targeted Architects, Architectural Technologists, clients, and architectural educators

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\* The research focused on structured CPD, a learning activity for which the learning outcomes are identified in advance.

- **Workshops** attended by Architects, Architectural Technologists, clients, architectural educators, and other Universal Design stakeholders
- **Prototype Universal Design CPD** courses with Architects and Architectural Technologists

## Findings

All five strands of research informed the development of the following findings and recommendations categorised according to research aims of the project:

### 1. Inherence of Universal Design knowledge to current building design practice

- Architects and Architectural Technologists responding to the survey exhibited a good understanding of Universal Design. While responses from the limited sample cannot be generalised to the entire population of Architects and Architectural Technologists practising in Ireland, it suggests a general interest and capability to learn about the topic amongst the profession.
- Specific requirements of previous design projects can be a common reason for having existing Universal Design knowledge for Architects and Architectural Technologists.
- There is a perceptible desire amongst Architects and Architectural Technologists for additional knowledge in Universal Design.

### 2. Current Universal Design education needs of Architects and Architectural Technologists practising in Ireland

- There is a demonstrated need for Architects and Architectural Technologists to have a better understanding of the needs of diverse populations.
- Architects and Architectural Technologists expressed a desire for exemplar projects to demonstrate Universal Design implementation.
- New CPD and movements in third level education should focus on moving the profession away from a building-centric paradigm to a person-centric paradigm. One way to start the transition is to explore the creative possibilities that can emerge from the technical guidance that already exists.

### 3. Current experience of clients in relation to Universal Design practice



- Clients who responded to the survey and who engaged in the workshops had a good understanding of Universal Design.
- Architects and Architectural Technologists were the most significant influential source of information on Universal Design for client survey respondents.
- Client respondents perceived Architects and Architectural Technologists to need a better understanding of the needs of diverse populations.
- Client respondents and participants perceived accessibility and application of Universal Design to building elements and circulation as important for Architects and Architectural Technologists to understand.

#### **4. Universal Design themes and topics of most interest to Architects and Architectural Technologists practising in Ireland**

- Architectural practitioners expressed an appetite for a clear and practical way of having the user perspective communicated.
- Architectural practitioners expressed a desire for methods and strategies for communicating the benefits of Universal Design to clients and colleagues.
- Architectural practitioners expressed a desire for a clear and digestible format which unambiguously showed how to apply Universal Design to building types and elements.

#### **5. The extent to which existing CPD for Architects and Architectural Technologists practising in Ireland addresses Universal Design topics**

- “Unstructured” Universal Design CPD resources are widely available in the form of web sites, web repositories, on-line videos, publications, anthologies, textbooks, technical and non-technical guidance and research reports. The Centre for Excellence in Universal Design provides a large amount of structured and unstructured CPD opportunities, including the organisation of an annual lecture in conjunction with the RIAI and its Universal Design Taskforce, linked to the RIAI Universal Design Award.
- English-language resources from many of the countries included in this research project are readily available to Irish practitioners.

- Universal Design CPD events are and have been available in Ireland, often based around visiting experts and the launch of Universal Design publications, but also including conferences and one-off events aimed at architectural practitioners.
- Accessibility is the focus of the majority of courses classified under the category of Universal Design, although many events and courses found in this research did include an overview of the Universal design approach.

## **6. Lessons learned following a review of International approaches to Universal Design CPD**

- There is a substantial body of literature and resources that can be used as a basis for developing Universal Design CPD events or courses.
- Practitioners expressing their own experience are a key component of many UD CPD events and courses aimed at architectural professionals.
- Courses can exist in isolation or can be stand-alone modules that link together into a comprehensive course. This is an approach used by both the University at Buffalo (USA) and at the University of Aalborg (Denmark).
- Course or module descriptions are often not clear and comprehensive.
- A number of courses have considered the relationship of Universal Design to subjects such as sustainability and wider human rights.
- The cost benefits or the advantages that can be offset against any additional cost of a Universal Design approach were addressed in a number of courses, as were strategies for communicating the benefits of Universal Design to clients or client bodies.
- Shorter courses were often focused on particular Universal Design topics, or topics given a Universal Design treatment.
- Where Accreditation is attached to UD CPD opportunities, it is usually in targeted competencies such as access auditing.

## **7. Motivations or deterrents for Architects and Architectural Technologists practising in Ireland to access Universal Design CPD**

- Client requirement is a primary motivator for Architects and Architectural Technologists to undertake CPD in Universal Design.

- Changes in legislation, requirements linked to procurement and requirements linked to professional association are significant motivating factors for Architects and Architectural Technologists to undertake CPD in Universal Design.
- Positive perceptions of Universal Design within third level education and practice settings can encourage uptake of Universal Design amongst Architects and Architectural Technologists.
- Designers prefer to receive information in short, concise modules that are easy to find and access.
- Too high a cost will deter Architects and Architectural Technologists from taking CPD in Universal Design.

## **8. Most effective means to deliver Universal Design CPD to Architects and Architectural Technologists practising in Ireland**

- In-person attendance is preferred over distance education.
- Additional course content can be provided in alternative formats before and after in-person instruction.
- Experiential learning opportunities are desirable.
- Availability to practitioners in remote areas is important.
- Lunchtime or full day sessions preferred over multiple half days. Longer courses were often associated and motivated by specific qualifications, such as in access auditing, or with desirable qualifications, such as postgraduate diplomas or master's degrees.
- A mixture of delivery approaches could be more effective in holding the attention of participants in CPD.
- The quality of presentation material emerged as extremely important to consider.
- Participants valued clear, focused delivery with a clearly defined set of outcomes.

## **Recommendations**

The following are the recommendations for the development and delivery of a programme of CPD in Universal Design for Architects and Architectural Technologists practising in Ireland.

### **CPD Content**



- High quality imagery and examples should be used in course content regardless of the course type. This is important in reinforcing the connection between Universal Design and good design.
- Informing Architects and Architectural Technologists of the needs of specific user groups should be pursued in new Universal Design CPD. This content does not lend itself to a standalone course due to the risk of inadvertently encouraging a silo mentality. It is useful to include in reference materials given before and/or after the course.
- The perspectives of highly diverse users should be addressed in CPD course materials in a manner that demonstrates the importance of designing for the broadest population possible.
- Communicating the benefits of Universal Design to clients can encourage an increase in the number of clients requesting their design consultants to have Universal Design competency. Likewise, Architects and Architectural Technologists need to learn how to best communicate the benefits of Universal Design to clients to demonstrate their competencies in this field and address the clients' needs.

## **CPD Delivery**

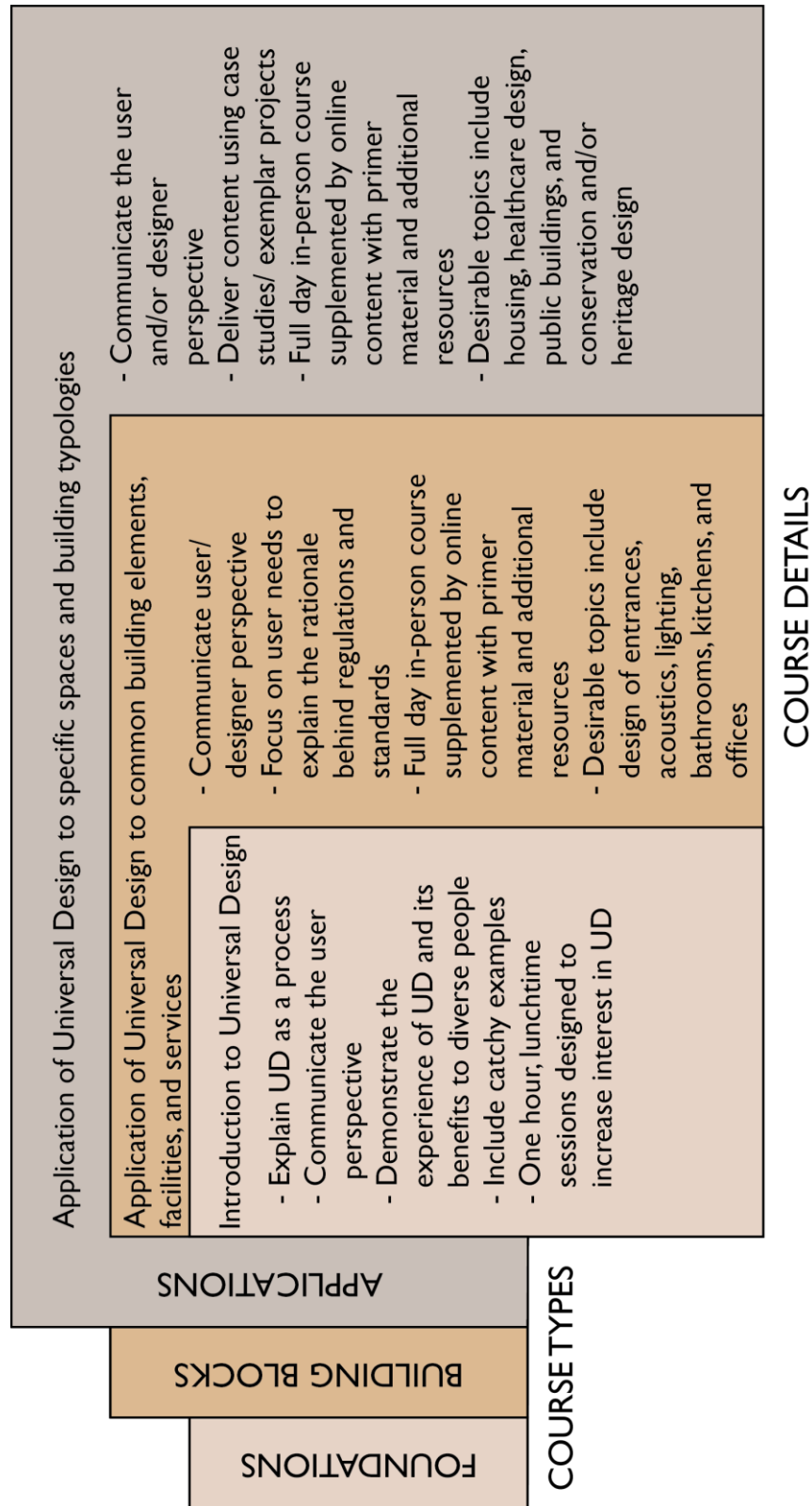
- This research project has shown that a hybrid delivery model combining information delivered both online and in-person is a desirable approach to Universal Design CPD, given the preference for in-person sessions and taking into consideration the relative high cost of such instruction. Primer material such as the definition of Universal Design and information detailing the needs of different user groups might be provided online in advance of in-person sessions. Upon completion of the in-person session, additional resources could then be made available online to course attendees including case study materials, design guides, and additional resource materials for future independent research or for use in professional work.
- In-person Universal Design CPD sessions should include experiential opportunities that allow course attendees to gain a first-person perspective of the application of Universal Design (or lack thereof). This can be accomplished using a variety of strategies including building tours, direct user testimony, designer testimony, videos, and case study exercises. Information on exemplars or problematic designs can be gathered in many ways. Participants suggested that

social media and crowdsourcing (e.g. strategy similar to #accessfail, and the Norwegian initiative [www.tenkuniverselt.no](http://www.tenkuniverselt.no) currently available could be effective. Tenkuniverselt invites anyone to upload photographs to a website of Universal Design examples they encounter in their daily lives). These methods use the knowledge and experience inherent in the field and profession to build a database for further exploration.

- This research project has shown that architects and architectural technologists have a preference for one-hour lunchtime sessions or full-day sessions. Given the limited interaction time of a one-hour lunchtime session, they should primarily focus on being made available to organisations and practices that are interested in expanding interest in Universal Design amongst their staff. This type of session is ideal for foundational information about Universal Design or delivery of a case study.
- New Universal Design CPD requiring attendance in a central location should consider the needs of attendees who must travel including time, travel distance, course duration, course cost, and ease of access to course location (e.g. public transportation, parking, etc.).

## **Possible Ways Forward**

Part of the challenge is to consider broad strategies for integrating Universal Design as indispensable building blocks of all continuing education experience for Architects and Architectural Technologists. There is also a need for new CPD that addresses Universal Design at different levels. Three levels are suggested for further exploration: foundations, building blocks, and application.



**Figure 1. Diagram outlining recommendations for Universal Design CPD courses**

- **Foundations modules/courses** could introduce Universal Design by focusing on content related to the experience and benefits of Universal Design to all types of people. It could concentrate on the “who” of user-focused design and introduce design concepts based on achieving greater social participation, as well as key drivers in policy, legislation and standards. Similarly, these modules/courses could discuss strategies of how to introduce Universal Design at all work stages of a project, from inception all the way through to post-construction. A selection of example course titles are as follows:
  - A. “Designing with a user perspective”
  - B. “Universal Design brings more value than cost”
  - C. “Applying Universal Design in practice”
- **Building block modules/courses** could deliver content focused on the application of Universal Design to common building elements (e.g. entries, acoustics, lighting, etc.) while avoiding an overly prescriptive or legislation focused approach. These would need more time to address issues and could be from a half day to a full day in duration, utilising a mixture of approaches including direct presentations, design workshops, and material that creates empathy with user perspectives. Sample courses could include:
  - A. “Wayfinding in Public Buildings”
  - B. “Universal Design of Lighting and Acoustics”
  - C. “Universal Design of Entrances”
- **Applications modules/courses** could be developed to explore the application of Universal Design to specific building/space typologies. This can be accomplished using tools such as case studies and could focus on delivering the perspective of users and designers. Direct testimony from designers and users would be suitable for this course/module approach. Housing (e.g. lifetime housing) may be a good typology to consider for initial exploration. Sample titles might include:
  - A. “A Universal Design Approach to Sports Facilities”
  - B. “A Universal Design Approach to Housing”
  - C. “A Universal Design Approach to Historic Buildings”
  - D. “A Universal Design Approach to Healthcare Facilities”

Regardless of the course level (foundations, building block, or application), communicating user perspectives is recommended to be part of course content. User perspective could be incorporated in a number of different ways including through guided tours, direct testimony, first person narrative, site visits, crowdsourcing testimony, and combining scenarios with a range of personas. User perspectives can be delivered in person, via media, or even through written documentation (e.g. first person narratives).

## **Conclusion**

There are significant drivers for Universal Design to become integral to the practice of architecture in Ireland. These include the diversity of ability and disability in the population generally, an increasingly ageing population, and the growing prevalence of health conditions such as diabetes and obesity. They also include the government commitment to promoting universal design in practice, supported by the dedicated statutory Centre for Excellence in Universal Design (the CEUD) which continues to support research, education and standards. Alongside this, the registration and support body for Architects in Ireland, the RIAI, has an established track record of investing in Universal Design CPD and of providing supports for members through the Universal Design Task Force. Collaboration between the Centre and the RIAI has led notably to the Universal Design Award as part the annual RIAI Irish Architecture Awards.

Collaboration between the RIAI, CEUD and other bodies from both Ireland and abroad has given a platform to further the thinking and awareness of Universal Design, and has included access to learning with diverse experts with extensive knowledge resources in Universal Design, design and ergonomics.

There are however barriers to be addressed in integrating Universal Design as part of mainstream CPD. The literature review demonstrates a historically limited inclusion of Universal Design content in third level education, which places an onus on Universal Design CPD to include an introduction to Universal Design, as part of the overall framework proposed. There are current initiatives in Ireland to address Universal Design at undergraduate level including the CEUD's Universal Design Grand Challenge, run annually for final year students at 3rd level. Equally, this report presents key findings and recommendations with the understanding that the development process for new Universal Design CPD will require resources for implementation and the time involved to develop and deliver CPD to practising Architects and Architect Technologists in the

built environment sector. As a result, the implementation of these recommendations will need to be prioritised and implemented in phases.

This report provides a framework to guide the development and delivery of new CPD in Universal Design informed by available literature, the perceptions and preferences of Architects and Architectural Technologists practising in Ireland, clients, educators, by a number of Universal Design stakeholders, and by the authors' expertise. Through the prototype CPD, informed recommendations on content and delivery have been made, including the value of the interaction with CPD participants as a means to strengthen the quality and attractiveness of CPD offerings. While these prototypes tested some findings related to content and delivery, additional feedback, and perhaps additional pilot testing, is needed to ensure the content included in the CPD is effective and attractive to practising professionals. This investigation could include research into different forms of building documentation, methods of capturing user experience, and new and/or advanced technologies to ensure content is produced and delivered at the highest quality.

One of the most important findings of the research is a demonstrated need for new CPD in Universal Design that moves beyond a focus on interpreting regulation and accessibility. The participants in this research communicated that CPD in Universal Design has a broader value than just helping professionals meet regulatory requirements. It has the potential to provide information and resources that increase “design agency”, or intervening in wider societal structures in the name of benefitting others, and it can empower Architects and Architectural Technologists to creatively approach designing for an increasingly diverse population. Further, a major recommendation from this research is the incorporation of user perspective – from the diverse range of people who live in and visit buildings and facilities – into Universal Design CPD content.

The research findings and corresponding recommendations highlight that response rates to the various segments of stakeholder engagement all indicate a strong level of interest in Universal Design amongst Architects and Architectural Technologists, working and practising in Ireland, as well as their clients. This interest only further highlights the need for new, effective CPD in Universal Design.