

Is Universal Design in Education Any of my Business? – Rough Transcription from proceedings in the Main Hall**

**Unfortunately this service was not available for the breakout sessions outside of the blue room

Croke Park Conference Centre

Contents

Is Universal Design in Education Any of my Business? – Rough Transcription from proceedings in the Main Hall**	1
12th March 2013	2
Opening Session – Welcome, Mary Quirke, Patrick Matthews	3
Keynote: Dr Joan McGuire	7
Blue Room Morning Session: Ron Hamilton, Dr. Marion Palmer, Nicola Fox Hamilton	13
Plenary Session: Dr. Brian Butler, Dr. Marian McCarthy	19
Blue Room Afternoon Session 1: Declan Reilly (in place of Declan Treanor).....	23
Blue Room Afternoon Session 2: Karl O’Keeffe, Dr. John Gilligan	27
Panel Discussion: Dr. Ger Craddock, Prof. Alex Milton, Dr. Marian McCarthy, Kjetil Knarlag	32
13th March 2013	40
Opening	40
Keynote: Prof. Martin Bean.....	41
Plenary: Mark Magennis, Esther Murphy, Dr. Michael Shevlin	49
Panel Discussion: Andrew Blair, Leslee O’Loughlin, Niall O’Hanlon, Dr. Mary-Liz Trant	55

12th March 2013

Opening Session – Welcome, Mary Quirke, Patrick Matthews

Brendan Goldsmith: Good morning everyone. My name is Brendan Goldsmith, chair of AHEAD. I'm the MC for today, welcome to our meeting. I'm conscious that we have a wide ranging group of people. I have met some of you before. We are anxious that there will be good interaction between people. When you get a chance, be forward in introducing yourself to other people. Make sure you speak to the people behind you and say who you are.

Before we begin, some housekeeping notices for your attention. They will be on the screen.

Welcome to Croke Park Conference centre. In case of emergency, exit is at back of the room clearly marked. There will be safety announcement made in the unlikely event of emergency, you do not use the lifts.

In this conference centre, very anxious that we stick to greenness, nothing to do with St. Patrick's Day, please respect the area, e.g. putting waste in appropriate bins.

Please ensure mobile phones are off, also there is Wi-Fi in the centre, no password required.

The first thing I should say is to offer you apology from Ann Heelan, she is not well, I spoke to her yesterday, she really meant to be here, but she has no voice. Ann's deputy, Mary Quirke will stand in for her.

My function is to act as MC and ensure speakers keep to time.

The other function I have apart from introducing our speakers is to say a very special welcome to our many friends from Universell, Norway. I'd like to say Cead Mile Failte to our friends from Scandinavia.

Our first speaker is Mary Quirke. She will say a little about the conference. Then I will introduce Patrick Matthews.

Mary Quirke: Good morning, a warm welcome to you all. On behalf of AHEAD, can I welcome you from Norway, the UK, Sweden, Holland, Belgium, also our LINK colleagues and our Irish colleagues.

I'm assistant director of AHEAD, I'm representing Ann Heelan. She is very disappointed that she can't be here today. I wish her a speedy recovery. When thinking about today, I reflected on what is going on. The title of this conference is "Is Universal Design in Education Any of My Business?" It's about what education looks like when it's the best it can be. For potential students, it's about accessing a course,

engaging in all aspects of learning, college life, work placements, internships, and then graduating. For students, it's about knowing they can be the best they can be whether they have a disability or not.

This year, AHEAD is celebrating its 25th year. We will have a publication of our stories for everyone tomorrow. The stories are stories of 25 graduates from the last 25 years, since 1988. There are stories from artists, playwrights, and teachers and most importantly, stories about people living their dream because of their education.

I would like to believe things are changing. We all share a real passion for learning and an appetite for success. A passion for a campus where everyone is welcome, where students who are deaf can become scientists, where all students can achieve their dreams. We can learn from past stories.

Is universal design any of your business or mine? I think it is.

Now I would like to introduce you to Patrick Matthews, Trinity College.

Patrick Matthews: Good morning everyone, I want to thank Mary for her introduction. I'm honoured to be asked to come here today, asked to relay my personal experience in relation to my education. I've had a lot of experience over the years, will select some highlights. My first experience of study was in Dublin Institute of Technology in Bolton St. I was training to be a draughtsman, specialising in fire protection, was trying to get work experience and was studying at the same time. I found it very difficult, I couldn't understand what was going on in the classroom, couldn't ask questions, and couldn't understand what the lecturers were saying. At that time, there were no qualified interpreters like we have here today.

I would try to get notes from my fellow students, had to figure out who was best note taker. Some students were very good and they would write things down for me in class. Things have changed since then.

I worked as draughtsman for a few years, and then started to teach ISL (Irish Sign Language). In 1985, some deaf people got together with me and organised a training course in NUI, Maynooth.

At that time, there was controversy about sign language - ISL is totally separate from BSL. It was controversial at the time. A course in Bristol University - we got funding to go there. There were deaf students from all over Europe. We communicated through international sign language. There was no problem to access. Everyone on the course was able to sign, we didn't need interpreters and if we did, it was for the hearing people. It was one of the best experiences I ever had. I learned so much during that

short period of time. Also, they were able to offer you assessment through English or sign language, marked in the same way. I was both teacher and learner on that course. When that group of students qualified, in 2001 Centre for Deaf Studies in Trinity College was set up. We wanted the same as they had in Bristol, so that everything was accessible through sign.

We could then train our own interpreters here and have more accessibility. Remember at that time, there was no access through technology. Even if there was technology, it was always through English, some deaf people can be fine with that, but it wasn't always accessible. Through linguistics of ISL, a lot more research has happened since then.

I'm sure you've heard of Alexander Graham Bell, he invented the phone. His wife was hard of hearing, he started to develop technology so his wife could communicate, as it turned out telephone had different purpose. That was the first of universal design. It turned out his wife couldn't use the telephone after all, she couldn't hear on the line.

When you think of accessibility e.g. the doorbell, all sound based. Really difficult for deaf people, you're ringing the bell, but you can't hear it. When it's visual, it's accessible for everyone.

Centre for Deaf Studies - technology has improved in that area as well. Years ago, when recording, we would have to bring cameras, recorders, now we don't need all that; we can email assignments which is so much more accessible. Amazing now what we can do with video footage. Also in the Centre for Deaf Studies, deaf students have been able to go abroad to study on exchange programmes. Also there is video conferencing for some of the lectures. I'm hoping technology improves texts very visual. It's difficult for interpreters to be travelling to different areas e.g. for deaf people to go to the doctor.

There are situations when the interpreter doesn't personally need to be there. Maybe we will be able to press a button and the interpreter will appear. That's something to work on.

So that's a personal synopsis.

Thank you.

Brendan Goldsmith: Thank you to Mary Quirke and Patrick Matthews for getting us to a great start. We have a couple of minutes before our next speaker, to give Joan a chance to get organised. Why don't you introduce yourself to the people beside you?

Okay, can I bring the meeting back to order? I'm delighted to see my instruction has been taken up, please keep that up during the intervals. We are back to one of our

main speakers, setting the scene for universal design for instruction, Dr Joan McGuire. She is an acknowledged international expert, with more than 80 journals. She has a wonderful knack of getting funding, almost €3 million to date. She has received numerous awards. It's a great pleasure to ask her to speak and she will be happy to take questions at the end.

Keynote: Dr Joan McGuire

Dr Joan McGuire: Good morning. Thank you, Brendan. I want to thank AHEAD for the opportunity to come here and speak about ways to include diverse learners in college class. To do this on the week of St. Patrick's Day, it doesn't get any better. Thank you to Ann Heelan also. This morning I will take 30 minutes of information to share with you. If there is time at the end for questions, I will take them. I am around today and tomorrow for conversations.

The landscape for education is changing, from globalisation and technology that morphs at the speed of light. The emphasis on learning is constant. Pedagogy is important.

I'm a professor and a disability person, and I hope that comes through this morning.

I will spend some time on content and our background on universal design for instruction, also a definition of universal design for instruction and guidelines which put universal design for instruction into practice and then some examples from different institutions. We are talking about change, it's important to realise that change brings challenge.

Whether in Ireland or USA or other countries, we represent all students who enrol, also older people who wish to keep up with employment trends. In USA we see many veterans with post-traumatic stress disorder enrolling. Students with disabilities are increasing population. Back in 1999 our Government initiated a grant, a competition for help with faculty work with diverse students. We have a history of students with disabilities, we decided to go for it and we have been funded to a substantial level. Our audience is diverse. In USA we have over 4,200 colleges, diverse in terms of all disciplines, and this brings challenge in terms of access, also most facilities have little training and diversity in technology and skill level in using technology. Our focus has been on non-visual disability like dyslexia, dyspraxia. Any student can learn in class including students with disabilities. How did we get from universal design to universal design for instruction? We have a background in education and we are sensitive to access and inclusion as well as some barriers to that. Consider these graphics [see overhead].

There is a common theme which is the need for access. As we started thinking about possibilities, the notion of universal design resonated with us. For background information, the North Carolina state university started working on this in the late 1960s with Ronald Mace who was wheelchair user. He came up with notion that design should take into account many different aspects. Retro fitting accommodations so people with disabilities compromise the aesthetic value of the building. Why not anticipate in advance the range of needs of all users and build them into the design?

Mace and his colleagues worked on the technical assistance to help in this process. They have 7 guidelines that architects can use for universal access to a building. As we entered competition in 1999, it was intriguing to us. Could we take the idea of access in the built environment and transfer it to the instruction environment? Could it anticipate diversity and build in so that our environment would be inclusive?

We began with definition (reading from overhead).

Key terms, pro-terms: People with disabilities benefit, but we also know that we all benefit from universal design benefits. Universal design is a frame of reference that can be used in instructional design process. I don't want to reduce it to a check list but it may be helpful. There is continued research on the notion of universal design. It's not a quick fix.

I assure you for universal design for instruction that I have all the time. It can be a mixed blessing. As a professor I'm thinking access and inclusion. Am I thinking of diverse student in my class? On the other hand I have to think of standard, I'm a teacher trainer, is the environment too inclusive, too open so the compromise is coming in standard? That is a question that comes up. We know that no environment will be totally inclusive environment for interpreters and the most inclusive classroom might not allow for that.

We have met frontiers, but we know it's not technology. I will address what principles for universal design are. The first principle of universal design is equipment use. I design it in a way that it can be used by all learners. The graphic is a computer. Flexibility in use is the second principle. I'm thinking of accommodating a range. An insert is notes that have been downloaded.

Third principle is simple and intuitive, clear, straightforward. When I design my instruction, am I presenting information that the student can understand?

Principle four is perceptible information regardless of their sensory abilities. I have included definitions but in conference these will be referenced so you can look at them.

Principle five, what would we do without the 'undo' button? Students have different learning paces, can we build in opportunities?

Principle six is low physical effort. Can I design so that it minimises unnecessary movement?

Principle seven is size and space for approach and use. We found something unique about teaching. Uniqueness is the social and interactive component. We added community of learners which is the fact that instruction should be designed so that it promotes interaction between student and facility. .

So we have principles for universal design. Now we put this in practice.

Assumptions and Guidelines:

As a professor I am beginning my design process, anticipating there will be a wide range of pre-existing knowledge among my students, a wide range of experiences, motivation. There won't always be a positive outcome for everyone.

This kind of teaching takes time. You start to think in this manner, once you get into it, it becomes consuming, it can be very time consuming. Starting small makes sense, in our work with faculty, we begin with the process of having them identify areas of the course they are not happy with, and often it's in the assessment area. If we went round this room, those of you who are instructors or faculty, we use inclusive strategies already. We may not talk about them in terms of universal design. Good teachers already use these strategies.

We know learning doesn't happen in a linear process. It's useful to think of stages. When we work with faculty, three stages - the planning, delivery, assessment stages. Knowing that these phases are interactive and informing the other. The technology continuum [see overhead]. We have low tech strategies, grading rubrics is an example of low tech technique. If dealing with traditional classroom setting, there are strategies that can be incorporated without use of technology.

Adobe Acrobat - PDF files with written and spoken notes obviously a useful tool.

In courses that involve lab work e.g. physical therapy, capturing a screen shot and posting it on course website allows students to go back as many times as necessary to review steps in that process.

How many are familiar with universal design syllabi? We find it emerging through universal design for instruction. In some colleges, in programmes and in a few schools that I'm aware of, this notion of having a template of a syllabus that every course and professor uses is catching on. This fits nicely with information.

Another component of universal design syllabus, outcomes for the course, dates for lectures, assignments, projected dates for tests, what policy is about, quizzes in the class. We have reviewed hundreds of syllabi; you might be shocked at the number which don't include a lot of this information. I see some heads nodding. Maybe you're seeing the same thing.

It's useful for students to have information on where to access resources.

Rubrics are a set of criteria that are used to evaluate work, it could be written work as in a paper, projects, but giving examples from the get go of what constitutes different

qualities in terms of that grading process puts everyone on the same page. If a student is striving for an A, the highest grade, they know from the get go the criteria they will be evaluated on. They can see a paper that would achieve an A.

How to create a sense of community ... [see overhead]

This course reflects the Nine Principles... [see overhead]

Behavioural expectations are set at the beginning of the course. In community of learners, diversity of opinion is respected.... [see overhead]

What purpose would this serve? In our university, there are several very highly regarded and effective professors who no longer allow cell phones in the classroom.

There is research about processing demands when using the Internet. When doing an online course, keeping an awareness of the amount of clicking or scrolling that's required is very helpful. It's easy to get lost. It's easy for students to get on a pathway and lose the concept.

Providing resources for students that can help them fill in the gaps. If after the first exam/test, it is clear the student is having difficulty because of knowledge gaps, if I include supplementary material on my syllabus, this will help the student.

In terms of planning as more opportunities exist, choose textbooks that are digitally available.

Delivering Instruction:

First point is self-evident - posting notes prior to class.

Using the pause procedure- in a classroom of diverse learners, there are different processing speeds. If I'm an audio learner I may have no problem, but if I'm challenged in that area, it may take me longer to retrieve information. As I'm delivering instruction, I want to be aware of that, especially when asking questions.

This would also be an instructional method that to me would be useful for international students, who may not be native language speakers.

Doing different things during lecture e.g. breaking into discussion groups, encourage group sharing.

I'm continuing with examples from delivering instruction e.g. David Miller's psychology course, this professor uses multi-media to communicate his information. He has created a community of learners.

Another idea in terms of delivering instruction is the one minute paper. At end of lecture, every student has an index card – they have to state what the most difficult concept presented today was and identify the one idea in class that they think was the most important. Then tell me which concept covered today they would feel comfortable with to explain to another student.

Assessing learning:

In some cases multiple choice tests and short essay tests may be the optimal way to measure learning. That said if thinking of inclusion, there may be other ways to measure learning, e.g. creating a Wiki page on topics.

Group project setting in advance is critical, so everyone's role is clearly defined.

Example of inclusive assessment strategy from a professor of French - very disappointed at results of first test, she designed an alternative, the students could write an article in French for pop culture magazine on a topic she approved of, or they could demonstrate an interview with the head of sports of the country talking about the soccer team.

More examples: Summarise in middle of semester, online discussions, and in-class exercises for extra points. Taking a long essay, dividing into sections, asking students to turn it in during semester, where they get feedback.

A professor in accounting course found it is well worth his time to spend 25 minutes in first class of semester teaching students to make online cards. At beginning of semester, she announces that she uses 10/15 min quizzes e.g. summarise important topic from last week's class. She collects them, doesn't grade them, but keeps track of who has handed them in. At the end of the semester, she checks them and students get extra marks.

Getting notion of universal design into your DNA so it's part of the way we think, but we have to be prepared for the challenges.

In classrooms, instructional strategies where they are used - is there a difference in grade points? Slowly, we are seeing research where universal design for instruction has been implemented; we have seen there is a difference, both in grade points and retention.

In classrooms where inclusion is the norm, can we see a reduction in the number of accommodations being requested?

Resource:

Universal design for instruction online elibrary- If you go to this website [see overhead] you will see e-Tools that can be incorporated into teaching to make it more inclusive. Ideas of how it can be used in class, also limitations. We also have an instructor's guide which will take you through step by step.

I think I've talked as long as I'm supposed to. I'll be around today and tomorrow, look forward to on-going dialogue. Thank you very sincerely for your attention.

Brendan Goldsmith: Thank you, Joan, for a fine start to our conference. We're not going to have time for questions now. We'll have a coffee break now. We are back at 12.05 for breakout sessions, 4 - one in this room, 3 on 6th floor which are colour coded; your badge should tell you which one you are going to. They will be hosted by our Link colleagues.

Blue Room Morning Session: Ron Hamilton, Dr. Marion Palmer, Nicola Fox Hamilton

Barbara Waters: I'm from the UK and it's my job to host this morning's session. I would like to introduce the speakers, Marion Palmer, Ron Hamilton and Nicola Fox Hamilton. The title is Designing Teaching and Learning Materials. Ron is lecturer and Doctor. Marion Palmer is chairman of institution and Nicola is cyber psychologist.

Ron Hamilton: Hello, I'm a graphic designer. I will talk about designing teaching learning materials from default universal design. The subject is emerging picture of universal design, we have emerging practitioners in teaching and learning and we are looking at strategies and design expertise of universal design. My co-presenters may talk about their roles.

Dr. Marion Palmer: I'm the user, my area is teaching learning. You will see that I'm the user and I'm trying to use universal design.

Ron Hamilton: We have a skilled community. The starting point is guiding principle by Dieter Rams, who was a designer in the 1940s. He was the senior designer in Braun and he designed these principles. We are looking at meeting the skills in practice and bringing design experience with that. The transfer of design principles are being passed on hopefully. I suggest you Google him and his products and you will see that Apple products are similar. So, just a couple of things. It is interesting we are talking about design. Tenth principle [see overhead].

There are three things I like, it concentrates attention and promotes simplicity. You notice it's too easy to add to a design, it adds clutter.

It's more of a challenge to pare it down. I know when I'm teaching my students that this is something which takes a long time to take on board, trying to get to essential message takes time. You see this is carried in workshops. This is a guiding principle.

Default to universal design. First the Collins one is fail to fulfil or perform an obligation. [see overhead]. In the absence of choice when people are working day to day, they use the software package on their computer. You end up with choices already made for type size and style, which is great if you are not a designer. When you have community, how do you differentiate, you end up with a body of documents that look the same. It's not easy to distinguish. There is a failure by absence of choice. It's important to make it as accessible as possible to the greatest number of people. Type, colour and arrangement, there is a failure to fulfil that obligation.

[see overhead]

So, the obligation for us is about universal design, and quality of engagement with material, it can be a passive role, but we advocate a more active involvement in the content, to build choices that will involve decision making. To give you some background, for us, the institution review in 2010 rolled it out.

In May 2011 we did post design workshop and this was a success. We followed it up in 2011 and building on that in 2012, we designed working materials, we have first universal design in one project module. That should be June 2013 [see overhead]. We have put them all together and let people see what we have done. We will make a presentation in teaching and learning workshop in June.

So, in that institution review the ... [see overhead]

That is our starting point. We looked at different material which provided us with opportunity, first was the exam papers, it never ceases to surprise me how the simple changes make all the difference, the shift they make are the most exciting.

To move from Serif to Sans Serif makes such a difference. The quality is moving on. In terms of what you could pre select in 2011 to now... in terms of white space, not feel a need to fill every space, to use white space as a design element. We had a newsletter which we updated. We had a teaching toolkit to represent good design. The module outline ... differentiates the user and the maker. We almost design it for ourselves and then put ourselves in the shoes of the user.

The community of practitioners ... we have teaching and learning committee in the centre. The whole process fails if you have to continually bring in the designer. Eventually, they become guidelines and it only comes into practice if it's used by the non-designers.

We are looking at moving into the third space, the end user has come in and will become more active as we move forward. Design making- in this instance, it is taking the principle and then transferring it to your own process for use. Marion is very skilled and has attended the workshops. You see from the way the relationship is when she gets up to talk about it.

To move community practitioners from a default position to bring in design process and looking at needs of users and what I can do to accommodate them requires a more active need.

We have simple goals for first stages and fulfilling that goal, in that facilitation of choice, using design for abundance of choice. The important thing is it is practice based, and then the designer can see what is required. You don't need to go to college for 4 years

to become a designer, the designer can be removed from the process and that moves forward to generate more material.

We have taken 3 of the 7 principles for universal design [see overhead]. They are what guide us at the moment. In terms of the transition, we have two stages since 2010, but it has gained momentum in the last 18 months. In establishing this culture of universal design and promoting it as an attitude through practice ... these two stages of implementation are not just in terms of design as it appears, it's also the attitude and the possibilities that lie in the content for your own needs and those of the users and to locate these possibilities. This is a maturing process. It's taking yourself out of the process; you are just the agent to make the right connection. You don't need to be a practice designer to do this. You go over it again and again and you will see where you are repeating yourself and you are actually designing when you do this. You work from embellished situation and work down, what is the easiest way to get the message across? If you are not too worried about the content, it tends to design itself.

I will get Marion to talk to you about this and accommodating the end user.

Dr. Marion Palmer: To reference Joan McGuire, this is the design syllabus. All the information for student is on the right hand side, the plain text. The left hand side blue column has the information for student, time, what the topics are. I went through that thinking through my module and what was the essential information. The sheet has the practical information on the left hand side. I found it hard to go from left hand side to right hand side; it's made what I'm trying to get the student to do much clearer. It's just to show you the shift the design has made and in my case with the student in the module.

Ron Hamilton: Now the difference between stage 1 and 2. We are working with notion of legitimate peripheral participation. This is the benchmark if this is successful or not, when people take these principles and visually present. We have not run this out as a formal process. We don't have time to dedicate people to this fulltime.

I will get Nicola to talk to you about design workshops.

Nicola Fox Hamilton: We ran some workshops, first was the response to needs of academics in the college. Most were excellent content generators, but no design training, their posters weren't very strong. We had 3 half day workshops, took them through design basics, and taught them some easy tools. Then we ran a series of teaching and learning materials for people with learning disabilities. Fundamental elements of graphic design, first thing is Grid - structure and alignment - you know when you get blank page syndrome - this creates a structure on the page to create a strong visual that people can access more easily. Hierarchy is very important, it's the story

you want to tell, what you want people to start/finish with, what you want them to take away. You want to make sure that the most important things to them are the clearest.

White space and composition- not filling your whole page up, using white space to break up the page.

Typography - this is so important, simplicity, not over-using fonts. It was teaching people to use fonts in the one family, which gives options to create hierarchy.

Image can be the most engaging thing. A lot of the time, people don't know what works, colour may not be right. Need to learn to use image in a way that's engaging.

Create a sense of harmony, using colour, typography, image, so you have a strong piece of design to communicate.

Use of thumbnails - these are visual shorthand, notation of ideas, fast, physical way of working, illustrates composition. From thumbnails, you can see white space, layout, and the hierarchy of the story you are going to tell.

[see overhead]

Simple grid to work with is a 3 column, 3 row grid. On right hand side thumbnail has been created. Shorthand for this is very simple. You don't have to be able to draw a straight line. Paragraphs delineate the edge of them. Headlines - you can create something dense and dark e.g. bold. Images denoted by using a square. You can show with this how you tell your story.

6 Thumbnails [see overhead] - 6 completely different ways of laying out information. You create them, then look and see how they are working, how eye is caught by something, e.g. the one on the top left, headline leads you to the image, then to the paragraph with text. On left you have empty space, text crammed together. So you can see quickly what layout might work for you. You take what works and then try out examples.

Next practical exercise is cut and paste, you choose thumbnail and create prototype. You can cut out images and texts from magazines. You can't choose your text, so not about the content but about structure and colour and how you can apply the thumbnail into something bigger. As you are cutting out and building, you are engaging with thumbnail and adjusting to see what works and what doesn't.

Cut & Paste examples:

[see overhead]

It's about creating and engaging quickly, using colour, type and images in an engaging way. You can see what works and what doesn't. You can cut out different letters from different places. It's easy to create engaging visuals.

We do this exercise with content that's meaningless, next stage of process is where you take the post you are trying to design.

Ron Hamilton: Stage 2: Case studies. Guidelines developed and tested in practice.

Cyclical process- reflection on and in practice. Now we are looking at stage 3.

Two versions of an exam paper [see overhead]. On left hand side Serif type face. San Serif more legible.

Circle intersects with organisation which is the square shape.

Conversation by email, Marion wanted to incorporate logo into her signature,

I suggested it should be below the signature with white space around it. A quick email and send it back, just simple things.

On left hand side is what the IADT teaching newsletter was. On right, we have what it looks like now. This is example of good design. We began to introduce images.

This is an email for teaching toolkit. I developed this and sent it back to the person. On this one, you can't see the information, but here you can see the workshop is at the top. You can see which workshop is on at the moment. It's just the way things are divided up, matching the needs of the content generator and bridge with the end user.

Dr. Marion Palmer: It has transformed the way I communicate with students, the way I construct the information. If anyone wants to look at it afterwards, I've brought last year's information - I'm much clearer now. Using the design process - we had expertise on hand. The focus of universal design has transformed my way of teaching. Our principles were at 6/7 in everyday practice.

Ron Hamilton: Thank you.

Barbara Waters: There was a lot to take in. We will take questions now.

From Floor: Heather Symmonds, LCC University. I'm concerned about babies in bath water and re-inventing the wheel.

There are lots of projects that have cost millions that would fit nicely into the framework. I'm thinking of the writing tag project 2005, also the work of Mat Ryan, also the in-curriculum project, also academic rigour John Wood Goldsmith.

Back to assessment which is the key.

Students being able to do their dissertation orally... writing can be your Achilles heel with dyslexia.

Dr. Marion Palmer: Thank you. In our art and design programme, I teach a psychology programme. We support that and we have had oral dissertations.

Barbara Waters: In the practice of non-art and design. Any questions? Thank you. That is an important point, Marion. How can you take one principle over the whole college? I hope you take the opportunity to talk to the team. The principles are one thing, but actually changing the culture is a tougher job.

Ron Hamilton: We have day jobs, and there is no separate unit. You have to have a starting point. For me the reward is the design. At a starting point with diverse communities, the small changes are the most significant at this stage.

Barbara Waters: Thank you. Please give a round of applause. We will move off and another speaker is here. Thank you.

Plenary Session: Dr. Brian Butler, Dr. Marian McCarthy

Brendan Goldsmith: Good morning. Back to order please. I'm delighted that we are keeping time. Before I introduce our next speakers, I want to give you some information. A number of people have been asking about presentations. They will be on line with full access.

Our next session is given the title 'What does multiple intelligences theory and practice ...' [see overhead]. We will hear from Dr Brian Butler, a blind man who entered University College Cork in 1992. He completed his higher education and now works for disability support service. He works with Dr Marian McCarthy. She is on secondment from University College, Cork. She is involved with teaching and learning centre, which provides cert for staff for pupil learning. We're delighted to have her here. She has many publications on teaching. I will hand over to them now.

Dr. Brian Butler: It gives me great pleasure to be here today. I and Marion will both speak. I will speak on universal design for learning and on multiple theories and UDL and my colleague Dr Marian McCarthy will take over and show how this works in classroom for pedagogy, to stitch universal design for instruction principle into their teaching.

Firstly, different approaches have been taken on application of universal design. I will look at approach for central design in Wakefield Mass, Dr Meyer and Rose, they have based three new principles and coined the term universal design for instruction and they are based on neuron-science. Every approach promotes variety in design and delivery. Their science is based on learning networks in the brain. There are 3 of them which are crucial, memory, problem solving and thinking. I will go through it quickly.

First recognition network is based at back of brain and this is where we recognise letters words, etc. secondly, there is strategies network and patterns generated on the brain and they help us with our actions. This is where we plan, conduct and execute our actions. It's important for active reading and for research and planning and strategies network is where we express ourselves. They work with each other.

MRI scans have shown the difference in learning pattern in each individual. The third network is the effective network which is based in the central core of the brain and its here where our emotions are and we are drawn to particular types of information. Its here we select information. Corresponding to this we have 3 principles.

Firstly, multiple forms of representation to address each individual - audible, visual, media. There are lots of different forms of representation. There are multiple forms of expression. It's important in learning and assessment. We have to be able to perform and act on the information. It's in the doing of the information that we really learn and

can show our learning. Everyone has their own social cultural background, find different ways of interacting with different student. This provides multiple environment and variety and accessibility. That is UDL for central applied technology. If you look at www.cast.org, they give detailed information.

Multiple intelligence was introduced in 1983. It's a theory of frame of mind and puts forward a theory of multiple intelligences. This variety of intelligence works together and it shows each learner is an individual, each person is individual and each processes information differently. You have linguistic, logical, interpersonal, spatial intelligence. These intelligences are with each person. Some are stronger in one area and others are stronger in another area. Intelligences can be developed. It's not that we are born with an IQ that doesn't change.

Can you all hear me.... so, the multiple intelligence [see overhead]. The attraction is it takes the student as an individual. Howard was impressed by the way his theory was taken up. It took off in the education world. After 20 years his theory had two new points. Each student is individual and the teacher has to craft the needs of each individual. Every skill needs to be taught in a variety of ways. We can see where MI feeds into universal design, how it promotes each individual intelligence. MI theory is not a pedagogical theory, it offers a variety of entry into the learning and learning is like a room with many doors. Some students might enter one door and another student through another door. There are 7 entry points to learning [see overhead].

These are the different entry points. Coming from a medical history background e.g. in particular time and place they might use the narration entry point for foundation of order of monks or nuns, or they might find a novel relating to the foundation of the order. For the entry point of quantitative you might look at the economy at the time. The aesthetic entry point you could show student slides of the art work that might depict the culture of the time, or through a poem perhaps.

So there are lots of ways, the questions that the monks might have asked, also the early church fathers and ancient writers. These are four of the entry points. The more ways you enter learning, the more variety you are creating, the deeper and more rounded effect of the learning and if a student can look at a topic in different ways, he has a clearer understanding of the topic. They need to be hung on a pedagogical framework. Dr Marian McCarthy will speak now. Thank you.

Dr. Marion McCarthy: We feel this is the best of learning, of practicing universal design for learning. We all have full time posts so there isn't time to keep reinventing the wheel. There are multiple ways of representation, expression and engagement. Life is too short to be teaching the wrong thing, you have to teach the part in relation to the

whole. Think of what the students are bringing, where they are coming from, so hit at the discipline right at the centre.

There's a certain electricity about that.

TFU - to let students know what's really coming. Marion Palmer makes that clear. What are the big burning questions? What's compelling? We should state that as our understanding goals. In the doing, is the learning, this is about student ownership and purpose. All the activities that are done, ask what the major performances are, what do they have to do to understand? The student needs to apply the knowledge in the new situation. Every student owns it differently, there is no hierarchy, there are various ways we can perform our understanding. It's not about singling out any student.

On-going assessment: It's about assessment re feedback.

Not final judgement, on-going assessment, informal feedback to the student. You will know in the lecture their body language. Giving them a variety of methodologies, there should be time presentations. It's not about us delivering for 55 minutes; it's about giving the students time to engage. Anyone can come in on the story at any time. It makes time for discussion. In universal design for learning, we want to focus on transformation. Ron mentioned the white space, that space that allows us time to think and discuss.

The other framework - the dimensions of understanding. People talked about content this morning. In University College, Cork there are four colleges, Medicine and Health, Law, Science... how do you talk to all of these people at once? Need a language that speaks to all.

Regardless of the discipline, all have the following in common. There is a knowledge base. There is a method. What are the ways in which the expert represents knowledge?

Universal design - it's not that you are teaching technically, you are unfolding to the students the discipline, what it is to live and breathe this discipline. We need it to be sustainable.

Pedagogical and Disciplinary lens together.

Knowledge in the generative topics hit together. The generative topic gives angle, focal point. As lecturers, we know how to think it through, but often we forget to tell the students what we want them to understand. Purpose is about ownership, handing over to the student, it's about what they're going to do. I have to ask myself have I given them several chances to do this.

Also on-going assessment, a chance to begin again, opportunity to negotiate, collaborate. On-going assessment has so much to offer. At beginning of courses, we welcome the students. We use a lot of rubrics; give them criteria about what's going to count. We tell them what a good answer looks like. I have a category called 'nearly there'.

We are interested in researching our teaching. It's not about a training deficit model, something to be fixed. We are on an investigation. It's about a journey, process, it's on-going.

Aligning TFU and UDL is an inclusive model... [see overhead]

The active learning thrust ... [see overhead]

We are all differently able in that sense. It's a positive. We can all own our learning in a variety of ways.

Example: Staff taking diploma in 2nd year, I am using a course portfolio model. We are getting them to research their teaching, critique their courses.

I have reviewed the course.... [see overhead]

This is key. We want it to appear on one page, how does this course look now? We ask them to prioritise that. Not every single moment of the 12 weeks, but the major moments.

I have analysed the strategies used to involve the students in the light of TFU/UDL.

I have reflected ... [see overhead]

This work won't come in until April; we will look at it then. Universal design for learning should open things up for all of us. We are partnering the learning, have to learn more and more to dance with our students, start with where they're at, not where we'd like them to be.

Thank you.

Brendan Goldsmith: Thank you, Brian and Marion, for another very enjoyable presentation. A big thank you to all our speakers, please show our appreciation. I'm conscious that we are a little behind schedule. We're moving to the dining room, along the corridor - people will show you where to go.

Back at 2.30. You can go straight to any of the breakout sessions. Please try to be back on time.

Blue Room Afternoon Session 1: Declan Reilly (in place of Declan Treanor)

Barbara Waters: I'm hosting the afternoon session. First speaker is Declan

Declan Reilly is my name. I work with Declan Treanor in Trinity College, Dublin. Inclusive Library Strategy 2010-2012.

Picture on slide is sphere within a sphere - it's an iconic sculpture. Most of you know Trinity is over 400 years old. Up to 1960, there was one library where Book of Kells is exhibited. It's now a tourist and archive area. Libraries have now developed around Trinity. They are copyright libraries. Trinity is entitled to a copy of every book published in UK and Ireland. There are 6m copies.

The inclusive library strategy came out of where the disability service met with the library when the disability service was established in 2000. In 2002, the library was funded for one position, a student with a specific disability or need - if they went to the library requesting something, the liaison person would help them to get what they needed. For a few years, it was seen as an excellent service, that person was on hand. It was a specialised service, an add-on, not mainstreamed and not available when the person wasn't there.

The Changing Environment:

There are increasing numbers of students with disabilities, increasing complexity of needs. Single staff member found it difficult to cope with demands. Service counters couldn't meet the needs. It became clear that the library element of the service needed to have an external review.

The path to change led to summer 2009, reviewed by external audit which led to recommendations. Implementation plan was taken to library committee who identified full time position.

Policies and procedures needed to be acquired for alternate formatting. Staff needed inclusivity teaching. Up until then, the staff had delegated to the designated member of staff.

What is TIL?

TIL stands for Trinity Inclusive Library which is collaboration between Trinity College library and Disability services. The idea was to embed inclusivity into mainstream part of the library.

When the service began in 2000, about 60 students registered. Up to Dec 2012, 1086 students. Already this year, numbers have reached above 1100.

Common difficulties:

One of the main issues is the accessibility of the built environment. The library is the primary information resource. Inaccessibility of materials is the second issue. Also side effects of medication, also difficulty with opening hours, also a lot of students find libraries overwhelming. Many students avoid the library entirely and still get through their degree by other means, not the ideal way to do it.

Students also have communication difficulties e.g. standing in a queue, walking up to speak to them can often be a problem.

Objectives of TIL:

To improve physical access, enhance access to resources, staff teaching, and library policy. It was agreed of long term and policy change.

Physical Environment:

This is a photo of library when no books in it, and few people, this is when it was just opening.

In Ireland, the Disability Act came in 2005 - All public buildings to be accessible by 2015. The careers and counselling services have moved to accessible buildings in last few years. The library is on multiple floors, it has lift access, but there are issues around egress, loop system.

There are three assistive technology information centres. This is an area in the library where it specialises in assistive technology, with scanners, printers, also low distraction study spaces. A lot of the study areas are open plan in Trinity, so it can be difficult to concentrate. Assistive technology officer is located in the space.

This is the main area of the Trinity Inclusive library strategy, getting access to reading material and information resources, this is what students find the most challenging, how to find journal articles, print them out and read them.

Information must be made accessible. An accessible information policy was adopted in 2009. Idea is to embed the accessible information policy into all the information processes of the library e.g. signage, websites, staff teaching, how staff respond to feedback from students. Training is given to library staff on one day of the year.

Permanent resource kept. Full accessible information is listed (CAPS). Students can have access to that throughout the year.

Also, web resources have been improved for students with disabilities and a greater emphasis on using the library. Opening hours, rules and regulations, what you can and can't do, what books you can borrow - this information is provided in a much clearer way.

Also, there's a page for staff as well, to advise them in relation to reading lists. If a book is needed in accessible format, sometimes it takes weeks/months to get it in alternate format, so important to request in advance. In Trinity there's a culture of reading lists at beginning of course, it should be done at the end of the previous year. Staff don't realise it can take weeks/months to get an alternate copy of the book.

Inclusive training guidelines:

Alternative formatting - the material given in electronic format to copyright library assumes it will be lent out. The understanding is it will be for a small number of readers. We sign agreement that only a certain number of students will have access.

Staff work with publishers regarding getting books in accessible format. Process is very complicated. It can take several months. This is a flow chart which indicates the steps required. The student indicates the alternative format, then it's ordered, passed on to student, that can take a number of weeks. If not available, has to go through up to 9/10 steps, so can take much longer. Recently, a text took three months to get in alternative format, so student is immediately disadvantaged.

Difficulties with alternate formatting - late receipt of reading lists, also difficulties acquiring machine readable formats, expertise is required to re-format.

There's a lack of awareness of formatting among publishers.

Reading lists strategies I've already mentioned. A lot more forward thinking needed re compiling reading lists and how it will be accessed.

Issue is the copyright problem, it's linked to profit publishers make. However, there's a legal obligation re disability rights and equity of access. There's still a lot of work to be done in that area.

Staff training: An annual workshop is provided, also individual supports are provided in the library.

Over 18 months from 2011 to 2012, idea was the changes would be incorporated in the library policies and processes, this has begun to happen. There is now a reader

charter, code of practice and guidelines, also a monitoring committee set up. Staff are involved in professional development and training including disability awareness.

Blue Room Afternoon Session 2: Karl O’Keeffe, Dr. John Gilligan

Barbara Waters: I would like to introduce you to Karl O’Keeffe and Dr John Gilligan (DIT); he has joined Enable Ireland to bring in assistive technology. Welcome. It's a two hander! Then we will take questions from all 3 speakers.

Karl O’Keeffe: I will fit in with Declan on accessible materials. Designing using the principle of Universal Design. I'm an academic in computer science. We have to produce learning materials. We have to create more, add more. The key challenge and what this conference is about is ‘do we really consider who is going to use these at the end of the day?’ We are worried if it will cover the material sufficiently and curriculum design. Do we think ‘who are the students that will use this?’ It was brought home in a direct way as computer science has a lot of graphics. In September I walked into a class and there was a student with visual impairment there. What was I supposed to do with my flow charts and diagrams? All of these things cannot be seen by them. This is all very visual. You would be thinking that I should have prepared. Karl also had a challenge. They were faced with putting it on line as the course has been taken up in Qatar. He had challenge in a different perspective.

What is the process for making this development? How should we go about it? That is what we are trying to do. Karl will talk later about training. We want to incorporate universal design, why are they different or are they a subset of each other? We took the National Disability Authority eLearning tool; We adopted Moodle, as it's up and running, also the ADDIE process, which is standard process and we looked at adapting it to incorporate the universal design for learning. The aim of this work is to provide professionals [see overhead]

It fits in with what Declan was saying. I mentioned we are Dublin Institute of Technology and are course providers for many subject matters. We have links with Enable Ireland. That course has been franchised to Qatar. They were faced with a move to eLearning. There were economic reasons. Because many of the people taking the course would have varying needs, the challenge was to make material accessible as possible. We have to make it sufficient and to meet the target of language comprehension.

The principles we wanted to incorporate were principles of universal design for learning. [see overhead]. These are the 3 principles. That is the cast poster for them. Representation, expression and engagement. Also, we have concept of universal design for instruction. Physical, materials, policies and stakeholders involved. I believe Universal Design for Learning is a key strategy for universal design for instruction, which includes everything from physical down to course strategy.

Universal design for instruction [see overhead].

When you move to online materials, one thing you change is the community of learners. You have technology with virtual learning environment and different instructional environment. We have to engage with student. There is a different paradigm shift. These are principles for universal design for instruction and then the universal design for instruction principle as community of learners. An important aspect of instruction of climate is to set the bar high and you must be able to deliver, you need quality in the materials to present.

The base line we took for this is ... the NDA had online learning tool to provide disability equality training to public sector staff in Ireland. We looked at their goals and principles, some lessons accessibility, speed that you want to engage, embedded continuous assessment [see overhead].

Moodle, the framework we used is this. It's a management system. There are many virtual learning environments. Moodle is free and it's open source, there is community that brings improvements. It also scores relatively well; it's a good experience using it. It gives us a nice pun with Universal Design for Learning. [see overhead].

Then we have accessibility challenge. [see overhead] Addie model corresponds with software and eProducts generally. Part of any analyses you establish user requirements. In the development of software, the user is ignored and hopes to get away with it. The Addie model had analysis, design (reading from overhead).

Based on the evaluation, we repeat until we have the development process (reading from overhead). The other key process is something that most development requires some kind of Addie. If you looked at this from computer science point of view, you would call it the waterfall.

Karl O'Keeffe: There are two main types of evaluation. We were constantly evaluating. We have quantitative evaluation. What they were or were not clicking in. Participants filled out a questionnaire. It had three main parts. Firstly, overall satisfaction of the module. Module and logs brought up a few things. We had good engagement within the forums. PDFs were unpopular with our participants. We used Survey Monkey; the questions were around Universal Design for Learning checkpoints. We had good reaction to the pilot. But it failed as over 50% said it wasn't as effective as the classroom based learning. There are 31 checkpoints. The key green was achieved. Blue was not applicable. The main point at the high end was the effect of Universal Design for Learning, there was a lot of yellow which we wanted to improve and did.

We wanted Moodle orientation which would have introduction forum and accessible materials. It's important that students are accessing the materials. The design process needed to be improved and principle needed to be embedded. Also the reference chart ... (reading from overhead).

From those initial 5 pilot modules we decided that Universal Design for Learning needed to be built-in as early as possible. Our initial project used text toolbar and we used the glossary built-in to Moodle. They helped us but were introduced almost as an afterthought. This is the new improved Addie, the analysis format (reading from overhead). These art forms are to be done during analysis to help make the content more accessible. These are analysis stage forms.

This area of the forums was based on this man who I will call Puente Dura. He has this model called SAMR, it's a theory of using technology to transform education and we were coming from face to face background and we wanted to substitute this, we were thinking PowerPoint and it's not taking into account what technology has to offer. We took an area where brainstorming could happen. Substitution, how can this be done? Augmentation, how can they be improved? Say you have a slide share, it's a substitution of a PowerPoint, for modification, and how can the use of online be improved? Is there a new way the module can be delivered? How can online delivery improve the way it's delivered?

Next part of form 1.1; This was designed around assistive technology course. We have a good idea of the type of people coming to our course. This was to build a persona because it helps us plan and gauge the appropriate level of training, and helps us speculate areas of interest and where people can contribute to the course. This can be done in different areas as well.

These forms were specific to AT. It's about splitting the subject matter to the smallest reusable matter you can, so if you can do it in ways that can be reused it increases its value [see overhead]. You can plan out your module and move them around. These are the design stage forms. The purple form on left hand side ... most would be done on this form. Knowledge transfer form ... this is information you are trying to give over to your users. It could be slide show with narration along with it. Along with that form, there is separate form added which gathers non narration content. It's important as lots of time the alternative content is left and they don't understand where the picture is to be used.

The blue forms are action and expression forms from Moodle which are treated separately, but it could be treated the same as first form in other areas.

Design stage forms.

We can see at the bottom how we arrange the forms into our module. This is the tool we built to help people work with these forms. There are 9 pages. Along the top we have each page with guidelines of universal design and each column is a checkpoint.

If you find you are not hitting a certain checkpoint you can go back to this tool and see if there is software to meet your requirements.

Here is a quick video which doesn't look slick. It's a test Moodle. This learning object is meeting our requirement. At the top we have a human voice; I will talk you through this. We have background knowledge. This is just to get people into what we are dealing with. This module is about switching accessibility mobility. Here we have visual and under this we have text, all narrated. This player is not normal you tube, its calletra (check spelling). The descriptions of the videos is audio, text, and subtitling. It's a lot of work, but it's worth it. I have another video, it's the book module we used in Moodle, it can be zipped up and it can be saved, you can have all those in your repository, it makes it more valuable and you can spend more time making it as good as you can. The forms can be downloaded if you are interested in the tool. They will be in the materials.

Barbara Waters: Thank you, we can take questions. Will it get easier as we go along?

Dr John Gilligan: It's a lot of investment at the start, the key thing is you are bringing in universal design, and so there is less retro fit.

Karl O'Keefe: It's getting easier. Any questions?

From Floor: Could you tell me more about the AT course you mentioned? Would there be a high amount of programming?

Karl O'Keefe: We cover a broad introduction to the area, hitting ATU and getting them to talk about their experiences. It's evolving all the time.

From Floor: I'm AT officer, I'm curious about continuing to train.

Dr John Gilligan: We have third and fourth universal design and a Masters in it. I will talk to you after and give you details.

Barbara: Any questions?

From Floor: I want to ask Declan ... and this question could be for everyone, have you made staff training compulsory for library? We should be inclusive; if some staff don't take it on board, it can undo the good work. If you made it compulsory, the people who turn up are the ones already doing it.

Declan Reilly: There is training for academic staff and for incoming staff there is a higher requirement, for current staff, it's not so much in that it's not mandatory, it's more what to do if they don't turn up. Participation doesn't mean it will be implemented afterwards. There are several hundred staff in Trinity College. It's not just a simple compulsory training day. Making something compulsory is one thing, but it's not in our remit if they don't implement. We don't do employment issues.

Barbara: It's management job.

From Floor: The process of making it compliant can be difficult.

Declan Reilly: One change I have seen in relation to the student needs, student centred education. We support the rights of the student and if you can do that by showing accommodation or recommendation of students with disabilities you change the culture and that is communication at a different level. Making change happen at a cultural level and a student led approach is the right thing to happen.

Dr John Gilligan:

The production of these materials, there are simple guidelines like correct font and colour background. I think in Trinity they produced a brochure that is available to staff which has worked well, but it's not widespread practice, how to get simple guidelines for good basic production of materials, and then worry about the difficulties. If you legislate then it doesn't become a desirable attainment. You have to make it simple. If a visually impaired person comes in and says 'make my information accessible.' One possible way forward is a clear repository of materials. We have web accessible guidelines. We don't have word document.

Karl O'Keeffe: Feature in Microsoft 10, it's a good wakeup call for some of your colleagues to check if their material is accessible.

Barbara: Thank you for your presentation.

Panel Discussion: Dr. Ger Craddock, Prof. Alex Milton, Dr. Marian McCarthy, Kjetil Knarlag

Gerald Craddock: Could you take your seats, please. You're being very obedient. I am the chair for the last session of the day.

My name is Gerald Craddock, Centre for Excellence in Universal Design, looking at education, applying universal design within curriculum, both at third level and second level and also the whole awareness of it. We are delighted to be supporting AHEAD at this event. Joan gave an excellent keynote this morning. Professor Edyburn could not travel due to sickness.

3 projects we are involved in that are specifically connected to area of education. Worked with university of Cambridge looking at a module of universal design and how it can be incorporated into second level- specifically looked at transition year, now looking at junior cycle. Based on a very successful model by university of Cambridge called Designing our Tomorrows. For people who were in the red room, excellent presentation on a module that we funded looking at first year under graduate, especially for people in design field e.g. product design, ICT, architect. We will be making it available on website before summer. Universal design on campus, the campus of the future, where we will have children from preschool to adults in further learning on the same campus. What will the campus look like? That's work we are looking at relating to education. We're also doing lots of work in built environment, products and services. We are about to launch the ten commandments of better design of websites. Co-launching first week of April, will be available on universal design.ie.

We have an International renowned panel with us this afternoon. 8 minutes for them to tell us their story and how they are applying universal design and where they see the next steps.

I will ask first, Kjetil Knarlag, who got out of his sick bed this morning to be with us all the way from Norway. He has an MA and is head of Universell, Norway. He works very closely with Ministry for Education, we had his good friend with us about 3 years ago when we launched European Council of Ministers document.

He will pronounce his name properly.

Kjetil Knarlag: I have some notes here. So 8 minutes for me to tell my story. I'm head of unit called Universell, higher education for ten years, inclusion in last few years. We couldn't have conference in Norway this year, so we have it here this year.

Why is universal design in education any of my business? My native language is Norwegian. We have national strategy which is ambitious, by 2025. The Norwegian Government don't care. Building, transport and housing is their concern.

The Government do some stuff on education, tell us to have plans for universal design, learning environment. That's a good start, but we have not succeeded yet. Mary Quirke said you are good at this. I have been listening to stories about Universal Design for Learning today. In Norway, we have some development to do. In higher education, we still have universal design understanding disability.

Small group of enthusiasts do great work. It's all about diversity. In this group of students, I think you have all kinds of students. Most people forget about that, because they plan for the ordinary common student, 22 years old, Caucasian, from mid-sector society, they think they are all the same. Within this group, there are all kinds of disabilities. They ask is this place for me. It's important to plan for diversity, if you can do that, we are getting there.

What's common for the group? They are multi-sensory. I think universal design is about perception and multi-sensory. If you can see, you can feel. If you can hear, you can perhaps see.

Professor Milton will tell us about architecture.

To understand universal design, we use this pyramid in Norway; We have used it for 7 years. The pyramid is any group of students, people, could be University College of Dublin. At bottom level, universal design includes most students in the ordinary solutions. No special needs, but of course not everyone can be in these ordinary solutions.

Level 2: reading difficulties, if all books were available, they would all be in level 1.

Pyramid has two levels on the top; it's easy to think that universal design will solve everything for everyone. It's a constant process. Assistive technology and personal assistance must be a part of universal design. You can put any group of students inside that pyramid. How do we make our environment, buildings, ICT, learning management system, have most people in level 1 of universal design? It's about learning, physical spaces, services, ICT. It's on Macro, Meso and Micro level. It's about policies, ownerships.... [see overhead]

The most important principle is flexibility in use. The design accommodates a wide range of individual preferences and abilities.

So you can plan. In this drawing, there are all kinds of people. It's not accessibility just for visually impaired people; it's at a higher level.

Norway universally designed by 2025.

It's quite ambitious.

Dr Gerald Craddock: His colleague was called Ulag, easier to pronounce.

Kjetil Knarlag talked about the Micro, Macro and Meso, if we can come away with that Norwegian model, that's impressive.

Dr Marian McCarthy is returning to the stage, she is co-director at University College, Cork, looking at the whole area of learning and understanding.

Dr Marion McCarthy: Ann asked me to address the notion of 'What do we do every day?'

Patrick Kiely is our learning technologist. You will get to visit the stations, resources for education. We're trying to heighten awareness, making our colleagues aware of how teaching and learning play out.

There's a picture of crest of University College Cork on the left and right. I ask colleagues where we are situated. I see Rose from IT Tallaght. What are the signs for teaching and learning that are around our buildings?

In UCC crest, you see the open book. Are there still people who can't get access to University College, Cork because of the way in which we teach or overly prescribe learning?

In the teaching is the learning and in the learning is the notion of research. I like the way teaching and learning are in the one sentence. If the students are not learning, we are talking to ourselves.

On right hand side, picture of crest which is above the gate of University College, Cork, the Irish translation for School of Munster.

Embedding learning from the bottom up. We try to get colleagues to picture what does teaching and learning look like around the university? Here are more examples of the crest. On left, Professor was teaching, if we spend time teaching at our students for 12 weeks course without letting them in, this is problematic.

We should be sensitive to the spaces where we work. Look at the west wing of University College, Cork, it's highly problematic. How are you going to learn if you are looking at the back of the neck of someone in front of you?

The space on bottom left where you have flat spaces, you can see how it can be moved around. We are getting our teachers to see where our spaces can be moved, how you negotiate the space, open up to all students, also how it might move from hierarchical to democratic. But we have to start where we're at. No point in throwing baby out with the bath water.

I'm constantly at my colleagues to take the principles of multiple representation, have a look at the spaces and ask can I have multiple ways of expression.

The Boole lecture theatre, a place where one can go to sleep.

As lecturers, are we set up to perform? This is where I stand and talk in front of 400 students. One student wrote I remind her of Tigger and Winnie the Pooh, walking up and down the lecture room. It's about reaching out to my students, about getting them involved in different ways.

The Seekers: Sculpture by Annette Hennessy, one student got carried away and ran off with one of them. On lower right hand corner, all presidents of the university [see overhead] all male- that will change.

This is Valencia Island in Kerry. Where are we going? Nowhere; unless we are teaching and looking for the evidence of student learning. This track way - 384 million years ago an animal walked across this [see overhead].

I'm interested in the work of scholarship ... Carnegie and Harvard work. What's fascinating is that unless we make teaching public and critically evaluate it, it's all just private property. Unless we open it up, what will be known of our teaching in years to come? We have to open up the learning to our students, must be flexible in our teaching, this comes from an attitude of being open to change. We have to be open to challenge, universal design has to start there.

There isn't one standard way. Each student's track way is different. In my research, I must constantly look for the evidence of student learning.

Dr Gerald Craddock: The Norwegians started this in 1979 and we can now trace it back to the tetra pods. I'd like to give the stage to Professor Alex Milton who heads product design here in Dublin.

Prof. Alex Milton: Okay, it's a lot to follow, so I will rattle through my presentation. It started 75 years ago. Universal design has become integral part of the design. We have not been good at getting the idea across. We have a research unit for the last 15 years. Check out the Helen Hamlin universal design of all types, education and products.

This is where you can tell I'm a Mac user! Design has been integral part of what we do, even in fashion, how does this work, it's an exclusive industry. We have to design for future sales. We have to speak to users and students. If we don't listen, we produce things like this ... it's a flop. From a design perspective, it's essential to have universal design agenda. It's not just about small number of people, Good Grips is fantastic, great ergonomics, and it's a top selling kitchen product in USA.

Universal design truly has become universal. The design process fundamentally ... we go through model of exploring, evaluating, it's not linear or sequential. We are constantly making a mess of things. We are not good at doing things in an ordered manner. At National College of Art & Design they are like this. We can constantly look and reflect on a broad range of users. We have medical device design which is world class. It takes what appears to be specific issues, like diabetic sufferers. It's now used commonly across the board for more appropriate dosage levels.

We have a 1.3 million project which started off looking at seating of people with different abilities, but it's obvious that universities have to look at universal objects. We have International group. Classrooms haven't changed dramatically. It's an issue for us. This is research and design process [see overhead]. We deal with qualitative and quantitative research and we deal with scientific research. We also engage in exploring learning environment. There is a set of directives from EU. New concepts-build, test and analyse. So that is what design is, as designers we often don't look at the curriculum.

In National College of Art & Design we have the cream of students. We have to be as inclusive as possible. By engaging with our staff and students, we design for people. We have to map routes and journeys, we have to empower students, we have to listen, not just tell people, create flexible structure; bamboo structure is great metaphor. We have to engage with staff and society. No one spoke to anyone else, it wasn't inclusive. We have to build a new curriculum, a universal inclusive curriculum which is not individually motivated ... (reading from overhead). We have new faculty structure, curriculum and philosophy. So, universal design at National College of Art & Design is an evolving agent of innovation. Thank you.

Dr Gerald Craddock: We didn't have to pull Alex away from the mic. We have 15 minutes. There is coffee outside. I will open it to the floor. Any questions? We have mics moving about.

Any questions for the panel? We would like people to be to the point. Don't be shy. We have 8 minutes.

From Floor: This is general observation. The creativity in relation to universal design, the commonality is about changing the way things are done. It's great to have people

here today who are champions. In relation to changing long standing institutions, it can happen also from the top down. To what extent do they feel management are open, can it work from bottom and top down?

Dr Gerald Craddock: Good question.

From Floor: I was going to ask about people from the top. There are lots here who support people with disabilities and education and there are researchers who are not here, like people at the top, the policy makers.

Dr Gerald Craddock: Thank you, last question. Don't be shy. Don't be afraid.

From Floor: It's about potential impact of people at the top, try to embed continuity. In the UK we had lots of friends who were presidents in university and they have retired and we are struggling to find our allies now.

Dr Gerald Craddock: To the panel, the sustainability. We have grass root efforts from Norway and Cork, putting this question to you of how do we influence management.

Prof. Alex Milton: I have been in Ireland for 9 months, it's a different scenario; a lot of it here is top down. I think the students are the people who are missing here as well. We are middle management and that is not necessarily a good thing. We don't have the people we are willing to engage with. We know higher education is perceived as a market place, that students are demanding a better experience, not just a better qualification and they have to engage in learning and social activities also. We have to engage them meaningfully; my experience is to listen to the students. Give them a voice.

Kjetil Knarlag: Action plan for universal design for IT. We made policy document and recommendations, but how to implement it was difficult.

Dr Marion McCarthy: The person who asked the first question, you need top down and bottom up. We started this work in 1990s, we have student here because we are also students, when you turn teachers into students it becomes a most powerful group. Dance with your students, in that sense you are always coming from the bottom up. We have 282 staff that have teaching and learning and become conscious that they are reaching all their students. From the top down, it's the beginning. There are awards for innovation ...teaching fellows in different fields. We have teaching and learning in each of the universities. It's a change in culture over time. It brings challenge. It's from top down and bottom up. We are in middle management. Several members of staff are on different committees and we are conscious of moving things forward.

Dr Gerald Craddock: Next question.

From Floor: Marion Power, it's important to integrate. In terms of students' voice, we all work under European standard and guidelines. They are powerful. Students' voices are represented at national and international level. We have to empower to have them in our institutions. Our one knows how to hold us into account. The minister has set up national teaching and learning and we should make the argument that this forum should promote universal design. We should invite the presidents and ask to meet them. There is commitment and I'm not sure most people know what it is. It's to reach out to the expertise.

Dr Gerald Craddock: Damian Gordon.

From Floor: Henry Vacus (check spelling) being the founder of universal design. Is it time to collect more universal design, there is a lot going on and we don't name it as universal design. To follow on the last comment, expand what we mean by universal design. Bouncing around the room is universal design, you are getting into the face of people. Universal design wording is a barrier and we need to create a ramp up to it.

Dr Gerald Craddock: Last round of questions. You cannot escape as the doors are locked. Any questions?

From Floor: Has the panel got strategies for dealing with people who are converted, but sabotage inclusive design principles in education?

Dr Gerald Craddock: Good question.

One more question. Last one?

Joan, how about you? Our friends from the States in the front row.

Joan: I'm looking at it from a local and systemic level. We have 4200 colleges and universities. Where I live, there are 52 institutions in one state. So getting that start, working with organisations, I guess it's multi-faceted. It's more of a comment.

Prof. Alex Milton: We have to include them. Even someone like a janitor has enormous control, first port of call when someone comes to institution. We have a stratified organisation, blue collar and white collar. We have to understand what we're all doing, need to have a clear vision about how to evolve and develop the service we provide.

From Floor: Are you thinking of lecturers who come and say this won't work?

From Floor: It's across the board. I think some are deliberate.

From Floor: I can think of some examples. One person said to me I'm paid to lecture, my contract is for 55 minutes. You have to look at where they're coming from. We need to give plenty of time and initiative.

Dr Marion McCarthy: I use the Hollywood canon ... things that bring out teaching and learning and bring it out into the open. On the point of people misunderstanding, you see, everyone was at school and so many have now been in third level, but they're not all doing it from the same angle. We need to be more explicit. We're not making it clear, that comes out in the learning outcome. In a way, we only have ourselves to blame, so we need to communicate, allow people to come in and say negative things, also not to take it personally.

Prof. Alex Milton: From a design perspective, dealing with universal issues, you go through capability procedures and modifications. I was involved in designing a car at 25. People who buy sports cars tend to be 65, struggle to get out of it at the golf club. We have a genuine understanding of what is required. Putting yourself in other people's shoes, developing empathy and nurturing; that is vital.

Dr Gerald Craddock: Thank you very much. One phrase I would use from the floor - universal design is conspicuously inconspicuous. We need to be working locally and at a global level. We need to be moving towards how we network. There's tea and coffee outside now. Put our hands together for our panel and for yourselves also.

Hand over for announcements. Thank you for fitting in so much in short space of time.

Exhibition area open, you can see our poster displays, launching universal design, will be hosted till 5.30. Lots of information out there, the hosts are all there to answer any questions you have, tea and coffee available.

We got a get well note for Ann which will be at our registration desk.

We finish at 5.30, start again at 10 am in the morning. I hope you have the chance to network and share. Hope you enjoyed the day. Look forward to meeting you at dinner. Thank you.

13th March 2013

AHEAD - Croke Park Conference Centre

Opening

Mary Quirke: Good morning.

Welcome back.

Before we start, could I have a show of hands for those who felt they learned something new yesterday?

Three things struck me yesterday, re organisations and how important the learning space is, not just the physical space but also the ambience, how teachers engage with that space and how they might use it differently.

Today ...technology - this word came up a lot yesterday, as a tool and also becoming part of the learning environment. I'm not claiming to be a technology know-it-all.

We will look at the reality of why people are so invested in education, also the outputs, the outcomes, about getting a job and living the dream. We will hear from some employers.

Martin Bean is from Open University, it's a global leader in flexible learning, before joining in 2009, and he was a General Manager with Microsoft. In 2012, he launched Future learn, open online learning courses.

Keynote: Prof. Martin Bean

Prof. Martin Bean: Morning, everyone.

Great to see you all this morning. I'm an unusual Vice Chancellor, I was born in Australia, met my wife in the Ivory Coast, married in Belgium, lived in the States, three American daughters, now live in Milton Keynes.

I admire the work you do for higher education students around the world. Open University has remained true to its mission. We welcome 16,000 students every year with declared disabilities.

My professional background is grounded in adult education. We talk about Universal Design for Learning and the way of approaching adult learning, but for those who are education practitioners, so much of what we're talking about these two days is just common sense. We know what works and what doesn't.

My job is to inspire, scare, and terrify you re where technology is going. The challenge isn't should we, or shouldn't we. My presentation will focus on what I see going on in higher education, won't spend much time on primary and secondary.

The reality is that a healthy tension exists with those who innovate, disrupt, and create access, also barriers to access. We need to promote greater inclusiveness.

I'm very pleased to be here especially it being 25 years for AHEAD. It may not sound like a grand deal, but here is some reflection, AHEAD founded in 1988, Berlin was divided, March 1989, scientist Tim Berners Lee wrote a paper - hypertext, now called the world wide web. It's hard to imagine not using it. About 80% of people use the Internet every day.

Trinity College stands since 1592, in UK higher education stretches back 800 years.

Experience tells us history does not smile on those that try to get by on past glories. Look at Kodak now, for most of 20th century, they dominated the industry. When Neil Armstrong took step on to the moon, his camera contained Kodak stock.

Their product was in every home. Kodak was last in profit in 2007, lost many millions dollars since, share price 75 cents last year. They filed for bankruptcy protection.

What went wrong? Digital cameras, online posting of pictures. Also smart phones.

So life moved on, left Kodak in its wake.

It took only 5 years for smart phone sales to wipe out Kodak. How do we build on our reputation? Innovation.

One of my intentions today is to tell you that innovation is a good thing, but we are afraid to innovate. We like to stay in our comfort zone, because it's more comfortable there. Without innovation we get stuck in a rut. Progress stops without innovation.

When Armstrong stepped on to the moon, he said 'one step for man, one giant leap for mankind', but the people who invented the spaceship had a real problem with keeping the weight down. It had the potential of making the model too heavy to take off. One of the first things to be taken out was the ladder and they replaced it with a knotted rope. In training they found the rope too difficult. How could they make the craft light enough? The problem was solved by junior engineers who came up with a simple and effective way to get rid of weight ... they got rid of the seats. They had installed comfy heavy seats but the juniors told their bosses that for a 5 minutes flight they wouldn't need to sit down. The seats were removed and left enough capacity for the ladder. The rope was left at home, and Armstrong was spared from taking a giant dangle for man.

James Dyson spent years bringing his vacuum around trying to show it off. They said there was no money in it and people demanded bags in their vacuum, the replacement bag industry was worth a lot of money. Dyson set up his own business and he now has a personal net worth of 1.5 billion pounds and why did intelligent trusted people just assume that vacuums must have bags and space ships must have seats. It's called the tyranny of conventional wisdom. It's a very real problem in our society. You see it in every sphere of life.

Many people's worlds spread no further than their horizon, but now people are tightly connected by social media and internet. Trying to pretend that education can keep above this will not bode well for student or teachers, yet that is what we are doing.

There is a photographer who went around to different schools in the world taking photos of students in the classroom ... there are some major differences. [see overhead] They all had a lot in common also but the clothes were different. The basic model was the same. Students sitting at desk facing teacher at front. Plato's academy shows him at the front of class and student dutifully taking notes. Many of you received a great education in this way, but is it the only way or the best way? Can we teach more by looking at basic principle?

I like to think that when Open University was first established, it wrote a whole new book. No entry requirements, colour TV used, designed on blank sheet of paper. A unique institution, but lots of people were sceptical. Many said a worthwhile education could only be obtained by sitting in lecture halls. They would be made to get involved with this project, and some faced hostility for getting involved. Others called it

blithering nonsense, Open University has proved them wrong- we are number one for student satisfaction.

All around the world, different countries have set up their own Open University and I am always asked for advice on how distance learning can work for them. I like to think all of this is not bad for a university that was described as blithering nonsense. We have made use of innovation to give the best possible education to the widest audience. We will always be open to people, places and ideas, it's more important now than in any point in history. Higher education is reaching a new phase and technology is advancing with incredible changes. We are facing many challenges. Five years ago there was 2000 OER courses; today Open University alone offers this amount.

OER specific universities are starting to pop up around the world. More than 25 million people have dropped in for a look. Having information freely available is most popular with student. I think it started with Wikipedia and MOOCs. Massive open online courses (MOOCs) are causing serious ripples, when internet comes along and disrupts an industry it never goes away e.g. books, music ... change can happen very rapidly. The wave of disruption hit education last year. The great brand box ticked, millions of people were signed up and tens of millions was invested, there is no shortage of money in the equation. Disruption in higher education is inevitable.

Where I was sitting, it was USA centric development. The rest of the world was not making use of it. Open up access to learning and give universities that exploit them a position in the international spotlight. Last year, Open University offered free to study design for global audience. Last month we were joined by five more. The British council have come on board too. We feel we will work with the best university with no fees and no minimum requirement to study.

There was a letter sent by autistic child and MOOC allowed him to study, he said his course was the first real course ever, he could enjoy it and keep in sync with the rest of the classroom. These are the types of letters I look forward to receiving. Quality education to a vast number around the world while remaining personal. Allowing them to embrace education presented by MOOC, the international aspect in higher education is increasingly important. It's a worldwide industry. They are worth about 1 billion euro to Ireland. There is crucial element of soft power, vast number of higher education people study abroad. Without MOOC, this was in danger of falling away. With people getting a taste of central European education which was what attracted foreign students to come to their university in the first place. With North America embracing MOOC, it's vital that our university continues to be seen as innovative. MOOC provide opportunity to invest in our student.

I know that you are saying he is blind evangelist. Hundreds are signing up and only a few are completing them.

Last year, I told a conference that it would be irresponsible for all universities to just start using MOOC, the danger lies into rushing into digital venture without thought. It's irresponsible. I spent my time in Microsoft going to schools telling people to think about the schools before you think about the software. Many schools spend a fortune on this technology but there is no real change in the way they teach. The student writes on an iPad, but the fundamental is the same.

Look at the problems with MOOC, high drop-out, courses that haven't been thought out, people not knowing what they are doing; it's the definition of irresponsible behaviour.

If you do know what you are doing, MOOCs are fantastic. I get asked if online learning can be as good as traditional face to face mode. The answer is simple; there is fantastic teaching face to face and lousy teaching face to face, same with online. It's not the mode; it's the fundamental quality of the education experience itself. Nothing matters more than the quality of the teaching. It's about how we can all use the best tools available for our current and potential students. I only sign up with top quality teaching. I won't judge the number of students, but the outcomes. Success solely being measured by size ... bigger is not always better. Learning through doing - world class storytelling. Accessible at all times, and offer more refined teaching and learning experience. Many MOOCs have trouble with guiding student to where they go next.

We don't allow the journey to end there. These beginnings are enough to spark a desire to learn more, a passion and we can succeed in higher education, we are there for non-formal education, there is a real demand for this, we have had over 25 million visitors. There is a lot to learn - for students who want to take things to the next level we give them the pathway for qualification.

Frozen planet had 11 million viewers per week, we offered a poster, and we shipped 220,000. More than 330,000 visitors, more than 8,000 looked at our frozen planet course and over 1000 did the course. We allowed them to progress as and when they wanted. A teenager in Mongolia is now applying for a place in M.I.T. It's a gateway and it's a vital one. At Open University we have supported people from free to fee. The courses will be completely free and we are looking at ways of providing additional services. This is the magic way of MOOC, for the institutions that get this right, the benefits will be tremendous. The story doesn't end with MOOC, internet commerce exploded in the 1990s but it hasn't changed much since.

Web has moved to Twitter, MOOC are just the latest intersection. What is on the horizon? What does the future look like? It's not easy to predict the future. In 1993 report for national commission on education foresaw 2015 and desks equipped with

digital equipment, said it would be impossible to provide each student and teacher with their own computer. Twenty years ago, it was not unusual for school to have three computers. The idea that within two decades everyone would have in their pockets access to the world's information. There are too many unknowns in the future. We shouldn't look for a single app. Pedagogy is too broad for one change. In 2013, it's folly to think of technology and education as two separate entities. They are entwined, when www was set up, it was an academic web to share information.

Pedagogy 2012 short - you can download it free from our website. It's pedagogy that's evolving, not just the technology. Using eBooks but also not comprising. Students can share notes and observations. Science experiments and history can be far more interactive.

Teachers could be provided with dashboard showing progress of students to help with complex learning environment. MOOCs have an important role to play. MOOS - massive online seminar. MOOCs - we cannot stand still and wait to see what emerges. That's not leading, that's following. The 21st century is not a good time to stand back.

Almost 25% say they use Internet for education in Ireland. 50% say they are interested in using Internet to gain qualifications from Irish and foreign universities.

People are ready for change; they are going to expect change. Around the world, we must equip our citizens with what they need. Embracing new thinking, new ways of working, not all straightforward, and not that comfortable, but it has to be done, because the past belongs to those who want to live in it, the future belongs to the innovators.

Thank you.

Questions:

From Floor: Alan Hurst from UK. It's a control question. In UK, some universities are seeking privatisation, question is those of us who work with disabled students are worried about privatisation on the grounds that they cost more?

Prof. Martin Bean: Fantastic question. Having had foot in both camps, private and charitable sectors. It comes down to motivation and everyone held to the same standard. If those two things aren't right, then we should be worried about privatisation. Let's take England, believe higher education sector functions on good will, charitable organisations. They come together to do the right thing by staff and students. I think the right consumer protections must be put in place, so students are not let down.

In the countries I visit, higher education is being squeezed every year. We have to be open to money from other sources.

From Floor: Future learning being a pathway to fee pay learning? What do you think of badges? We've been exploring this for some time. We have traditional view that education is only valuable when you are in the system. In the world we live in, there is incredible value in your peer group, conferring on you a badge for what you have achieved. If someone has done 10/14 weeks with MOOCs, the ability to give them badge and put on their portfolio, we think that's a good idea.

Ispot - website - it's about nature, you can take a photo of plant/creature, put on Ispot, and say what you think it is. People critique - peers give you a badge. Favourite story is about 10 year old girl, father took photo of moth, and she posted it. It was the first ever sighting of this moth in England. If we start embracing the world in different ways, giving them badges for what they've been involved in. The MOOC space is hung up on completion. 7% success rate, the media is calling the other 93% failures. We should admire anyone who does education no matter whether they have completed it or not.

From Floor: James Matthews, University College Dublin. How do we go from free to fee? How do traditional universities utilise that model? How do we get people to partake in online courses?

Prof. Martin Bean: It has to be about transparency and honesty. First thing is to be upfront with someone who is doing MOOC, say here is where it will lead you. Step two with our open learn platform is what Amazon is like e.g. people who used this also liked this.

We think the learner should be presented with where to go.

One of the things we had to think about is how you develop framework, questions they ask and then answer. That proved to be difficult. Same problem in helping people understand where they will go with this.

Help people not to make mistakes in enrolling. In this boundary between free and fee, you will see innovative models coming through. We have 5 minutes. We have 3 questions. This is a real pleasure. Thank you for having me. Let's bring one mic to the front.

From Floor: My name is Heather Simmons, how happy are you with disability compliance with Open University?

Prof. Martin Bean: We work on this more than any other university. But I wouldn't say we have got it right. I'm delighted our undergrad courses have been made accessible. Yes, do I still get frustrated that browser and Google docs are not accessible for disability context. How do I continue to create innovation without leaving some people

behind? I know in a world where technology is pervasive, I don't do any favours by not introducing them to this. We are focused on this every day and I hope to do more.

From Floor: Ger Craddock, Dublin, title behind you is Universal Design in Education, is it any of your business?

Prof. Martin Bean: Universal design, yes, if you look at what I have studied on universal design before this conference ... we are not all the same in this room, the way we consume education, how we need to be assessed and adjust the flow of pedagogy, others may succeed in different way. Inclusive well rounded students are to the core of Open University. We set up Open University anywhere, you can download an app from anywhere and it will give you all the tools. We know that will only work for a percentage of people, our course materials from the very beginning are predicated on universal design, if you look at the various modes, we fully embrace this. The MOOC that replicates that will ultimately be successful as they will have the widest possible audience.

From Floor: You mentioned that you have 16,000 students. In Ireland our figure is under 8,000 with disability about 5%. In percentage terms, are students with disabilities studying all courses or just studying humanity?

Prof. Martin Bean: It's spread across the whole area. No one has brought to my attention that disability students are only studying in one area. A lot of fundamental barriers with people with disabilities we can overcome with formats and we connect them with tutors, the core model of Open University is working for them and us. It's definitely not discipline bound. For geology we run a summer programme, you look at bits of rock, we developed a piece of kit which allows people to stay at top of quarry and they participate in real time. Those who cannot make it to the quarry can do it from home. Technology is not something that leaves people behind.

From Floor: You spoke about Daniel, you said he has Aspergers ... if I did an Open University course, I wouldn't have to do presentations. The issues of social aspects and relating to your peers, it's not really there with Open University.

Prof. Martin Bean: I would like to think that the hope that Daniel can keep pace will help him engage more socially. There are three universities left with open learning. Oxford, Cambridge and Open University. The day we went people centred was the best. The world cannot build enough universities for people to have the sort of teaching we have right now. It's about great teaching, we are ranked as the number one in student satisfaction. I no longer think of it as face to face but peer to peer. We do what we can.

Thank you. Take care, everyone.

Mary Quirke: Just some key things I picked up. I'm from Cork, but you can speak so faster than me!

Some things we looked at, no entry requirement, always open to new ideas, great thinking, innovation, exciting, terrifying for people who faced obstacles. This journey is just the beginning. Thank you. If you weren't terrified by that, you will be by our next session. We are asking people to leave this room and go next door; you will have tea coffee on the move, every 15 minutes you will move to the next station so everyone gets opportunity to learn from each station. Thank you.

Plenary: Mark Magennis, Esther Murphy, Dr. Michael Shevlin

Mary Quirke:

Okay, welcome back everyone. Hope you enjoyed your speed dating session.

Introduce you to next session - Mark Magennis will cover digital inclusion and students with disabilities.

Mark Magennis: Hello, everyone. My name is Mark Magennis from NCBI CFIT. Prepared this presentation with Esther Murphy and Michael Shevlin. After I give the introduction, there will be two parts; two students will present their experiences in relation to digital technology in education. I apologise their names aren't on overhead.

We are very pleased to have students here, need to learn from them and learn from each other, so the second part of workshop will be you talking to each other. I will then wrap up with feedback.

Topic: 'Any of my business '. What's my business in this? What's my role in this?

Brief introduction to Digital Inclusion, three things involved, the digital systems, the content of the systems the students have to use, also the devices they use to access them. Digital systems are things like websites e.g. college website, library catalogues, systems also when applying to go to college. The issues are it must be accessible to all the students, that all students can use the systems. Whose responsibility is it? We talk about the designers and developers. They are responsible for making it accessible, but we're also talking about procurement, a company will be chosen, however the procurer has to say it is accessible, so they have a real role there.

Digital content: Text, graphics... [see overhead]

Issues for this content have to be perceivable and understandable, especially for people with visual impairments. Video material has to be discarded or must have alternative description. People with hearing disabilities won't be able to hear the sound tracks, so will need captions/subtitles. In terms of who is responsible for this, content comes from lecturers but also it comes from other places.

Now there are more and more phones and tablets to access this content. Assistive technology is used. Issues for that are the availability of these assistive technologies and the right match for the student; also cost is a big issue. In CFIT where we can teach the designers to make acceptable systems, but then there's a barrier - the user don't have enough skills in their assistive technology to make use of the system built in.

Who is responsible for this? The student is responsible for learning to use assistive technology. Peer supports also important. Most of us are on Facebook, I doubt any of us went on a training course for Facebook. Much is picked up from your peers; they are a valuable source of information. They may understand the needs better.

This is all about roles and responsibilities. We will prompt you to talk about roles and responsibilities. We will now hear from the people who matter most which is the students.

Esther Murphy: Thank you, Mark. I'm going to introduce our students. We're delighted they're with us today. All of us believe the student experience is the one that should be leading.

I would like to introduce Saleem Ur Rahman, 2nd year studying computer science at Blanchardstown IT. He helped us out with a workshop we ran in Trinity. So hand over to Saleem. His talk is guided by the challenges technology has posed for him and some of the facilitators. He has just finished his first semester 2nd year exams.

Saleem Ur Rahman: I'm studying in Blanchardstown IT in 2nd year computer science. I completed my Leaving cert, will explain how I got to Blanchardstown IT. I had to get certain amount of points, which I did. I asked for a scribe and a computer. I thought it would be nice and clear. There were a few challenges with the Leaving cert, but overall it was fine. The maths - trying to write my equations, if something wrong, had to go back over. There was some extra time given.

I got through that, now in Blanchardstown IT. I got the technology I needed there, got my computer. I thought ... so I just go ahead and attend my lectures. Sometimes, the lecturer's slides were inaccessible, pictures/images not described, so I had to go back to lecturer to explain what was in the slides.

PDF's you would think would be accessible, but they weren't being used to full extent. Not your ideal solution to have to convert the PDF's. So that was a problem.

Access to library books were another issue for me. All text books were hard backed. No eBooks. I had to ask in the library if I could get book in eBook format. You can get a Kindle book, think you can put it on iPhone, but it's not accessible.

Software on PC which Amazon brought out, you can read the book, but can't review it. Critical thing is to read the text, but that's it, so it needs to be in a different format.

However, that seems to be accessible now. I use a Braille display for exams. Whatever's on laptop is outputted and it's in Braille. I cannot learn by listening to Jaws talking, it goes in one ear and out the other. So, things are not straightforward.

Another barrier I faced was in first year, 2nd semester maths - it was all equations and diagrams, couldn't be read by screen reader, all inaccessible, had to be converted into format that was accessible. The lecturer took the initiative and got a student in who converted it into accessible format. It was matrices, diagrams, all visual. The lecturer had to change the content to make it accessible for me. Matrix is cumbersome for a sighted person, think of a blind person.

They made alternative arrangements for exam, slightly different paper. I had a scribe, he called out the paper, I told him answer, he wrote it down. That worked out well.

2nd year, the grades reflect the work I put in.

If there was another person that goes into college and thinks I can't go finding stuff that's not accessible and give up easy. My parents say you will get there ... you do get there, but with barriers in your way.

Esther Murphy: Thank you.

We won't take questions straight away. Now I will introduce James Brosnan, he has graduated with first class honours in communications from DCU. He will describe his experiences himself.

James Brosnan: My grandfather was a schoolmaster in Athlone, so interested in academia at early age. I have a new passion; it's the joy of movement. I press a switch under my chin to communicate. The system has got me through college.

Esther Murphy: James is experiencing some difficulties with communication device.

James Brosnan: My grandfather was a schoolmaster in Athlone, academia appealed to me at an early stage. I press a switch under my chin to communicate. The system has got me through college and the world of journalism. Going back to fundamentals, there's more than my chin.

I was almost 6 when I began special school. I went on the bus in the morning, came back in the afternoon. It gave me the essentials to live. Before technology, it was a sheet of symbols on a board. With my kind of disability, cerebral palsy, the body is in constant conflict with itself.

I entered mainstream for secondary education. The school was co-educational and non-denominational. People say it was a doss school. The caretaker made ramps for accessible buildings and a roster was developed. I was making appearance on TV

with my mother and brothers. I had a synthesiser. The Junior and Leaving cert were done in the school. I developed scoliosis and had an operation the year before the Leaving.

College was next. Because of mix-up with the Leaving, I went to 2 colleges before I proved myself. I did Communications. It was my bridge to success.

Thank you.

Esther Murphy: Thank you so much, James. I'm in awe of the perseverance, thank you so much for being with us today.

It's over to ourselves, our role, how do we exploit the opportunities, avoid the dangers. How do we tackle issues? How do we address policy change?

You've just come from speed dating cafe experience, this room not as conducive. If every 2nd row people would turn around, maybe 4/6 people in group. We are asking these questions of you. As a researcher, I have a responsibility to reflect the true experiences in order to impact policy change.

We are privileged to have a mix of people all interested in this area. So answering question as lecturer, policy maker, disability support officer, whatever your role is. What can you do to exploit the opportunities of digital technologies in access and avoid the barriers?

2. In this role I can contribute...

So this is a short session, will keep focussed.

Dara has lent me the bell, so will feedback in 5 minutes.

Can we encourage you to turn round and get chatting being guided by these questions.

Thank you.

Dr Michael Shevlin: Everyone together for 5 minutes now. We were looking for roles and responsibilities. We're all good at saying 'that's your job, not mine'. So feedback from groups, as a former teacher, it's dangerous to make eye contact with me! Someone at the back? Would you like to say what you were discussing?

From Floor: We both have different roles, I am an employer.

From Floor: I am a student advisor.

From Floor: We were discussing roles re impact of digital.

As an employer, one issue we have is in disseminating information; we need a mix of mediums. If using technology and it's an important message to get out, we need to make sure we're communicating in a person to person way as well, otherwise it loses impact.

Dr Michael Shevlin: It's often about the relationship, also what needs to be communicated.

Thank you, Andrew.

Anyone else?

From Floor: You talked about ownership ... the issue of procurement. University should say we accept no offers that are not disability friendly. The students have high expectations, they have high IT input. They know how to handle it, we don't. Need needs assessment; what will work and what won't? We know there are always technological issues. But preparedness is good value for money. It's involving the student union at all levels. We need to listen to disability representatives on a daily basis especially in IT area.

Dr Michael Shevlin: Very good way of conceptualising how we look at access and how it develops. How does it become embedded? May not have a solution straight away.

Some more comments?

From Floor: Teacher training is vital, what needs to be embedded is universal design.

Dr Michael Shevlin:

The student becomes integral part each time we develop. This can also be linked into curriculum, new Junior cert, can be embedded into curriculum.

Final comment?

From Floor: Lecturer in university should have access to know your audience, that you know your student group and those with disability and look at their accommodations in advance of delivery, so you can meet their needs. Making sure lectures in certain font size, colour background that would be easy to embed. Disability services work closely with individual schools.

Dr Michael Shevlin: It comes back to the idea of embedding. Sometimes communication between disability officers and lecturers isn't what it should be.

From Floor: On the policy, just looking at headings Mark is putting on overview. Government is publishing National Digital strategy, as part of Ireland having EU

presidency. Books being major issue for universities, then work our way down through secondary and primary schools. It's now totally based around workbooks and how you interact with workbooks in a digital age.

Dr Michael Shevlin: Thank you to Mark for questions, we see this as a work in progress. We hope you will engage with us. Thank Saleem and James for their input.

Lunch now.

Esther Murphy: Thank you Dr Michael Shevlin, back here at 2.45, final part - Employer opinion and what they expect and think.

Mary Quirke: Will have publication available, enjoy your lunch.

Panel Discussion: Andrew Blair, Leslee O'Loughlin, Niall O'Hanlon, Dr. Mary-Liz Trant

Mary Quirke: Welcome back, everyone. Our employers are not so used to sitting so far away from people. I've been requested to ask you to move towards the front.

Dr Mary-Liz Trant: Thank you very much. This is our last session of the conference. We'll finish off on a good note. My name is Mary-Liz Trant, and I work in access for all students in higher education. Employability has always been an important outcome for students, very important where we are now. We need to meet the needs of employers, so good to get employers' perspective on universal design, also what employers would like to see more of and what they can contribute. It's that dynamic through programmes like WAM, helping students with disabilities getting that job they want.

I'd like to introduce Leslee O'Loughlin, Human resources Manager with Enterprise Rent-A-Car.

Andrew Blair, head of human resources Business Banking, Bank of Ireland.

Niall O'Hanlon, access officer for ESB.

We have two questions - each will talk about their assessment of development in universal design in Ireland so far. There will be different understanding and awareness among the speakers.

What are the key areas for further development...? [see overhead]

Each speaker will speak for 8/10 minutes, and then will open to the floor.

Start with Leslee.

Your views on those questions?

Leslee O'Loughlin:

I've been working with Enterprise Rent-A-Car for 3 years, am from San Francisco. Enterprise is a global American based company, been in business for 57 years, largest rental car provider in the world. Every year we recruit from 8,000 graduates up to 15,000 graduates worldwide.

First question in relation to my personal experience... I know the focus has been on education. I work in partnership with career services in universities. They do a fantastic job in helping students with disabilities finding employment.

What I would like to see is more engagement with universities from an educational standpoint in terms of employability. I'd like to interact more with lecturers. We're working with WIT on a project 'Embracing technology'. Lecturer in marketing department has teamed up with 3/4 students, candidates with disabilities and female candidates - we are in auto industry, females might see it as being male dominated.

There's an assumption for students with disabilities that they may have to drive. We're not teaching them to drive, but how to run a business.

The project these marketing students are working on is trying to find out how we as a company can advertise ourselves to attract these kinds of candidates. There will be a benefit for the students. We are also working with UL ... the project is 'how to help us attract candidates with disabilities and female candidates also'.

In terms of universal design, we still have challenges. Having come from the States working with Enterprise Rent-A-Car, things like accessibility in our offices ... in the States it was a non-option. I continue to beat the accessibility drum when identifying new locations. Continuing to make sure people understand that attracting diverse talent has tremendous benefits.

Dr Mary-Liz Trant: Thank you, Leslee.

Joan McGuire was talking yesterday - in Ireland we have to do retro-fitting. It's about everything new we do, that we must have universal design.

Now we move on to Andrew Blair, works in Bank of Ireland.

Andrew Blair: My background is also in human resources, worked in human resources for 25 years. Bank of Ireland is one of the pillar banks employing 12,000 people. There have been many changes over last 10/15 years, there are a lot more people with disabilities applying to organisations and applying to the bank in particular. I had my eyes opened about 10 years ago by AHEAD, because what we've been good at is complying re access and minimum standards or so we thought until AHEAD asked us to be audited. We didn't look forward to that. While we had very expensive buildings which we thought were accessible, we had done things where we hadn't thought first about diversity or difference.

In 2000, we had a new building, thought we would have that one audited. Outside the front door, there were three steps for main entrance. To the left, was an ugly contraption, you put your wheelchair there, pressed button, it chugged along, it took about a minute to get up. Most of the time it was broken. The audit said why not put a ramp in.

One of the issues with employers taking on people with disability is that they perceive cost around the accommodations. I'd say it's a resistor for employers. That's one aspect of it. Change is thinking about how we design the jobs, what criteria should we have to attract those people. First thing that has changed from universal design point of view is getting job design right, then applying it, so people can access and feel comfortable accessing.

We employed a number of people who were deaf without much knowledge and thinking it wouldn't be a big issue. We had an interview process with an interpreter which was okay as an experience, but the person didn't get the job, because the hiring managers found the process difficult to handle, so we need to know what was making the managers uncomfortable.

The changes we made were ... we prepped the managers and the interpreter, because the questions being asked were quite technical, and the interpreter couldn't pass them on. We sent the questions out beforehand. That's a massive change. Over last ten years, because of that we have taken on a lot more people with disabilities; it has made it easier to take them on.

WAM programme - what really made a difference was getting managers and human resource managers taking on people for 6 months placement, we learned so much from that. We thought we were open minded, diverse aware, in fact, we don't know anything. First question 'what do you think is disability?'

Dr Mary-Liz Trant: Thank you, Andrew. The perceived costs, it's not just for employers, it's also an issue for colleges too.

Final panel speaker Niall O'Hanlon.

Niall O'Hanlon: My name is Niall O'Hanlon and I work with Electricity Supply Board. I'm the access officer. I deal with complaints staff have from a disability point of view e.g. different formats of information.

We offer ten placements every year for 6/9 months, they get paid, and they are meaningful jobs. They are throughout the company, also not only for graduates. The programme started in 2006. We have employed 76 people so far. We've got support from line managers and staff; we mentor each of our trainees. The type of work is mainly administrative but can be in all areas of the company.

It's been a very successful programme both internally and externally. We have had positive responses from staff members, also from the people who come in. They come in on first day very shy, but after 6 months are ready to go out into the big bad world. They know what it's like to work in different locations. ESB put in place most supports.

Interview stage - I was speaking to our recruitment and selection people, what do they look for in an able bodied graduate, what competencies?

It looked like the graduate interview was a lot tougher than the graduate traineeship programme.

Disabled candidates ... competencies may not be as strong as other graduates which may be due to sensory difficulties. You have a lower expectation of the candidates you bring in.

Last year, we had a girl who wasn't educated right up to her 20s, had never done Leaving Cert, she came back this year, she did her Leaving cert in her 20s, degree in early 30s, and she had a hearing impairment.

Some of our candidates have not been able to show the same determination.

The feedback I get from the candidates is once they are in place; they are well able to do the work. If they have done a degree, they have gone the extra mile to overcome difficulties.

Dr Mary-Liz Trant: It's about universal design of interview processes. It's that expectation that an employer is asking about clubs and societies they've been involved in, that's not always appropriate. Different students have different experiences in college. Every candidate should have equal chance to do well. It's about everyone being able to shine and show achievement for what they've done.

Andrew spoke about experience of interviews, both interviewer and interviewee having the right chance to show what they're capable of.

If I can throw it open to the floor. Introduce yourselves and where from.

From Floor: Siobhan from Enable Ireland, this has been a very useful discussion. There is a challenge around accommodating employees in the workplace. Do the panel members have comments on accommodating employees who acquire a disability during their working life? Long work absences should be pro-actively addressed. Some are at high risk of never returning to employment. Do panel have comments?

Niall O'Hanlon: In ESB, we have a high percentage of ESB linesmen getting injured, every year we make a return of disabled staff. An example of a retained staff member ... he was a driver, got injured, was given an office based job, he hated it, manager came up with the idea - would he like to drive one of the trucks, so got an automatic van and he's back on the road now and loves it.

Andrew Blair: It's interesting that you say there's difficulty with retaining people. If someone acquires disability, resistors re cost issues don't get put on the table. If

someone acquires severe disability, there is a strong desire to do the right thing. I think it's because Bank of Ireland is an old traditional institution, which would almost do anything to try to retain people, throw money at the problem, rather than deal rationally with the issue.

Leslee O'Loughlin: It hasn't been something I've come across in Ireland, been working here for 6 years. I can think of two examples of employees who acquired a disability.

Enterprise does provide long term disability benefit. We try to keep those employees engaged in the business, keep communication consistent and allow opportunity to re-engage in the business.

I have to incorporate this in disability training with our line managers. I put this very much on the forefront and talk about being inclusive. Sometimes, they see difficulty with hiring people because it's a rental car company.

Andrew Blair: Argument - what if one of us acquires a disability? Are we not going to do the right thing?

Dr Mary-Liz Trant: Siobhan from Enable Ireland.

From Floor: I think it's interesting to hear practical examples. My experience is in IT sector, accommodations have not been as forthcoming. Cost of those accommodations can be very low and can be achieved. It's great to showcase some good examples where companies have done the right thing.

From Floor: Barbara Waters, UK. The issue around cost. Not all disabilities require physical/financial investment. I'm thinking of managers who think employees might take up time e.g. people with mental health issues, autism etc ... that the manager will have to organise the person's work. It's a reluctance to change the way you run your department.

Andrew Blair: Example of perceived cost that was very positive. When we first brought people in for placement, some managers were more willing to give time upfront. People who put their hands up and said they'd like to understand the situation, they were better people managers. When I first took on people with disabilities, I was very careful to put them with better managers. There is some extra work to do, but not a vast amount. Some managers don't want to change, just focus in on their job.

Perceived cost - the swipe system as you come in, in the new building the swipe system had been put up at a high level. When we had someone with a wheelchair, we had to change that. We thought why have we got that up there? Why not have them all at waist height? That's what we have now. So that had a positive impact.

You can swing your hip at it now!

Dr Mary-Liz Trant: Do you want to say something about perceived costs? Are there ever conversations about how that's managed?

Niall O'Hanlon: I have not met it so far, and I've been in the job nearly two years. We've taken in over 20 trainees ... we've spent a lot of money on interpreting this year. I work in human resources and so far I haven't met the problem. We are a large organisation ... it would have to be something seriously expensive for us to say we couldn't do it.

Leslee O'Loughlin: It's about having the hard conversation with the stakeholders. We just recruited a student from UL on WAM programme. District managers are responsible for their businesses. We had an office that already hired its placement student for the year. We interviewed the WAM candidate, when we found out that he was WAM candidate and interview process didn't give fair opportunity - I went back to the manager, we had a conference call with the management team. The area manager who did the final interview said candidate sailed through the interview, normally would have said 'can't afford this'. The thing to do would be spread the entire cost throughout the group.

Dr Mary-Liz Trant: Have heard employers talking, the 'why' bit. Enterprise has a role in this, the huge diversity, different perspectives e.g. whether it's women, people with disabilities, minority groups. It's sometimes the unspoken bit.

Leslee O'Loughlin: I think when you bring in these candidates, it gets easier. We want to have our line managers, management see the benefits it brings.

Niall O'Hanlon: I would agree with that. Every year, the positive feedback coming from staff up as far as the directors of the company, it's so positive, it's not hard to sell it again the following year. We're starting our programme again this year. It's not me having to go out any more, they're coming to me, and the quality of the candidate is coming through.

Dr Mary-Liz Trant: Presumably feedback from customers as well. This is a company that supports diversity. In our census, 9% are people with disability. Maybe choose Enterprise Rent-A-Car, Bank of Ireland, over other companies. These things need to be articulated more as we progress / develop.

From Floor: Patricia Cardy, Athlone IT. Emphasis is on increasing participation for people with physical and sensory disability. We have found more students with mental health difficulties, also Asperger's. The focus seems to be on the physical and

sensory. Are you focussing on those with mental health difficulties, Asperger's? They need a lot of support.

Andrew Blair: It's all disabilities. But I think you're right, the main concentration is on disabilities you can see and understand more. I think we need awareness and understanding and degree of knowledge, we don't have the knowledge and experience that people in this room have. So creating awareness is part of what we do. Health insurance scheme - for people who are long term ill, 80% on that list have mental problem. How we deal with that is very important. The number is over 100. That list was much less some years ago, I think because it was hidden. It's a difficult subject.

Leslee O'Loughlin: I would agree with that. My colleague attended conference called Beat the Change, it was eye opening. You are learning things you didn't know about mental health, for employers there's probably still a stigma around it. I would not say we are precluding those folks. In terms of understanding, we have a lot of work to do as an employer.

Niall O'Hanlon: We had a Down Syndrome candidate last year; the situation was helped in that someone in the location was aware of Down Syndrome issues, so it made it easier to look after.

Leslee O'Loughlin: We have focussed on trying to help engage with our own employees, running workshops, how to deal with mental health issues, stress. Dealing with issues internally for our employees is important to us.

Dr Mary-Liz Trant: We work with Job Bridge and Wam. Someone with Asperger's - there isn't a wide understanding how we can support them well; will they have a good experience? In a way, we are a bit behind regarding those with mental health disabilities. All of us have a disability of some sort arguably.

From Floor: Caroline from WAM programme. A lot of you from higher education have an opportunity to tell your students about the WAM programme. We launched in Dec, 180 people have already registered looking for work. If they are on database, they have a better chance of getting a job.

Dr Mary-Liz Trant: It's a fantastic programme, congrats to AHEAD for it.

Final comments?

Thank you to each of our panellists; it's been a short enough conversation. Supporting people with disability is hugely important, hopefully in next 3/5 years we will move that on. WAM has been instrumental in that. I don't know if we could have had this kind of panel 5 years ago.

Thank you, Leslee, Andrew and Niall. Thank you all for your attention.

We are closing the conference now.

Alan Hurst will wrap up proceedings.

Alan Hurst: When Mary asked me to close the conference at lunchtime, she said there will be something in it for you. It's cheap car hire, cheap banking and cheap electricity!!

Colleagues, it's been a long but good two days. Proceedings of conference will be on website. Please collect copy of 25th year publication as you leave. Can I thank all the staff of AHEAD for all the work they've put in, over past two days and in preparing for this conference.

Conferences are never easy to organise, can't please everyone. Some speakers had to drop out due to ill health, also CEO not able to be here, good wishes to Ann for a speedy recovery.

I speak on all our behalf, on AHEAD's behalf, I'd like to thank all the speakers, also thank all the participants, both from Ireland and overseas for coming to Dublin.

I wish you a safe journey and hope to see you at future events.

Innsbruck International Disability Conference is happening in July. AHEAD is a conference sponsor, if you want details check out by googling Innsbruck disability conference.

Happy St. Patrick's Day.

One last administrative announcement, please leave your badges at the desk, also we will send out feedback form and look forward to receiving those back.

Thank you.

Close of Conference