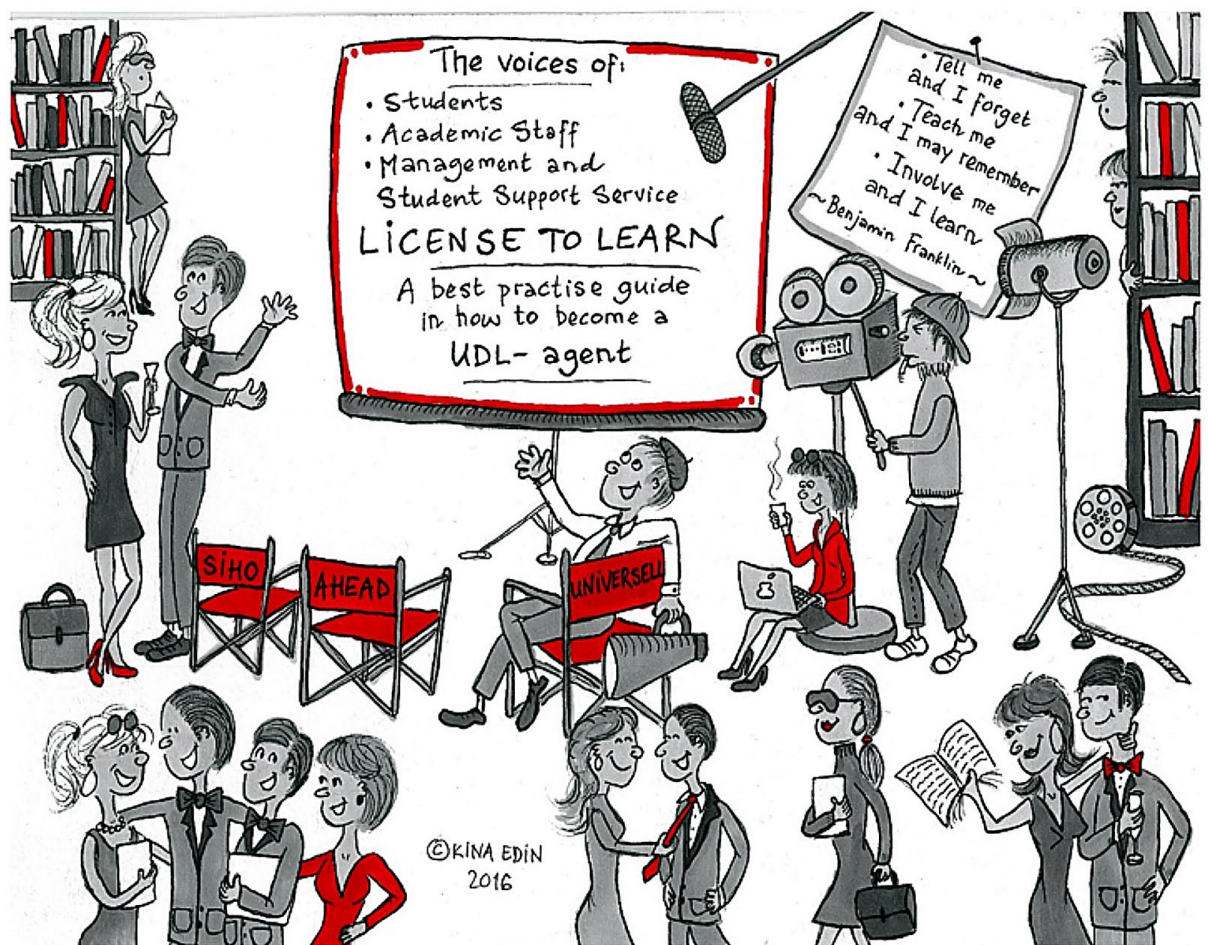


Universal Design for Learning

A Best Practice Guideline



Universal Design – License to Learn



Funded by the Erasmus+ Programme of the European Union

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UDLL project manager: Kjetil A. Knarlag, NTNU

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Illustrations by Christina Edin, Luleå Tekniska Universitet, Sweden and Ray Watson, Ballyfermot College of Further Education, Ireland.

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Introduction

What is Universal Design? What is Universal Design for Learning? Most likely, you have only heard of these terms somewhere along your journey as a student, a teacher, a manager or an employee at a student support service in Higher Education. Perhaps you have encountered the term Universal Design in another context, like listening to the news in relation to requirements for public buildings and ICT systems. Well, these are important, but in a learning context, they are just a small part of a bigger picture.

Right now, you have opened the Best Practice Guidelines for UDL – Universal Design for Learning. That is a good start because this indicates that you have some kind of interest in understanding and take advantage of the concept.

So ‘What’s in it for me?’ you might think. What we want these guidelines to do is to help you start reflecting - how do the UDL principles affect me in my context? What can and should I do when someone asks me to contribute to a universally-designed learning environment? We address a wide range of readers, with different experiences, roles, attitudes and ideas about how to address student diversity. Our purpose is twofold;

Firstly, we want you to embrace Universal Design and Universal Design for Learning as the best concepts for a flexible, creative and inclusive learning environment for the benefit of all learners. Including you.

Secondly, we want to give you theory, perspectives and practical tools to challenge and change your everyday working methods.

Using our seven guidelines, you will learn about important aspects of introducing UDL as a key concept for creating inclusive learning. The guidelines address all the important stakeholders within a higher education institution, who in our opinion have a role to play in the understanding and implementation of the concept.

Four stakeholders - many perspectives

These guidelines are written with input from four important stakeholder groups in Higher Education. Their voices have contributed a number of good ideas, advice and perspectives. Simultaneously, the different guidelines address stakeholder roles in implementing our thoughts.

1. The policy makers and management

This group has given advice on how to implement UD and UDL from the top, reminding us of perspectives like the need for vision and strategies, the fact that change is built on evidence and knowledge, and to ensure quality and collaboration in the process. The first guideline about sustainable policy is our answer to these challenges, and guideline two about collaboration is a must-read on this matter. Managers at faculty level have emphasized the need for universal curricula design, treated carefully in guideline four. All these guidelines represent the important framework for other stakeholders' success. Even the best manager cannot work alone, so look into guideline two for collaboration partners, and guideline seven for your really experienced experts.

2. The academic staff and faculty members

The academic staff are crucial in implementing UDL. This is very natural; UDL is very much about methods for good teaching and assessment, and definitely about the students' learning outcome in the end. This requires a good design process in creating the curriculum, described in guideline four, and a toolkit for teaching, learning and assessment presented in guidelines five and six. Again, look to your partners and peers as early adopters in guideline two about collaboration, guideline three about students as UDL partners, and guideline seven about agents for change. Well, it seems likely if you are an academic; just read the whole set of guidelines.

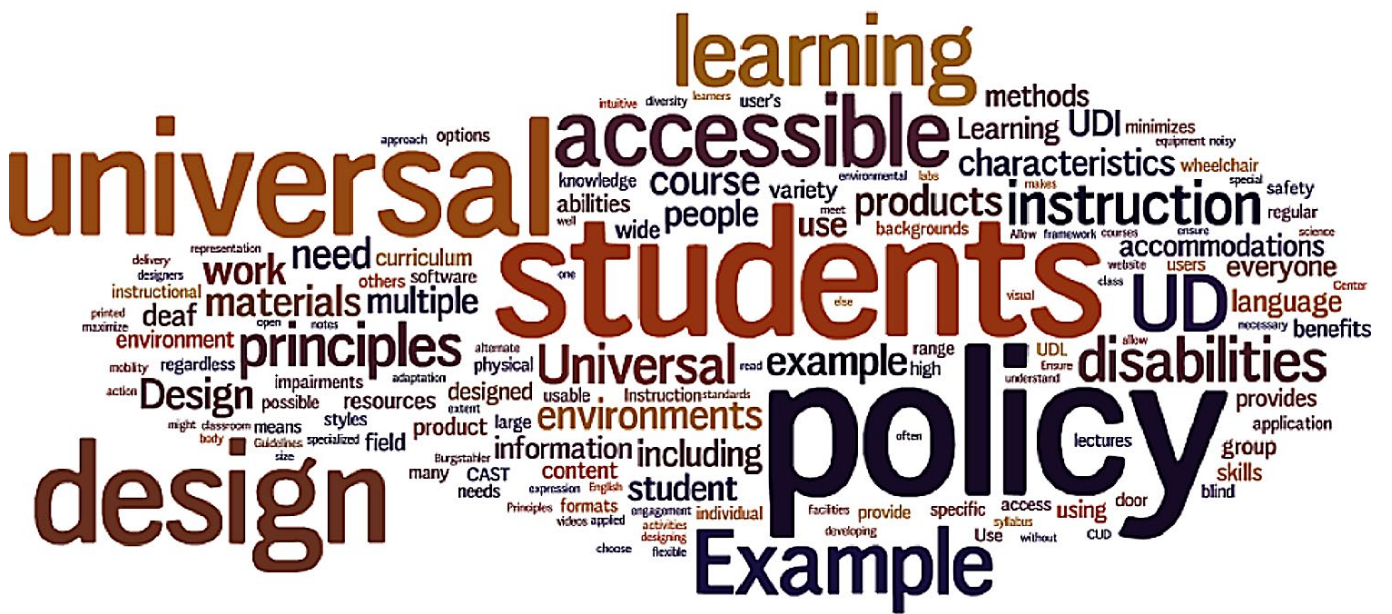
3. The student support services

If you are already working in any kind of disability support office, at a faculty or in the administration, you must prepare to be one of our agents for change. You will probably have to take the lead in addressing the managers and feed them with knowledge and ideas, to collect the best practice from early adopters among teachers, to be creative and active to promote collaboration for developing UDL across campus, and simultaneously address the student's needs in all different contexts. Stressful? Well, all these guidelines are to support your work. Use them, discuss them – and challenge your working environment in small steps.

4. The students

The students' contribution and input are all over the guidelines. Even though most students are not concerned about the term UDL, they really want their learning environment to work out well for themselves and their fellow students. They want good practice, flexible and varied teaching and learning methods, and a system above all which ensures progress and quality assurance. Moreover –

quite obviously – they want the opportunity to ask for something additional if the UD and UDL efforts from all stakeholders are not sufficient or adequate. If you are a student reading this: please step up, participate. Equally important: be an active, prepared and conscientious student. Prepare to do your part in changing the learning environment for the benefit of all students.



Dictionary

We have used a lot of terms which are common in adult learning but which may vary from country to country and in different languages, so we have given a short definition below to assist your reading of the document.

Blended learning

The practice of using both online (digital) and in-person (class, lectures, mentoring etc.) learning methods in teaching students. This creates a mix of a digital learning environment and a physical learning environment, but there is no fixed balance between them.

Competence standards

A competence standard is a particular level of competence, ability or skill that a student must demonstrate to be accepted on to, progress within, and to successfully complete a course or program of study. This is related or similar to the term learning outcome, which might be used in some European countries. Used in guideline 5.

Curriculum

A curriculum is a deliberately planned, designed program of learning which incorporates subject content, skills and competences to be developed, recommended approaches to learning and teaching and the forms of assessment for student progression

Disability

Disability is the result of the loss or limitation of opportunities for a person with an impairment to take part in society on an equal level with others due to social and environmental barriers.

Early adopter

Person from university staff, who has done something innovative or differently in every day practice, resulting in best practice for UD or UDL as a result. Teachers adopting innovative flexible ways of teaching and assessing students, often do this consciously to promote student's learning, but might be unaware of the concept of UDL.

Impairment

An impairment is an injury, illness, or congenital condition that causes or is likely to cause a loss or difference of physiological or psychological function.

Institution

We use the word institution for every higher education institution that provides higher education (in some countries third level) for students, this can be a university college, a university, or technical university.

Learning outcome

Either the expected knowledge, skills and competencies a course/program of study is designed to achieve; or the skills and competencies attained after successful completion of a course/program of study often stated as 'The course will have the following learning outcomes'. The term is related to the term 'competence standards'. Used in guideline 5.

Syllabus

A syllabus is the prescribed list of curriculum content and the sequence in which it should be taught.

Universal Design

Universal Design means the design of products, environments, programs and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Universal Design for Learning

The term 'Universal Design for Learning' has been defined in US legislation as 'A scientifically valid framework for guiding educational practice that provides flexibility in the ways information is provided, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged. UDL reduces barriers in instruction, provides appropriate accommodations, supports and challenges, and maintains high achievement expectations for all students including students with disabilities. (Higher Education Opportunity Act, Sec. 103, Additional Definitions)

The big picture

UD and UDL in the Wider Context

The UN Convention on the Rights of People with Disabilities (UNCRPD) was adopted by the UN General Assembly December 13th 2006. The UNCRPD is intended to protect the rights and dignity of persons with disabilities, and most European countries have both signed and ratified the convention.

The convention sets specific requirements for how member states should promote policies to ensure that persons with disabilities could fulfil essential human rights, such as access to education. UNCRPD defines universal design and accessibility as key concepts in the development of an inclusive society, in all aspects of life. The important consequence of UNCRPD is forming new and adjusting existing acts and regulations. UNCRPD represents an important paradigm shift in how to address disability and diversity.

During the last two decades, the terms ‘Universal Design (UD)’ and ‘accessibility’ have been discussed closely in many areas of society. The UD concept originated in the US as a design concept. It has been transferred and developed in other areas, like architecture and ICT, and further developed in several other disciplines across the world. Universal Design is explained as a dynamic concept, constantly developing as we learn more and try out theories in practice. Our experience is that legislation on Universal Design is slowly expanding into Higher Education. At least when it comes to the physical learning environment.

The concept of Universal Design (UD) represents an excellent framework to ensure inclusion for students with disabilities in higher education. Still, the UD framework is until recently unused as an educational and pedagogical concept. Why is this so?

UD and UDL in an Educational Context

Systems-thinking

Universal Design for Learning (UDL) is a relatively new concept in higher education that means we have to change how we think about educational practice so that a greater diversity of students is included in higher education, including those with disabilities. Moving towards UDL means challenging the status quo of the traditionally advantaged learner and a pedagogy based almost entirely on text based learning. In order to respond more effectively to the different learning requirements of a greater diversity of students there needs to be a rethink about all aspects of the system.

The key stakeholder groups invited to take part in this UDLL project have clearly identified that a systems-thinking approach would give us greater insight into how

to implement UDL in higher education. We must bear in mind that any change in one area of the system has a knock-on effect on the preceding and following parts, creating a domino-type effect. For example, if the admissions policy of an institution positively discriminates in favor of admitting students with visual impairments and blindness, then this will have an impact on all other areas, for example how the institution provides accessible information; how ICT is embedded in teaching; how the library provides eBooks and how performance is examined.

This project was deliberately structured to create reflective spaces for collective dialogue with key stakeholders at all levels, and in particular the student group, to explore UDL as a positive solution to diversity. The focus groups asked questions about their different perspectives, what people valued in their work, what they aspired to do, and what stopped them from doing things differently. It went beneath the surface to reveal assumptions, tacit beliefs and revealed how a fear of failure can paralyze innovation and how their role identity can affect their behavior and act as a barrier to bringing about change.

In most cases when confronted with a problem we seek a quick fix solution such as adding-on additional supports in the case of a student with a disability. This does not solve the problem in the long term as it does not involve any fundamental changes to the system in terms of culture and practice. A more effective approach to problem solving is to question the assumptions and strategies that underpin the nature of the problem in the first place.

What has emerged from the UDLL project is that all involved agree that a development mind-set involving risk taking, tools and resilience is needed within the culture of higher education institutions. The process of bringing key stakeholders together to share their ideas, learn from each other and apply their collective creativity to solving problems can be an uncomfortable yet invigorating experience. It is a critical process in bringing about the changes necessary to successfully implement UDL as a framework for learning in higher education.

This concept is further explored in the article on systems theory on our 'Resources' website at www.udll.eu.

Trends in Higher Education

Before implementing UDL theory and practice in a Higher Education, we have to be aware of the broader context relevant for this work. Higher Education has developed rapidly the latest years, especially when it comes to the digital development and the new teaching and learning methods replacing more traditional approaches. Also, the student population is more diverse than ever.

Digitalization

The students have grown up in a digital world. They are used to finding resources online, delivering tasks online, group work and cooperation online and use of social media. The digital learning environment challenges the traditional physical campus, and the learning content is more accessible than before. It is important to keep all students in mind in this development.

Innovative teaching and learning

Active students participating in discussions and challenged to analyze, synthesize and evaluate, interactive relationships between students and teachers, flexibility, variation, differentiated learning

Diversity

Variation in culture, ethnicity, gender, social class, learning styles, personal experience, preferences, disabilities. 24 % of the students report some kind of disability in HE, and 15 % of the students report some kind of disability that affects their studies (Eurostudent, 2015).

Raising awareness of diversity

In all study programs, subjects and groups of students, there is a diversity of students who all represent something unique. Many perceive students as identical and average, but it is seldom the case. In a first year course on a Bachelor's degree, many of the students come straight from upper-secondary, while others already have many years of experience from working. Maybe someone has been raised in a different culture with a different language, or maybe someone has a form of psychological, physical or cognitive impairment. Everyone should assume that the student group, almost regardless of size, is diverse.

Students' different experiences means they develop different ways of learning. They may prefer certain ways to approach learning; some learn best by listening, while others learn best when they take part in the activity itself. It also means that students have different preferences and strengths when it comes to how they best demonstrate knowledge and a great variance in what they perceive as motivating.

With knowledge of diversity in the student population, it is important to plan teaching that best caters for different needs, learning styles and preferences. If you do this, it will reduce the need for individual adaptation, while increasing the motivation of all learners.

The following guidelines are designed to support you and your institution in developing and implementing UDL as a strategy for inclusion.

Guideline 1

**Create a sustainable and coherent policy
through clear visions and strategies**



Figure 1: Implementing UDL is an institutional responsibility. All stakeholders must be involved.

Introduction

Developing a sustainable and feasible policy is a crucial and powerful tool for a successful implementation of the UDL concept in Higher Education. Policy makers and management have a key role for success when it comes to inclusion for students with a disability. To develop and implement an inclusive and flexible learning environment, with progressive practices for inclusive teaching and learning for all students, we need policy makers and managers to act systematically based on sustainable policy and practice.

All policy and strategies build on knowledge. This is also very true for implementing UDL as a core strategy for including all students in learning. Knowledge about the diverse student population is important, as well as knowledge about rapidly changing learning methods and the development of ICT as a pedagogical tool for all students. In the last decade we have also seen a shift in emphasis from access to learning environments to **learning itself** – which certainly is a key tenet in UDL thinking.

Simultaneously, demands from overall policy like the UN Convention on Rights for People with a Disability (UNCRPD), and EU and national regulations, create an important framework for policy on inclusion in Higher Education. Universal Design is an important pillar in UNCRPD.

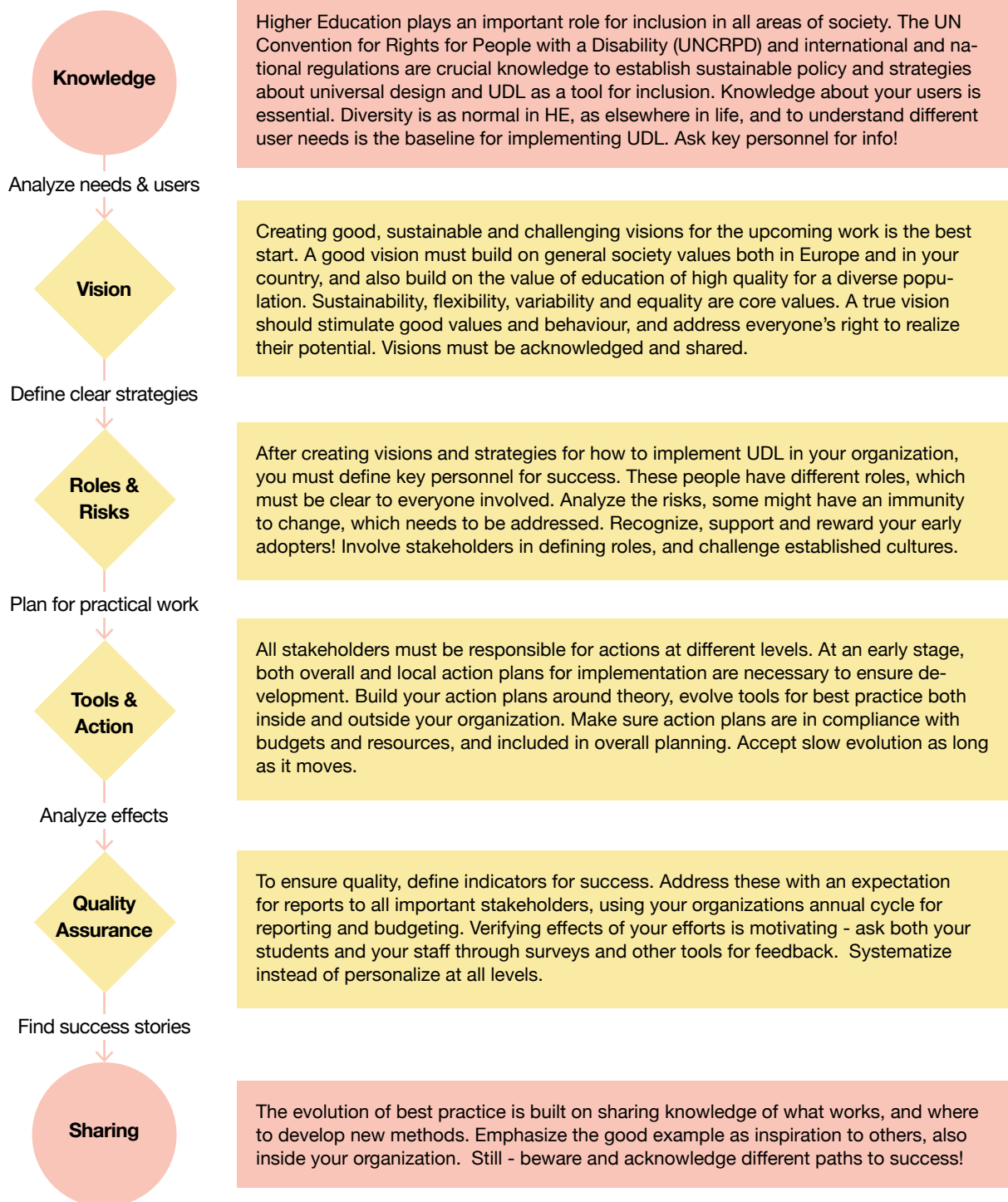
All policy makers – or managers at different levels in a Higher Education Institution – must take this development into consideration when creating visions and implementing UDL as a key concept for inclusion. The management's responsibility is thinking top down – based on knowledge and influence from all stakeholders.

Ask yourself:

- Is there any vision at a national level about universal design in your country?
- What visions and strategies exist at your institution to ensure an including learning environment for all students?
- Who are the key personnel to realize these visions, and how do you as a leader support them?

Top-down implementation of UDL

A quick guideline for decision makers



Ground rules for implementing UDL in Higher Education

- Develop an over-arching institutional policy
- Use the expert knowledge of the diverse user
- Create clear and challenging vision
- Form sustainable strategies at all levels
- Develop action plans for implementation coherent with budgets and other important plans
- Use/develop your system for evaluation and quality assurance

A Vision for UDL

According to policy makers and managers in different HEI's – a vision is an important tool for inclusion. Vision and strategy are both important, but vision always comes first. If you have a clear vision on UDL, the right strategy will be identified. If you don't have a clear vision of UDL as a tool for inclusion, no strategy will save you.

These guidelines for a UD and UDL vision are built on input from a transnational group of leaders at different levels in the educational sphere. Their advice for a vision for UDL is to:

- Emphasize the pedagogical component of UDL – as a tool for excellent **learning outcomes** and fulfilment of **competence standards**
- Emphasize the **value of education, and reward good educational practice equally as research**
- State the clear message that every student must have **equal opportunities to reach their potential**
- Stress that education for people with disabilities is closely connected to **participation** in work life and other areas of society
- Focus on **diversity rather than disability**, that equals all students
- Highlight that UDL is a benefit for all students – UDL represents a framework for higher educational quality for all students, both nationally and internationally

Visions must be formulated at different levels. We have collected and developed some examples for inspiration. Use them wisely in your own context.

Vision example 1:

“Norway universally designed by 2025”

This brief and concise vision from the Norwegian Government in 2009 was followed by national action plans at different areas of the society. The vision's strength is the simplicity and exact timescales; the weakness is that it stretches across everything. At a governmental level it works very well as a vision as long as strategies are implemented beneath.

“This is a very high level vision, which has to be transformed to visions suitable for Higher Education. A vision for UDL must build on pedagogy.”

ORB, 20.1.2016

Vision example 2:

Vision for UD of ICT

“All ICT and communication technology shall be universally designed by 2020. This will ensure equal access for all students and staff to information and necessary IT based support systems for teaching, learning and learning technology.”

The important question is how to articulate a good vision for UDL in Higher Education. It must definitely be a vision based on values and practice in your context. Nevertheless, here is our suggestion, including the need to set a timetable.

Vision example 3:

UDL

“By 2020, our Higher Education Institution recognizes diversity as the norm. In addressing this, all students must have equal opportunities to reach learning outcomes, meet competence standards, to experience personal development and be prepared for the next steps in life. This can be achieved through a learning and teaching culture based on core values in Universal Design of Learning: flexibility, variation, activity and engagement. UDL is the pedagogical framework for all our students.”

In the process in developing and implementing vision:

- Adjust the vision to your context
- Adjust the vision to your level of ambition
- Adjust other action plans according to your vision
- Discuss with your experts on teaching, learning and diversity
- Put enough resources – economic and personnel - to ensure feasibility
- Find your early adopters among academic staff
- Always remember: find your own recipe!!

Define roles and responsibilities!

Implementing UD and UDL in a big organization needs clear thinking about who does what, where the scope for action and the lines of responsibility are, to ensure quality in decision-making. It is interesting to see that the role of the disability officer is slowly changing to be UD and UDL coordinators. They may often need to co-ordinate groups of people both bottom-up and top-down. This is why roles and responsibilities must be formally acknowledged in the organization.

We have gathered all key stakeholders influencing this matter at a university in this table:

Roles and responsibilities in implementing UD and UDL in HE	
At the macro level	
<p>Demands from society and overall planning</p> <ul style="list-style-type: none"> • Policy • Visions • Ethics and basic values in society • Acts and regulations • Strategies 	<p>Strategic Lead: The board, rector, dean</p> <ul style="list-style-type: none"> • Create visions • Define values • ownership • Make a framework for reporting and quality assurance • React to acts and legislation
At the meso level	
<p>Planning and implementing at a system level</p> <ul style="list-style-type: none"> • Action plans • Technical quality standards • Regulations • Subject-specific instructions 	<p>Implemented by: program coordinators, service providers at all levels and the UD and UDL coordinator (or disability office)</p> <ul style="list-style-type: none"> • Curricula design and course planning/ syllabus • Service and systems • Day-to-day management • Evaluation
At the micro level	
<p>The individual in relation to context</p> <ul style="list-style-type: none"> • Individual perspectives • User experience • Teaching and learning • The student • Academic staff 	<p>Implemented by: teachers, counsellors, and the individual student</p> <ul style="list-style-type: none"> • Individual education plans • Use of learning activities and technology • UDL and accommodations

Table 1: Stakeholders, roles and responsibilities in implementing UD and UDL in HE.

Guideline 2

Build on strong networks and value all partnerships

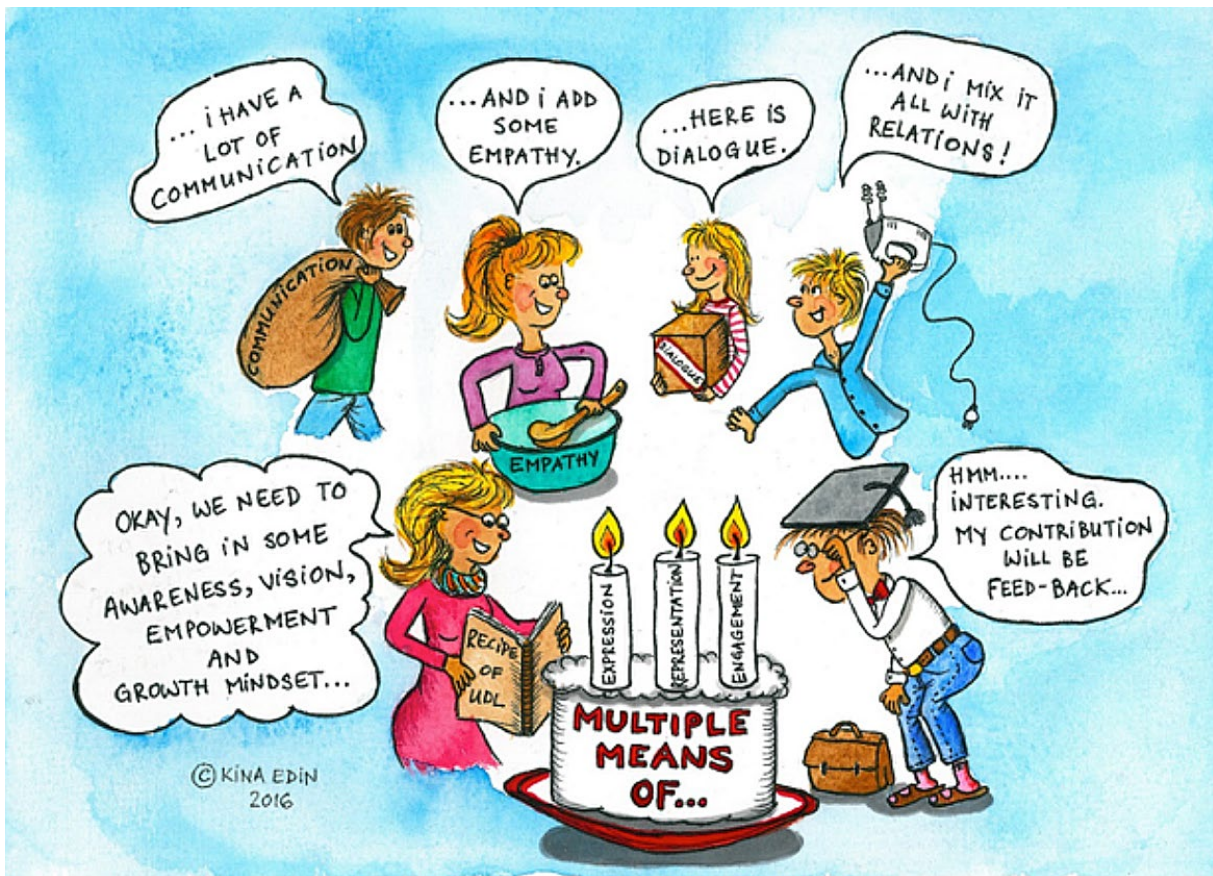


Figure 2: Collaboration between all stakeholders is necessary to implement UDL across campus.

Introduction

The title of this guideline encourages you as a reader to build on strong networks, and to value and collaborate with all potential partnerships in the UD and UDL work. You might wonder - For whom is this guideline? What partnerships? Does anybody else but me have an interest in diversity, Universal Design and UDL?

Collaboration across campus is crucial to implement the Universal Design concept, especially when it comes to the learning component, which for some might feel a bit soft and less easy to define compared with other areas of UD theory and practice. The main purpose of this UDL guideline is to identify opportunities for change and to strengthen good practice.

No single person can be the UD or UDL champion. All our stakeholders identified close collaboration between students, academics, experts on diversity, disability and Universal Design, managers and policy makers, and early adopters as crucial to all UD and UDL development. Why is this so? How can we create and develop useful networks to ensure development in this field?

As we have learned, greater numbers of students enter higher education with different learning and support needs. Alongside this development, new technology and pedagogical methods for supporting the learning process are emerging, challenging both faculty members and administration and support systems. Every HEI must meet the need for collaborative relationships between faculties, students with disabilities and experts on teaching, learning and diversity in a professional way, and in an atmosphere where everyone's input is valued.

Ask yourself:

- What kind of networks could exist for collaboration to create change and address UDL as a best practice solution?
- What structures are there in your institution, and if you were to invite a group of colleagues to discuss diversity and UDL, where would you start?
- Who are your key colleagues for developing and implementing UD and UDL thinking where you are?
- In what way and on what level can students be involved?
- What does it take for you or someone in the right position to be the UD and UDL coordinator at your institution?

In Guideline 1, we defined important roles and responsibilities at a macro, meso and micro level, developed from a management point of view. In the following, we will look at why and how the different stakeholders can work together.

We all have assumptions on why the different stakeholders are cautious in contributing to develop good practices on UDL. A regular assumption is to claim there is no interest of these at the faculties or in management. This might be so, due to lack of knowledge, resources or maybe other urgent work in a constantly developing university and university college life. Still, if you want to gather interest from stakeholders, invite them to the first small step - **Collaboration**.

Collaboration is in itself a value, and most higher education staff collaborate on tasks like course design, curriculum development, professional discussions, rules and regulations, strategies, economics etc. Experience has shown that there might be hidden assumptions on both diversity, disability, UD and UDL. This might occur when these themes are seen as something extra, something costly and not valued as a part of the policy of the institution or of great value for the society.

In this tough climate, as an agent for change, you need to focus on the how to collaborate with all stakeholders, and to value their difference and perspectives. Who are the most important ones to bring to the table? Let us have a look.

1. The Board, the Rectorate, Deans: Invite them to manage, facilitate and organize collaboration

Invite the managers to do what they do best. Managing and organizing collaborative activities needs support from managers at different levels, and might need some resources to develop well-functioning networks for best practice and change.

If there is a vision, strategy and action plan for implementing UD and UDL on campus, invite the managers to a first meeting of a bigger group taking responsibility for further development. At the top level, there must be a great body of knowledge, facts, figures and success stories to encourage further achievements. Seek endorsement at the top level for people to move on from thinking in silos. Take time to recognize success stories in this field, bring them to your management or colleagues to support open interaction and collaboration.

Use strategic and professional committees with concerns about teaching and learning. They will be important allies and can help to give feedback on a larger scale.

2. Faculty members: Feed them with best practice

- use the early adopters

In our definition of a faculty member, we refer both to the academic staff of a higher education institution and the administration supporting them. As an example, in Norway the administrative faculty support staff have an important role coordinating faculty interests, and is an important partner for both the disability office and the students. In their role of connecting experts and academics and student demands, they are crucial for collaboration at a Norwegian HEI, and hence important for implementing UDL.

The faculty members have, with some exceptions, little knowledge about disability and Universal Design. However, they are the experts on course planning, rules and regulations, and most certainly about teaching and learning strategies and methods. This is a fantastic starting point; invite them to contribute from their own position and use their knowledge in a focus group on UDL and diverse learners and pedagogical practice.

Faculty members, especially the academics, want more **information and training** - our experience is that they are most interested in listening to best practice examples. Some academics are even **early adopters**. They have knowledge of the diverse user groups, and some might have adopted new teaching methods such as blended learning and flipped classrooms, and the use of technology as support to both traditional and new teaching. These early adopters are the best ambassadors, and perfect collaboration partners in a group. Faculty members are more likely to learn from peers than from others. Encourage and use the early adopters wisely, if you are one yourself, search for peers amongst the disability and UDL experts.

3. Student support services

Staffing and organization of student support services vary between different HEIs. Student services may be delivered through a disability office, a group of student counsellors, a careers center, or as a mix of all kind of support functions. Different categories of support service have differing experiences in relation to diversity; A disability office is naturally more likely to have knowledge on UDL than an international office in a higher education institution. But all have important parts to play in a universally designed campus, and are equally valuable in the partnership of stakeholders.

The question to ask is how these services contribute to the learning process, and how to involve them as partners in UD and UDL collaboration. Most likely, as we show in Guideline 7, the existing disability office might be given or may take a role in UD and UDL progression, and be one of the key agents for change. They have knowledge of diversity, disability and perhaps UD and UDL theory and practice, but have to cooperate with and challenge all stakeholders to deliver change.

4. Centres for excellent teaching: support with theory and evidence

Where an HEI has a Centre for Excellence in Teaching, or similar professional committee, challenge them to give input to the work. The importance of collaboration and support from pedagogues and other staff dedicated to best practice in good teaching and learning is of great importance. Managers and academics often ask for scientific evidence, and such committees or centers can support you with academic pedagogical knowledge, and connect UDL practice to theories and educational trends.

This provides an opportunity to investigate further the concept of UDL in higher education, and to address this both as a field of upcoming research, and a field of collaboration. Several pedagogical trends support the UDL thinking, use them well for further development on an expert level. You can see our literature review on the website at www.udll.eu.

5. The students: bring them in as experts on their own situation

Students are an important part of the stakeholder group. They will have different disabilities, learning styles, preferences and needs. Invite the students to the table on equal terms.

Students have stories, are experts on their own situation, and their experiences will benefit for all other stakeholders. In a collaboration, they are natural partners, but they may need encouragement to disclose their difficulties, as well as their success stories. It is also important to encourage them to take a step aside, and evaluate the needs of other students as well. We will talk about student participation in Guideline 3. Even though each student's situation is particular to the individual, they are all a part of a bigger context. In a collaboration based on shared values and interests and with a welcoming atmosphere, students can be equal partners. When you break down the walls between involving students and the other institutional stakeholders, the students are empowered as well.

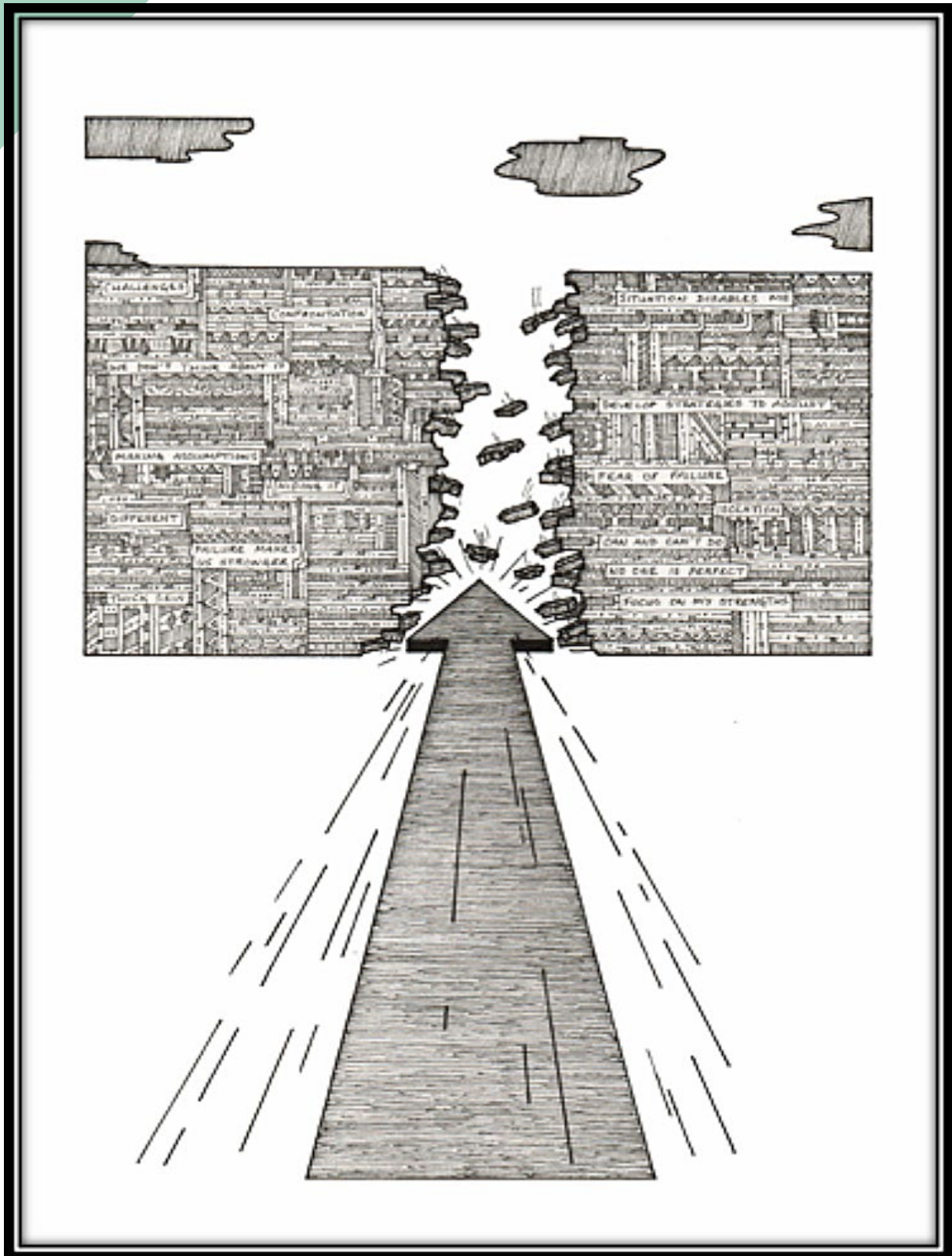


Figure 3: Involving students breaks down walls and silos.

Moving Forward

This guideline is about providing good methods for collaboration. Here are our tips for planning your approach. Create a realistic time frame for these activities. Do it your way.

9 smart tips for developing UDL collaboration

1. Recognize and value the system, culture and relevance
2. Make the small steps visual, valued and equally important
3. Introduce UD and UDL through general workshops on pedagogical practice
4. Partner with experts on teaching excellence and university pedagogues
5. Build online resources for faculty members
6. Start projects or thematic workshops for in-depth investigation
7. Use early adopters from all levels
8. Build case studies on success stories from students, faculties, managers or support systems.
9. Challenge the silo thinking

Guideline 3

Engage the students as UDL partners

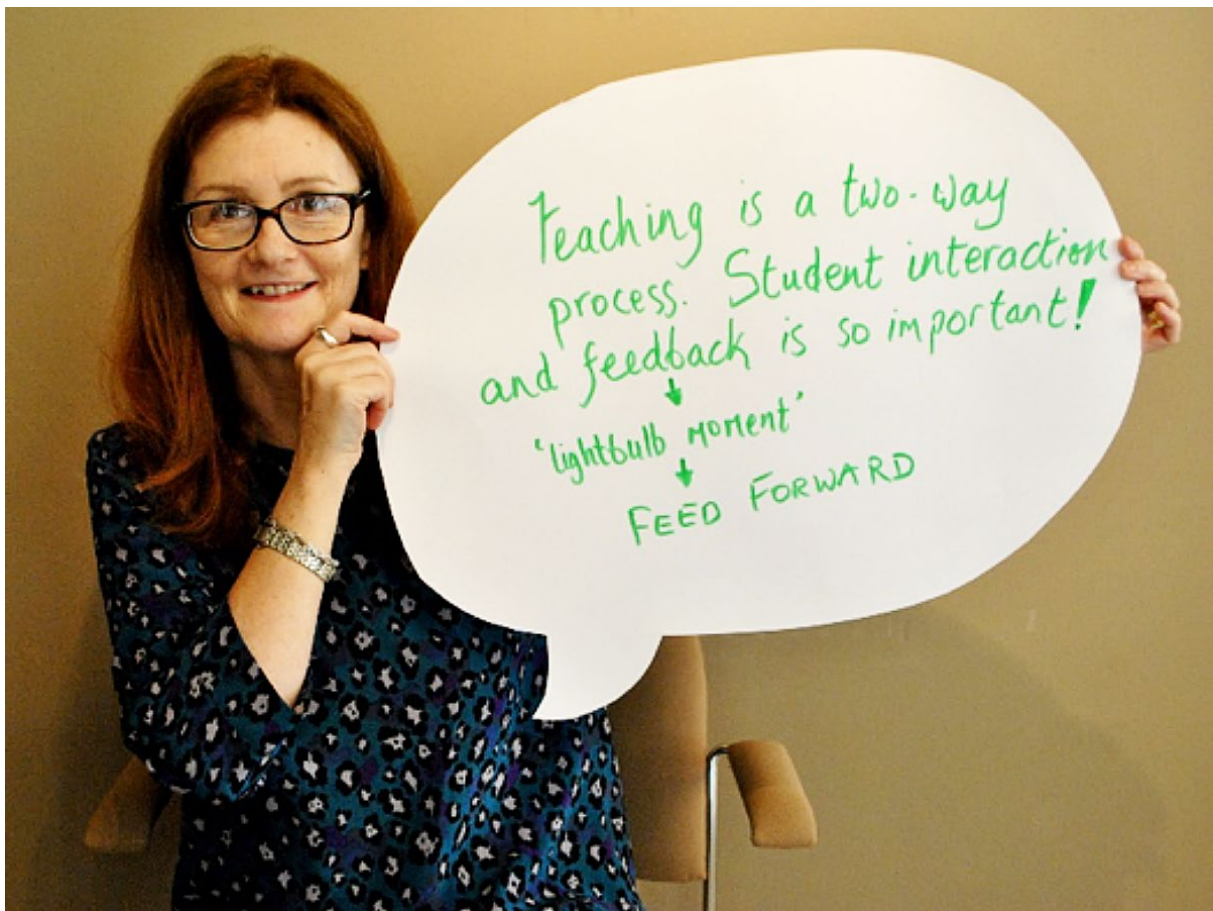


Figure 4: Irish teacher Ellen Reynor is showing her quote: “Teaching is a two-way process. Student’s interaction and feedback is so important. When you have a lightbulb moment, you can feed forward”.

Introduction

Hearing about UD and UDL in higher education, many students probably think that it is not relevant for their studies and their well-being. Similarly, if you are working as a teacher, manager or administrator in higher education, you may wonder how students can be a support in developing universally designed services, instruction and assessment. Why is UDL relevant for students? What is their role in developing inclusive learning environments? How can we recruit and engage students to become UDL-partners?

Ask yourself:

- What kind of relationships do you have with students in your class?
- What kind of fora do you use to communicate with them and welcome their input?
- How do you stimulate students' interest in your courses?
- How do you engage students to provide feedback and input on your practice?

The powerful relationship between teachers and students

Discussions in our focus group meeting with students and the focus group meeting with academic staff showed that the relationship between teachers and students is of great importance for both stakeholders. In fact, both students and teachers expressed a wish for a closer relationship than they have today.

Common in all the success stories that students shared in the focus group meeting was a close and a good relationship to a particular teacher or a member of student support staff who had seen their difficulties and talents and been a great help in finding alternative solutions. Their teachers had expressed great expectations for them, but had also been open to considering demonstrating how they might achieve the learning outcomes in alternative ways.

The teachers in the focus group expressed a wish that students were more proactive and participative in the development of instruction and assessment, and they stated that feedback they received from students had great value.

Especially in large classes, students traditionally can be passive consumers of teachers' lectures. Students and academic staff need to work together to overcome this tradition. From a teacher's point of view, think of your students as your audience, your guests, and most importantly your colleagues. Will people want to visit you if you do not have an inclusive atmosphere where they feel welcomed? Similarly, if you treat students and their opinions as unimportant, they will not share their experiences with you, and they might end up not participating in or joining your classes. Show that you are interested in their opinions, and they will play an active and important part in changing the role of the teacher and student support staff.

To get the best out of your students, it is important to be aware of hidden messages that are communicated through the instruction, teaching and assessment methods you choose. If we offer students a routine based curricula structured in a way that allows minimal freedom, we are unconsciously preparing the students to aim low. Moreover, when students are not given freedom of choice, or taught critical thinking skills, they are less likely to develop the tools they need to fulfill their career aspirations later in life. If we provide students with different alternatives and choices, and give them responsibilities, we communicate that we believe in them to master the tasks. Also, teaching students about UDL and engaging them as UDL partners encourages them to make decisions, think critically, and above all, sends them an important message that you value their input.

Ask yourself:

- What kind of hidden messages can you find in the way you organize your instruction?
- What changes might you consider about the way you organize assessment and other services?
- In what ways and fora can you get to know your students even better?

Students' dictionary for engagement and a closer relation

In the focus group meeting with students, the students expressed and shared **eight words and actions** that would engage them and their fellow students to get on board in the UDL-bus.

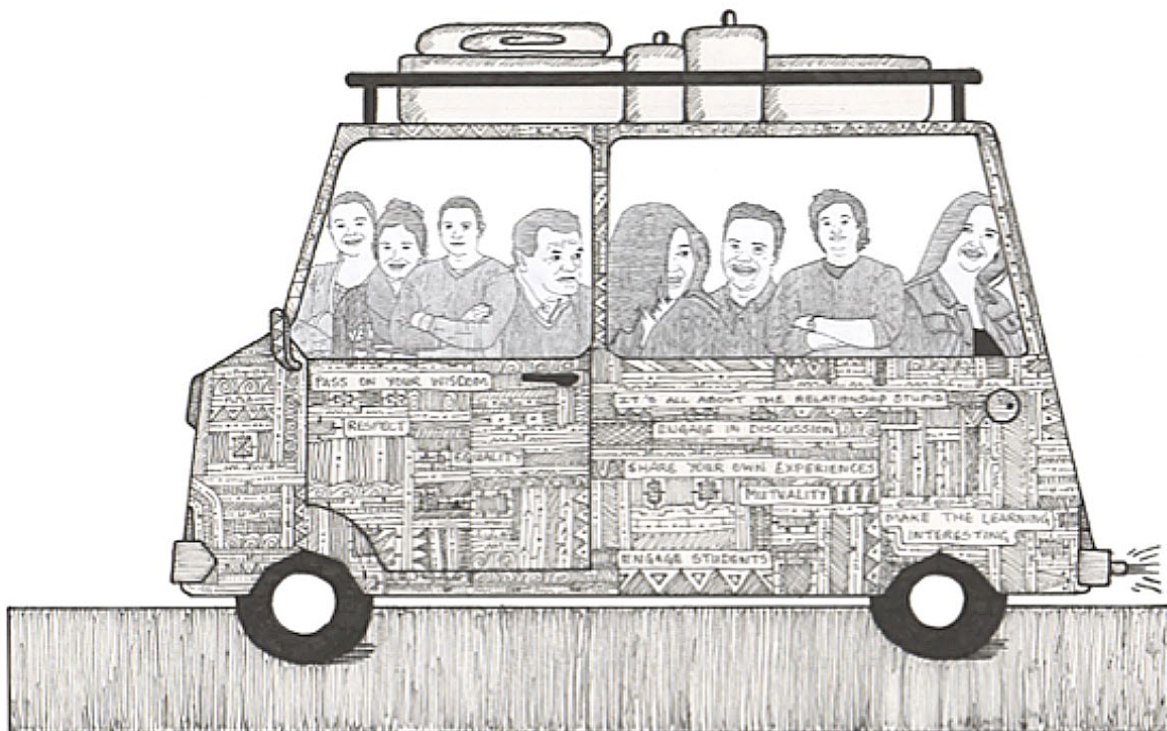


Figure 5: Students from the focus group meeting on the UDL-bus. Freehand illustration from Ray Watson, Deaf graduate Ballyfermot College of Further Education, Ireland

1. **Build bridges** – reach out for us and make it **easy, interesting** and **welcoming to contribute**.
2. **Be personal** and **share your own experiences** too.
3. Be **authentic and consistent** - there has to be a connection between what you say and what you do.
4. Speak a **language** we understand.
5. **Communicate** on platforms we use.
6. Treat us as **equal partners**.
7. **Expect** something of us and **express this explicitly**.
8. Make it **fun** to contribute.

Meet our students and hear them talking in our student toolkit at udll.eu.

What is the students' contribution?

If you were to engage students in the development of a universally designed learning environment, what could be their role?

For students with or without a disability it is extremely important **to share knowledge about their difficulties, and their needs and strengths in the learning situation**. If students share their experiences, it is easier for you as a teacher or support service to design instruction and assessments that suits the student's preferences and needs. Students will be more willing to do this if you provide a welcoming, non-judgmental atmosphere.

If students experience any confusion or they wonder what is expected of them, **there should be fora and spaces where they can clarify this with higher education staff or support services**. When students ask questions, you also get to know what they have not understood and you get the opportunity to improve your practice. Students will also be more motivated to work when they know the purpose and what is expected from them.

Students can continually be involved in evaluation and providing feedback on lectures, assessments, exams and services the HEI offers. If students don't provide feedback, teachers and HEI staff do not have any parameters for what works and what does not work.

Students can have an active role in developing an inclusive learning environment. **As a teacher, you can engage students to care for fellow students' development, both personally and professionally.** This can be done in multiple ways. Here are two examples:

- Arrange group work, where students have the freedom of choice with regard to how they deliver a task. Everything is allowed. The only mandatory work is that they have to produce two things: a product and something that illustrates the cooperation process. This makes them cooperate and hopefully help each other to reach the target.
- Engage different students to write notes from the lectures. The students can choose if they write them, draw them or illustrate them in another preferable way. The notes will be shared digitally for the rest of the students, and the student who is responsible will change from one week to another.

As a support service, you can engage students to care for fellow students' development, both personally and professionally. One example is to arrange resource groups for students with disabilities or similar needs. These groups can meet regularly to discuss topics like:

- Appropriate study techniques
- Coping strategies
- How to make 'To do-lists' and plan their week
- Or just to socialize and make friends

Incentives for recruiting students as UDL- partners

Many teachers can have the idea that it is difficult to recruit and engage students as contributors in developing a universally designed learning environment. Many of you are used to communicating with student representatives and student politicians and certainly these groups are very important for collaborating in networks described in Guideline 2. But as far as the rest of the students go, teachers and students report having minimal contact and interaction. So, how can you stimulate interest within the diverse student population?

Here are our tips:

In order to engage students as UDL-partners use these arguments:

- UDL reduces barriers and the need for individual accommodations
- It gives you influence and autonomy in how knowledge is presented (instruction), demonstrated (assessed) and which methods are used to get you and fellow students engaged
- It gives you the opportunity to study at your own pace and repeat lectures regardless of time and place
- You learn about diversity: different learning styles, different approaches to learning and demonstrating knowledge
- The learning environment improves, you experience by mutual support among peers and better cohesion
- Freedom of choice and the opportunity to learn how to develop critical thinking skills - important qualities in building a career
- You learn tools to become a smart student and a good learner
- You learn more about the purpose of subjects and tasks, teachers' expectations and relevance for the labor market

Guideline 4

Re-design the curriculum process

The Design Circle

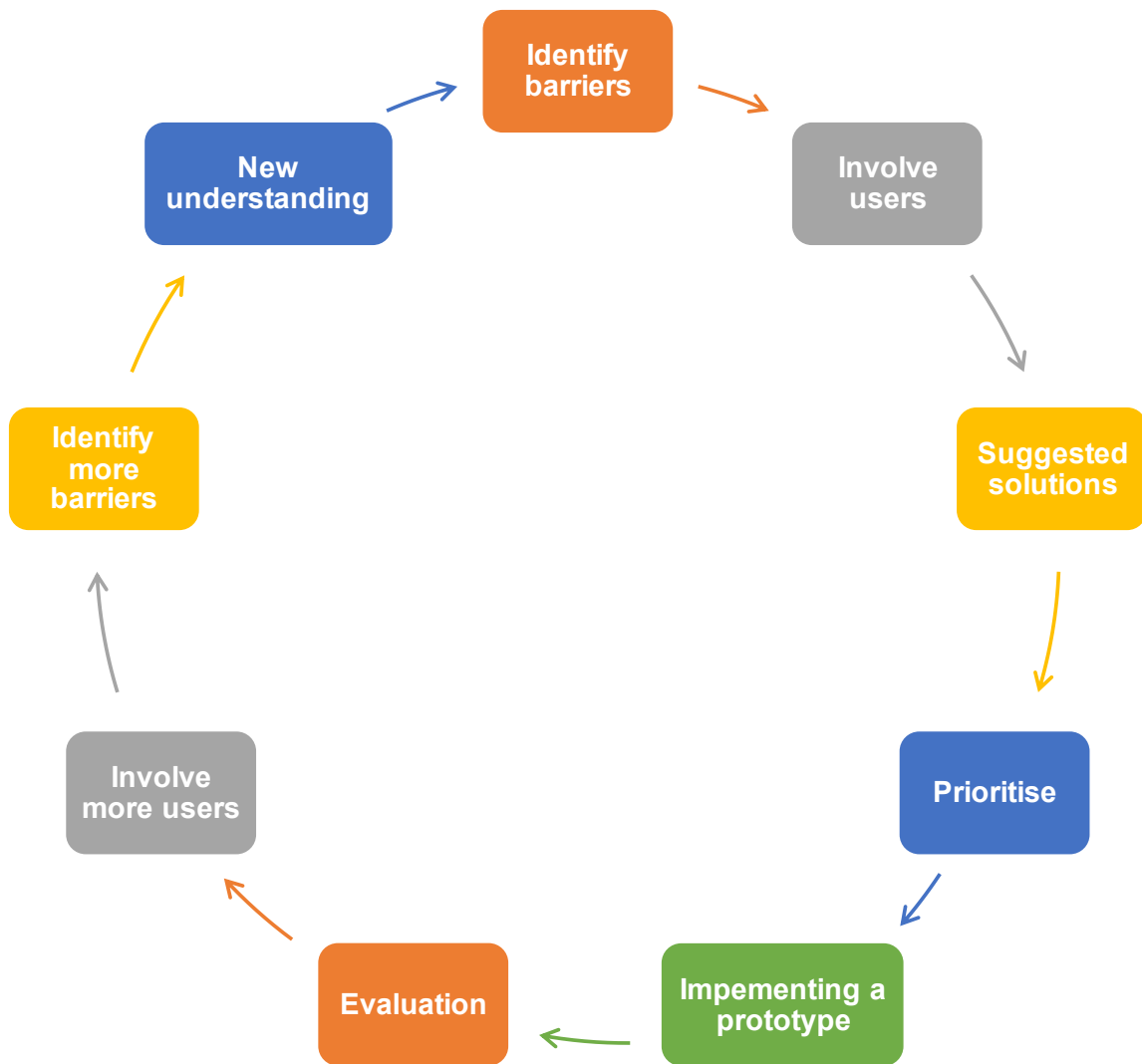


Figure 6: The design circle for implementing universal course design.

The design circle is essential in all UD and UDL thinking, and equally important in curriculum design.

Start by identifying barriers, involve users from a diverse group of students and colleagues, create an outline and prioritize the most important part, implement a prototype for the course, do your own evaluation, involve more users and identify more barriers, and end up with a new understanding. Start all over again if you are not satisfied.

Introduction

A key element in creating a universally designed learning environment lies in the course and curriculum design process. It is of great importance to acknowledge that this actually is a process. It includes the description of learning outcomes, fulfilment of competence standards, implementation through teaching and learning activities, and measurement through assessment methods. Equally important, this work is heavily affected by demands from the outside through national qualification frameworks, and the different national curriculum regulations for all kinds of studies.

Through the Bologna Process, there has been a significant change and restructure of Higher Education programs in Europe. Each country has been called to develop a national framework of qualifications, related to every program of study and each single subject in the program. Through the Bologna Framework, higher educational institutions must redesign study programs to ensure international transparency, and a common understanding of qualifications and learning outcomes. This strongly affects how higher education institutions design their study programs, how they communicate assessment requirements to students to meet competence standards, and descriptions of learning outcomes, teaching methods and syllabus, all to be presented in the graduate studies prospectus. This is most likely to be found on the website of the institution and in individual course handbooks. The result may look different between European countries, but all the information must be there.

This development might be challenging to the teaching of diverse learners but also offers an opportunity to develop best practice on inclusion. There are several questions to consider. How are students with different kinds of disabilities affected by the way we design our courses? Is there a universal way to plan for diversity in this process?

It is not possible to answer these questions easily. The best answer is to address this complex field through design methods – especially when you are expected to have a diverse group of learners in mind. Universal Curricula Design – or Universal Course Design – is a piece of design handwork. In this guideline we will demonstrate how to use design methods, and what to consider at crucial stages in the process.

Ask yourself

- What processes are in place for developing the curriculum and the competence standards for new courses or rewriting existing courses?
- Who is involved in course and curriculum planning – is there a group of colleagues discussing how this can be addressed by others – or is curricula design a private process at your institution?
- To what extent are topics like diversity and disability an issue in course and curricula planning?
- Which elements outside the institutions are strongly affecting the planning and design process – and what is negotiable among these demands?
- What kind of information about universal design and reasonable

The Curriculum Design Process

Inside the curriculum design process, there is a close relationship between several factors. Curricula design is related strongly to both assessment methods, and to teaching and learning activities.

The GSI Teaching and Resource Center at UC Berkeley has created a seven-step guide for syllabus and curriculum design. These steps are generic, and we have re-designed them and added elements from diversity, disability, sustainability and Universal Design to the list, to creating a useful tool for universal curriculum design. Remember, use the design circle (Figure 6).

1. Course description – challenge your assumptions on UDL and diversity

Making an overall course description is the first step towards defining the scope of the course. This part describes the purpose of the course, how it is related to other parts of a study program etc. An idea of the intended learning outcome can be presented here, and it might be interesting to use backward planning to make these descriptions precise.

The physical environment, the instruction period, how instruction is going to be carried out, and other key elements that defines a course must be taken into consideration.

Listing out these elements will be a good start of the design process. Already here you can challenge your assumptions and anticipation about student diversity and disability. Especially assumptions that are built on former experiences, when students are asking about exceptions, accommodations and extra support. By challenging yourself at an early stage, you will be thinking more inclusively and universally in the next steps. Convince both yourselves and your fellow course designers, to think intentionally and consciously about diversity. What has worked well before? What are your fears? Where can you gather knowledge to meet diversity? What is actually a universally designed curriculum?

2. Be explicit on general course objectives – motivation is everything

To describe the general course objectives is the next step, building on the work done under the previous section. Start by asking the question: “This course aims to...”, and keep the students’ motivation in mind in formulating the general objective. A critical point in UDL thinking is to challenge and motivate the learner through providing multiple means of engagement. This includes providing options for recruiting interest through (among others) optimizing relevance and value of the course.

For all students, emotional elements like attention and engagement, are fundamental for motivation and learning. To see the course objectives as relevant to the overall study program and to upcoming work life are two examples of how to have your student’s attention already from the start. For some students – especially students with learning difficulties and concentration challenges – this is of great importance. These students are very concerned about relevance, value and authenticity. Well, that goes for all of us, probably.

3. Be explicit on specific learning objectives – consider core values and methods

This is normally where everyone starts in course planning. Specific course objectives state the goals of the course from the perspective of student learning. These descriptions of learning outcomes may differ between countries; the most important is to relate them to the term competence standards. A candidate who has completed his or her qualification have the following learning outcomes defined in terms of knowledge, skills and general competence. A competence standard is a particular level of competence or ability that a student must demonstrate.

In this section, the learning outcomes and competence standards are articulated precisely. This is specifications about

- **Knowledge**

Understanding of theories, facts, principles, procedures in subject areas and/or occupations

- **Skills**

The ability to use knowledge to solve problems or tasks (cognitive, practical, creative and communication skills)

- **General competence**

The ability to use knowledge and skills in an independent manner in different situations

The descriptions of these demands may be very challenging if they focus too strictly on requirements. A universally designed approach reflects on different user needs and limitations, and simultaneously defines core values in a program or a course. This has been named 'teachability'.

Ask yourself:

- What are the core requirements of the course or program that you design?
- How accessible is the curriculum for students with different needs?
- Which core requirements cannot be changed, regardless of any disability?
- How can the competence standards and learning outcome descriptions be made more accessible for students with different needs?
- What steps has to be taken in the design of specific learning objectives?

This stage of the design process is absolutely the most important part of a universally designed curriculum process. Use the 'Gap model', the 'Users pyramid' and the design circle several times in this particular stage. It will be to the benefit for all students. See our short video on the Gap model at our student toolkit website <https://studenttoolkit.eu/>, or at YouTube at <https://youtu.be/KJ0CywDdYE8>.

4. Define reading lists – think alternative routes for access to literature

Syllabus designers must focus on the pedagogical payoff of the reading lists. It might be seen as obvious, but the syllabus or recommended readings must serve as a natural extension of the course objectives. If course objectives determine the readings, it will be much more motivating for all students.

Textbooks, compendiums and printed articles are well-known challenges to students with print difficulties, like students with dyslexia or students with a visual disability. In course design, looking for digital versions or digital alternatives is an important exercise to ensure access to learning materials. Thinking of alternative routes to obtain knowledge is the task, when it comes to details about accessible formats (pdf-documents, databases, videos etc.), it will be necessary to consult the disability experts, the library staff, ICT experts, or the UDL or disability office at your university.

5. Methods of assessing student learning: Use UDL thinking on assignments and other feedback

Assignments should flow naturally from the objectives described in the first three sections above. The most important question to ask is how the assessment method meets the learning objectives and the expected competence standards. Course objectives must determine the assignments, not the other way around. This is important for motivating the students, and a key element in UDL thinking, and we have learned that this is most crucial for students with mental health difficulties. But equally important for all students.

The second question to ask is if the assessment method excludes any of the students due to disability, and if the method will result in a disadvantage for individuals or groups with similar needs, which has to be addressed by accommodations. Remember, assessing student learning is not only summative like an end examination. It is also about assessing student work during the semester (for example mid-term evaluation, assessing practice periods, and other kinds of teacher evaluation (formal and informal feedback, gaming, peer reviewing etc.).

Universal Design of assessments is thoroughly discussed in Guideline 6, and feedback through student active learning and teaching methods are discussed in Guideline 5. There are important connections between assessment methods and universal curricula design. Competence standards and learning outcomes must be met by all students. HEIs have a responsibility to ensure that assessment methods address competence standards and learning outcomes properly, but there should be alternative routes to meet the demands. All students should be able to demonstrate their achievement, and this flexibility must be taken into consideration

in the curriculum design process. The relation between assessment and Universal Curriculum Design is demonstrated in the Figure 7 below. Be precise on your course policy – include accommodations where necessary.

To articulate the policies that will help your students succeed in the course is of great importance. Being clear on expectations from the start will help both students and the academic staff, this is true for all students, but crucial for students with challenges of a disability. Course policy can include practical information like the expectations for attendance, office hours for student counseling, expectations for homework and essays, etc.

At this stage in the design process, it is also time to define disabled students' opportunities to apply for accommodations. The course designer must acknowledge that regardless of how flexible and explicit the Curriculum Design Process has been, there might be individual needs not covered for in the general solution. This is explained in our video about the Users Pyramid, see <https://youtu.be/pTocjqqaGEbY> and read more in guideline 6. Be clear on limitations and possibilities, and be open and inviting for individual needs.

6. Know your diverse users – the baseline for all UDL thinking

In course planning, awareness and knowledge of the diverse student population should be the first thing to think of. Diversity is related to gender, class, ethnicity, and of course disability. Teachers often ask if it is necessary to plan for all eventualities, especially in small student groups, which tend to be more homogenized than bigger groups. The best answer is to be aware, to be open for changes and to plan from this list 1-6. If you gain knowledge about the most important and common challenges you will meet in class (like reading and writing difficulties, hearing impairments, visual impairments and mental health issues), you will be well prepared. The disability or accessibility office probably will have small leaflets available on all groups, which will make the planning for diversity – or planning universally – much easier.

As we have seen; in the design process, it is very clear that you have to think about both what methods for learning and teaching you want to use, and how students will be assessed. UDL thinking and practice must be included in all these stages, and they are very much related. Figure 7 demonstrates key UDL practice in the three core activities:

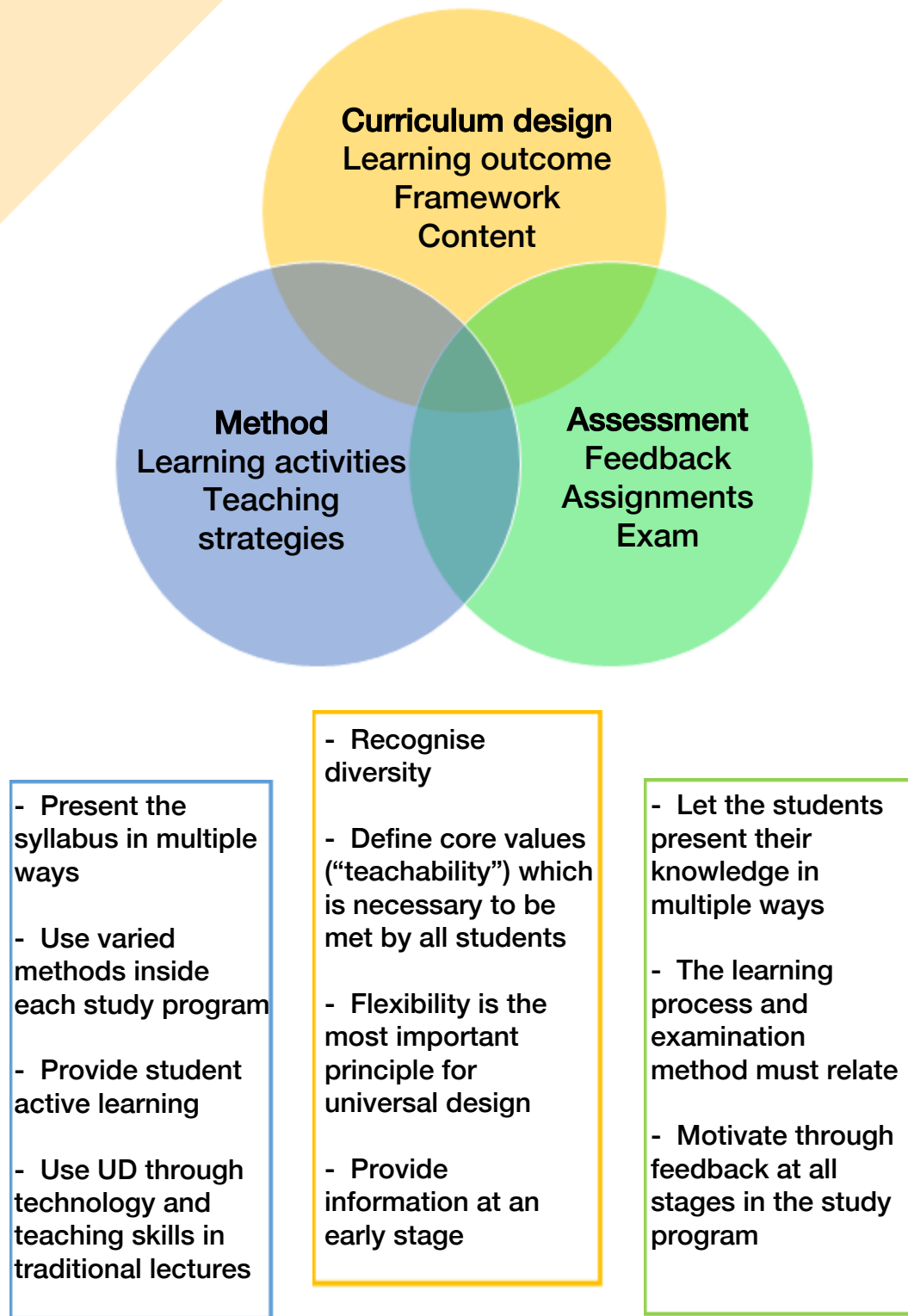


Figure 7: Course design, curricula design, teaching and learning methods and assessment are important terms, which are closely related.

Be aware of external elements like culture, institutional and academic requirements, physical environment and the university’s social responsibility. They are all elements that will affect the process.

A quick checklist for universal curriculum design

- Know your potential user groups, and look for challenges in fulfilling a course
- Beware of your anticipations and assumptions on the diversity and possibilities - changes might be positive for all
- Be clear on core requirements in the course or a program
- Look for alternative routes for fulfilling competence standards and achieving learning outcomes
- Use UD and UDL concept in designing: Flexibility, variation and motivation are crucial for all students
- Digitalize and share
- Be open for accommodations
- Use colleagues and experts on teaching, learning, diversity and design
- Beware of outer demands like culture, academic requirements and social responsibility. They will affect the design process.
- Use the design circle – take your time

Remember: This is the most important work you can do for inclusion into higher education. It deserves the best of you and your colleagues.

Guideline 5

**Modernizing teaching and learning while
maintaining standards**

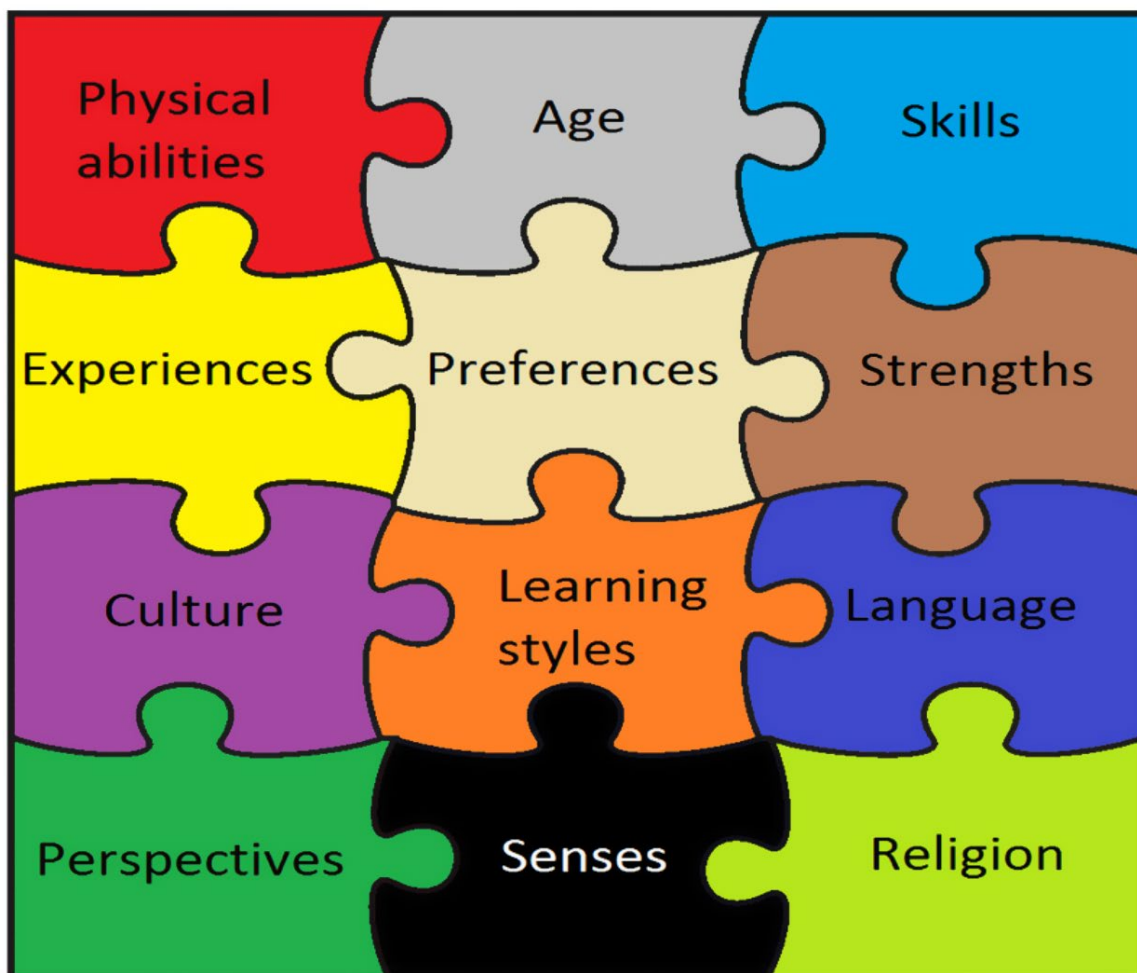


Figure 8: A puzzle where each piece illustrates different aspects of our personality and life experiences.

Introduction

Designing and developing inclusive learning environments does not mean lowering standards. In fact, it is the opposite. Universally designed teaching and learning is necessary for some, but it also promotes better quality for all learners. UDL offers a framework that can be used in developing teaching and learning. It offers a recipe on how to develop course descriptions and goals, teaching methods, technology and assessment methods that respond to a diverse student population.

With knowledge of the diversity in the student population, it is important to plan teaching that best caters to different needs, learning styles and preferences. If you do that, it will reduce the need for individual adaptation while increasing the motivation of all learners.

Ask yourself:

- Think about your own practice and how you respond in an innovative way to diversity in the student population. What example of good practice are you most proud of?
- Think about redesigning your own educational practice with diversity in mind, to create an inclusive, accessible and welcoming learning environment for all students. What challenges do you expect?

Your role as a teacher

As a teacher, you have a lot of power in how you plan, structure, carry out and evaluate instruction. If you exclusively choose lectures as the only instructional approach, where you transfer information and knowledge over to the students, it will guide them to learn your interpretation of the subject. If you add an exclusive use of written examinations you probably influence students' learning that will be characterized by memorizing the knowledge, but not necessarily giving them an understanding they use to analyze, evaluate and apply in different settings.

Choices you make as a teacher regarding what methods you use for instruction, assessment and the rest of the student's learning process, will have a great impact on students' learning outcomes, how they master challenges, their independence and empowerment and their self-efficacy and motivation. That is why it is really important to make **conscious** and **intentional** choices when you design your instruction.

To make conscious choices in designing instruction, it is necessary to have knowledge of the differences in the student population. It is crucial to know the core of your subjects and it is vital to see the relationship between types of instruction, assessment and desired learning outcome.

Reflection is an important part of a teacher's work. No matter how experienced you are, you can still struggle and you are never 'fully-developed' as a teacher. If you constantly seek and search for new ways to teach, you will keep on developing and learning yourself too.

Ask yourself:

- What do you want the students to learn?
- What will we gain from a lecture?
- What will we gain from co-operative activities such as group work?
- How will students achieve the learning outcome in the best possible way?
- Are there other ways students can get the same knowledge?
- What if some of your students have a hearing or visual impairment or dyslexia– how could you provide alternatives for the diversity of students?



Figure 9: Belgian teacher Ellen Meersschaert is showing her quote: 'It's not about knowing it all, it's about constantly seeking'.

Involving students and colleagues in developing your teaching will empower the students, and you as a teacher will be more receptive to learn at the same time.

A teacher, who delivers instruction that is based on the principles of Universal Design, is a facilitator for learning, and not just a content expert aiming to transfer knowledge. Academic staff working in higher education in some countries don't have pedagogy training, but luckily, pedagogical skills and methods are possible to learn for everybody.

Ask yourself:

- How do you present information? Do you deliver a speech, or do you encourage students to find information and knowledge elsewhere?
- Do you engage with the students? What other methods can make students learn the content?
- How can you facilitate their learning process? How do you motivate and inspire students to be engaged in the subject?

Creating a UDL Lecture

In order to respond to the diversity of students' needs and strengths, it is necessary to vary the methods we use and be **flexible** when it comes to **presenting information and knowledge, how students demonstrate their knowledge and how we get them motivated and engaged** in the subject. More practically, it is about providing:

- Multiple means of presentation
- Multiple means of action and representation
- Multiple means of engagement

Let us start by exploring the principle of multiple means of presentation, and how this can be adapted as a support in transforming a traditional lecture to a UDL Lecture.

A traditional lecture is not a barrier for inclusion in itself. It is when it becomes the only way of presenting knowledge that it could be a problem. For some students it could be a preferable method, because it is a routine that is familiar for students and teachers. However, most students will not get the chance to use their strengths by sitting as passive listeners in an auditorium.

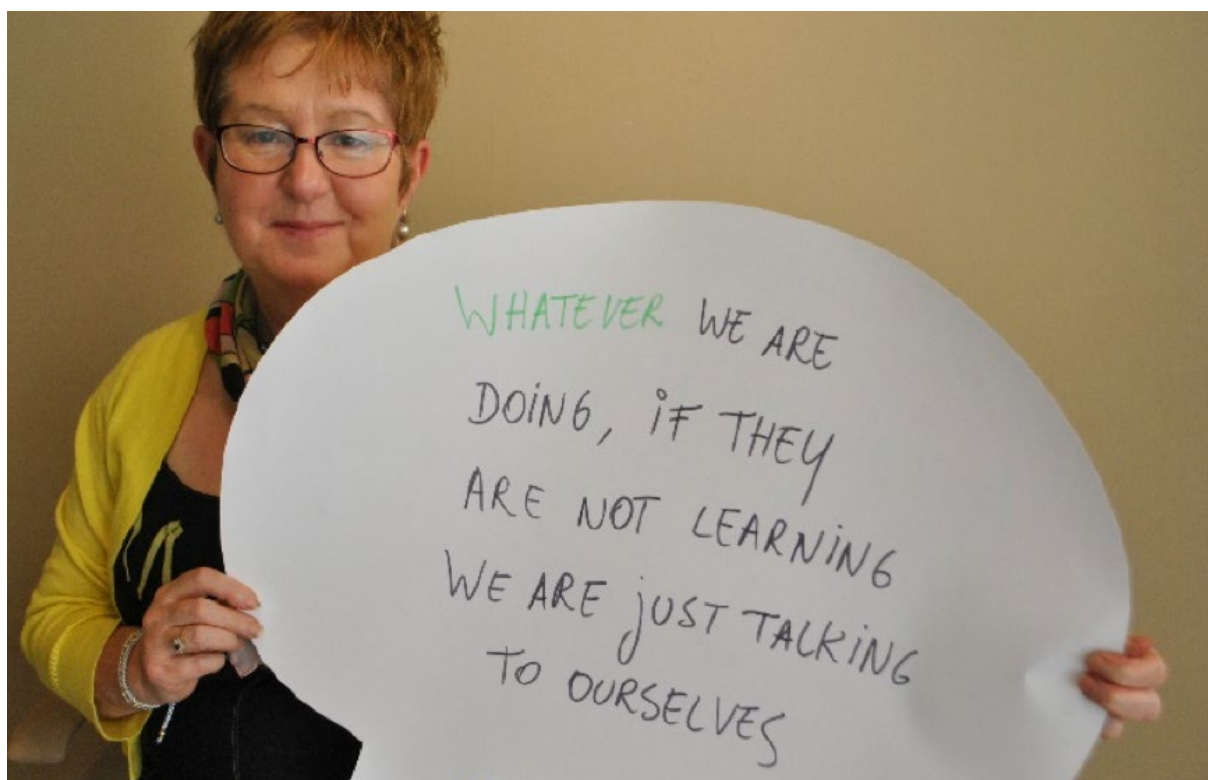


Figure 10: Irish teacher Marian McCarthy is showing her quote: 'Whatever we are doing, if they are not learning we are just talking to ourselves'.

No teaching method is good if it is the only approach and methodology to impart knowledge. To ensure that students will reach and grasp the knowledge, it is essential to introduce the knowledge in various ways. As a teacher, it is also necessary to vary the methods you use. The knowledge can be presented visually, in written text, auditory or with the use of video. Recorded lectures or presentations give the opportunity for repetition and reduce the risk of misunderstandings and ambiguous messages. This is especially important for students who have challenges with a particular teaching method, but also useful for all students, because a part of the education journey in higher education is to teach how to learn and to learn how to take independent choices.

Multiple ways of engagement

Multiple ways of engagement uses principles of how students are engaged and motivated in different ways. We know that there is a strong connection between motivation and learning. Therefore, it is of great importance to stimulate students' motivation. There are multiple factors that can influence this, both to get students' interest in the first place and to maintain their motivation over time. Based on experiences and examples in the focus group meetings with students, academic staff, management and student support services, we have gathered some recommendations here. As the three main principles of UDL are closely connected, you may experience some repetition when you read the following recommendations, but since they are so important, they cannot be repeated too often.

In order to motivate students for your course you can:

- State the purpose of activities explicitly. Use the course description actively.
- State the course usefulness and relevance explicitly, preferably through concrete examples.
- Encourage students to cooperate with companies in the labor market.
- Encourage collaborative projects across disciplines. This can raise students' understanding of the subject.

- Provide tasks with different levels of difficulty so that students can choose challenges that are best fitted to their level of ability.
- Provide feedback throughout the year and vary what kind of media and channels you use.

Using inclusive learning methods

There is a growing number of inclusive learning methods of teaching and learning being used in higher education institutions. Some courses designed as **blended learning**, are conducted in a combination of traditional lectures with compulsory attendance, and use of online activity. With this combination between 20 % and 80 % of the course may take place through web activities.

Another example of an inclusive learning method is known as the **flipped classroom**, which can be seen as part of blended learning. In recent years, the idea of the flipped classroom has reversed the traditional educational arrangement by delivering instructional content, sometimes online, outside the classroom, while activities, including those that may have traditionally been considered homework, in the classroom. In a flipped classroom model, students might watch online lectures, collaborate in online discussions, or carry out research at home and engage in concepts in the classroom with the guidance of the teacher. Because these types of active learning allow for highly differentiated instruction, time spent in class can be used for problem solving, critical thinking, group work and research, in line with what is pedagogically sound for student learning. As a result, the teacher's interaction with students in a flipped classroom will be more personalized, and students are actively involved in knowledge acquisition and construction as they participate in and evaluate their learning.

A teaching method developed as a type of flipped classroom is called **peer instruction**. This method has an interactive approach where students prepare for teaching sessions by reading a set text. When they meet their peers back at the institution, the teacher prepares electronically-based questions for the students to answer. Afterwards they work with the same questions in groups, followed by a new round with individual questions. In this way, the teacher gets feedback on students' knowledge, students get motivated to prepare for class and they experience the power of learning together. A peer instructional approach removes the focus from the teachers and their knowledge, to the students and their actual learning.

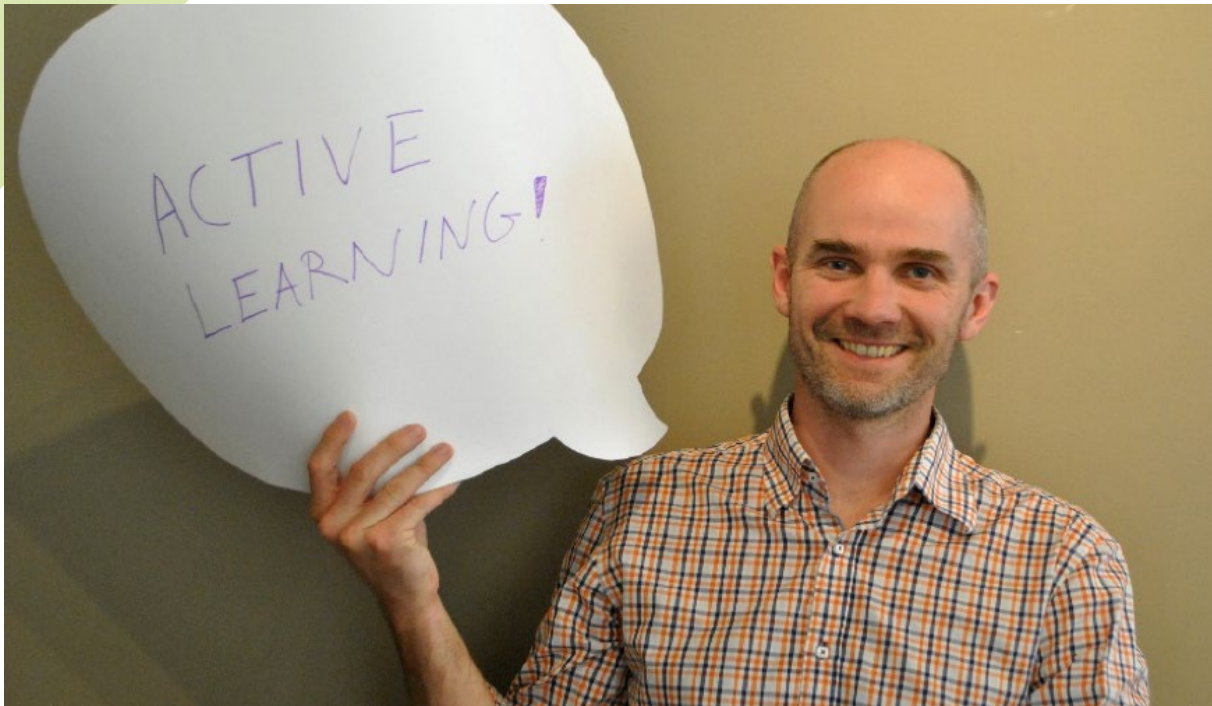


Figure 11: Norwegian teacher, Magnus Borstad Lilledahl is showing his quote: ‘Active Learning’.

These examples offer an inclusive way of presenting knowledge because they allow different learners to study at their own pace with their preferred techniques and strengths. As a teacher, you just have to make sure it does not make any new barriers for students with diverse needs. Whatever instructional method you choose, always remember to offer variation, alternatives and flexibility.

ICT as a tool for inclusion

Although it does not necessarily involve moving the whole course online, pedagogy can get a lot of support from technology.

In teaching in higher education today, some talk about digitalizing exams, others try to use more digital tools and means in their teaching, while others see advantages in digitalizing the whole curriculum, by moving teaching, syllabus and assessment onto the computer and offering it through online courses. Digitalizing courses and use of digital methods and tools can change the principles of teaching and learning, and especially affect the learning conditions for students with disabilities.

Complete digitalization of a subject can be done in different ways. One of the versions is called Massive Open Online Courses (MOOC), and is well-known for its unlimited participation, open access through web and interactive user forums to support community interactions between students, tutors and teaching assistants.

Many higher education institutions use their own Moodle such as Blackboard to create an intranet. A digital environment also facilitates use of assistive technology in an academic context, which is especially important for students with visual impairments and students with dyslexia. However, is it necessary to move the whole curriculum with teaching, syllabus and assessment online to make it accessible and flexible for all?

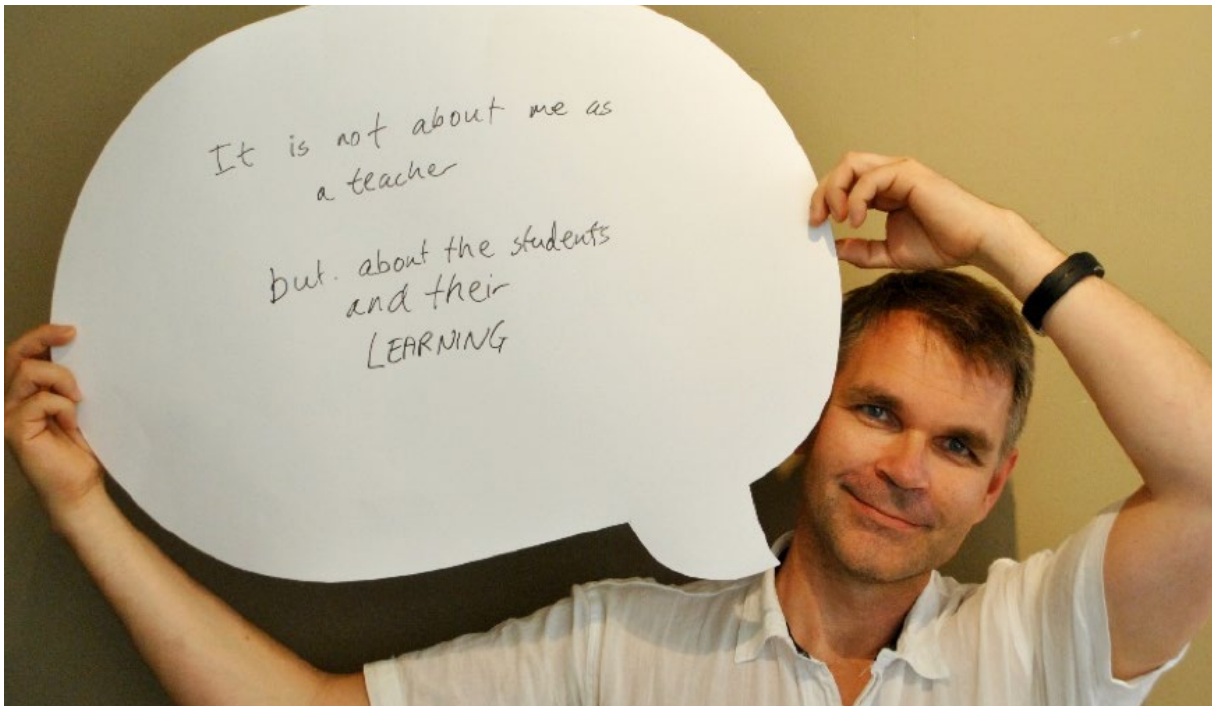


Figure 12: Norwegian teacher, Carl Fredrik Sørensen is showing his quote: 'It is not about me as a teacher, but about the students and their learning'.

While the examples presented above are teaching methods, technology can also be used as a tool to accompany a traditional lesson. The teacher can for instance use different applications, instruments or programs to get feedback from the students or to test their knowledge, for example through gaming programs. 'Kahoot' is an example of a game-based approach to blended learning.

Be aware - use technology with care

As we have seen, technology offers variation and flexibility, and gives the students the opportunity to study where, when and how often they want. Digital devices are diverse and transformable. When the learning material is presented through digital platforms, it can adapt uniquely to all students and their needs and preferences. Students who visit the web page can adjust it to individual needs with regard to

photos, turn off graphic or turn on the sound and text-to-speech-tools. However, when using online courses or digital tools, it is important to make sure that the technology does not create new barriers for students or academic staff, especially the ones who are especially vulnerable in the traditional learning situation, such as students with disabilities. In order to prevent this, it is smart to arrange ways for getting regular feedback from students with different impairments.

Technology in itself is not inclusive, and it is important to acknowledge that a good UDL teacher does not need to use a lot of ICT tools and be an expert in ICT in order to be a good UDL ambassador.

In order to improve teaching and learning by implementing UDL:

- Recognize, acknowledge and get to know the diversity in the student population
- Plan teaching methods that best cater for different needs, learning styles and preferences
- Develop instruction based on what learning outcome you want the students to reach
- Provide alternatives and flexibility in how you present knowledge
- Vary methods and mediums used to present knowledge (written text, auditory, video)
- Constantly seek for new ways of teaching
- Use ICT as a tool for inclusion

Always remember: There is not one single universally designed route for all learners. Treat diversity with flexibility.

Guideline 6

Reviewing Academic Assessment – How to provide inclusive learning methods to reach the right learning outcomes for all

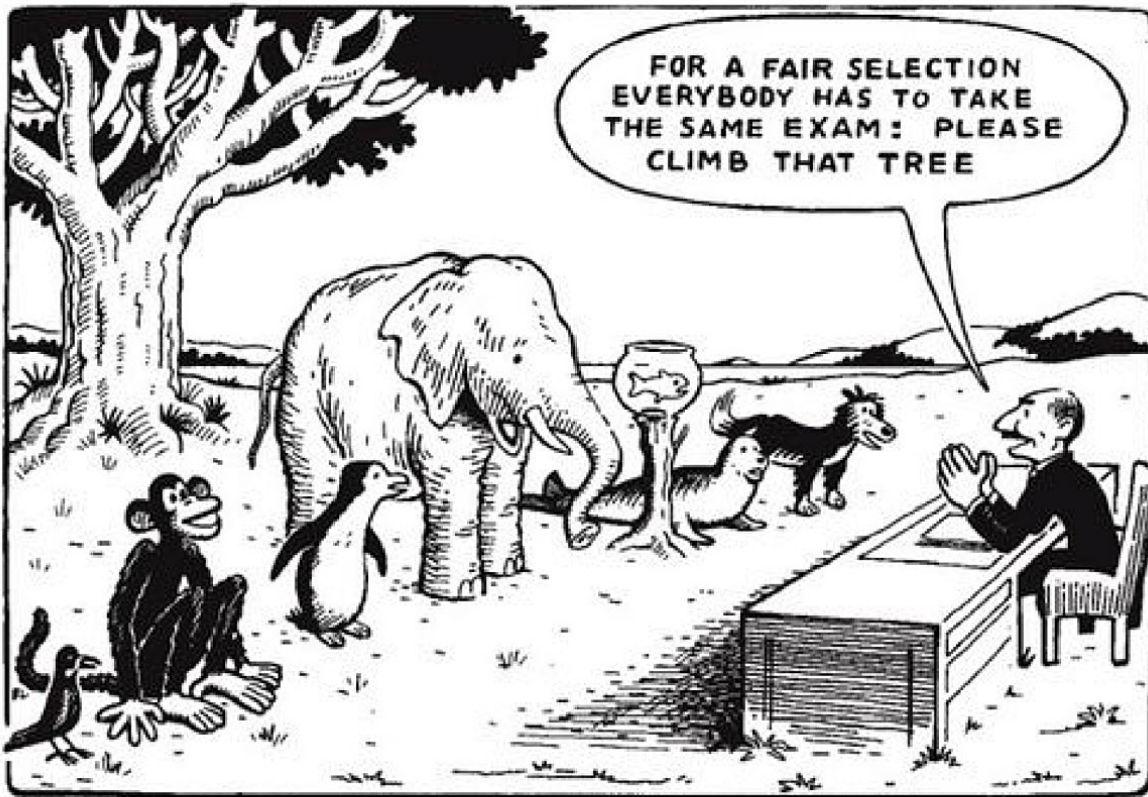


Figure 13: Seven animals are challenged to climb the tree as their exam. The animals demonstrate diversity in a group illustrated by a monkey, a penguin, an elephant, a fish, a seal and a dog. The teacher says: 'For a fair selection everybody has to take the same exam: please climb the tree'. Origin unknown.

Introduction

In the illustration on the previous page, you saw a teacher telling his class of animals that the exam is to climb the tree. He wanted to ensure equal treatment. However, is it a fair treatment for everybody to be tested in climbing up the tree, when the class consists of a bird, a chimpanzee, a penguin, an elephant, a fish, a seal and a dog? It is clear that a seal and a chimpanzee face different challenges if required to climb the tree. We all have different strengths which enable us to succeed with different tasks. Just as the animals are diverse, so is any group of students. So, how can we meet the diversity in the student population when organizing exams? What is effective assessment?

Effective assessment can be defined by a number of characteristics. For example it should be:

- Context-free
- Value-free
- Fair
- Valid
- Able to discriminate between different levels of performance
- Relevant to course content and planned learning outcomes
- Clear and unambiguous instructions
- Clear about marking criteria, available in advance

However, as we can see fairness does not necessarily mean equality for all. Equal treatment for all is unfair for some. So, what is an inclusive and fair assessment?

Questions to consider

- What is the relationship between assessment methods and students' needs and strengths?
- What are the main barriers for students with a disability in the exam situation?
- What is the relationship between learning goals and the way I assess achievement of the learning goals?
- How can we create a universally designed assessment?

What is inclusive assessment?

One way to explain diversity and how we can work with developing inclusive assessment, is to see the relationship between assessment method and demands on one side and students' needs and strengths on the other side. If we add the strategies and relationship between individual accommodations and universal design this can be illustrated through the 'User's pyramid'

If we use the traditional written exam as an example, some of the students' needs are similar and some of them are quite individual. Altogether, the students with or without needs for accommodations represent the different levels in the pyramid, but which 'level' they belong to and what kind of support they need will differ, depending on the assessment methods and demands from the environment. To demonstrate how the pyramid applies to assessment, let us take a closer look at each level with descriptions and examples to illustrate the pyramid's content.

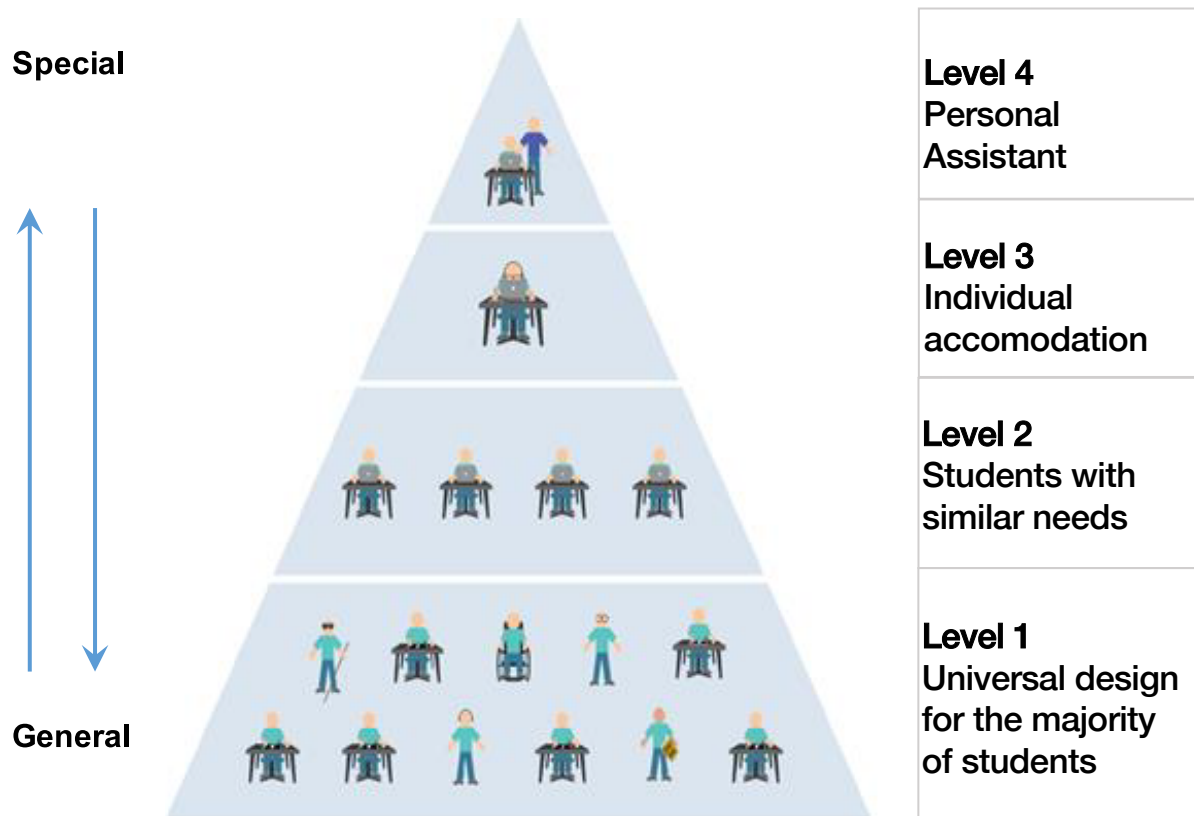


Figure 14: User's pyramid showing Level 1 with ordinary solutions and Level 2-4 with different forms of individual accommodations, the levels are described below.

Level 1: The majority of students

The majority of students can accept the planned form of examination, even though it is not necessarily their preferred way of showing knowledge. The concept of Universal Design is to create solutions which include as many students as possible in the ordinary solutions.

Level 2: Students with similar needs

In a classical written examination, some students will have additional but similar needs for examinations. For example, most students with writing difficulties or dyslexia need a computer and a text editor program with a spellchecker. In almost any group of students of a certain size, adjustments will be offered to groups of students with similar needs.

Level 3: Individual accommodation

In a group of students, there also must be room for individual accommodations. In our example, a written examination, there might be students who need more than just a computer with a spellchecker. These students might need special ICT equipment or assistive technology, like a screen reader or a speech synthesizer.

Level 4: Personal assistant

Sometimes students might have the need for more personal assistance, in addition to reasonable accommodations and assistive technology. To stay with our example, in a traditional written exam, a student might need practical assistance, for example with questions and written answers, such as a reader or scribe.

Changing conditions for the exam

Imagine how the pyramid would look if you made a minor adjustment to the exam. What if you arranged a written exam where all students were allowed to **write on a computer** (with appropriate safeguards to maintain the security in an exam context) and there are **no limitations around how many hours students can take** (within appropriate boundaries)? The group of students having a computer as an individual accommodation will be no different from the rest of the students and a part of the HEI's routine solutions. Similarly, students who need extra time will no longer be an issue. Like this, the level of students taking the exam within the routine solutions are likely to increase. Still, some students will have individual needs, like the need to take an alternative exam, for example.

If we made another adjustment to the assessment strategy like **providing flexibility and freedom of choice**, where all students can choose in negotiation with their tutor how they demonstrate knowledge, the first level of the pyramid would be even bigger, and the second level would almost disappear. The third level of the pyramid will also be reduced, but some students will still have the need for technical aids, for example. The fourth level will still be the same as earlier, because there will always be some students with difficulties and needs that require particular assistance.

The helpful idea of this model is that minor adjustments to the exam can reduce the impact of a student's disability in the assessment context and their need for individual accommodations. Planning for all learning differences, will ensure a high-quality learning environment for all, also for students who have not self-disclosed their disability.

Creating a universally designed assessment

Universal Design of assessment draws on the philosophy of access for all, but also recognizes that assessments must discriminate between students who have mastered the content and those who have not. It is vital that the needs of a wide range of students are addressed without changing the level of difficulty built into the assessment method itself. With help from four focus group meetings with students, academic staff, student support services and managers, we have gathered seven recommendations to how you can create a universally designed assessment. Follow these and create a welcoming atmosphere where all students can reach their potential.

Seven recommendations to create a universally designed assessment:

1. Choose an assessment method based on what skills and characteristics you want your graduates to have. The assessment method should be in line with the purpose of the exercise; be aware of any methodological access barriers.
2. Vary assessment methods and provide alternative ways to demonstrate knowledge (written, digital, physical)
3. Give students the opportunity to choose how they will respond to a task
4. State the purpose and criteria for goal achievement
5. State what it takes to carry out the task methodically and show examples of how the task can be completed
6. Make the assessment an opportunity for learning
7. Ensure a close connection between students' achievement, your chosen assessment method and the feedback you provide to the student

Let us take a closer look at what the different recommendations mean and imply in practice.

- 1. Choose an assessment method based on what skills and characteristics you want your graduates to have. The assessment method should be in line with the purpose of the exercise; be aware of any methodological access barriers**

It is essential to discriminate between the actual content you want to test and other information or skills that may act as barriers to students. In the context of supporting students with disabilities, assessment developers need to identify the skills and knowledge that are targeted by the assessment and those that are not. The targeted skills and knowledge should be those used to make decisions about a student's performance/achievement. An Access Manager, participating

in the focus group meeting with student support services, expressed his concerns about a typical evaluation process this way:

What skills and characteristics do we want our graduates to have? We have a tendency to get lost in failing to understand what the key competencies are and getting these mixed up with ancillary elements, which are not central to these (...) In some cases we are getting side tracked as to how a student would display these competencies rather than providing a number of ways to the student to display these.

Patrick Hoey, Access Manager, University of Limerick Ireland

Ask yourself:

- Are the instructions on the assessment you provide easy for students to understand?
- Is the layout of the assessment easy to navigate?
- Are items formatted consistently throughout the assessment?
- Is the language used in the assessment appropriate for the students in your class?
- Is the print large and legible enough for all students to read? Are diagrams clear and consistent with text?
- Can the assessment be taken in a variety of formats (i.e. paper, computer based)?

2. Vary assessment methods and provide alternative ways to demonstrate their knowledge

The content in this recommendation is often referred to as ‘multiple ways of action and expression’ and is one of the main pillars in addressing and developing UDL in the US. It implies the importance of varying assessment methods and providing alternative ways of expressing knowledge with regard to meeting different needs and strengths in the student population.

When a 4-8 hour written exam is the only way students are offered to demonstrate what they have learned, will it, in a limited scale, show what they have achieved in their learning? Similarly, a multiple choice assignment demonstrates certain skills, but as the only method, it will not show how students are reasoning their way to the correct answer. If the student has dyslexia, she/he could risk answering wrongly because of the assessment method, rather than insufficient knowledge. If a student has social anxiety it could be particularly difficult to have a presentation in front of the rest of the class, but it does not automatically mean that they do not possess the knowledge, and perhaps could express it well if presented in front of a smaller group or just for the teacher.

3. Give students the opportunity to choose how they will respond to a task

We have different strengths when it comes to how we express ourselves. Some are verbal, others visual, and some prefer to express themselves in writing. Therefore, it is important to vary between different assessment methods such as essays, posters, games, group work, oral presentations, written examination and multiple choice. Most students have their own preferences regarding how they best show knowledge, but if you have variety, a lot more students can use their strengths and the students learn to express themselves in multiple ways.

Instead of writing an article, the student can, for example, create a poster, make a video, create a Power Point presentation or give a presentation. As long as the targeted goals are achieved, this change in assignment allows students to show creativity. Besides, autonomous choices can make students more engaged in the activity and students learn how to think outside the box.



Figure 15: A red box that differs from the rest of the boxes - he thinks outside of the box

4. State the purpose and criteria for goal achievement

It is of great importance that students understand the purpose and usefulness of the learning, knowledge and skills that are expected to be acquired in each course. If not, they may be less motivated to learn. This is especially true for students with Asperger syndrome or students with ADHD and dyslexia. Sharing criteria for goal achievement will guide these students to appropriate study techniques and give them a heads up on what to prioritize. Students' motivation and interest will also increase when the relevance of the instruction and assessment methods are expressed explicitly, both in relation to assessment and employment.

5. State what it takes to carry out the task methodically and give examples of how the task can be completed

Many students are not familiar with the methodology of different assessment methods. One example is how to write in an appropriate academic style. If you provide the students with an outline on how it could be drafted, including recommendations of how to write the different parts (i.e. how to write a structured discussion), students learn how to do the assessment correctly at the same time as they demonstrate their knowledge in a better way. One way to do this in practice is to publish a study guide in advance of the exam or use it actively in an assignment. Another practical approach you could take is to ask students to evaluate each other's work using the study guide. This way the students will learn what is required to achieve the learning goals, and get inspired to how they can solve the task themselves. They will also learn about the diversity among fellow students and that their approach to learning is not necessarily the only and best way to demonstrate knowledge.

6. Make the assessment an opportunity for learning

We usually distinguish between summative and formative assessment. The summative evaluation is an assessment of the students' learning at the end of the study program/course. This is the formal feedback students get on their exam and tests, and is the most common one used. This type of evaluation is provided after a test is completed, and rarely contains any room for improvement or comments. Formative assessment is an assessment that is provided for the student to learn. This is the continuous assessment that occurs in the seminar room between teacher and the student, which aims to support students learning and get them to see where they are in the learning process. If you arrange several tests during the semester, the tests and evaluation of them becomes a vehicle for learning in itself, and you give the students the opportunity to develop further. Use more formative assessment!

7. Ensure a close connection between students' achievement, your chosen assessment method and the feedback you provide to the student

The content of the feedback you give is of particular importance for students who have ADHD, Asperger syndrome, dyslexia or hearing loss. Students with ADHD and Asperger syndrome often need close guidance in tasks because skills like planning, study skills and making priorities often is challenging. Students with dyslexia will have a great need for concrete verbal feedback, while students with hearing loss have more benefit from feedback provided in a written format. Sometimes students with disabilities find that the curriculum is perceived as chaotic and overwhelming. When students receive feedback that is directed towards their specific work, they will be guided towards better learning and better use of appropriate methods for achieving the learning objectives that are expected in the course.

Ask yourself:

- Do you inform students who perform well why their work is good?
- Do you provide students who perform less well with suggestions on how they can perform better?
- Do you provide sufficient explanation to students when you give 'negative comments'?
- Do your praise and positive feedback indicate what the students should continue doing?

Guideline 7

Identify the UDL ambassador: how disability services staff can be the agents for change

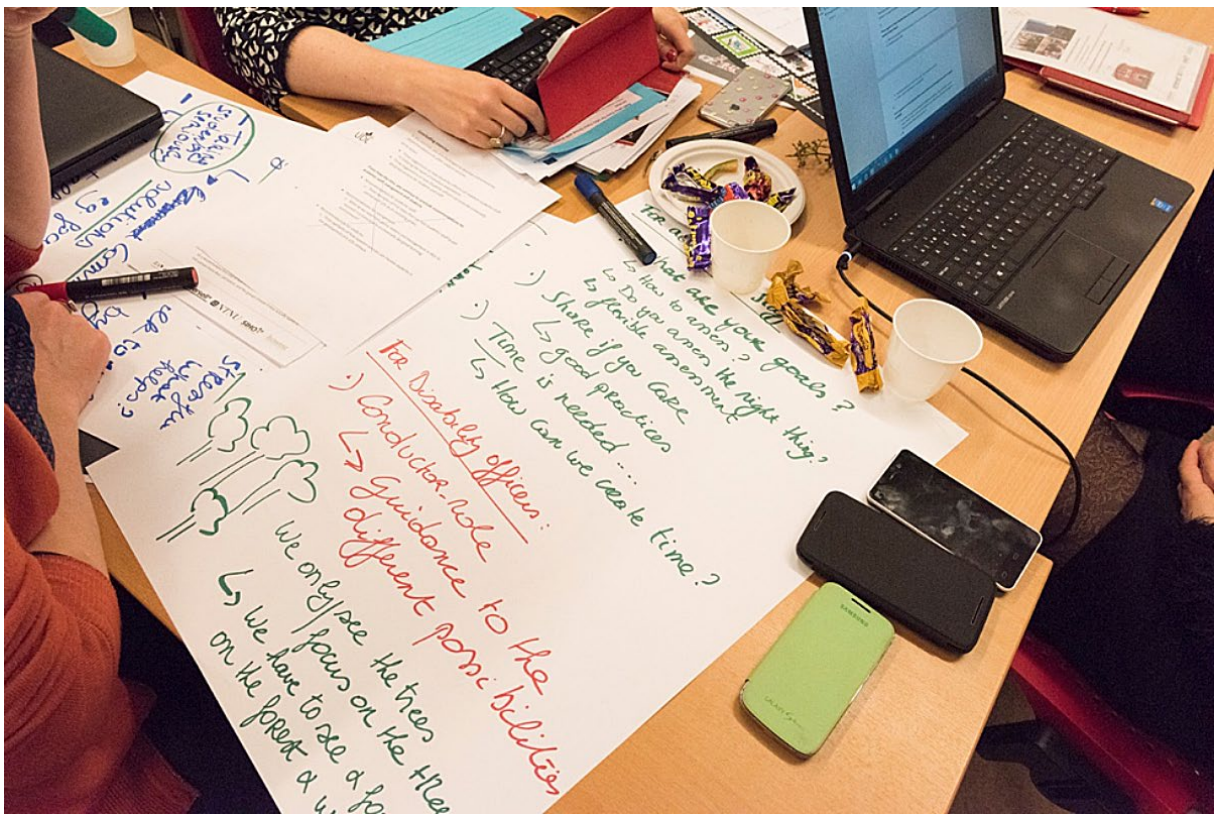


Figure 16: Disability officers brainstorming about what their future role should be in a UDL-environment. Photo: Eir Bue.

Introduction

Universal Design and UDL thinking will involve a shift in well-established traditions and mindsets for all stakeholders in higher education. No wonder it is simultaneously perceived as both an awakening and a challenge. Disability officers and support services have decades of experience of working with students with disabilities. They understand firsthand the challenge for a student with a disability on campus. They have also observed many changes in curriculum, teaching practice, the student demographics and the increasing demands that this can place on an institution. This expertise and knowledge well qualifies them to coordinate this work and become a UDL ambassador.

If you work in a student support service or as a disability officer, you might think that UDL is a concept that will change what you do and how you work. You are probably right! Another assumption is that it will be difficult to convince and support academic staff to plan their teaching for a diverse range of students. So far, you probably have cooperated on many occasions, and often in a reactive manner, with academic staff to find alternative reasonable solutions to a student's specific need. UDL is about taking this learning and using it differently.

We believe that focusing on UDL as the main approach will reduce the need for individual accommodations, and change your role as the disability officer. However, you are an essential part of the team. What is the best approach and method for disability officers to provide support and knowledge to both students, teachers and management?

Ask yourself

- What will be the disability officer's role in a UDL environment?
- How can UDL be addressed as a sustainable strategy for inclusion?
- What are good initiatives for support services?
- What individual supports for students with disabilities will still be needed in a universally designed learning environment?
- How can support services free up resources in order to benefit more students?

Disability officers' role in a UDL-environment

New pedagogical approaches and innovative technologies are currently identified as solutions for inclusion. To ensure UDL impact, this development requires policies, regulations and action plans, which support UD principles and the UDL concept. It also requires that all the stakeholders within a HEI – academics, managers, support systems and learners – collaborate, share responsibility and can contribute to the development of an inclusive learning environment. Furthermore, it is critical that stakeholders are enabled to cooperate across departments or faculties in working towards the same goal. As a student support service, you have a lot of knowledge about students with disabilities, you understand the individual adaptations, you know what can be included and perhaps made universal in order to benefit all students in a lecture or overall learning environments. You understand disability and its impact in a learning environment. You are, therefore, a key player in the development of a UDL environment.

Raise awareness and knowledge

When it comes to motivating colleagues (academic and administrative staff) to develop inclusive practice you should inspire with evidence from your practice of how students with disabilities thrive in the right learning environment. One way to do this is to gather feedback on student progression and retention. Find out how this information is shared within your institution, which committees review student achievement and demonstrate how this can be improved through adopting strategies for Universal Design. If you aim to embed Universal Design for Learning in quality assurance and equality and diversity committees, it is seen as part of the day to day work of managers and academics.

Incentives should be used to encourage change, for example inclusive practice can provide more efficient use of time as there will be fewer students needing individual accommodations; student engagement and retention will benefit. If change does not occur there could be negative consequences for the institution, for example, unsatisfactory quality assurance reviews, or possible legal action related to equality legislation.

How to sell it– success factors for UDL

Through focus group meetings with students, academic staff, management and student support services, we have learned that most stakeholders are more interested in concrete actions and results than giving the concept a label or a special terminology, like UDL. The term UDL suggests assumptions about disability. Many

academic and administrative staff are not aware about diversity in their classes, so it is important to raise this awareness and at the same time **sell UDL as something that will benefit and support all students.**

To secure change, stakeholders (especially academic staff) need to **know that they already do many of the right things.** In the focus group meeting, we learned that academic staff use a lot of UDL and many techniques that fall within this concept without knowing it.

For example:

- Video record/podcast lectures
- Flipped classroom using digital materials and problem-based learning
- Use quizzes during lectures
- Have flexible deadlines for exercises
- Present knowledge through multiple channels and media
- Offer feedback in varied media

If you cooperate with academic staff around analyzing what is part of their classroom practice, you will probably find several aspects that are especially helpful for students with different impairments. At an individual level UD and UDL can be perceived as something additional to their daily work. **If you find elements that are relevant in their particular situation, something they can benefit from both personally and professionally,** you will support them to discover how UDL can support student engagement and quality assurance in the longer term.

No change will happen if you are the only UDL ambassador on campus. Do some research and discover some of the 'early adopters' – that is those that are starting to take a UDL approach and like it. Newly trained/qualified teachers are often pro UDL and like creative approaches and innovative methods. Experienced teachers also have tried and tested teaching practices that they know work. They have experienced making changes and seen the results. **A helpful move is to recruit, support and cooperate with the 'early adopters' around developing best practice.** If you recruit one in each faculty, you can form an interest group. Together you can share approaches that have worked.

Embedding new roles and responsibilities

As a part of changing disability officer's roles and responsibilities, we also need to review job descriptions. A new role for many disability officers is to contribute in a proactive way to the development of the Universal Design policy across campus. This includes cooperating with management on the development of action plans for Universal Design implementation and consciously reviewing Universal Design for Learning approaches. Another new role is to cooperate with academic staff and the institution's center for teaching and learning to develop inclusive learning methods and assessment that cater for different learning styles and disabilities and proactively include learners with a disability. Further, a disability officer will collaborate with other professionals to offer training on best teaching practice with a focus on the fields of disability, diversity and inclusive learning.

In order to become a good UDL ambassador it is helpful to have relevant experience working with students with disabilities, student counselling, mental health work or Universal Design. Further, a good UDL ambassador should possess the following personal characteristics:

- Excellent cooperation and communication skills – communication skills include the ability to present, communicate and interact with colleagues, students and other professionals and also the ability to produce appropriate text based documentation.
- The ability to engage and motivate others.
- The ability to engage with a wide variety of people and demonstrate empathy.
- The ability and willingness to work in a targeted way and to take a solution oriented approach.

Ask yourself

How do you see job descriptions changing within your service in your higher education institution? What is current practice? Discuss with your team and make a job advertisement that illustrates how your knowledge and experiences might fit into a future job description relating to developing inclusive practice.

Five initiatives for support services (that work)!

To get you started, we have identified, together with other disability support service professionals, five initiatives that have worked and that you can use as you seek to become an agent for change.

1. Arrange induction courses for all students, offering knowledge about HE and illustrating how it is to be a student on campus

An aspiring student has a lot to learn and it is easy to underestimate what it actually means to be a student, never mind a student with a disability. Both incoming students and the HEI itself need to prepare. Being well prepared is of particular importance, especially if the student is commencing a program of study whereby the impact of their impairment will be greater. Embedding this in practice for all students can be seen as level 1 and 2 of the Universal Design pyramid (shown in guideline 6). As a support service, you can invite those future students on an induction course to prepare them for student life, showing them around campus, orientate them and engage in a relationship that will promote positive conversations as to how they hope to engage positively in their learning. Those students with additional needs (identified as at level 3 and 4 of the UDL pyramid) may require additional induction regarding specialist software, using an interpreter or additional academic support such as a mentor.

2. Influence the development of CPD and professional teacher training programs to include information about UDL as an integral part

To reach a wider audience you can ally with the professional center for academic staff on teaching and learning (continuous professional development, CPD) or professional teacher training programs, and influence their courses to include information about diversity and the impact of disability in the learning context. Support services can also themselves design courses about Universal Design and its benefits when working with a diversity of students for academic and administrative staff perhaps once a year or on demand.

3. Build a relationship with your management: become the go-to person about UDL and make sure they take intentional choices based on relevant and timely information and best practice

Seek to influence and challenge all action plans. Engage with senior managers to facilitate joining working groups and ensure that the diverse learners' voice is represented where key decisions are being made.

4. Develop and provide a toolbox with inclusive methods and tools for academic staff

Develop a toolbox with inclusive methods and tools. The toolbox might include:

- How to make universally designed Power Point presentations, presenting text and other materials, including when offering online resources
- Alternative arrangements for practical work
- Examples of alternative assessments that fit your course/subject
- Flexible arrangements for fieldwork/work placements

5. Arrange structure and study skills courses for all students and consider peer mentoring

Many students with disabilities face challenges in how to structure, plan and carry out their work. In fact, many, if not most students experience this. The transition from upper-secondary to higher education, can be fraught with anxieties and many students need additional support. Arranging study skills courses for new students can be of great support for student both with and without disabilities. By focusing on the need for good learning strategies, the emphasis is more on being a good student than on the disability and can work for all students. Furthermore, using student mentors as assistants can enhance the process for all involved in skills development and delivery.

Using resources differently

In focus group meetings for different stakeholders, the main argument against UDL was the time-aspect and the challenges about how they could prioritize working with universal design for learning when they used all their resources to find reasonable accommodations for students with disabilities. Several actions and resources can be reorganized in order to benefit more students. Here are some examples:

In order to free up resources you can:

- Introduce UDL concepts to key stakeholders, like centers for teaching and learning/CPD, central academic staff communities and student welfare organizations
- Build relationships between departments inside the HEIs
- Work with staff based in faculties and institutes
- Digitalize administrative services
- Consider what services could be provided as a self-service
- Cooperate with and influence staff working to improve teaching and learning
- Advocate for a wider range of assessment methods
- Promote the use of computers as a norm and standard practice in all exams

Nine tips from professional support staff to all stakeholders



Quote:

Make conscious and intentional choices



Quote:

Support early adopters



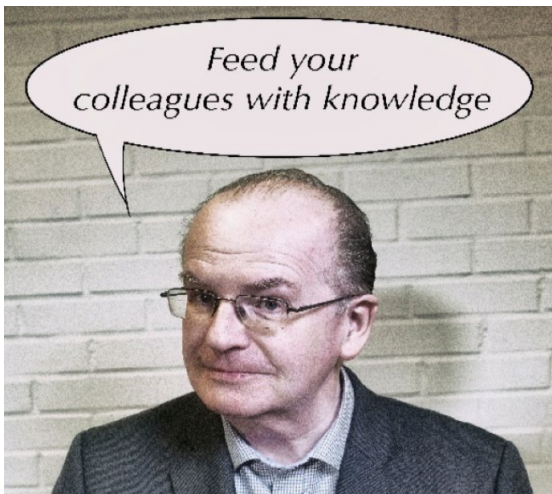
Quote:

Dare to be different



Quote:

Even small steps make big difference



Quote:

Feed your colleagues with knowledge



Quote:

See solutions not challenges



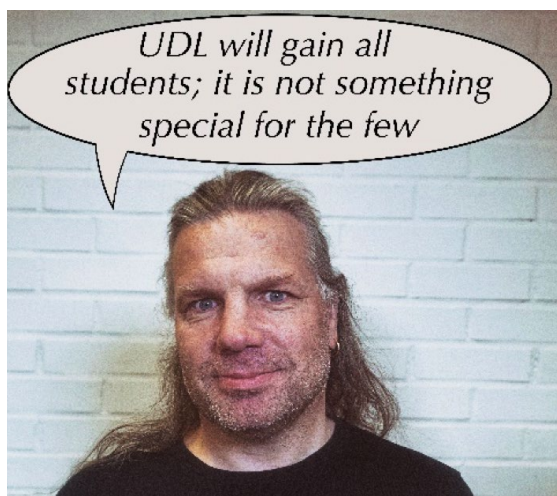
Quote:

Share your good practice



Quote:

Take your time to discuss with all stakeholders



Quote:

UDL will benefit all students; it is not something special for the few

Redesigning your service - Universal Design of support services

As a UDL-ambassador, you have an important responsibility for sharing the UDL story with both students and staff. Therefore, it is essential that the services you provide reflect the messages you are trying to impart - that you practice what you preach. As a disability officer or a support service professional, you should endeavor to provide services that can be accessed not just by students with a disability, but by anyone on campus that might require information on structuring learning, working with a student with a disability, other students or even perhaps a colleague with a disability.

Offer universally designed services by:

- Providing visible, precise and timely knowledge and information to students and staff through variety of channels
- Being visual, open and present for all, both physically and digitally
- Using clear language that is easy to understand and intuitive
- Planning courses and workshops for the diversity of students/ staff (remember flexibility and variation)
- Involving all users, including students, in the development and activities of quality in support services. What do students need? What do students miss?
- Being clear about roles and responsibilities

Always remember to walk the talk!

