Accessible and Quality Digital Education for Autism and Intellectual Disabilities
ToT Course for Educators

Common understanding of autism and intellectual disabilities in the context of education

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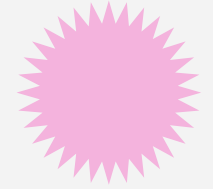
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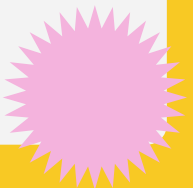
Expected Learning Outcomes

By the end of this session, you should be able to:

Learners should be able to acquire common understanding of autism and intellectual disabilities and identify key characteristics.
Recognize and appreciate the strengths and skills commonly found in learners with autism and intellectual disabilities
Differentiate between strengths and weaknesses in neurodivergent individuals
Describe the principles and benefits of inclusive education for learners with autism and intellectual disabilities.
Apply UDL principles to design instructional strategies that address and overcome barriers to learning.

My country

My job

Name

My hobby

What I expect from my coming here

01

Overview on Autism and Intellectual Disabilities

Characteristics, challenges and strengths

ASD and ID: Definitions

Autism spectrum disorder is a condition that impacts how a person perceives and socialises with others, causing challenges in social interaction and communication. The condition also includes limited and repetitive patterns of behaviour.
The term "spectrum" in autism spectrum disorder refers to the **wide range of symptoms** and severity.

An intellectual disability is a condition that develops in childhood. It affects the child's capacity to learn and retain new information, and everyday behaviour such as social skills and hygiene routines.
 Learners with this condition experience challenges with **intellectual functioning** and developing **adaptive skills** like social and life skills.
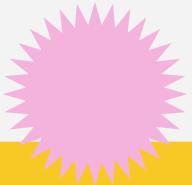
Areas affected by Autism Spectrum Condition:
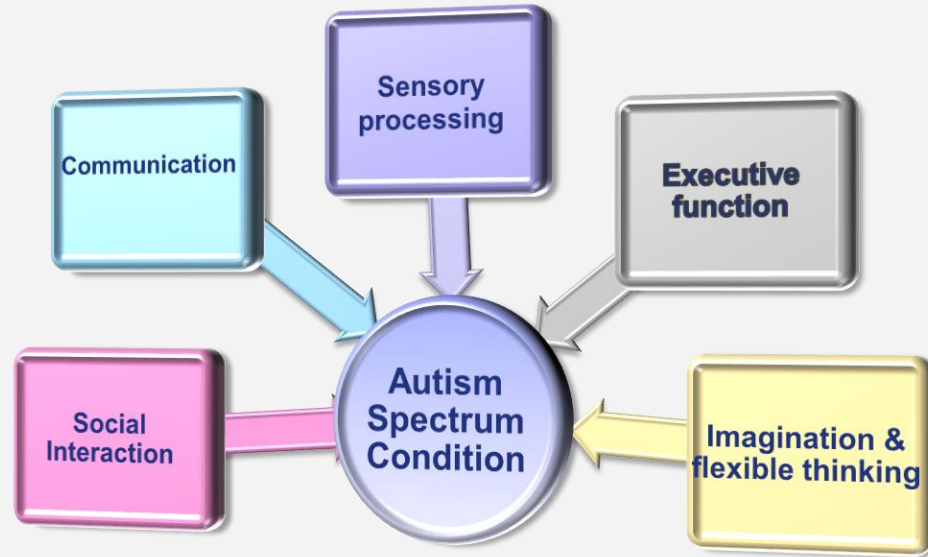
Examples of behaviours that may be typical for learners with this condition:

Difficulty initiating tasks

Difficulty staying on task

Difficulty with organisation

Planning

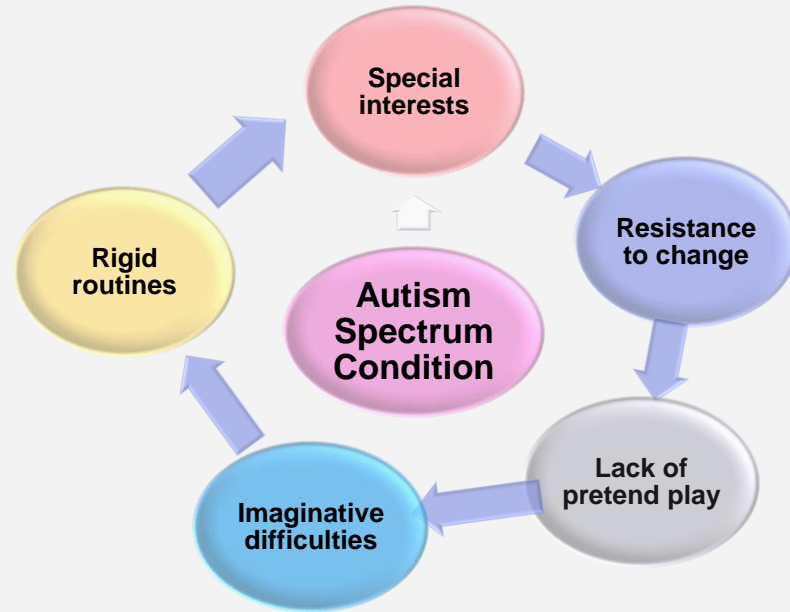Following multi-step instructions

Impulse control

Flexibility

Self-monitoring

Working memory

Problem-solving

Key characteristics:

Fostering Independence and Self-management in the Classroom

Learners with autism and ID may face unique challenges with:

- understanding and following social cues
- abstract concepts and problem-solving
- generalising skills across different settings
- communication (difficult for them to express their needs and wants)

Individuals with autism and ID may have difficulty with executive functions such as:
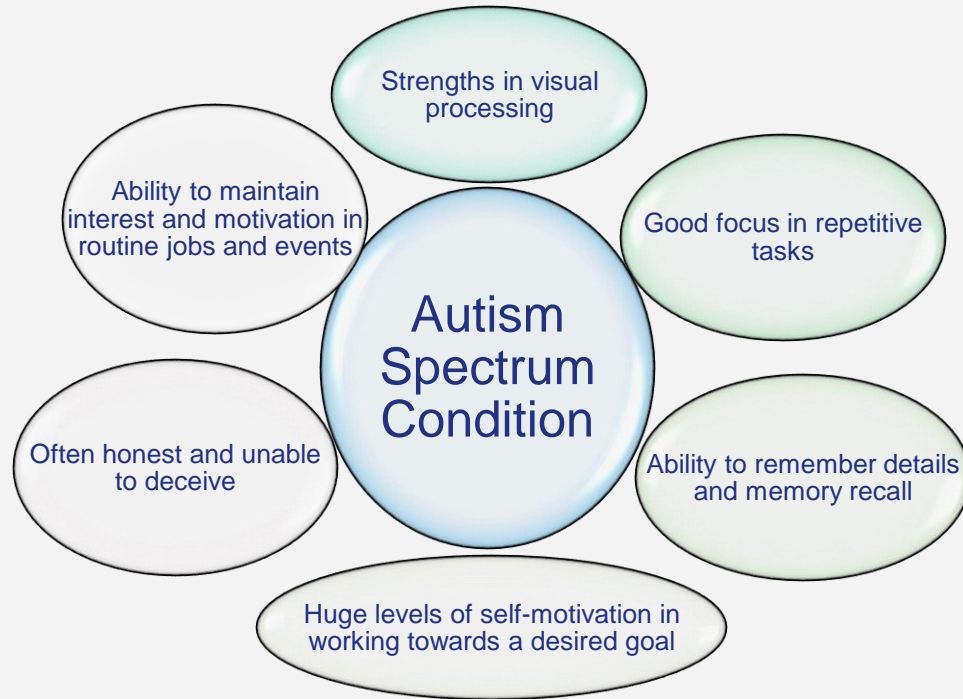
- planning
- organising
- attention
- working memory
- problem-solving
- self-regulation (critical for managing daily tasks and responsibilities)

These cognitive functions are important for initiating and completing tasks **independently**, making **decisions**, and **adapting** to changing situations.

Strengths and skills in people with ASC

- Strengths in visual processing
- Good focus in repetitive tasks
- Ability to remember details and memory recall
- Huge levels of self-motivation in working towards a desired goal
- Often honest and unable to deceive
- Ability to maintain interest and motivation in routine jobs and events
- Autism Spectrum Condition

Making use of strengths and skills

Every learner, regardless of the condition, possesses a distinct array of abilities, capabilities, and talents

This acts as the catalyst **for unlocking their full potential** in terms of engagement, learning, and social interaction

Acknowledge

Get to know them

Help them thrive

Incorporate

When supporting learners with autism, it becomes **crucial to recognise and acknowledge their individual strengths**

By harnessing and incorporating strong enthusiasm and dedication towards their specific skills and interests effectively, we can enhance their motivation and overall success in the learning process

Adopting a strength-based perspective

- Focusing on **how learners will be successful** is of paramount importance, instead of thinking of all the reasons they will not (deficit model).
- When the educator designs their curriculum, belief in learner success should be at the forefront in order to eliminate barriers in the learning environment and thus take away many of the reasons and excuses for failure.

you're doing great!
I know you're trying very hard.

CHIBIRD

keep up the good work!

Understand eventual barriers linked to **information processing** together with the demands of the content to be learned. Instructional strategies must take into account barriers such as **information overload, processing issues or distractibility due to overstimulation**.

Not only academic skills

- While academic skills are important, there are **other foundational skills that should be addressed first to support their overall development**.
- **Foster their ability to "learn to learn."** - identify and address their deficits while also using effective educational practices that go beyond solely targeting them – employ well-trained instructors and a well-sequenced curriculum.
- Important: teach skills that enable learners to **acquire additional skills** without requiring highly specialised instruction

Make **efforts** to:

Set clear and consistent expectations

Use visual aids

Break tasks

Provide positive reinforcement and feedback

Provide opportunities for self-management

Encourage independence

Make **efforts** to:

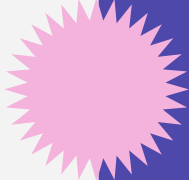**Encourage social skills**

Provide support
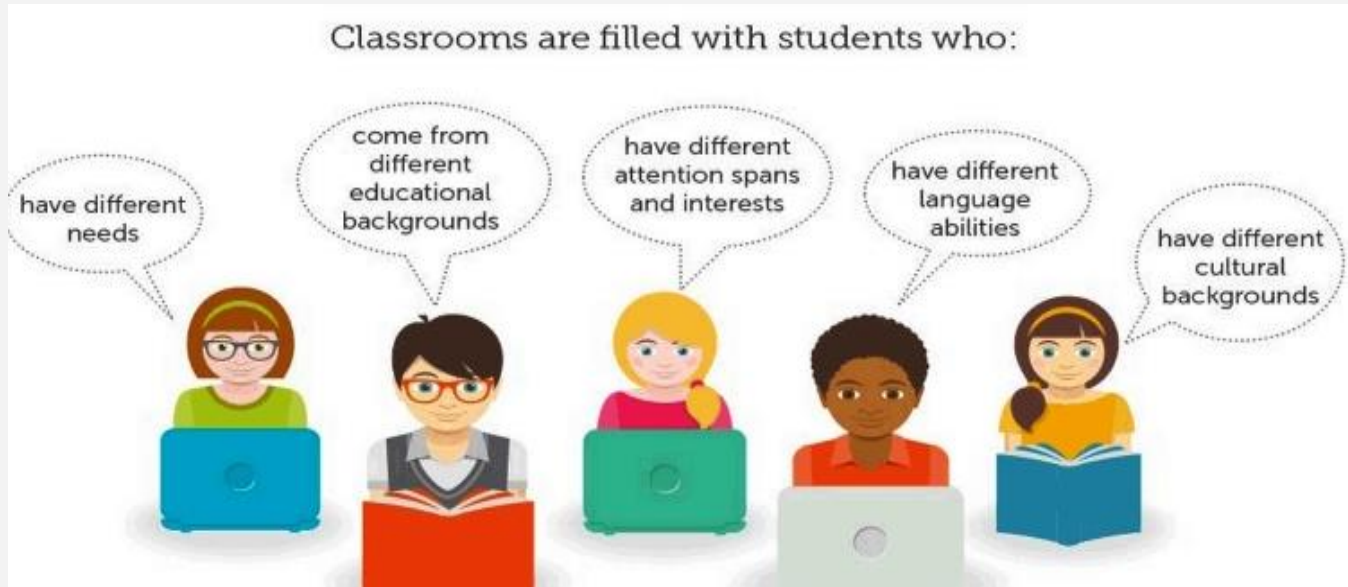
Emphasise strengths

Continuously monitor and adjust

Contemporary (?) realities

Classrooms are filled with students who:

- have different needs
- come from different educational backgrounds
- have different attention spans and interests
- have different language abilities
- have different cultural backgrounds

"Inclusion helps students to socially understand their world and gives them a feeling of ownership while building a sense of family or community."

Reality Vs Uniformity

- "**one size does not fit all**" in today's diverse classrooms

- growing number of students with a broad range of educational needs seeking services in **general education** classrooms

- some general educators may feel **inadequately prepared** to meet the needs of an increasingly diverse population of learners

- an instructional philosophy of "Teachers teach students, not disability labels," and "**If a child doesn't learn the way we teach, then we better teach the way the child learns.**"

"Students with special needs have taught me that I do not know everything. They have taught me that there are so many different ways children learn—not just a few ways"

Diversity in the classroom

Opportunities and challenges

The idea of **least restrictive environment** is a relative concept and must be determined individually for each pupil

Challenge: balancing of maximum integration with the delivery of an education appropriate to the unique needs of the student with <u>disabilities</u>.

It is **based on the student's educational needs, not their disability.**
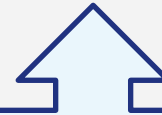
the degree of involvement and participation is determined individually for each pupil.

No one arrangement is appropriate for each and every child!

Inclusive education: definition

- **Is inclusion** the practice of educating students with disabilities and other learners with exceptionalities in general education classrooms?

- **Inclusive education**, more than just addressing how the pupil's disability impacts learning, must **consider the various barriers that often impede or exclude meaningful and effective participation in the classroom**.

- The physical placement of students in a general education classroom is not an end in and of itself but rather **a means to an end**.

"...*the more students with special needs are included, the more their self-esteem increases*. ..It's a slow process and it isn't easy, but in the end everyone benefits, including the teacher."

Three broad domains with which to approach inclusive pedagogy when teaching learners with and without disability:

(i) a **belief** that all learners bring something of value to the learning environment

(ii) a **design** that values differences while also providing access to and enabling engagement with dominance;

(iii) **actions** that work with learners and their communities not only on universally effective ways to transfer and assess content knowledge but also on a wide range of cognitive, affective and behavioural issues.

"I measure my students' progress by equipping them with the attitudes, skills, and tools they need for success in school as well as for life."

There are many ways to show what you know!

The tighter we cling to **the school way** of expressing knowledge and skills**,** the more learners we are **excluding.**

If there is **another way** that allows learners to show how much more they know, they should not be deprived of that option.

The more **means of expression** that learners **develop**, the more versatile they will be in various settings at various tasks.

The school way needs to be every way.

Unique and shared

Activity: Into groups, each team has to find something unique about each person and something they all share in common as a group — these can be things about your personality, abilities, origins, fears, hobbies, fun facts, needs or anything else. Announce the results to the whole meeting when all groups are ready.
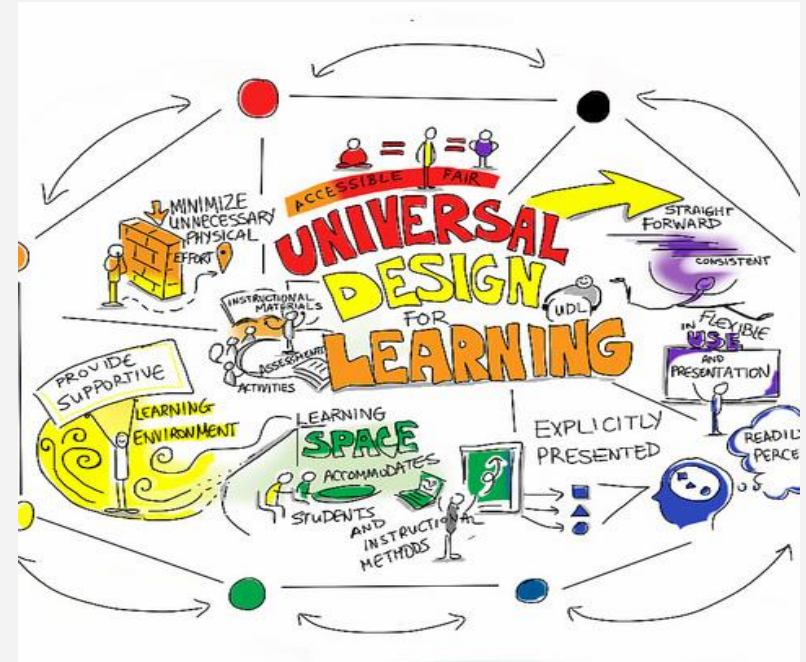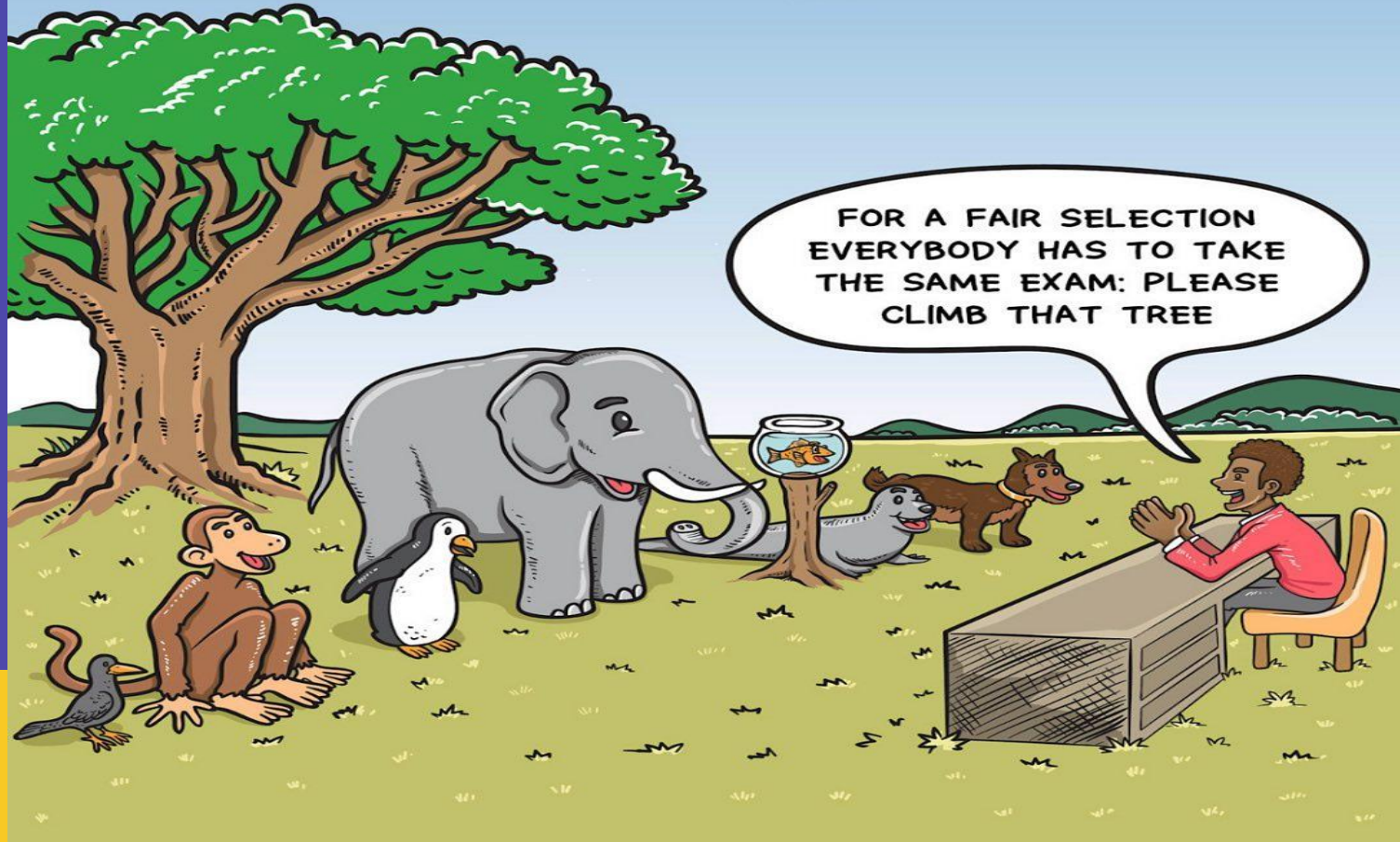
04

Overcoming Barriers with UDL design

Engagement, Representation, Action and Expression – Assessment as well!

What is UDL?

- What does UDL mean to you?

- **A framework guiding and supporting teachers in creating goals, providing methods, materials and assessments while taking into account variability in learners' abilities, needs and preferences.**

Every student's way is universal

Universal Design for Learning IS NOT:

- Lowering learning goals or achievement expectation
- Changing the curriculum
- A one size fits all approach

Universal Design for Learning IS:

- Extra time with planning
- Set framework for instruction

UDL principles: Provide….

1. Multiple means of engagement

The "Why" of learning
- Options for self-regulation
- Options for sustaining effort and persistence
- Options for recruiting interest

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING

2. Multiple means of representation

The "What" of learning
- Options for Perception
- Options for Understanding Language, Mathematical Expressions and Symbols
- Options for Comprehension

RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING

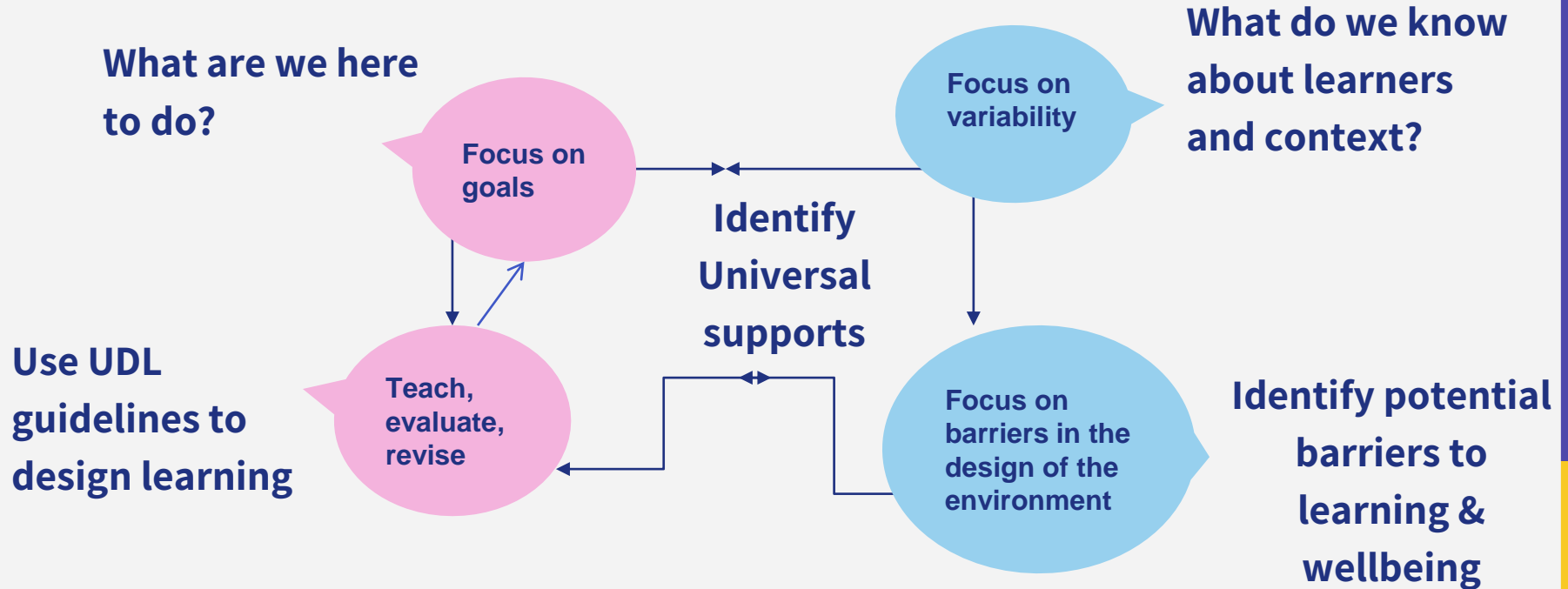## 3.Multiple means of action and expression

The "How" of learning
- Options for physical action
- Options for expression & communication
- Options for executive function

STRATEGIC NETWORKS:
THE **HOW** OF LEARNING

UDL thinking

Strategies for **engagement**
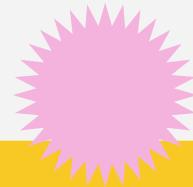
(some)

Organized Classroom

A place for everything and everything in its place, a well-organised classroom is that in which **the teacher and learners alike can obtain materials** they need **easily, quickly**, and **independently**.

Mnemonics

Techniques (verbal, physical, or written) that can be used for any subject area helping learners recall factual information that has been learned. Recall is facilitated by making **connections to familiar words**, **letters, images, or ideas**; in order to be effective, mnemonics use **multiple senses**, have emotional connections, use humour or pleasant or vivid images, and contain symbols or pictures.

Arts

Using the Arts to develop executive functions makes the teaching content compelling—to **fight off boredom** and **frustration** that can lead to disengagement and inappropriate behaviour.

Strategies for **representation**
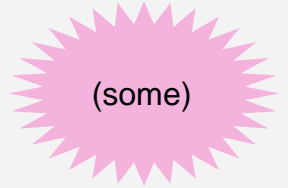
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Visually Accessible Text

Accessible reading materials are the one(s) that **the learner decides** is best. Experiment with various fonts in various sizes

Auditory books

They increase **listening** skills, improve **correct use of punctuation**, and **engage** learners in the reading process.

Schedules

Different ways (text, icons, pictures, and Braille) to **display the daily schedule** or agenda so that everyone can use and apply it. It meets the needs of learners who need the **predictability** of what is coming next and how long it will last.

Continuum of Abstractness

Non-readers or learners with limited vocabulary can benefit from visuals of objects. It's a way **to scaffold learners from concrete to abstract representations**, to support reading and communication skills

Graphic Organizers

Any **visual structure** or **symbol** that is used to represent knowledge or concepts and any relationships among them. They promote **patterning** and construction of meaningful **connections** to previous learning

Timers to support task completion

Time management is a higher order executive functioning skill; monitoring progress and limitations in temporal abilities have a negative impact on project and task completion. **Separate** the learner's **ability** to **complete the task** at hand and their ability to **manage time.**

Strategies for **action** and **expression**

(some)

Learner-Created Bulletin Boards

Have learners (individually, in small groups, or as a whole class) **express what they know** about a topic or concept by **displaying** it on a **bulletin board**. Providing them with the opportunity to show their uniqueness and creativity establishes a sense of belonging in the classroom community.

Coded Assignments

This can help learners **focus on a particular part** of the assignment or **avoid another** part so that their attention and stamina is spent working on the skill at hand (**highlight** or putting stickers to questions, **number** textbooks, folders, or supplies to show the order in which to use them, **colour code** maths problems to highlight different operations, **arrows** for instructions, etc).

Communication Supports

Provide augmentative and alternative communication (**AAC**) supports as well as **Universal Computer Equipment**

Learner Recordings and videos

Just as teacher-made videos can help learners input information, recordings and videos can help learners express their learning. Responses must be made **completely by the learner**, **just as** they would be **in writing**, and they must **contain the same** details and expression of knowledge and skills.

Multiple means for **assessment**

Ways in which teachers evaluate learners must **vary** along with the ways in which learners are engaged in learning, materials are represented, and learners represent what they know...

Adapted Tests

- Important to adapt the test for their **needs**.
- Consider **barriers gaining access** to the test questions and directions or responding
- Have an **accurate evaluation** of the learner's understanding of the content.

Solving real-world problems

- Authentic and meaningful assessment → assess **skills** that are **used** to make a difference in the school or community.
- Frustration with **a situation** → turn it into an **opportunity** to **solve** the problem (i. ex. choice of recess activities, work on a budget proposal, fundraising planning for a family, etc).
- Learners **involved throughout the process**, from identifying the problem to the steps taken to solve it.

CHOICE!

- Learner choice **is essential** for inclusive UDL
- Think in terms of **homework menus**, an array of **options** to choose from (a tic-tac-toe board, a restaurant menu, a checklist of options with varying point values, etc.)
- Meet the goal and common **set of criteria** established across all choices

Ability Profiles

An ability profile is a **representation of skills** that a learner has achieved (may be a written description, a photo, a video, or a work sample).

The idea is to **focus on what the learner can do** and **show how far the learner has come**, not how far the learner has to go.

Steps **for UDL planning**
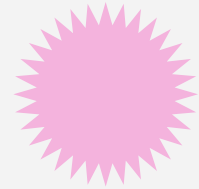
- understand eventual **barriers**

- demands of the **content** to be learned - select **critical** features from supplementary

offer **multiple options**

Not interesting/relevant?
Lack of perseverance or coping skills?
Others?

What the learners will need in order to advance to the next level - reach an alignment between what the learner knows and what they are expected to know

Learners choose what works for them in **Engagement**, **Representation**, **Action** & **Expression**

1

Engagement

Use the arts:
Use props/ different voices for different characters in reading, play a song at the beginning, show compelling photographs, etc
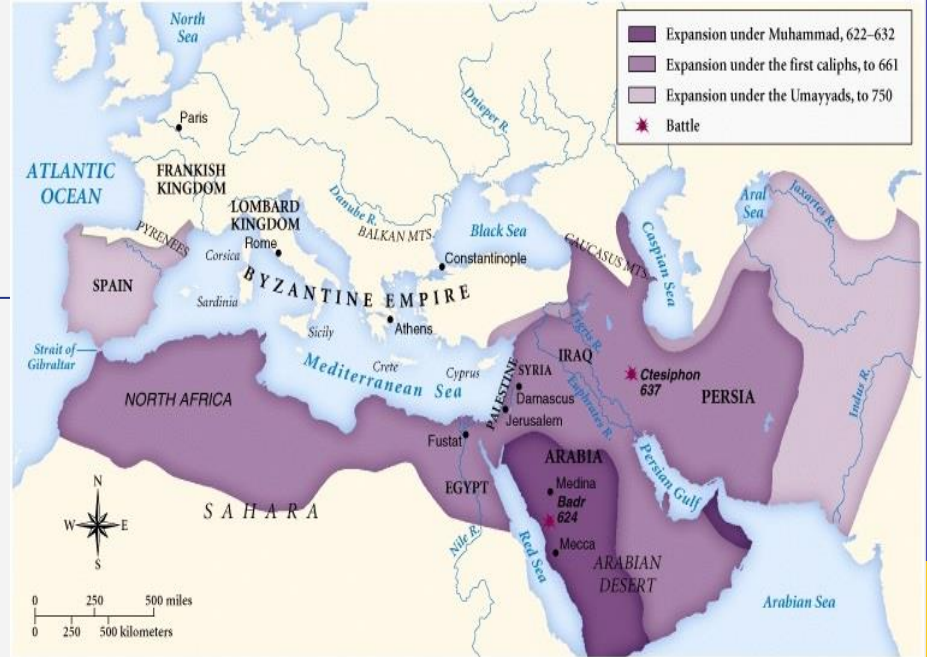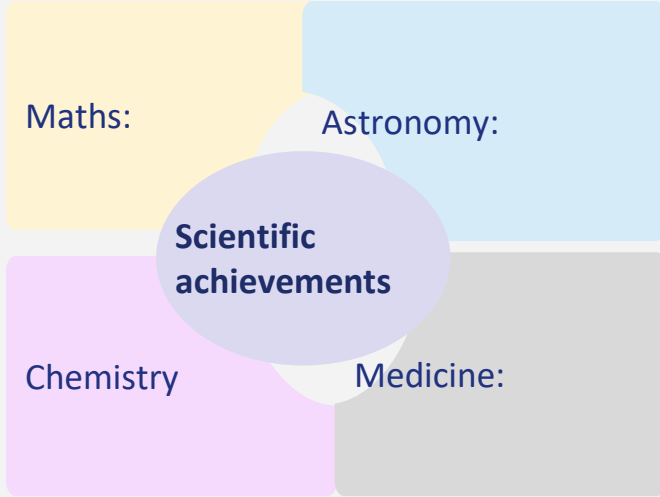
1

Engagement

2

Representation

Vocabulary, numbers, and symbols should be paired with alternative representations of their meaning—photos, illustrations, graphs, charts, or physical models. Ex. Use Study Snippets to reinforce learning

Expansion under Muhammad, 622–632
Expansion under the first caliphs, to 661
Expansion under the Umayyads, to 750
★ Battle

North Sea
ATLANTIC OCEAN
Paris
FRANKISH KINGDOM
LOMBARD KINGDOM
Rome
Corsica
BALKAN MTS.
Danube R.
Dnieper R.
Black Sea
CAUCASUS MTS.
Caspian Sea
Aral Sea
Jaxartes R.
PYRENEES
SPAIN
Sardinia
BYZANTINE EMPIRE
Constantinople
Sicily
Athens
Crete
Cyprus
Strait of Gibraltar
NORTH AFRICA
Mediterranean Sea
PALESTINE
SYRIA
Damascus
Jerusalem
Fustat
EGYPT
IRAQ
Ctesiphon 637
Tigris R.
Euphrates R.
PERSIA
Persian Gulf
Indus R.
SAHARA
ARABIA
Medina
Badr 624
Mecca
ARABIAN DESERT
Nile R.
Red Sea
Arabian Sea
N W E S
0 250 500 miles
0 250 500 kilometers

Maths:

Astronomy:

Scientific achievements

Chemistry

Medicine:

3

Action and Expression

- Give learners **option** of composing with **different media** when completing assignments
- Build **scaffolding** into every assignment and provide **feedback**
- Begin with an **objective** and **rationale** and provide work examples, scaffolds, and checklists for every assignment
- Give learners a lot of **tips** on how to stay organised and make necessary resources accessible

Some learners don't know how to organise things on their own.

ex. provide templates for written work and storyboard templates: sheets with boxes and speech bubble blanks for contributions to science (Ibn Sina/ Avicenna)

"Most teachers waste their time by asking questions that are intended to discover what a pupil does not know, whereas the true art of questioning is to discover what the pupil does know or is capable of knowing."

—Albert Einstein

Thank you for your attention!

Do you have any questions?

Learn more about ISEC-ADE at isec-ade.eu

ISEC - ADE

Accessible digital education for learners with autism and intellectual disabilities: Innovating solutions and enhancing educators' competences
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