Teach me to help

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Manual for the design and development of an online course in the field of social work education

eManual

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SUMMARY

Introduction

Empowering Social Workers for Inclusive Online Education

The Teach Me to Help (TMTH) project was initiated in response to the urgent need for accessible and disability-friendly online education. This collaborative effort involves five organisations - from Romania, Italy, France and Cyprus - committed to equipping social workers with the skills needed to design and deliver effective online courses for this underserved demographic.

With a dearth of online courses designed specifically for people with disabilities, the TMTH project seeks to bridge this gap. The recent global pandemic has highlighted the effectiveness of online education, and the overall aim of the project is to remove barriers that hinder the educational and inclusive development of individuals with special needs.

Empowering Social Workers as Change Agents

Recognizing social workers as pivotal figures in supporting individuals with disabilities, the TMTH project aims to enhance their capabilities. Social workers, given their frequent interactions with diverse populations, are well-positioned to play a transformative role. Through the project, they will gain the tools and knowledge needed to create online courses that cater to the unique needs of their target audience.

Central to the TMTH project is the creation of an all-encompassing guide, meticulously developed by collaborative partners. Each partner brings their expertise, innovative thinking, and a shared dedication to making a meaningful impact.

Introducing the Partners:

The Social Care Directorate Arad (DAS Arad): As a public service, DAS Arad is entrusted with the critical task of offering professional services and programs that protect and support vulnerable groups. Centered around child protection, family dynamics, elderly care, and individuals with disabilities, DAS Arad exemplifies a steadfast commitment to societal well-being. Their contributions to the project encompass an extensive array of critical topics, from universal design for learning to curriculum reconstruction, setting the foundation for an inclusive educational journey.

CELIZ International Center: As a centre of excellence for lifelong learning initiatives, CELIZ has contributed significantly by leading the goal-setting process and formulating clear course objectives. These contributions collectively enrich the educational journey of people with disabilities.

Oriensys is a French organization created around the founder - whose high-level practice in education, science and educational leadership aimed to transform education into social dynamics. This perspective imprints the work of its team of experts in the field of educational sciences reflecting remarkable results in modernizing educational practices. Oriensys' major contribution to this guide consisted in explaining and exemplifying current didactic methods, from the digital environment, their roots in classical pedagogy and their inclusive valences from the online environment.

The Organization for Promotion of European Issues (OPEI) operates with a resolute commitment to fostering social integration. OPEI's role in the project involves the creation and cultivation of active-participatory teaching techniques. These methods hold the potential to revolutionize how educational content is delivered and absorbed.

Igor Vitale International Srl: As a specialized entity in applied psychology, Igor Vitale International Srl is uniquely positioned to elevate the realm of pedagogy. In the TMTH project, the IVI team worked on refining teaching methodologies, guaranteeing that they are not only comprehensive but also universally accessible. Additionally, IVI played a pivotal role in crafting visually engaging components that enhance the overall learning experience.

A Collective Effort for Inclusive Education

By pooling their expertise, these partners aim to reshape the landscape of online education for people with disabilities. This result of the project is not merely a guide; it is a collaborative endeavor with far-reaching implications. Together, these organizations are committed to empowering social workers, promoting inclusive education, and ultimately fostering a more equitable society.

Chapter 1 - Formulating the purpose of the course

1.1 How to formulate the purpose of a course

Formulating the purpose of a course is an important process for any instructor or trainer. The aim should be clear, concise and specific and should focus on what the course aims to achieve. When talking about an online course for people with disabilities, the goal should specifically reflect the learning goals and needs of these people. Here are some suggestions for formulating a goal for such a course:

❖ Identification of specific learning objectives for persons with disabilities: Learning objectives should be clear and specific and reflect the needs and learning objectives of persons with disabilities. These goals could include, for example, improving online accessibility, developing communication and social interaction skills, or improving navigation and technology use skills.

❖ Defining the purpose in clear and easy-to-understand terms: The purpose should be defined in clear and easy-to-understand language for the target audience. This should reflect the specific learning needs and objectives of people with disabilities so that they can understand exactly what they will learn from the course.

❖ Ensuring that the goal is measurable: The goal should be measurable so that you can assess whether the participants have achieved the learning objectives and provide them with the necessary feedback. This may include, for example, assessing their online browsing skills or their ability to communicate and interact socially.

❖ Include a statement about the benefits of the course: The scope should include a statement about the benefits of the course for people with disabilities. These benefits could include improving their

ability to use technology, developing new skills, or improving their ability to participate in online activities.

Here is an example of how an effective goal for an online course for people with disabilities might be formulated: "The goal of this course is to help participants acquire the skills and knowledge to navigate and use technology effectively and accessibly so that so that they can improve their communication and social interaction capabilities, acquire new skills and better integrate into online communities."

a. Definition of learning objectives

Formulating the purpose of a course is an important part of the course planning process and can influence its success. The objective is a concise and clear statement of what is intended to be achieved through the course. To formulate a goal it is important to identify the learning objectives of the course. These may include knowledge, skills and competencies that learners need to acquire. Also, these objectives may vary depending on the type of disability of the people involved, but may include the following aspects:

Knowledge: Knowledge-related learning objectives may include, for example, learning specific concepts related to disability, understanding legislation or policy relevant to people with disabilities, and learning about support options available to them.

Skills: Learning objectives related to skills may include learning specific communication techniques and strategies, such as using assistive technologies or adapting behaviors and body language to communicate more effectively with people with disabilities.

Competences: Competency-related learning objectives may include developing specific leadership and collaboration skills in working with people with disabilities, as well as learning adaptive skills and flexibility in dealing with complex situations.

When defining the learning objectives of such a course, it is important to take into account the different types of disabilities and the specific needs of the learners. In this regard, it would be useful to consider feedback from disabled people and subject matter experts to ensure that the learning objectives are relevant and appropriate. It would also be useful to consider how learning objectives can be effectively measured and assessed to ensure that learners are meeting their objectives and making progress in their learning.

a. Identification of the target audience

Depending on the target audience, the purpose can be formulated differently. For example, the purpose of a course for introductory level learners may be different from that for advanced level learners. Identifying the target audience is an important step in formulating the purpose of a course, as it can vary

according to the needs, experience level and interests of different groups of learners. Here are some examples to illustrate this:

Purpose of an Introductory Course: An introductory course is usually aimed at learners who have little or no experience in the subject area. The purpose of this course could be to provide a comprehensive introduction to the field, familiarize students with basic terminology and concepts, and prepare them for subsequent courses. For a target audience that has little or no experience of working with people with disabilities, the aim of an introductory course might be to help participants understand their specific needs and abilities and to give them an introduction to how to communicate and interact with these people. The purpose could also be to prepare them for later courses, which could be more advanced.

Purpose of an advanced course: An advanced course is usually aimed at learners who already have solid experience in the subject area. The purpose of this course could be to develop and deepen the knowledge and skills acquired in previous courses, as well as to explore advanced and complex topics in the field. For a target audience with experience and solid training in working with people with disabilities, the aim of an advanced course could be to develop and deepen their skills and knowledge in working with people with disabilities, explore advanced topics and learn new techniques and strategies to improve their performance.

It is important to consider the level of experience and training of the target audience when formulating the purpose of a course to ensure that it is appropriate and relevant to them. The specific interests and needs of the target audience should also be considered to increase engagement and interest in the course.

In the case of an online course for people with disabilities, identifying the target audience is essential to ensure that the purpose of the course is appropriate and relevant to them. The target audience for such a course could include people with physical, cognitive or developmental disabilities, as well as people who work with them, such as health professionals, therapists or their family members. Regardless of the level of training and experience of the target audience, the aim of an online course for people with disabilities should be to help participants improve their skills and knowledge in working with these people, to provide them with support and assistance in developing skills needed and to give them a deeper understanding of their specific needs and abilities.

a. Formulating the goal

The purpose statement should be a concise and clear statement of what is intended to be achieved through the course. In general, the purpose of a course should inspire and motivate learners to achieve learning objectives and improve their skills and knowledge. A clear and well-formulated goal can help improve learning and increase learner engagement during the course.

The importance of formulating a clear and concise purpose: The purpose of an online course for people with disabilities should be a clear and concise statement of what is intended to be achieved through the course. This is important to help participants understand exactly what is expected of them and to motivate them to achieve their learning goals.

Defining a specific and measurable goal: The goal of an online course for people with disabilities must be specific and measurable. This means that it must be clearly defined and measurable to determine how well participants have achieved the learning objectives.

An example of formulating a specific and measurable goal for an online course for people with disabilities might be: "The purpose of this course is to help participants understand and apply techniques and strategies for communicating and interacting with people with disabilities to- and improve skills and performance in this area."

Identifying Learning Objectives: Before formulating a clear purpose for an online course for people with disabilities, it is important to identify the learning objectives of the course. These could include, for example, learning specific communication and interaction skills with people with disabilities, developing strategies to adapt to their specific needs, and learning ways to work with assistive technologies.

Ensuring Relevance and Appropriateness: The purpose of an online course for people with disabilities must be appropriate and relevant to the target audience. This can be achieved by involving subject matter experts and feedback from participants to ensure that the purpose is relevant and appropriate to their specific needs and interests.

Formulate a realistic and achievable goal: The goal of an online course for people with disabilities should be realistic and achievable. This means that the goal must be achievable through the course and realistic in terms of expectations of participant performance.

Identify clear evaluation criteria: To ensure that the goal is measurable and evaluable, it is important to identify clear evaluation criteria

a. The goal must be achievable

The goal must be achievable, that is, it can be achieved through the course. It is important to be realistic about expectations and ensure that the resources are available to reach the goal. Ensuring feasibility is an important aspect of formulating a goal for an online course for people with disabilities. To ensure that the goal is achievable, it is important to take into account the following aspects:

Realistic learning objectives: The learning objectives of the course must be achievable and appropriate to the level of training and experience of the target audience. It is also important to consider the resources available to reach these goals.

Available resources: It is important to ensure that the necessary resources to achieve the goal. These may include, for example, qualified personnel, training materials, assistive technologies or other resources necessary to achieve the goal.
Time required to achieve the goal: It is important to consider the time required to achieve the goal and ensure that it is realistic and appropriate for the duration of the course.
Ensuring participant engagement: It is important to ensure that participants are engaged and motivated to achieve their learning objectives. This can be achieved through appropriate training and interaction methods such as question and answer sessions, group work, feedback and continuous assessment.
Identifying additional resources: It is important to consider that some people with disabilities may need additional resources to achieve learning goals. These resources may include, for example, sign language translation, alternative documents or other assistive technologies.
Ensuring attainability is important to ensure that the goal is realistic and appropriate in terms of expectations of participant performance and the resources available to reach the goal. This can help improve participant engagement and motivation and ensure a successful course.

a. Deadline adjustment

The goal should have a clear deadline to help participants focus and work towards achieving it. Also, the deadline should be realistic and allow enough time to reach the goal. Adjusting the deadline is an important aspect of formulating a goal for an online course for people with disabilities. The deadline is important because it helps participants focus and organize their efforts to reach the learning goals and also motivates them to work towards achieving them. However, it is important that the deadline is realistic and allows enough time to reach the goal. An unrealistic or too tight deadline can lead to stress and anxiety for learners, which can negatively affect their performance and ability to achieve learning objectives. Furthermore, for people with disabilities, a tight deadline can be even more difficult to meet, due to their specific needs and possible obstacles they may encounter in the learning process.
Thus, to ensure an adequate and realistic deadline, it is important to consider the following aspects:
Difficulty level of the course: The deadline should be adapted to the difficulty level of the course. If the course is more difficult or requires more time and effort, the deadline should be longer to allow enough time to reach the goal.
Participants' needs and capabilities: It is important to consider the needs and capabilities of the participants and ensure that the deadline is appropriate for them. This may include, for example, longer periods of time to complete tasks for people with disabilities or those who require assistive technologies.
External factors: The deadline should take into account external factors that may affect the learning process, such as holidays or special events.

Continuous assessment and feedback: It is important to provide continuous assessment and feedback throughout the course to allow students to adjust their efforts according to their progress and achieve their learning goals in a timely manner.

1.2. Assessment of training needs to determine the purpose of the course

Training needs refer to gaps or deficiencies in a person's knowledge, skills, or behaviors that need to be improved in order to perform tasks or perform better in a particular area. Training needs can be identified by evaluating the performance of individuals, feedback from colleagues and customers, analyzing critical situations, studying trends in the field, or other evaluation methods. Identifying training needs is important to ensure that training is relevant and appropriate for the target audience and to achieve training objectives. Once training needs have been identified, they can be transformed into specific training objectives. These goals should be measurable and specific so that they can be evaluated and tracked. In addition, training should be tailored to the specific needs of the target audience. "Training Needs Assessment" (TNA) is the method of determining whether there is a training need and, if so, what training is required to meet the need. The purpose of a course can reduce, if not eliminate, the gap between what is needed and what is missing in terms of training by equipping participants with knowledge and skills and encouraging them to build and improve their capabilities. Current status data are essential for training need assessment as they serve as baseline data.

a. Techniques for acquiring training needs

Identifying the training needs of people with disabilities may be different from identifying the training needs of people without disabilities, as they may have specific learning needs related to the type and degree of their disability. Here are some specific techniques for identifying the training needs of people with disabilities:

• *Consulting the disabled person*: Consulting the disabled person is an important way to identify specific training needs. The disabled person is best placed to express their specific learning needs and requirements, and consultation with them can help identify how the training program might be adapted to suit their needs and abilities.

• *Assessing current capabilities*: Assessing the disabled person's current capabilities can help identify gaps in knowledge or skills and identify what would be needed to meet learning goals.

• *Assessment of the environment and assistive technologies*: The assessment of the environment and assistive technologies can help identify accessibility needs regarding the learning environment and technologies used in the training program.

• *Consultation with Disability Specialists*: Consultation with disability specialists can help identify assistive technologies and other approaches to adapting the training program that could be used to meet the specific learning needs of individuals with disabilities.
• *Developing individualized training plans*: Developing individualized training plans that focus on the specific needs and goals of people with disabilities can help meet their learning needs and achieve their training goals.
By using these specific techniques to identify the training needs of people with disabilities, it can be ensured that the training program is tailored to the individual needs and abilities of people with disabilities and that they will have an equitable and accessible learning experience. Training needs can be gathered through an information gathering process and met through training. The TNA process helps the trainer and also the recipient requesting the training to specify the training need or performance deficiency. Evaluations can be formal (using surveys and survey and interview techniques) or informal (asking questions to those involved) (Jean B., 2006). Training is a means of ensuring that trainees have the right knowledge and skills to carry out their work effectively and competently. Training may be required when there is a gap between desired performance and actual performance, and the reason for this gap is a lack of skills or knowledge. Training may only be able to solve some of the problems. Thus, the problem must be analyzed and identified if the training will be able to solve it. If training is required, the objective of the training and how it will help participants become more effective must also be defined. This process is called training needs assessment or training needs analysis.

Here are some examples of training needs, which may cover the following situations.
• Solving a current problem
• Avoiding a past or present problem
• Creating or capitalizing on a future opportunity
• Ensuring learning, development or growth
The purpose of TNA is to answer some familiar questions: why, who, how,
what and when. The following describes the questions and what
analysis can be done to answer them.
Training needs assessment processes can be divided into five steps: i) problem and needs identification; ii) determining the design of the evaluation needs; iii) data collection; iv) data analysis; and v) feedback.

a. Important aspects in formulating the purpose of a course

In formulating the purpose of a course, it is good to take into account certain aspects such as:
The role of the trainer ("facilitator", "mentor", "mirror", etc.). It is necessary to understand the role the trainer plays in the training. The trainer can have the role of a facilitator, who stimulates reflection and

critical thinking, of a mirror that reflects the behaviors and thoughts of the participants to make them manifest, etc.

Adaptation of a training. Adapting online training for people with disabilities is a crucial necessity to ensure an equitable and accessible participation and learning experience for all participants. Here are some suggestions for adapting online training for people with disabilities:

• Make sure the delivery platform is accessible: First, make sure the delivery platform used for the training is accessible to people with disabilities. This may include, for example, ensuring that the platform is compatible with assistive technologies such as screen readers or special keyboards.

• Ensure course materials are accessible: Ensure course materials are adapted to be accessible to all participants. This may include, for example, using high-contrast text and large fonts for the visually impaired, or providing transcriptions for video and audio material.

• Provide communication and interaction options: Provide communication and interaction options to suit the individual needs of participants with disabilities. This may include, for example, providing chat or video communication options so that people with hearing or vision impairments can participate in group discussions.

• Make sure the instructions and tasks are clear and easy to understand: Make sure the instructions and tasks are clear and easy to understand for all participants. This may include, for example, using simple and clear language, avoiding the use of jargon and explaining technical terms.

• Provide personalized feedback and individualized support: Provide personalized feedback and individualized support for each participant based on their specific needs and requirements. This may include, for example, offering one-to-one question and answer sessions or personal coaching.

In general, adapting online training for people with disabilities requires an individualized approach and sensitivity to the needs and experiences of each participant. It is important to consider the diversity of the participant group and adapt the course accordingly to ensure a fair and accessible learning experience for all.

If we talk about a physical course, we must focus on the following aspects:

The space where training takes place must be practical and comfortable.

• room size: neither too big nor too small. Not too much space should be left between the trainer and the participants;

• brightness: a room in which you can take advantage of natural light is recommended;

• seats: comfortable and mobile, possibly arranged in a circle, this has positive influences on the dynamics;

• not too bulky furniture;

• the environment should be quiet: a noisy context would disturb the training.

If the place where the training will take place cannot have some of these aspects (for example the chairs are fixed and cannot be moved), the trainer should have enough time to adapt. If there is no projector or whiteboard it is important for the trainer to think about how to replace them. During a course, participants can ask, for example, if it's a nice day, to continue outdoor activities. This has advantages and disadvantages. We can consider advantages if the participants request and the trainer accepts, the following:

• Participants will feel included

• Can help overcome certain resistances

We can consider the following disadvantages:

• Leaving the gym may mean that gym rules may be broken and this is very risky

• It is usually much more difficult to speak outdoors, the trainer has to speak louder and the participants have many more sources of distraction

The time. It often happens that the trainer thinks that the time available is less than the actual time required. For this reason it is essential to be prepared to shorten the lecture if necessary, however keeping the absolutely necessary parts, namely:

• introductory session (participants can get to know each other, explain their expectations, the right atmosphere is created for the following parts)

• final session (reflection on what was done and learned)

It should be noted that:

❖ Many decisions (cuts or additions) have to be made on the spot

❖ The trainer knows which pieces are critical and cannot be cut if the available time is insufficient

❖ Let the trainer know what additional games or activities can be used to make good use of time if time remains

❖ The trainer must know very clearly which parts of the training are interchangeable and which are not

❖ Some activities can be postponed until post-training (reading materials, etc.)

c) Number of participants

The number of participants in an online course for people with disabilities may vary depending on the nature and purpose of the course. In general, an online course could be designed to be delivered to a large number of participants if the technology used and the delivery platform allow it. However, in the case of an online course for people with disabilities, instructors and trainers may want to limit the number of participants to ensure that all participants can receive individual attention and support

tailored to their specific needs. Also, for a course involving practical or social interaction skills, a smaller number of participants could allow for a safer and more comfortable environment to learn and interact. In general, it is important that instructors and trainers consider the needs and requirements of participants with disabilities and adapt the course accordingly. This may include limiting the number of participants, providing options for one-on-one interaction and communication, adapting course materials to be accessible, and accommodating the specific needs of each participant during the learning process.

If the course will be physical, to ensure the success of the training (from the point of view of group dynamics and the realization of the activities) at least six people should participate. The optimal maximum number is around twenty participants. The optimal number of participants also depends a lot on where the course is held. There are exercises that can only be done with a certain number of participants. This is the typical situation that must be foreseen by the trainer, who must have as an alternative the ability to improvise.

d) The experience and endurance of the participants

The trainer must always take into account the experience of the group. The experience and resistance of participants in an online course for people with disabilities may vary depending on the type and degree of disability and the level of accessibility of the course. Some people with disabilities may have previous experience using technology, while others may be less familiar with it. In terms of resistance, people with disabilities may have difficulty using certain technologies or online platforms, depending on the degree and type of their disability. For example, visually impaired people may have difficulty navigating websites that are inaccessible or have insufficient contrast between text and background.

However, there are also many resources available to help people with disabilities overcome these obstacles and participate in online courses. This may include, for example, assistive technologies such as screen readers or special keyboards, or accessible course materials such as audio files or high-contrast text.

It is important that instructors or trainers are aware of the needs and experience of disabled participants and adapt their courses to ensure that they can participate and learn in an effective and accessible way. It is also important to provide positive and encouraging feedback and ensure that participants feel supported and encouraged to meet their learning goals.

e) Knowledge of the topic. Games and activities

Advantages of real-time online learning include flexibility and affordability. Participants can take part in training sessions from wherever they are, without having to travel. This can be very beneficial for people

with disabilities who may have difficulty getting around or who live in isolated areas. In addition, online training can be effective in increasing the commitment and involvement of participants. Real-time learning can encourage participants to interact and take part in discussions and activities, which can lead to more interactive and engaging learning.

However, it is important to consider the individual needs and abilities of the participants. Some people with disabilities may need additional assistance to participate in real-time online sessions, such as assistive technologies or an accessible delivery platform. In general, real-time online learning can be an effective and flexible way to deliver courses and training sessions, especially for people with disabilities who might have difficulty attending in-person learning sessions. It is important to consider the individual needs and abilities of participants and adapt the delivery method accordingly to ensure an accessible and equitable learning experience. Knowledge of the topic can be improved through the use of games and activities in training programs. These games and activities can be used to help participants better absorb information, retain it and apply it more effectively in their activities.

Here are some examples of games and activities that can be used to improve subject knowledge in training programs:

Word games: Word games can be used to help participants remember key terms and concepts. These may include crosswords or word puzzles.

Group Activities: Group activities can be used to promote collaboration and information sharing among participants. These may include role-playing or activities involving discussion groups or teamwork.

Short presentations: Short presentations can be used to introduce new topics or to recap key information. These can be made in the form of PowerPoint presentations or in the form of visual or interactive materials.

Periodic Assessments: Periodic assessments can be used to test participants' knowledge and help them identify gaps in subject understanding. These may include tests or review exercises.

Simulations: Simulations can be used to help participants apply their knowledge to practical situations or to better understand the implications of decisions or actions. These can be done in the form of role-playing games or virtual simulations.

In general, games and activities can be used to make learning more interactive and engaging, which can help consolidate knowledge and enhance the learning experience of participants. It is important that these games and activities are adapted to the needs and requirements of disabled participants and are delivered in an accessible and fair environment for all.

f) Other aspects about the participants

The trainer must be aware of the presence of disabled people in the course and plan the activities taking this into account. It might be useful to identify the level of knowledge among group members so that the best way to set up the initial part of the training can be assessed.

Bibliography

1. Anderson, L. W., & Krathwohl, D. R. (2001). "A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives". Longman.
2. Ayres, K. M., Mechling, L. C., & Sansosti, F. J. (2013). "The impact of video-based instruction on the social skills of students with autism spectrum disorders". Journal of Positive Behavior Interventions, 15(2), 95-106.
3. Barton, L. E., & Smith, J. D. (2015). "Effects of a self-monitoring device on the on-task behavior of students with disabilities in general education settings". Journal of Behavioral Education, 24(1), 59-80.
4. Bausch, M. E. (2013). "Literacy for all students: An instructional framework for closing the gap". Guilford Press.
5. Browder, D. M., Gibbs, S. L., Ahlgrim-Delzell, L., Courtade, G. R., Lee, D. L., & Flowers, C. (2009). "Reading instruction for secondary students with moderate to severe disabilities". Exceptional Children, 75(2), 135-150.
6. Christensen, L., & Johnson, R. B. (2014). "Educational research: Quantitative, qualitative, and mixed approaches". Sage Publications.
7. Cook, B. G., & Schirmer, B. R. (2003). "What is special about special education for students with emotional or behavioral disorders?". Journal of Emotional and Behavioral Disorders, 11(4), 216-225.
8. Danforth, S., & Rhodes, L. (2017). "Applied behavior analysis in the classroom". Routledge.
9. Ellis, E. S., & Lenz, B. K. (2016). "Teaching reading to learners with dyslexia: A multisensory approach". Pearson.
10. Gardner, H. (2011). "Frames of mind: The theory of multiple intelligences". Basic Books.
11. Gargiulo, R. M. (2017). "Special education in contemporary society: An introduction to exceptionality". Sage Publications.
12. Gennari, V. J., Pappas, C. L., & Curtis, D. F. (2016). "Supporting students with disabilities in the online learning environment: A review of best practices". Journal of Postsecondary Education and Disability, 29(3), 231-246.
13. Giangreco, M. F., Cloninger, C. J., & Iverson, V. S. (2002). "Choosing outcomes and accommodations for children (COACH): A guide to educational planning for students with disabilities". Paul H. Brookes Publishing.
14. Gough, N. (2014). "Thinking strategically about special educational needs and disability in the early years". Routledge.
15. Leko, M. M. (2012). "Universal design for learning: A guide for teachers and education professionals". Harvard Education Press.
16. Mastropieri, M. A., & Scruggs, T. E. (2010). "The inclusive classroom: Strategies for effective differentiated instruction". Pearson.
17. Reynolds, C. R., & Fletcher-Janzen, E. (2012)
18. Heward, W. L. (2014). "Exceptional children: An introduction to special education". Pearson Education.

19. Westwood, P. (2004). "Curriculum and assessment for students with moderate and severe disabilities". Jessica Kingsley Publishers.
20. Salend, S. J., & Duhaney, L. M. (2017). "Creating inclusive classrooms: Effective and reflective practices". Pearson.
21. Turnbull, A. P., & Turnbull, H. R. (2015). "Exceptional lives: Special education in today's schools". Pearson.
22. Villa, R. A., & Thousand, J. S. (2016). "Creating an inclusive school". ASCD.

Chapter 2. - Statement of feasible objectives

2.1. What is a goal?

A course delivery objective refers to a specific and measurable goal that an instructor or participant aims to achieve during the course. Course objectives are important to provide a clear structure and direction in which participants will move in the learning process. These may vary depending on the content of the course, the level of experience of the participants and their expectations. Objectives therefore represent the specific outcome or purpose expected from a course. The objectives specify what will be achieved throughout the course and should be directly related to the needs of the learners. As a result, the objectives are the specific steps that lead to the successful completion of the course. Achieving objectives leads to specific, measurable results.

Setting specific, measurable, achievable, relevant and time-bound (SMART) objectives is a good way to plan the stages of the course. Setting SMART goals keeps the course moving, helps with accountability and timing, and lets us know we're accomplishing what we set out to do.

What does SMART mean?

SMART stands for Specific, Measurable, Achievable, Relevant and Time-bound.

- Specific - The objective clearly states so that anyone reading it can understand what will be done
- Measurable - The objective includes how the action will be measured.
- Achievable - The objective is realistic
- Relevant - A relevant goal makes sense
- Time bound - Each objective has a specific deadline for completion

Examples of SMART goals

Example 1: Collaborate with 11 tribal entities.
The bulleted list below shows how this goal is and is not a SMART goal.
Is it specific? It's clear, but could be more specific about who will do this and what
what does "collaboration" mean?
Is it measurable? Yes, but it must be specified how it will be measured
Is it doable? Yes, if you have the time and resources
Is it relevant? Yes, because collaboration increases the chances that change will be made and contributes to sustainability.
Is it limited in time? No - no deadline for achieving the objective is specified.

Example 2: The Project Manager will obtain memorandums of understanding that specify the terms of collaboration of agencies with 11 tribal entities involved with youth until August 31, 2017. The objective outlines what will be done and who will do it. It is measurable, specified some details of the MoUs and is time bound.

Example 3: The project director will obtain memorandums of understanding specifying the terms of interagency collaboration for 11 tribal entities that work with youth. The MoUs will specify how many times per year the entities will meet, as well as other details on how the entities will work together. The Advisory Committee will review all documents before signing; the director will present the documents to the advisory committee and Tribal Council by August 31.

Types of objectives

There are three types of objectives, which reflect different aspects:

- ❖ Cognitive objectives: "What do we want the students to know?".
- ❖ Affective objectives: "What experiences do we want the students to have?"
- ❖ Behavioral objectives: "What do we want the learners to do?"

Goals can also reflect different levels:

- Mastery objectives are usually concerned with minimum essential performance – those learning tasks/skills that must be mastered before moving to the next level of instruction.

- Developmental objectives are concerned with more complex learning outcomes – those learning tasks in which learners can be expected to demonstrate varying degrees of progress.
- The instructional objectives describe in detail the behaviors that learners will be able to perform at the end of the course. Both goals and objectives use language to achieve results, and the characteristic that differentiates goals from objectives is the level of specificity. The purpose expresses the expected results in general terms, and the objectives express them in specific terms. Learning outcomes are statements that describe the meaningful and essential learning that learners have achieved and can reliably demonstrate at the end of a course or programme. Learning outcomes identify what the learner will know and be able to do at the end of a course or programme, such as the essential and enduring elements and knowledge, skills (skills) and attitudes (values, dispositions) that constitute integrated learning. that a graduate of a course or program needs.

What are the differences between goals and outcomes?

Objectives are intended outcomes or consequences of instruction, curricula, programs, or activities. Outcomes are the results obtained or the consequences of what has been learned; that is, evidence that learning has occurred. Objectives focus on specific types of performance that learners are expected to demonstrate at the end of training. Objectives are often written more in terms of teaching intentions and usually indicate the content of the subject that the trainer intends to cover. Learning outcomes, on the other hand, are more learner-centered and describe what the learner should learn. Learning outcomes are statements that specify what learners will know or be able to do as a result of a learning activity. Results are more precise, specific and measurable than objectives. There may be multiple outcomes related to each objective, and a given learning outcome may support multiple objectives

Questions the learning outcomes address include:

• What knowledge, skills, abilities, aptitudes and dispositions should the learner have when graduating from the courses?

• How will they be able to demonstrate these capabilities?

• How well does the course prepare him?

• What assessments can we use to demonstrate growth in learners' knowledge, skills, abilities and capabilities?

Learning objectives specify both an observable behavior and the object of that behavior.

"learners will be able to write a research paper."

In addition, the criterion could also be specified:

"learners will be able to write a research paper in appropriate scientific style."

Characteristics of good learning outcomes

Statements of learning outcomes should:

- Specify the level, criterion or standard for the knowledge, skills, abilities, abilities or dispositions that the learner must demonstrate
- Include the conditions under which they should be able to demonstrate their knowledge, skills,
- Be measurable (some easier than others)
- To be stated in such a way that the result can be measured by several assessment methods (ideally)
- To be drafted in such a way as not to combine in a result statement elements that cannot be evaluated

Guidelines for writing statements of student learning outcomes

• Student learning outcome statements must be aligned with mission statements (and applicable objectives).

• Statements of learner learning outcomes should clearly indicate the level and type of skills required of graduates of a programme.

• The areas that are the subject of the assessment.

• Knowledge, skills, values and attitudes that a trainee in the training program is expected to have.

• The depth of knowledge, skills, values and attitudes that a trainee is expected to have from the training programme.

• Statements of learning outcomes should be distinct and specific.

Example generic result:

Learners completing the engineering program will practice design skills.

Example of distinctive result:

• Graduates of the engineering program will demonstrate knowledge of mathematics and the fundamentals of engineering. Specifically, the learner will have the ability to demonstrate general design principles; to use fundamental engineering techniques, skills and tools for engineering practice; to analyze and interpret data to produce meaningful conclusions and recommendations.

Examination of the program curriculum

• Are there gaps? Are there learning goals/objectives that are not addressed or are addressed very poorly?

• What would the ideal graduate of the program look like (knowledge, skills, beliefs and values)?

• What experiences (assignments, papers, productions, internships, etc.) do the students have through the training program?

• What standards would we expect the learners to achieve?

2.2. Statement of feasible goals

To define a course objective, we must take into account the following aspects:

Specificity: A well-defined course objective should be clear and detail what participants are expected to learn or achieve at the end of the course.

Measurable: An effective goal must be measurable to assess progress and determine whether the goal has been achieved.

Tangible: The objective must be realistic and feasible, taking into account the available resources, the time allocated and the level of experience of the participants.

Relevant: The objective must be consistent with the purpose of the course and match the needs and interests of the participants.

Time-bound: An effective course objective must have a well-defined deadline so that it can be achieved within a reasonable amount of time.

When defining an objective for a course, we must ensure that it encompasses these aspects and provides clear direction for course development and implementation.

Let's take each one and break them down, specific to an online course for people with disabilities

1. Specificity

Specificity means setting clear and concise objectives that explicitly show what participants need to learn or what skills they need to acquire by the end of the course. This helps participants understand what is expected of them and plan their learning accordingly.

Here are some examples of specific goals for an online course for people with disabilities:

• At the end of this course, participants will be able to use a screen reader to navigate and access web content effectively.

• After completing the course, participants will be able to use speech recognition software to draft documents and communicate online.

• At the end of the course, participants will acquire self-advocacy skills and be able to express their needs and rights in various contexts, such as at work or in relations with institutions.

• After completing the course, participants will understand the different types of disabilities and be able to identify appropriate resources and assistive technologies for each type of disability.

• Upon completion of this course, participants will be able to develop personalized learning strategies that facilitate their access to information and communication in the online context.

• Each of these objectives is specific, clear and goal-oriented, which helps participants know what to expect from the course and how to direct their efforts in the learning process.

2. Measurable

A measurable objective means that the results achieved can be evaluated in a concrete way, allowing instructors and participants to understand the progress made and determine whether the objective has

been achieved. This makes it easier to adjust the course according to needs and improve teaching and learning methods.

Here are some examples of measurable goals for an online course for people with disabilities:

• At the end of the course, participants will be able to navigate a website using a screen reader, demonstrating this through a practical test where they will access and identify specific information.

• Upon completion of the course, participants will successfully use speech recognition software to compose a document of at least 500 words with a typing error rate below 10%.

• At the end of the course, participants will develop a personalized self-advocacy plan, including at least three strategies they can apply in the context of their everyday lives.

• After completing the course, participants will complete a knowledge test that assesses their understanding of different types of disabilities and the appropriate resources and assistive technologies for each.

• Upon completion of the course, participants will present an individual project that demonstrates the application of personalized learning strategies in a real-world context, such as a work project or educational activity.

These objectives can be assessed using concrete tools and methods, such as practical tests, projects or examinations, so that they can be measured and compared against the criteria established before the start of the course. This helps to ensure that the outcomes of the course are tangible and that the participants acquire the skills and knowledge that the course proposes.

3. Tangible

A tangible goal means that the proposed goal is realistic and can be achieved given the available resources, the time allocated and the level of experience of the participants. This is important to keep participants motivated and to avoid frustration caused by overly ambitious or unrealistic goals.

Here are some examples of tangible goals for an online course for people with disabilities:

• During the course, participants will learn to use at least two assistive software applications to facilitate their access to information and communication online, tailored to their individual needs and abilities.

• During the six weeks of the course, participants will participate in at least four hands-on workshops where they will explore and test different assistive technologies in a controlled environment tailored to their level of experience.

• At the end of the course, participants will be able to identify their own needs and select appropriate assistive technologies, taking into account resource availability and accessibility.

• During the course, participants will have the opportunity to share their experiences and learn from each other through an online forum, encouraging collaboration and developing a supportive community.

• Upon completion of the course, participants will be able to apply the acquired knowledge and skills to improve the accessibility of their personal and professional environment, given the resources and time available.

These goals take into account the fact that participants have different levels of experience and disabilities, as well as the resources and time available for the course. Thus, the objectives are adapted to their real needs and can be achieved through a sustainable and realistic effort.

4. Relevant

The relevance of a course objective means that its purpose must be directly related to the course topic and meet the needs and interests of the participants. Relevant objectives ensure that the time and effort invested in the course is valuable to the participants and that they will acquire skills and knowledge that will help them in their daily lives or in their professional activities.

Here are some examples of relevant goals for an online course for people with disabilities:

• During the course, participants will learn about disability rights laws and regulations in the educational and professional context, which will enable them to become more informed and able to self-advocate effectively.

• During the course, participants will explore different adaptation and compensation strategies that enable them to face the challenges that disabilities can present in daily activities and in the work environment.

• At the end of the course, participants will be familiar with a variety of resources and assistive technologies that are specifically designed to support people with disabilities in accessing and using online information and services.

The course will address different types of disabilities and provide information and concrete examples of how assistive technologies can be adapted and optimized for each type of disability to ensure that participants will be able to apply the knowledge in their personal context.

During the course, participants will have the opportunity to collaborate with other learners facing similar challenges, thus developing a support network and learning from each other about effective ways to overcome obstacles.

These goals are relevant to people with disabilities because they directly address specific problems and situations they face in their everyday lives. Therefore, participants will be able to apply the knowledge and skills acquired in the course to improve their quality of life and to face the challenges they encounter in various contexts

5. Limited in time

A time-bound goal means that the intended goal must be achieved within a clearly defined and reasonable time frame. Setting a deadline for course objectives helps to keep participants motivated and engaged, while ensuring effective assessment of progress and results.

Here are some examples of time-bound goals for an online course for people with disabilities:

• By the end of the third week of the course, participants will be able to use a screen reader to navigate and access web content effectively.

• During the eight week course, participants will learn and become familiar with at least three different assistive technologies to support them in their daily and professional activities.

• At the end of each course week, participants will complete a short assessment of their progress to monitor understanding and application of the concepts and techniques presented in the course.

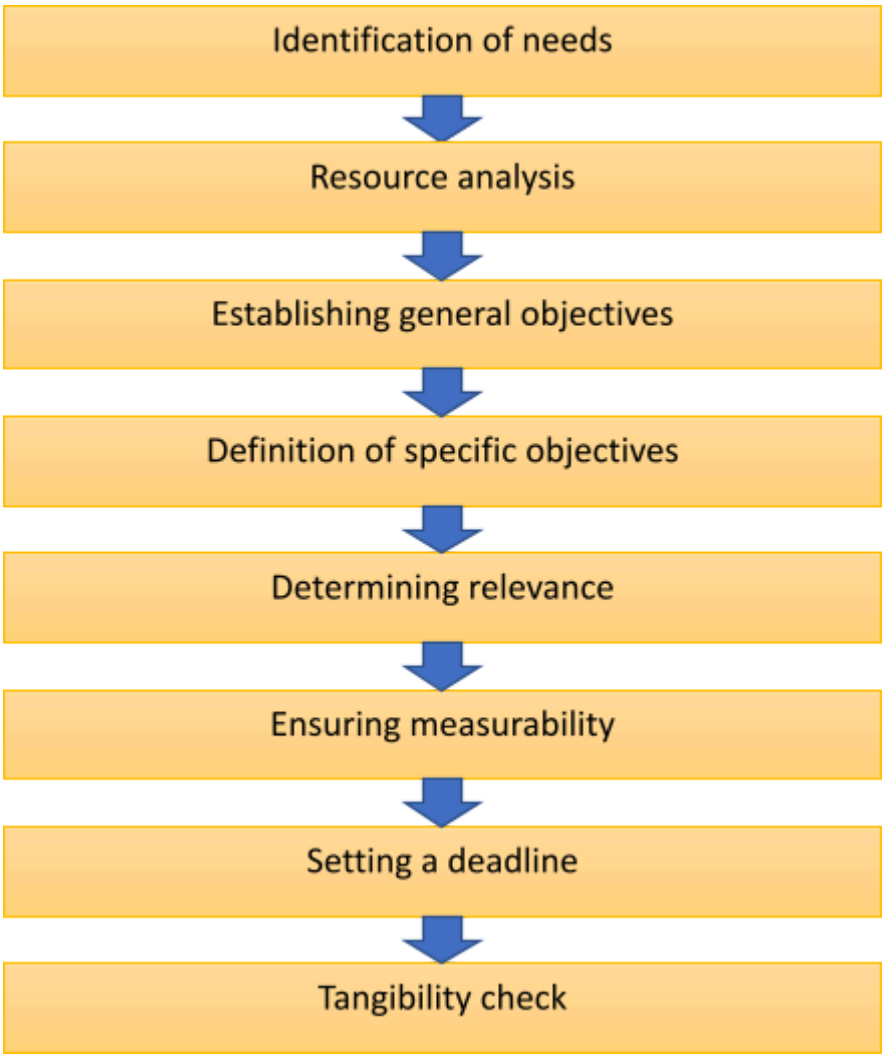
• In the sixth week of the course, participants will have the opportunity to share their experiences and solutions found to overcome specific challenges through a planned group discussion session.

• At the end of the ten week course, participants will present a final project that demonstrates the application of the knowledge and skills acquired in a real context, such as a work project or an educational activity.

Setting a deadline for these objectives encourages organization and planning on the part of both instructors and participants, and ensures effective assessment of outcomes based on progress made throughout the course. This helps to keep the participants motivated and focused on the set goals

To set effective goals, it is good to take into account the scheme that includes the steps to reach an optimal result. This scheme is shown below.

Figure 1. objective formulation scheme



Needs Identification: Assess the needs of the participants and identify the objectives that the course should address.

Resource analysis: Identifies the resources available to ensure the achievement of objectives (time, personnel, materials, technology).

Establishing general objectives: State the general objectives of the course, which broadly describe the purpose and expected outcomes.

Defining specific objectives: Formulate specific objectives that describe in detail what participants will learn or achieve at the end of the course.

Ensuring Measurability: Establishes criteria and methods to assess progress and determine whether objectives have been achieved.

Determining Relevance: Checks whether the objectives are consistent with the purpose of the course and match the needs and interests of the participants.
Set a deadline: Set a reasonable time frame in which the goals should be achieved.
Tangibility check: Ensures that the objectives are realistic and feasible, taking into account the available resources, the time allocated and the level of experience of the participants.

2.3. Tips for trainers in formulating objectives

Know your audience: Trainers need to understand the needs, abilities and challenges faced by participants with disabilities. This includes becoming familiar with different types of disabilities and associated assistive technologies.
Specificity: Make sure the course objectives are clear and detailed. Objectives should explicitly state what participants are expected to learn or achieve at the end of the course.
Measurability: Formulate the objectives so that they can be evaluated in a concrete way. This may include practice tests, examinations or projects that allow both trainers and participants to measure progress and determine whether objectives have been achieved.
Achievability: The objectives must be realistic and feasible, taking into account the available resources, the time allocated and the level of experience of the participants. Avoid setting goals that are too ambitious or unrealistic, which can cause frustration and demotivation.
Relevance: Make sure the course objectives are consistent with the purpose of the course and match the needs and interests of the participants. This will ensure that the time and effort invested in the course is valuable and applicable in their daily lives.
Time-bound: Formulate the course objectives so that they have a well-defined deadline, allowing them to be achieved within a reasonable time frame. This helps keep participants motivated and engaged.
Flexibility: Be prepared to adapt teaching objectives and methodology to the specific needs of participants with disabilities. This may include adjusting the pace of the course, adapting the training materials or providing additional support.
Encouraging feedback: Solicit feedback from participants on course objectives and teaching methods. This will give you valuable information on how you can improve the course and adapt the objectives to make them even more effective.
Knowing your audience is essential to formulating appropriate and effective course objectives. In the case of an online course for people with disabilities, it is important for trainers to consider the following aspects:

- Different types of disabilities: There is a wide range of disabilities such as physical, sensory, cognitive and mental. Trainers need to familiarize themselves with these types of disabilities and understand how they can affect the learning process.
- Levels of skill and experience: Course participants may have different levels of skill and experience in the area of interest as well as in the use of assistive technologies. Trainers must take these differences into account and adjust course and objectives accordingly.
- Assistive Technologies: Trainers should be aware of assistive technologies available for different types of disabilities, such as screen readers, cursor control devices, or speech recognition software. This will enable them to adapt training materials and provide appropriate support to participants.
- Barriers to learning: Trainers need to be aware of potential barriers to learning for people with disabilities, such as accessibility of materials, adaptation of the virtual learning environment or effective communication with participants.
- Inclusive teaching strategies: Trainers should use inclusive teaching strategies and ensure that training materials are accessible to all participants, regardless of the type of disability. This may include the use of subtitles, transcripts, alternative images and descriptive text.
- Legislation and regulations: Trainers should be informed about national and international legislation and regulations on the rights of persons with disabilities in the field of education and vocational training.
- Support networks: Trainers need to know the resources and support networks available to people with disabilities, so that they can guide them and provide them with relevant information in this regard.

Understanding these aspects and taking them into account in the formulation of course objectives will ensure an effective and inclusive learning experience for all participants, adapted to the specific needs and challenges of people with disabilities.

Specificity in the formulation of course objectives is essential to ensure that participants clearly understand what they are being asked to learn or achieve and to provide them with a clear and structured path through the learning process. Here are some tips to ensure course objectives are specific:

- Use clear and precise language: In formulating objectives, use clear and precise language, avoiding ambiguities and jargon. This will ensure that participants understand exactly what is expected of them.
- Identify the skills and knowledge to be acquired: Make sure that the course objectives reflect the skills and knowledge that the participants need to acquire from the course. For example, instead of

saying "participants will learn about assistive technologies", you can say "participants will be able to identify and use at least three different assistive technologies in their personal or professional context".

- ❖ Detail expected actions and outcomes: Specify the actions participants will take and the outcomes they will achieve as a result of the course. E.g,
- ❖ "participants will create a project that demonstrates the application of assistive technologies in their work or educational context".
- ❖ Structuring the objectives: Structure the course objectives so that they reflect a logical sequence of events and actions, from basic knowledge to the most advanced. This will help participants see how the different aspects of the course are connected and understand the progress they need to make.
- ❖ Includes assessment criteria: Specifies how participants' progress and achievements will be assessed against course objectives. This may include practice tests, assessments, projects or presentations.
- ❖ Examples and Contexts: Provides concrete examples and contexts where the course objectives can be applied to the real life of the participants. This will help participants understand the relevance of the objectives and apply them effectively in practical situations.

In conclusion, specificity in formulating course objectives ensures that participants have a clear understanding of expectations and what they need to learn or achieve. This facilitates communication between trainers and participants and contributes to the success of the course

The measurability of the course objectives is important to evaluate the effectiveness of the course and to understand whether the participants were able to achieve the set objectives. In the case of an online course for people with disabilities, measurability can be approached in different ways. Here are some things to consider to ensure course objectives are measurable:

- ❖ Knowledge check: In the evaluation process, trainers can use different tools to check whether the participants have acquired the necessary knowledge. These tools may include quizzes or quizzes with objective questions to measure understanding and assess whether course objectives have been achieved.
- ❖ Competency assessment: Trainers can assess the skills acquired by participants through practical activities such as exercises, projects or presentations. This will allow both trainers and participants to understand the extent to which specific skills have been developed and whether course objectives have been met.
- ❖ Self-assessment: Participants can be encouraged to assess their own progress and reflect on what they have learned in the course. This may include completing a learning log or self-assessment questionnaire to help participants measure their progress and identify areas for improvement.

- Continuous Feedback: Trainers should provide continuous feedback to participants both during and after the course. This can help monitor progress and adjust goals if necessary to ensure they are measurable and relevant.
- Benchmarking: Trainers can establish benchmarking criteria, such as grades or percentages, that allow participants' performance to be compared to that of other learners or to standards set by the trainers. This can help identify the level of success of the course in achieving the set objectives.
- Adaptation of assessment methods: To ensure the measurability of course objectives for participants with disabilities, trainers must adapt assessment methods to their specific needs. For example, if a participant has vision difficulties, the trainer could offer an oral test instead of a written one.
- Data Analysis: Trainers can analyze data collected through assessments and feedback to objectively assess

Achievability of course objectives is important to ensure that participants feel confident and motivated in the learning process. In the case of an online course for people with disabilities, tangibility can be addressed through the following strategies:

- Assess available resources: Trainers should consider available resources such as training materials, online platforms, assistive technologies and support from other professionals or institutions. This will enable the adaptation of objectives to existing resources and the establishment of realistically achievable targets.
- Time Allocation: It is essential to take into account the time allocated to the course and the schedule of the participants when setting the objectives. The objectives must be achievable within the available time frame without overburdening or underestimating the learning capacity of the participants.
- Experience level of the participants: Trainers should take into account the experience level of the participants, both in terms of the area of interest and the use of assistive technologies. Objectives should be tailored to the skill level of each participant, providing appropriate but achievable challenges.
- Flexibility and adaptability: Course objectives should be flexible enough to allow adjustments based on the needs and progress of the participants. Trainers must be prepared to adjust objectives and adapt training methods along the way, depending on the progress of the participants and the feedback received.
- Support and guidance: To ensure the achievement of course objectives, trainers must provide appropriate support and guidance to participants with disabilities. This may include one-on-one support, question and answer sessions, or additional resources to help participants overcome obstacles and achieve their goals.

- Setting intermediate goals: Instead of setting large and unrealistic goals, trainers should set smaller and more attainable intermediate goals. These milestones can be set throughout the course, helping participants measure their progress and stay motivated.
- Promoting success: Trainers should focus on the success of participants and recognize their achievements throughout the course

The relevance of the course objectives is crucial to maintain the interest and engagement of the participants in the learning process, especially in the case of an online course for people with disabilities. To ensure the relevance of course objectives, trainers can follow the following strategies:

Identifying the needs and interests of the participants: Before setting course objectives, trainers must understand the needs and interests of the participants. This can be done through direct interaction with participants, discussions with specialists or disability research.

- Connection to the purpose of the course: The objectives set should be closely related to the purpose of the course and target skills or knowledge that are relevant to the participants' area of interest.
- Contextualizing learning: Trainers should create a context where participants can apply what they learn in the course to their everyday lives. This may include using practical examples and scenarios, as well as connecting to problems and situations that participants face in their personal or professional lives.
- Integrating feedback: Throughout the course, trainers should be receptive to participant feedback and adjust training objectives and methods according to their needs and interests. This can help ensure the relevance of course objectives and enhance the learning experience.
- Promoting autonomy and self-direction: Trainers should encourage participants to set their own goals and direct their learning according to their individual interests and needs. This can help increase the relevance of course objectives and promote continuous learning.
- Collaboration with other resources: Trainers can collaborate with other resources, such as disability specialists, professionals in related fields, or other organizations, to ensure the relevance of course objectives. These collaborations can contribute to a deeper understanding of participants' needs and the development of more effective training goals and methods.
- Reviewing and updating objectives: To maintain the relevance of course objectives, it is important that trainers review and update these objectives regularly.

Time-limiting the course objectives is important to ensure that participants remain motivated and engaged in the learning process. In the case of an online course for people with disabilities, setting time-bound goals can be approached through the following strategies:

- ❖ Establish a course calendar: Trainers should establish a course calendar that includes specific milestones, activities, and deadlines for achieving objectives. This calendar will help participants plan their time and monitor their progress throughout the course.
- ❖ Short and Long Term Goals: Trainers can set short and long term goals to keep participants motivated and engaged. Short-term goals can be achieved in a shorter time frame, while long-term goals may require more time and effort.
- ❖ Scheduling flexibility: In the case of an online course, it is important to take into account the individual needs of the participants and offer flexibility in scheduling. This may include offering recorded sessions or the ability to go through the content at your own pace, depending on the availability and needs of the participants.
- ❖ Progress Monitoring: Trainers should constantly monitor the progress of participants and provide feedback and assistance to ensure that course objectives are met in a timely manner. This may include question and answer sessions, one-on-one discussions or periodic assessments.
- ❖ Encouraging self-assessment: Trainers can encourage participants to assess their own progress and reflect on goals achieved and those remaining to be achieved. This self-assessment can help participants stay engaged and motivated to achieve their goals in the allotted time.
- ❖ Reviewing and adjusting objectives: Throughout the course, trainers should be prepared to review and adjust objectives based on the progress and needs of the participants. This may include extending or shortening the deadlines for certain objectives, depending on the progress of the course and the participants.
- ❖ Setting Milestones: To maintain engagement and motivation, trainers can set milestones throughout the course that represent checkpoints for achieving time-bound goals.

Flexibility in setting and adapting course objectives is essential when working with people with disabilities, as each participant may have different needs and abilities. Here are some strategies for addressing flexibility in an online course for people with disabilities:

- ❖ Continuous assessment of needs: Throughout the course, trainers should continuously assess the needs and abilities of participants, adapting teaching objectives and methodology accordingly.
- ❖ Tailored pace: An online course should provide the opportunity to go through the content at a pace suitable for each participant. This may include recorded sessions, additional materials, or frequent breaks to ensure that all participants can absorb the information at a comfortable pace.

- Adaptation of training materials: Training materials should be accessible and adapted to meet the needs of participants with disabilities. This may include using accessible formats such as expanded text, described audio or video content, or providing alternative material that covers the same content.
- Individualized support: Trainers should provide individualized support to participants based on their specific needs and abilities. This may include mentoring sessions, additional training or adapting assessment methods.
- Open Communication: Trainers should maintain open and constant communication with participants, encouraging them to express concerns, provide feedback and seek support when needed.
- Collaboration with specialists: Trainers can collaborate with disability specialists or professionals in related fields to obtain information and advice on how best to adapt teaching objectives and methodology to meet the needs of participants with disabilities.
- Review and adjust objectives: Throughout the course, trainers should be willing to review and adjust objectives based on feedback received and participant progress. This may involve changing objectives, extending or reducing the time allocated to certain activities or adjusting assessment methods.
- Overall, flexibility in approach to teaching objectives and methods is crucial to creating an effective and accessible learning environment for people with disabilities.

Encouraging feedback from participants is essential to ensure that course objectives and teaching methods are effective and tailored to their needs. In the context of an online course for people with disabilities, here are some strategies for soliciting and using feedback:

- Open Communication Channels: Give participants various communication channels to share their feedback, such as email, discussion forums, anonymous surveys, or live Q&A sessions.
- Encouraging constructive feedback: Trainers should encourage participants to provide constructive feedback and express concerns or suggestions in a respectful and well-reasoned manner.
- Periodic evaluations: Throughout the course, trainers can conduct periodic evaluations to collect feedback from participants on course objectives, teaching methods, and training materials. These assessments may be formal or informal and may include self-assessments, peer-to-peer assessments, or trainer assessments.
- Analysis and integration of feedback: Trainers should analyze the feedback received and integrate it into the course, adjusting the objectives and teaching methods according to the needs and suggestions of the participants.

- Open and transparent discussions: Trainers should maintain open and transparent communication with participants, discussing the feedback received and explaining how it will be used to improve the course and adapt the objectives.
- Encouraging participation: Trainers should encourage participants to get involved in the course improvement process, take responsibility for their own learning and collaborate with trainers and their peers to create an effective learning environment tailored to their needs.
- Track and monitor improvements: After feedback adjustments have been implemented, trainers should closely monitor the impact of these changes on participants and the course as a whole.

This will allow continuous evaluation of the effectiveness of teaching objective
and methods and facilitate further adaptation if necessary. Overall, encouraging feedback and using it to improve the course and adapt the objectives will ensure that the learning process is effective and tailored to the specific needs of participants with disabilities

In conclusion, if we are referring to an online course for people with disabilities, it is important to ensure that course objectives and teaching methods are adapted to the needs and abilities of these people. If the course objectives are formulated in a clear and specific way, as we have shown in the material above, taking into account the needs and abilities of people with disabilities will encourage active participation and involvement of learners in the learning process. It is important to ensure that what we have as course content is accessible to all participants, regardless of the type of disability they have. This may involve using text transcriptions for audio materials, providing visual alternatives for people with visual impairments, or including clear and easy-to-follow instructions for people with cognitive disabilities. We may incorporate assistive technologies into the course, such as screen readers, special keyboards, or speech recognition software, to facilitate access to course content and support participation by people with disabilities. Flexibility to complete assignments or projects and adapt teaching methods to suit the needs and learning pace of people with disabilities is important in terms of time allocated. It is essential to ensure that participants with disabilities have access to additional resources and support to meet their course objectives. This may include individual guidance, support groups or other relevant educational resources. And one of the most important elements is providing constructive feedback tailored to the needs of participants with disabilities to encourage their learning and development. We may use various assessment methods, such as practical projects, group discussions or oral presentations, to assess progress and determine whether course objectives have been achieved.

Bibliography

1. Mager, R. F. (1997). Preparing Instructional Objectives: A Critical Tool in the Development of Effective Instruction (3rd ed.). Atlanta, GA: The Center for Effective Performance.
2. Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. New York: Longman.
3. Horton, W. (2012). E-Learning by Design (2nd ed.). San Francisco, CA: Pfeiffer.
4. Moore, M. G., & Kearsley, G. (2011). Distance Education: A Systems View of Online Learning (3rd ed.). Belmont, CA: Wadsworth Cengage Learning.
5. Rose, D. H., & Meyer, A. (2002). Teaching Every Student in the Digital Age: Universal Design for Learning. Alexandria, VA: Association for Supervision and Curriculum Development.
6. Burgstahler, S. (Ed.). (2013). Universal Design in Higher Education: Promising Practices. Seattle: DO-IT, University of Washington. Retrieved from https://www.washington.edu/doit/sites/default/files/atoms/files/UDHE-promising-practices.pdf
7. Fichten, C. S., Ferraro, V., Asuncion, J. V., Chwojka, C., Barile, M., Nguyen, M. N., ... & Wolforth, J. (2009). Disabilities and e-Learning Problems and Solutions: An Exploratory Study. Journal of Educational Technology & Society, 12(4), 241-256

Chapter 3 - Defining the issues to be addressed

The content of the online course and the topics to be addressed should be determined taking into account the specific needs of people with disabilities. These needs may vary depending on the type of disability, the person's level of independence and the purpose of the course.

In general, and particularly in the context of the "Teach Me to Help" project, online courses for people with disabilities should address topics that are relevant to their daily lives, such as: how to use the computer and the internet, how to cope with everyday activities, how to engage in the labour market, how to manage your budget or how to protect yourself from abuse and discrimination.

In addition, online courses for people with disabilities should provide opportunities for self-paced learning and interaction with other learners and trainers.

3.1 Universal design for learning

Universal design theory was originally developed by architect Ronald Mace and his team at the Center for Universal Design at the University of North Carolina. The concept was originally used in the field of architecture to create environments that are accessible and useful to all people, regardless of ability. This approach has subsequently been extended to various fields, including education, technology and industrial design.

The 7 principles of universal design are; 1. Fair use, 2. Flexibility in use, 3. Simple and intuitive use, 4. Perceptible information, 5. Fault tolerance, 6: Low physical effort
7. Size and space for approach and use. Read more: What is Universal Design
https://universaldesign.ie/what-is-universal-design/

Universal Design for Learning (UDL) is an educational approach based on research in the learning sciences, including cognitive neuroscience, that guides the development of flexible learning environments and learning spaces adaptable to individual learning abilities. This approach was originally defined by David H. Rose, Ed.D., of the Harvard Graduate School of Education and the Center for Applied Special Technology (CAST) in the 1990s. The UDL principles provide teachers with a framework for creating instruction that meets the diverse needs of students. UDL promotes multiple ways of **representing** information, **expression**, and **engagement** to ensure access to learning and enhance student motivation and engagement.

UDL aims to create an inclusive curriculum by removing physical, cognitive and organisational barriers to learning. This involves clearly defining instructional objectives, adopting varied teaching methods, providing adapted materials and flexible assessments. The ultimate goal of UDL is to provide all students with the opportunity to learn in an environment that allows them to develop to their full potential, regardless of specific abilities or needs.

The curriculum, as defined in the UDL literature, has four parts: educational objectives, methods, materials and assessments.

Read more about Universal Design for Learning: CAST, Universal Design for Learning Guidelines https://udlguidelines.cast.org/

3.2 Inclusive curriculum

"Nothing about us without us." This phrase is a fundamental principle of the disability rights movement. It underlines the importance and the need for people with disabilities to be involved in decisions and actions that directly affect them.

Specifically, any decision, policy or initiative that impacts on people with disabilities should be taken with the direct participation and input of people with disabilities. The central idea is that people with disabilities are best placed to understand their specific needs, concerns and requirements and that they should be involved in the decision-making process that affects their lives.

The concept of inclusive curriculum is addressed in numerous research papers, educational policies and guidelines for inclusive education and refers to an educational framework that adequately and equitably integrates the needs and perspectives of people with disabilities into the learning process.

By adopting an inclusive curriculum for people with disabilities, we aim to remove barriers that may exist in education and adapt teaching strategies, materials and assessments to accommodate the diversity of needs of students with disabilities. This type of curriculum is not just limited to technical adaptations, but also aims at changes in content and learning to include and reflect the diversity of experiences and perspectives of people with disabilities.

Fig. Goal 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, https://sdgs.un.org/goals/goal4)

"The stories and narratives we tell and use in classrooms matter. The resources we use, the people who appear in our curriculum, and the activities we design for students reveal and promote society's beliefs about identity, diversity, and power. Moreover, they develop or limit potential and belonging within that society. Teachers and curriculum designers must therefore review instructional materials and integrate resources and lessons that include people with disabilities." (Nikhil Kishore, 2022, Setting Up a Disability-Inclusive Curriculum)

The disability-inclusive curriculum plays a crucial role in shaping a positive and equitable understanding of disability for both students with and without disabilities. It involves the inclusion of disability content in learning materials and lesson plans, all of which are created and guided by people with disabilities. This educational framework promotes a diverse and contributory perspective on disability, replacing the traditional deficit, illness and difficulty-based conception. Through this approach, it encourages the development of a more inclusive and equitable world in the future, where disability is seen as a natural component of human diversity and where negative stereotypes are countered by positive role models and authentic representation of people with disabilities in school education.

Read more:
disabilityequalityeducation.org, What is Disability Inclusive Curriculum and why is it essential?
Inclusive.tki.org.nz, Understanding pedagogy as integral to innovative learning environments, https://inclusive.tki.org.nz/guides/planning-innovative-learning-environments-iles/understanding-innovative-learning-environments/

3.3 Curriculum design and content reconstruction

Curriculum design and content reconstruction are two important steps in developing an online course. (Keller, 2010)

Curriculum design is the process of creating a plan for the course describing objectives, topics, activities and assessments. The curriculum should be based on the needs of the learners and the learning outcomes the course aims to achieve.

Content reconstruction is the process of creating or adapting content for the course. This includes creating or finding text, images, videos and other materials that are relevant to the course objectives and will engage learners.

The two stages are closely linked, as curriculum design will inform the process of content reconstruction, and content reconstruction will help ensure effective curriculum implementation. Here are some of the most important considerations in designing online courses:

- *Learners' needs.* What are the learners' prior knowledge and skills? What are their learning styles and preferences?

- *Learning outcomes.* What are the specific knowledge, skills and attitudes that learners should acquire at the end of the course?
- *Entry level:* What is the previous knowledge and skills of the learners? How can the learning and assessment activities be adapted to suit the learners' level of knowledge?
- *Content/Curriculum.* What are the course objectives? What topics will be covered? How can the content be presented in an engaging and informative way?
- *Activities.* What activities will help learners achieve the learning outcomes? How will the activities be assessed?

Keller provides a detailed overview of the online course design process, including a discussion of needs analysis, learning outcomes, entry level, curriculum, and course content.
(1) Needs analysis is an important step in the development of any course, online or physical. At this stage, the training provider (trainer) will work with the client (institution, learners) to identify the training needs of the learners. This can be done through discussion, questionnaires or interviews. (2) Once the needs have been identified, the training provider will be able to start defining the learning outcomes. Learning outcomes are the objectives that learners should achieve at the end of the course. They should be measurable, specific, achievable, relevant and timely (3) Before the course starts, the training provider will need to assess the entry level or prior learning of the learners. This can be done by means of a test or a survey. Assessing the entry level will help the training provider to ensure that the course is suitable for the learners' level of knowledge.
(4) Curriculum design and content redesign. Once needs have been identified, learning outcomes have been defined and entry level or prior learning has been assessed, the training provider can begin to develop the course curriculum. The curriculum is the course plan that will guide content development. It will include the course objectives, the topics to be covered, the learning activities and the assessment activities.(5) The final stage is the course design. Once the curriculum has been developed, the training provider can start developing the course content. Course content can include text, images, videos, audio and other materials. The content must be relevant to the subject matter of the course and must be presented in a clear and concise manner.

Pedagogical Content Reconstruction (PRC) is a process of transforming learning outcomes into learning content. It is a systematic approach to the design and development of learning materials that are aligned with the needs of learners and the learning outcomes the course aims to achieve.

The general principles of the PRC include:

- *Start with learning outcomes.* The first step in PCR is to identify the learning outcomes the course aims to achieve. These outcomes should be specific, measurable, achievable, relevant and time-bound.
- *Consider the needs of learners*. The next step is to consider the needs of the learners. What is their prior knowledge and skills? What are their learning styles and preferences?
- *Select appropriate content*. Once the learning outcomes and learner needs have been considered, appropriate content can be selected. This content should be relevant to the learning outcomes and should be presented in an attractive and informative way.
- *Design learning activities.* The next step is to design the learning activities. These activities should help learners achieve the learning outcomes and be aligned with the content.

- *Evaluate learning.* The final step in the PCR is the assessment of learning. This assessment should be aligned with the learning outcomes and provide feedback to learners.

Here are some tips on how to turn learning outcomes into learning content:

- *Use clear and concise language.* Learning content should be written in clear and concise language that is easy for learners to understand.
- *Use examples and illustrations.* Examples and illustrations can help make learning content more engaging and informative.
- *Use active learning strategies.* Active learning strategies, such as problem-solving activities and group work, can help learners engage with the learning content and achieve the learning outcomes.
- *Give feedback.* Feedback can help learners identify their strengths and weaknesses and improve their learning.

By following these principles and tips, curriculum designers and 'content rebuilders' can create effective and engaging learning content.

Sources:

Keller, J. M. (2010). Five fundamental requirements for motivation and volition in technology-assisted distributed learning environments link http://dx.doi.org/10.5216/ia.v35i2.12668

Keller, J. M. (2010). Motivational Design for Learning and Performance: The ARCS Model Approach link http://dx.doi.org/10.1007/978-1-4419-1250-3

De Jong, O., (2009), Exploring and changing teachers' pedagogical content knowledge: An overview, link https://www.researchgate.net/publication/274067735_Exploring_and_changing_teachers'_pedagogical_content_knowledge_An_overview

Shulman, L. S. (1986). Those who understand: knowledge growth in teaching.Educational Researcher, http://www.jstor.org/stable/1175860

3.4 Inclusive curriculum design

Hirsch (2017) outlined six key characteristics that faculty members can focus on to enhance the effectiveness of course content: revitalization, expansion, specification, maintaining authenticity, creating impact, and refinement. In a study by Yu et al. (2020), the importance of inclusive course content was emphasized, with a focus on promoting interaction, emotional engagement, and sustained involvement in the learning process.

These six issues represent key strategies and features for developing an inclusive curriculum that accommodates the diverse needs of all students, including those with disabilities:

1. **Revitalization:** This refers to updating and refreshing content and teaching methods to keep pace with changes in education and in the needs of students, including those with disabilities.

2. **Broadening:** involves developing content to cover a wider range of topics and approaches to ensure that the diverse needs and interests of students, including those with disabilities, are met.

3. **Specificity:** means clearly defining learning objectives and expectations to give all students, including those with disabilities, clear direction and achievable goals.

4. **Maintaining authenticity:** This involves maintaining the authenticity of learning materials and experiences to make them relevant and meaningful to all learners, regardless of need.

5. **Creating Impact:** Involves developing learning activities and experiences that have a significant impact on students, including those with disabilities, and enable them to develop their skills and knowledge effectively.

6. **Refining:** This refers to continuing to improve and adjust the curriculum based on feedback and the needs of students, including those with disabilities, to ensure an optimal learning environment.

Fig. 6 strategies for inclusive curriculum design (Quayson & Zirkle, 2022)

In the context of the needs of people with disabilities, this could include adapting materials to be accessible, providing the necessary support for different types of disabilities, using assistive technology and creating a learning environment that is inclusive and provides equal opportunities for all students.

Source: Felix Quayson, F, Zirkle, C. (2022). *Practices For Designing An Online Course.* The Interdisciplinary Journal of Advances In Research In Education. DOI: 10.55138/oh104284fcz

3.5 Selecting the content of the training programme and determining the sequence of presentation

To select the content of a training programme, you need to prioritise, taking into account the importance and relevance of the knowledge, data and information to be provided. To this end, go through the following three steps:

1. *Identify the objectives of the training programme*. What should participants know, be able to do and be after completing the programme?
2. *Identify essential content.* What is the content that is necessary to achieve the objectives of the training programme?
3. *Identify additional content.* What content might be useful but not essential to achieving the objectives of the training programme?

After identifying the content, you need to establish the sequence of presentation. Make sure that essential content is presented first, followed by additional content. Also make sure that the content is presented in a logical order that is easy for participants to understand.

Here are some additional tips for selecting content and determining the sequence of presentation:

- Take into account the needs and interests of participants. What do they want to know and what do they want to learn?
- Use a variety of teaching methods. This will help participants stay engaged and learn more effectively.
- Use examples and practical applications. This will help participants to better understand the content.
- Give feedback to participants. This will help them assess their progress and identify any areas where they need more help.

Source: Designing Training Programs: A Practical Guide by Brian J. Tracey, published by AMACOM in 1994

3.6. Education or training?

Coaching and training are often used interchangeably, but there is actually a key difference between the two. Training refers to the imparting of knowledge and information, while education refers to the development of skills and competences.

For example, a training program in the use of a new software program might provide instructions on how to install the program, how to use the graphical user interface and how to perform specific tasks. A training program in the use of the same software program could go further and provide students with the opportunity to practice using the program, solve problems and receive feedback from an instructor.

In general, training is a part of the training process, but it is not the whole process. Training also includes instruction, but goes further and develops skills and competences. Below are the main differences between instruction and training:

Feature	Instruction	Training
Purpose	Passing on knowledge and information	Developing skills and competences
Methods	Teaching, demonstration, reading	Practice, problem solving, feedback
Duration	Usually short	Usually longer
Objectives	Helps learners learn about something	Helps learners learn to do something

Source:

- Maciuc, I, Instruction strategies link http://cis01.ucv.ro/DPPD/STRATEGII%20DE%20INSTRUIRE_final.pdf
- Sinha, D., What's the Difference Between Training And Development? A Comprehensive Guide link https://www.chrmp.com/difference-between-training-and-development/
- The Difference between Training and Development https://www.gyrus.com/the-difference-between-training-and-development

3.6.1 Training course plan

A training programme must contain clear information on the content of the training. Each programme developer may use different content descriptors, but clear content should include the following generic categories:

- Programme / Module Title: Describes the subject of the programme and/or the general objective.
- Purpose: Specifies which skills will be acquired by completing the training programme.

- Relation to occupational standard: specifies the link between the programme and the units of competence in the occupational standard.
- Entry requirements: any previous training from which the programme offered must start.
- Summary of contents: Specifies the content of the program.
- Learning Modalities: How the programme will run.
- Resources needed: materials, equipment needed to run the programme.
- Learning activities: Activities carried out by participants during the programme.
- Benchmarks: List of benchmarks.
- Evaluation criteria: How and against which criteria the participant will be evaluated.

TRAINING COURSE PLAN

COURSE NAME:

TRAINER:

PARTICIPANTS:

PERIOD:

VENUE:

No. crt.	Theme of the activity	No. of course hou	No. hours applications	No. of hours review and evaluation	Training media / training materials

Source: the Good Practice Manual for the Development and Implementation of Continuing Vocational Training Programmes, published by the Ministry of Labour and Social Protection in 2015.

3.7 Types of content

Creating a trainers' guide for online courses for people with disabilities requires a careful approach to the types of content that meet diverse learning needs and preferences. Below are some types of content suitable for online courses for people with disabilities:

a) Text-based content:
- Structured and clear text with headings, key points and short paragraphs.
- Use simple language to make it easier to understand.

Source: W3C Web Content Accessibility Guidelines (WCAG) provide guidance for creating accessible web content (https://www.w3.org/WAI/standards-guidelines/wcag/).

b) Audio content:
- Provide transcripts for audio lessons and podcasts.
- Provide subtitles for videos to help the hearing impaired.

Source: the National Center for Accessibility and Disability Education (NCDAE) provides resources on captioning and transcription (https://www.ncdae.org/resources/cheatsheets/).

c) Video content:

- Make sure videos have audio descriptions for visually impaired users.
- Use sign language interpreters or provide sign language videos for hearing-impaired users.

Source: the Web Accessibility Initiative (WAI) provides a comprehensive guide to creating accessible videos (https://www.w3.org/WAI/media/av/).

d) Visual content:

- Use high contrast and avoid relying solely on colour to convey information.
- Provide alternative text (alt text) for images to describe their content.

Source: Diagram Center provides guidance on creating accessible images and graphics (http://diagramcenter.org/accessible-image-sample-book/the-diagrammar-a-framework-for-making-images-and-graphics-accessible.html).

e) Interactive content:

- Make sure that interactive elements are accessible via keyboard navigation.
- Make sure that timed interactions have adjustable time limits.

Source: Microsoft's Inclusive Design Toolkit provides guidance for creating inclusive interactive experiences (https://www.microsoft.com/design/inclusive/).

f) Questionnaires and evaluations:

- Offer several ways to complete questionnaires, such as textual or verbal responses.
- Give extra time to people who may need it because of cognitive disabilities.

Source: Robert P. Dolan & all. (2013) A Universal Design for Learning-based framework for designing accessible technology assessments. David H. Rose Center for Applied Special Technology. Pearson. (https://www.researchgate.net/publication/349103060).

g) Documents and information materials:

- Use accessible document formats such as PDFs with appropriate structure and labels.
- Convert complex documents into simplified versions for better understanding.

Source: PDF Accessibility Techniques from Adobe provides guidance for accessible PDFs (https://www.adobe.com/accessibility/pdf/pdf-accessibility-overview.html).

h) Interpersonal communication:

- Encourage online discussion platforms and inclusive communication tools.
- Provide guidelines on respectful and inclusive communication.

Sources: the Partnership for Inclusive Disaster Strategies offers a guide on inclusive communication, "A Guide to Interacting with People who have Disabilities" (https://disasterstrategies.org/resources/) National Council on Disability. Effective Communications for People with Disabilities: Before, During, and After Emergencies https://ncd.gov/publications/2014/05272014/

Here are some web resources that may be useful for creating online courses for people with disabilities:

- Center for Universal Design in Education (UDL): UDL is an approach to learning that considers the needs of all students, including those with disabilities. On the UDL website, you can find resources on how to create online courses that are accessible and inclusive.

https://www.udlcenter.org/

- The Center for Applied Special Technology (CAST) is a nonprofit educational research and development organization that created the Universal Design for Learning (UDL) framework and UDL guidelines, now used worldwide to make learning more inclusive.

https://www.cast.org/resources/online-tools

- WebAIM: WebAIM is an organization that provides resources on how to make websites more accessible for people with disabilities. On the WebAIM website, you can find resources on how to create online courses that are accessible to people with visual impairments, hearing impairments and other disabilities.

https://webaim.org/

- National Center on Accessible Media (NCAM): NCAM is an organization that provides resources on how to make media content more accessible to people with disabilities. On NCAM's website, you can find resources on how to create online courses that include alternative text, captions and other accessible features

https://ncam.wgbh.org/

In addition to these web resources, it is important to talk to students with disabilities about their specific needs. In this way, you can create online courses that are accessible and inclusive for all learners.

When incorporating these types of content into your online course, remember to consult with people with disabilities and disability advocacy organizations to ensure you are appropriately addressing specific needs. Also, regularly review and update your course materials to reflect current accessibility practices.

3.8 Examples of courses and resources

3.8.1 Examples of courses

Here are examples of online courses and resources for professionals and people with disabilities:

- The HELP online courses available on the Council of Europe website are interactive and visual. They cover various human rights topics, reflecting the different areas of work of the Council of Europe.
https://www.coe.int/en/web/help/courses

- The course "Rights of Persons with Disabilities", developed in 2018 by the Council of Europe together with the Advocacy Centre on Council of Europe Standards (ACCESS), includes the following

modules: Introductory module, Non-discrimination and intersectionality, Legal capacity and independent living, Accessibility and independent living, Social rights of people with disabilities

link: https://rm.coe.int/course-brief-rights-persons-disabilities/16808b4fa3

- Courses on Moodle, GSuite and Microsoft 365 can be accessed free of charge on the University of Bucharest website https://online.unibuc.ro/category/resurse/cursuri-online/

- Disability Matters, a free e-learning resource for social professionals https://www.disabilitymatters.org.uk/Catalogue/

In order to develop online courses for people with disabilities, we suggest some course titles that address key aspects of their lives and can be developed by social work professionals:.

"How to use the computer and the internet." This course can cover the following topics:

- Basics of computer use, such as how to turn your computer on and off, how to use the mouse and keyboard, how to surf the Internet
- How to use basic programs such as a web browser, a text editor, a word processor, a presentation program
- How to use the internet to access information, communicate with other people, shop, learn new things

"How to cope with everyday activities." This course can cover the following topics:

- How to shop
- How to cook
- How to wash and dress
- How to get around
- How to take care of your health
- How to cope in society

"How to get a job in the labour market." This course can cover the following topics:

- How to make your CV and cover letter
- How to prepare for a job interview
- How to cope at work
- How to protect your rights at work

"How to manage your budget." This course can cover the following topics:

- How to make a budget
- How to track your spending
- How to save money
- How to pay your bills on time
- How to deal with difficult financial situations

"How to protect yourself from abuse and discrimination." This course may cover the following topics:

- What are abuse and discrimination
- What rights do you have as a disabled person
- How to report abuse and discrimination
- How to protect yourself from abuse and discrimination

These are just a few examples of online courses for people with disabilities. There are many other courses available that can cover a variety of topics.

3.8.2 Institutions providing support for the education of people with disabilities

Here are some sources of information that may be useful for developing online courses for people with disabilities:

1. The Romanian **Ministry of National Education** is the central public authority responsible for the organisation and functioning of the education system in Romania. The Ministry of National Education is responsible for ensuring the right to education for all citizens, regardless of age, gender, race, ethnicity, religion, disability or other personal or social characteristics.
2. **The Ministry of Labour and Social Protection** is the central public authority responsible for developing and implementing national labour and social protection policies.
3. **The National Agency for Employment** is a public institution of national interest, subordinated to the Ministry of Labour and Social Protection, which aims to promote employment, prevent and combat unemployment and reintegrate disadvantaged people into the labour market.
4. **The National Council for Combating Discrimination** is an independent public authority, whose task is to ensure respect for the principle of non-discrimination in all areas of social life. The National Council for Combating Discrimination has the right to investigate and sanction any form of discrimination, including discrimination on the grounds of disability.
5. **The National Organisation of People with Disabilities** is a non-governmental organisation that represents the interests of people with disabilities in Romania and campaigns for the respect of their rights and the promotion of their social inclusion.
6. **The Rights of Children with Disabilities Foundation** is a foundation that promotes the rights of children with disabilities in Romania, providing information, counselling and legal assistance to children with disabilities and their families.
7. **ANFPDC** - National Authority for Adult Vocational Training is the central public authority responsible for the implementation of national policies in the field of adult vocational training.
8. **ANPH** - National Agency for the Protection of Persons with Disabilities is the central public authority responsible for the implementation of national policies for the protection of persons with disabilities.
9. **ANF** - National Agency for Vocational Training is a public institution of national interest, subordinated to the Ministry of National Education, whose activity is to ensure the coordination, monitoring and evaluation of the vocational training process of adults.

Bibliography

1. National Center for Accessibility and Disability Education (NCDAE) (https://www.ncdae.org/resources/cheatsheets/).
2. De Jong, O., (2009), Exploring and changing teachers' pedagogical content knowledge: An overview, link https://www.researchgate.net/publication/274067735_Exploring_and_changing_teachers'_pedagogical_content_knowledge_An_overview
3. Diagram Center (http://diagramcenter.org/accessible-image-sample-book/the-diagrammar-a-framework-for-making-images-and-graphics-accessible.html).
4. disabilityequalityeducation.org, What is Disability Inclusive Curriculum and why is it essential? https://www.disabilityequalityeducation.org/what-is-disability-inclusive-curriculum
5. Inclusive.tki.org.nz, Understanding pedagogy as integral to innovative learning environments, https://inclusive.tki.org.nz/guides/planning-innovative-learning-environments-iles/understanding-innovative-learning-environments/
6. Web Accessibility Initiative (WAI) (https://www.w3.org/WAI/media/av /).
7. Keller, J. M. (2010). Five fundamental requirements for motivation and volition in technology-assisted distributed learning environments link http://dx.doi.org/10.5216/ia.v35i2.12668
8. Keller, J. M. (2010). Motivational Design for Learning and Performance: The ARCS Model Approach link http://dx.doi.org/10.1007/978-1-4419-1250-3
9. Kishore, N., (2022), Setting Up a Disability-Inclusive Curriculum, edutopia.org. https://www.edutopia.org/article/setting-disability-inclusive-curriculum/
10. Maciuc, I, Instruction strategies link http://cis01.ucv.ro/DPPD/STRATEGII%20DE%20INSTRUIRE_final.pdf
11. Ministry of Labour and Social Protection, (2015), Good practice manual for the development and implementation of continuous vocational training programmes
12. National Council on Disability Effective Communications for People with Disabilities: Before, During, and After Emergencies https://ncd.gov/publications/2014/05272014/
13. Microsoft's Inclusive Design Toolkit https://www.microsoft.com/design/inclusive/.
14. Partnership for Inclusive Disaster Strategies, "A Guide to Interacting with People who have Disabilities" https://disasterstrategies.org/resources/)
15. Quayson, F, Zirkle, C. (2022). Practices For Designing An Online Course. The Interdisciplinary Journal of Advances In Research In Education. http://dx.doi.org/10.55138/oh104284fcz
16. Robert P. Dolan & all. (2013) A Universal Design for Learning-based framework for designing accessible technology assessments. David H. Rose Center for Applied Special Technology. Pearson. https://www.researchgate.net/publication/349103060
17. Shulman, L. S. (1986). Those who understand: knowledge growth in teaching.Educational Researcher, http://www.jstor.org/stable/1175860
18. Sinha, D., What's the Difference Between Training And Development? A Comprehensive Guide link https://www.chrmp.com/difference-between-training-and-development/
19. Accessibility techniques for PDFs https://www.adobe.com/accessibility/pdf/pdf-accessibility-overview.html

20. Tracey, Brian J. (1994) Designing Training Programs: A Practical Guide. AMACOM
21. The Difference between Training and Development
    https://www.gyrus.com/the-difference-between-training-and-development
22. W3C - Web Content Accessibility Guidelines (WCAG)
    https://www.w3.org/WAI/standards-guidelines/wcag/

Chapter 4 - Identifying teaching methods

We are witnessing an impressive digital transformation in our societies in real time. The changes are leading to an ever-expanding 'digital economy' and, as a result, are having a significant impact on education and work as a whole. This development brings with it a number of opportunities, but also challenges, including the responsibility to ensure that no one is left behind in the digitisation process. The aim of this chapter is to provide a coherent framework for understanding the key concepts related to disabled people's access to the digital economy and online education, and the processes associated with them. Identifying appropriate teaching methods for training those who will teach online courses for people with disabilities is important for several reasons:

Accessibility and inclusion: Identifying appropriate teaching methods can ensure that the content and learning experience is accessible to all students, regardless of their disabilities. Inclusion is essential to ensure that no student is marginalised or excluded from learning.

Effectiveness of learning: Teaching methods can directly influence how students assimilate and master content. For people with disabilities, certain methods may be more effective in facilitating understanding and assimilation of information.

Engagement and motivation: Teaching methods can influence the degree of student engagement and motivation. Choosing appropriate methods can stimulate active participation and engagement in the learning process.

Adaptability: Disabilities can vary significantly and teaching methods can be adapted to meet the specific needs of different types of disabilities.

4.1 Pedagogical approaches

A pedagogical approach is a set of principles that guide the teaching and learning process. If well defined, it can help ensure that a training course is effective and relevant to the needs of learners. There are many different pedagogical approaches, each with their own strengths and weaknesses. Some of the most common pedagogical approaches are:

1. The constructivist approach

The constructivist approach is a theory of learning that argues that learners learn best when they build knowledge on their own experiences and prior knowledge. This means that students are actively involved in the learning process and the teacher is a facilitator who helps them learn. This can be a very effective approach for people with disabilities as it allows them to learn at a pace that suits them and to focus on the aspects of the subject that are of interest to them.

2. Collaborative approach

The collaborative approach is an approach to learning that is based on collaboration between learners. This means that learners work together to achieve their learning objectives. The collaborative approach can be a great way to help students learn from each other, develop their communication skills and develop critical thinking. This can be a very effective approach for people with disabilities as it allows them to feel less alone and have access to support from other learners.

3. Research-based approach

This approach to learning focuses on problem solving. This means that students are involved in research activities to find answers to their questions. The inquiry-based approach can be a great way to help students learn to think critically and develop problem-solving skills. This can be a very effective approach for people with disabilities as it allows them to learn in a practical way and develop critical thinking skills.

4. Integrative approach

The integrative approach is an approach to learning that is based on the integration of different areas of knowledge. This means that learners learn about different subjects in an integrated way. The integrative approach can be a great way to help pupils understand how different subjects are related and develop critical thinking. The integrative approach is effective in online education for people with disabilities because it allows them to learn in a more comprehensive and holistic way.

5. Reflective approach

The reflective approach is an approach to learning that is based on reflecting on one's own learning experiences. This means that learners are invited to reflect on their own thoughts, feelings and behaviours during the learning process. The reflective approach can be an excellent way to help learners develop critical thinking and understand their own learning style. The reflective approach is also effective in online education for people with disabilities as it allows learners to reflect on their own thoughts, feelings and experiences.

6. Traditional approach

This type of approach focuses on teacher-centred teaching, where the teacher is the main source of knowledge and students are passive learners. Teaching is based on methods such as frontal lessons and repetition exercises.

Sources:

Bruner, J. S. (1966). Toward a theory of instruction. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1978) Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Piaget, J. (1954). The construction of reality in the child. New York: Basic Books.

Doyle, W. (1992). Curriculum and pedagogy. In P. Jackson (Ed.), Handbook of research on curriculum (pp. 494-526). New York: Macmillan.

McNeil, J. D. (1986). Curriculum: A comprehensive introduction. Boston: Little, Brown.

It is important to note that each of these pedagogical approaches has advantages and disadvantages. The most appropriate approach for a particular course or student may vary according to the individual needs of the learner.

Here are some examples of online courses using these pedagogical approaches:

- An online history course using a constructivist approach allows students to learn about different historical periods through stories, games and simulations.
- An online science course using a collaborative approach allows students to work together to conduct experiments and solve problems.
- An online math course that uses an inquiry-based approach allows students to learn by doing research and solving their own problems.

Here are some sources that provide additional information about these pedagogical approaches:

- John Biggs (2003) Constructivist Approaches to Online Learning. RoutledgeFalmer. link
- David Jonassen (1999). Meaningful Learning with Technology. Collaborative Approaches to Online Learning. ETR Associates. link
- Howard Gardner (1999) Research-Based Approaches to Online Learning.Pearson Custom Publishing. link
- John Biggs (2003) Integrative Approaches to Online Education. RoutledgeFalmer. link
- David Jonassen (1999). Meaningful Learning with Technology: Reflective Approaches to Online Learning. ETR Associates. Link

4.2 Trends in teaching methodology. Classical vs. modern methods

Trends in teaching methodology reflect significant approaches and changes in the teaching and learning process to ensure an effective and relevant educational experience. In this respect, several important directions in the evolution of teaching methodology can be observed (Constantin Cucos, 2006):

Innovation of methods: There is a move towards the implementation of new training methods and procedures that respond appropriately to the requirements and context of learning. One example is the use of brainstorming to stimulate creativity and free thinking in the problem-solving process.

Active-participatory methods: There is an increased preference for methods that involve students in the learning process. These methods emphasise learner interaction and engagement, activating their cognitive and operational capacities.

Quality of the method: A key direction is to focus on the qualitative aspects of the method. This means focusing not only on the technical application of the method, but also on how it enriches the students' educational experience.

Communication and interaction: Teaching methodologies are geared towards promoting effective communication between teacher and students and between students. This contributes to the development of communication and collaboration skills in an interactive learning environment.

Active learners in the learning process: The importance of actively involving learners in their own learning process is emphasised, increasing their responsibility and autonomy in gaining knowledge.

Emphasis on formative and educational development: Modern teaching methodologies place more emphasis on the overall development of students, not just the transmission of information. This aims to develop competences and skills that contribute to an educated person open to lifelong learning.

Self-education methods: Promoting methods that encourage students to take an active role in their own education, to search for and identify knowledge, thus developing independent learning skills.

Effectiveness and relevance: Modern teaching methodologies are particularly concerned with developing methods and approaches that are effective in achieving educational objectives, adjusting to the specific reality of the learning environment.

Overall, these trends reflect a dynamic and adaptable approach to education, designed to align with the needs and aspirations of learners, including those with disabilities, to ensure an optimal and inclusive educational experience. (Constantin Cucos, 2006, pp. 288-289)

The dynamic nature and renewal of training methods are determined by a number of factors, such as:

- **Technological developments:** Technological advances are opening up new horizons in learning, including options such as online courses, simulations and educational games.
- **Social change**: Society is evolving rapidly and the needs of students are changing with it. Teaching methods need to adjust to these changes, ensuring relevant and effective education for students.
- **Innovations in educational research**: Advances in educational research have uncovered new ways of learning that have proven more effective than traditional approaches.

As a result of the adoption of modern teaching methods, a new form of human personality is emerging, characterised by increased creativity, enhanced independence and increased ability to approach and solve problems.

We are witnessing and participating in a process of redefining the major objectives of education as a result of the use of modern teaching methods. Today, education goes beyond the mere transfer of knowledge and increasingly focuses on cultivating critical thinking, problem-solving and effective communication skills.

Below, we present a comparative analysis of classical and modern learning methods (Mazilescu, 2009):

Classical vs modern methods

Classical methods	*Modern methods*
Prioritise training	Put the training of the learner before the instruction
They focus on content, on learning the material	Are learner-centred, focusing on the development of skills and abilities
Gives priority to the teacher's work	Focus on learner activity and participation
Focus on teaching	Put learning before teaching
The pupil is seen as the object of instruction	The learner is both the object and the subject of the act of training and education, of his own formation.
Neglects to learn methods of self-study, independent work	Follow the learning of independent work techniques, self-learning
They are word-centred, being predominantly communicative; verbal and bookish	Are action-centred, exploration-centred (experience gained through exploration, research, action)
They are responsive, based on reproductive activities	Are actively participatory, i.e. they propose knowledge acquired through own effort
They are product-oriented, presenting science as a sum of finite knowledge	Turns its attention to the processes by which students arrive at personal elaborations
Are abstract and formal; emphasize direct contact with reality	They are concrete
Have too little applicability	Cultivate an applied, practical and experimental spirit
Impose rigid learning management	Encourage independent work, initiative, creativity
Impose formal control	Stimulate self-control, self-evaluation, self-regulation in students
Promotes competition	Stimulate cooperation;

It is based on extrinsic motivation with elements of fear, coercion	Intrinsic motivation that comes from the act of learning, from the joy of success;
Maintain rigid, autocratic (authoritarian) relationships between teachers and students	Pupil-teacher relationships approximate the conditions of social life and the psychological requirements of the developing young person, promoting democratic relationships that enhance cooperative aspects;
The teacher is the transmitter of knowledge	The teacher is the organiser, the mentor, facilitator; the discipline of learning is imposed by constraint.The discipline of learning derives from rational organisation of work

A major criticism of traditional educational methods is that they promote passivity among students. Instead, by using modern methods, pupils' active involvement, initiative and creativity are stimulated.

Excerpt from:
Mazilescu, C.A. (2009) *From general pedagogy to science and technology didactics.* Timisoara: Ed.Pedagogica

4.3 Classification of training methods

Etymologically, the term method derives from two Greek words odos - "way" and metha "towards", "towards", and has the meaning of "way towards", "way to", a way of pursuing, of exploring an objective phenomenon in order to find the truth, a path taken in order to reach a goal, to obtain a determined result".

Teaching methods can be defined as "ways of action by which pupils, independently or under the guidance of the teacher, acquire knowledge, form skills and abilities, aptitudes, attitudes and conceptions about the world and life". (M.Ionescu, V.Chiș, p.126)

The teaching method is the way or way of working:

- "selected by the teacher and implemented in lessons or extra-curricular activities with the help of and for the benefit of pupils;
- which in all cases requires cooperation between teacher and pupils and their participation in the search for solutions, in distinguishing truth from error;
- which is used in the form of variants and/or procedures selected, combined and used according to the level and needs or interests of the pupils, in order to assimilate knowledge thoroughly, experience values, stimulate the creative spirit, etc.; the use of methods is not only aimed at assimilating knowledge;
- which allows the teacher to act as a competent carrier of the content of teaching and as an organizer of the teaching-learning processes; in the course of these processes, the teacher can play the role of facilitator, guide, evaluator, teaching being an aspect of learning".

Teaching methods, through their active intervention, can change the course of teaching and learning processes and can set one course or another. The choice of teaching method is therefore of great importance, as it is the variable which potentially influences the effects of learning and is largely responsible for the achievement of the desired results, their level and the effectiveness of the educational process.

The functions performed by the training methods are:

- cognitive function
- formative-educational function
- motivational function
- instrumental function
- normative function (Cerghit, 2002)

The great variety and diversity of training methods has led to the need to classify them. There are several types of classification, each based on different criteria such as purpose, environment, task or participants.

Here are some examples of types of classification of training methods:

- By purpose: training methods for knowledge acquisition, training methods for skill development and training methods for attitude formation.
- By medium: face-to-face training methods, online training methods and blended training methods.
- By task: instructional methods for individual learning, instructional methods for collaborative learning and instructional methods for problem-based learning.
- By participants: training methods for adults, training methods for children and training methods for people with disabilities.

The classification of training methods is a complex issue that has not yet been fully resolved. However, classification can be useful to better understand different training methods and to choose them according to specific needs.

Source:

Cerghit, I. (2006) Teaching methods. Editura Didactică și Pedagogică, Bucharest.

According to the teaching task performed, methods are divided into two main categories: assimilation methods and assessment methods (Cerghit, 2006).

Assimilation

Ioan Cerghit distinguishes three main types of assimilation methods in the context of learning:

1. Verbal methods:

These methods focus on conveying information to students through oral or written language and include lecture, exposition, explanation, conversation, debate and text work. These methods focus on verbal communication to convey knowledge and facilitate understanding.

2. Intuitive methods:

These methods rely on sensory experiences to help students assimilate information. Demonstration with natural or manufactured objects, use of modern media (auditory, visual, audio-visual) and modelling through experimentation or object models are examples of intuitive methods. These stimulate the senses to facilitate learning.

3. Active methods:

These methods involve actively engaging students in the learning process. Examples include role plays, simulations, projects and case studies. Learners are involved in practical activities such as exercises, algorithms or discovery, which help them to explore, experiment and apply knowledge in real contexts.

Each of these types of methods has a specific purpose in the learning process and addresses the different needs of learners. Verbal methods focus on verbal communication, intuitive methods stimulate the senses, and active methods encourage active engagement of learners in practical experiences.

Cerghit also stresses the importance of assessment methods, which allow the teacher to obtain information about the students' knowledge, skills and attitudes. They can be used to monitor learners' progress during a course or learning sequence, to identify gaps and to adapt the learning process to individual needs.

Evaluation

Cerghit identifies three main types of evaluation methods in the educational context:

1. Control methods (verification):

These methods are used to assess students' level of knowledge at the end of a course or learning unit. They provide an overall picture of student performance at a specific point in time. Examples:

- Tests and exams: Checks students' knowledge and skills.
- Essays: Allows detailed expression of knowledge and critical thinking.
- Portfolios: Collects various works and projects to illustrate long-term progress.
- Direct observation: monitors behaviour and performance during activities.

2. Appraisal methods:

These methods are used to assess students' continuous progress throughout a course or learning unit. They provide regular and detailed feedback to guide student development. Examples:

- Grades and grades: reflect the level of achievement of the learning objectives.

- Reports and observations: Provides descriptive feedback and analysis of performance.
- Tests: examines understanding and application of knowledge in a specific context.
- Exam (oral, written, practical): assesses knowledge and skills at various levels of complexity.

3. Diagnostic methods:

These methods are used to identify gaps or difficulties in knowledge and skills in students. They are essential for adapting learning to individual needs. Examples:

- Diagnostic tests: identify the level of knowledge at the beginning of a learning unit.
- Interviews: Provide additional information about students' thinking and abilities.
- Comments: Evaluate students' behaviors and reactions in a variety of situations.

It is important to emphasise that these types of methods can be combined in a creative way to ensure a comprehensive assessment tailored to the needs and development of each individual student. For example, teachers can use a variety of monitoring, assessment and diagnostic methods to provide a complete and accurate picture of students' progress and development in learning.

Teaching methods can be classified according to the dynamics of the teacher-student relationship:
1. Traditional: didactic exposition, didactic conversation, demonstration, textbook work, exercise;
2. Modern: algorithmisation, modelling, problematisation, programmed instruction, case study, simulation methods (games, simulator learning), discovery learning. (Iacob, 2018)

Traditional, expository or frontal *methods* give the impression that they are no longer in line with the new principles of active and conscious student participation. However, they can be of particular value to a large audience with a cultural level that ensures access to the information message conveyed in relation to the time unit.

Modern teaching methodology is oriented towards the active and conscious involvement of students in the process of their own education and the stimulation of their creativity. In this context, the prerequisites of teaching methods are characterised by a number of defining directions. The dynamic-open relationship consists of the changing relationships that are established between the different methods. The diversity of methods is imposed by the complexity of the learning process; each method must be chosen according to the register to which it relates.

There are different types of teaching methods which can be classified into four broad types:
- Teacher-centred methods,
- Learner-centred methods,
- Content-centred methods; and.
- Interactive/participatory methods.

Teacher-centred methods: These methods focus on the role of the teacher in the learning process. The teacher is the one who teaches the material, answers questions and gives feedback to students.

Learner-centred methods: These methods focus on the learner's role in the learning process. It is the learner who is responsible for their own learning and they need to be proactive in seeking information and participating in activities.

Content-centred methods: These methods focus on the content of the learning. The content must be accessible and adapted to the needs of students with disabilities.

Interactive-participatory methods: These methods involve the interaction and participation of students in the learning process. Students can interact with each other, with the teacher and with the learning content.

To achieve maximum results, it is important to use a combination of different methods. For example, a teacher can use a teacher-centred method to teach the material, a learner-centred method to provide feedback to learners and a content-centred method to ensure accessibility of the content. The teacher can also use interactive-participatory methods to stimulate learner engagement in the learning process.

Here are some examples of interactive-participatory methods:

- *Online discussions:* Learners can discuss the material with the trainer and other learners.
- *Working groups:* Learners can work together to solve problems or create projects.
- *Educational games:* learners can play games that help them learn the material in a fun way.
- *Simulations:* learners can participate in simulations that help them experience real-life situations.

Interactive-participatory methods can be used to stimulate students' involvement in the learning process and help them learn more effectively.

Traditional teaching methods are based on the transmission of knowledge by the teacher to the students through lectures, explanations and exercises. Modern teaching methods are based on actively involving students in the learning process through role-playing, simulations, projects and case studies.

Active, learner-centred learning

Sugata Mitra, Professor of Educational Technology at the University of Cambridge, is an advocate of active learning. In his book 'The Learning Revolution', he argues that learning is most effective when students are actively involved in the learning process. He defines active learning as "a process in which students are engaged in activities that require them to think, problem-solve and create." This means that the teacher has the role of facilitator of learning and the learner is responsible for their own learning.

Mitra identifies a number of benefits of active learning, including:

- Gives students a sense of control over their own learning.
- It motivates and engages them in learning.
- It helps students develop critical thinking and problem-solving skills.

- It helps students to be creative and innovative.
- It helps students communicate and collaborate with others.

Source:

De Toni, A.F., De Marchi, S. (2023). Self-Organised Schools: Educational Leadership and Innovative Learning Environments. Routledge, Link https://library.oapen.org/bitstream/handle/20.500.12657/57614/1/9781000643459.pdf

Mitra, S., (Feb 2013), *Build a School in the Cloud*, link https://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud retrieved July 2023

Several other authors refer to active learning, such as Howard Gardner, author of the theory of multiple intelligences, David Kolb, author of the Experiential Learning Model, Jerome Bruner, author of the theory of discovery learning, or John Dewey, American philosopher who founded the progressive movement in education.

4.4 Education in the virtual environment

4.4.1 The virtual learning environment

Learning environments are spaces in which a planned transmission of knowledge takes place. Virtual environments can be very useful during lessons for planning and individualising work, maintaining a fluid relationship with families or promoting interpersonal relationships. Source: Pere Marquès Graells (2006) "Learning environments", "Innovative educational projects with ICT".

Students have a lot to contribute to the development of environments. It is they who can best assess the usefulness and usability of virtual environments, who can promote the use or non-use of different tools, who can actively construct their learning process and be real participants in their own evaluation. These ideas can be applied to specific learning environments or pedagogical frameworks such as:

- learner-centred
- knowledge-centred
- evaluation-focused
- community-centred

ICT-mediated learning is learner-centred to develop interdisciplinary and cross-curricular skills. Digital tools allow monitoring of the learning process, generating written and oral feedback on students' productions, individually and in teams, ensuring the specific educational needs of each student and stimulating students' motivation. Immersion in a digital environment allows for greater democratisation of education.

Democratising education means that education must be regulated by consensus, as well as the development of a kind of critical citizenship with the capacity to generate its own evidence-based discourse, participate in society through democratic mechanisms and influence it to promote the general good of society.

Source:

- Anderson, T., (2008). The theory and practice of online learning, AU Press, Athabasca University
- Roche, S., (2016).Education for all: Exploring the principle and process of inclusive education, https://link.springer.com/article/10.1007/s11159-016-9556-7

4.4.2 Autonomy and self-motivation

Bandura's 1997 study found that self-efficacy plays a significant role, as individuals with increased confidence in their own abilities are more likely to strive to make changes in their work environment and to persevere in their work even when faced with negative prospects for results. In contrast, those with low self-efficacy are more likely to experience feelings of desolation and discouragement and show less resilience in similar situations. The stronger the perception of self-efficacy, the greater the improvement in effort, perseverance, coping and adaptability (Bandura, 2001).

The concept of self-efficacy, representing one's level of confidence in one's ability to perform a specific task, is a crucial factor among teachers and students using online platforms; increasing self-efficacy can encourage online educational practices (Kundu, 2020).

"To keep up with the world of 2050, you will have to do more than generate new ideas and products, but above all, constantly reinvent yourself." (Yuval Noah Harari, 2018)

Harari identifies a number of connections of self-motivation with learning in the virtual environment:

- Students' self-efficacy is closely linked to their environment.
- Self-directed learners acquire knowledge and skills independently.
- Those who embrace lifelong learning will be most successful in a world of rapid change.

At the same time, we also identify an important barrier to the adoption of a self-directed learning style rooted in traditional education. Our dependence on teachers and formal learning frameworks is too great. Learners who take control of the educational process need tools to tap into the most valuable sources of knowledge (elearningindustry.com, 2021).

4.4.3 Strategies and recommendations for achieving the goal of self-directed learning in virtual education

Learners can take control of their education online by following the steps and applying the recommendations below (Purdue Global, https://www.purdueglobal.edu/blog/online-learning/online-learning-self-motivation/):

a) Organise your approach:

- Sequence Authentication - Communication - Question: Follow this sequence to ensure that you interact effectively with your online learning platform.
- Time Blocking: Allocate specific blocks of time in your calendar for study, assignments and other educational activities.

b) Effective study habits:

- Focus on one activity: Avoid multitasking, as research suggests it impairs efficiency and cognitive function.
- Eliminate wasted time: Identify and minimise distractions such as social media, texting and unconstructive web browsing during study sessions.
- Break down tasks: Break down large projects into smaller, more manageable parts to progress and complete more efficiently.

c) Planning and strategy:

- Develop a long-term strategy: Set your educational goals and benchmarks for the duration of your programme.
- Set short-term goals: Break down the long-term plan into smaller, achievable short-term goals.

d) Connect and get involved:

- Interact with peers and trainers: Use virtual learning platforms, social networks, chat groups and support groups to interact and collaborate with peers and trainers.

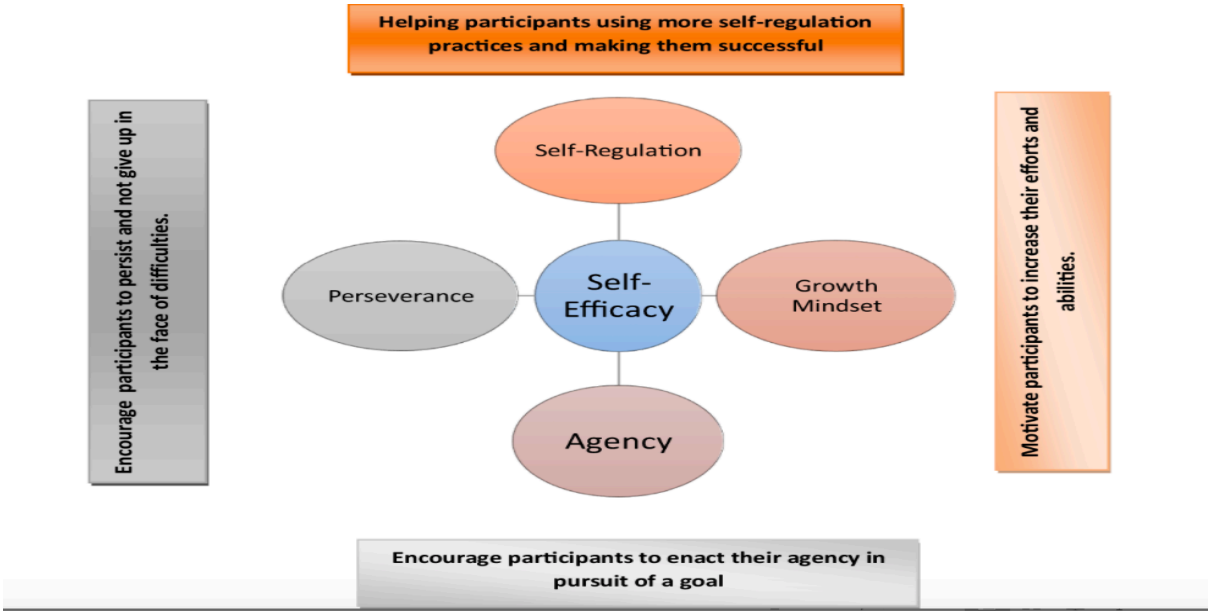
e) Reflection and motivation:

- Reflect on motivation: Consider when you last felt a lack of motivation in your online educational journey.
- Identify influencing factors: Recognise the factors that have had a positive impact on your motivation to excel in online learning.
- Address demotivators: Identify the main sources of demotivation and develop strategies to counteract them.

f) Self-efficacy and the environment:

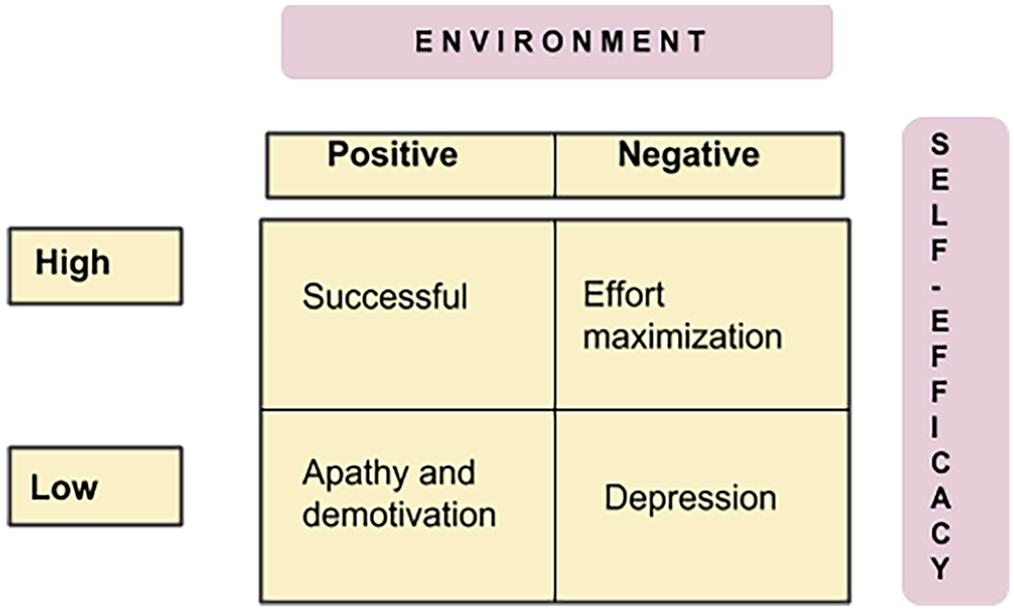
- Define self-efficacy: Understand your belief in your own ability to succeed in your educational endeavors.

Fig. Benefits/outcomes of self-efficacy (Kundu, 2020)



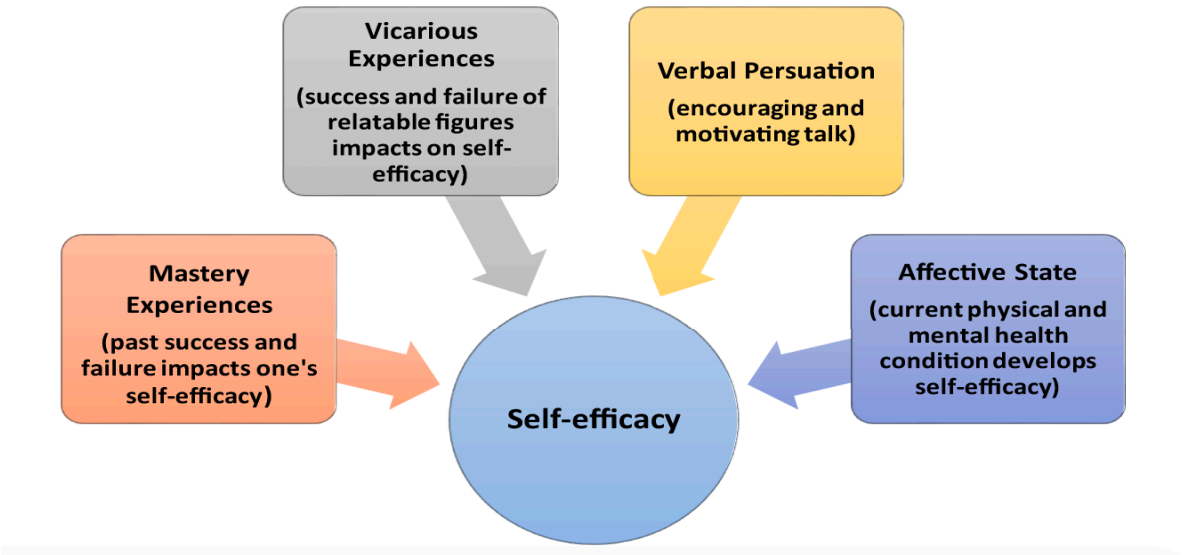
- Consider the environment: Recognize how your environment, both physical and mental, can influence self-efficacy and overall performance.

Fig. Impact of environment on self-efficacy (Kundu, 2020)

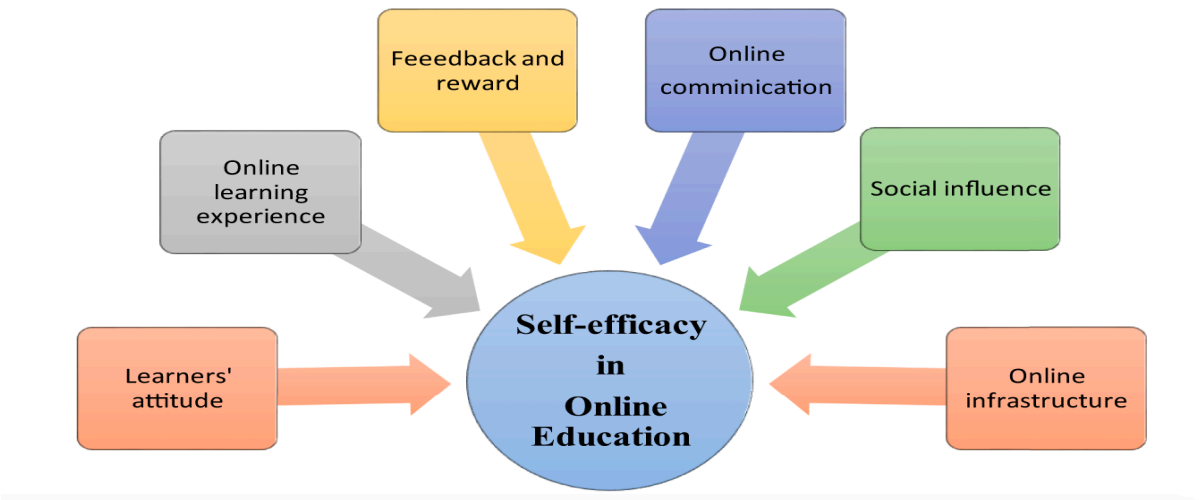


By incorporating these steps and tips into your approach to online learning, you can take a proactive role in managing your learning experience, boosting motivation and achieving educational goals. Remember that commitment, discipline and self-awareness play key roles in effectively overseeing your own learning.

Fig. Main sources of self-efficacy (Kundu, 2020)



Fig, Factors influencing self-efficacy in online education (Kundu, 2020)



4.5 Barriers to online learning

In e-learning, people with disabilities and trainers, social workers and support persons face a number of barriers, such as:

1. Lack of accessible materials:
This barrier refers to the absence or insufficiency of learning materials adapted for people with disabilities. These materials may include documents, presentations or online resources that are not created with attention to the specific needs of these people. Lack of accessibility can make learning difficult or even impossible for these people.

2. Inaccessible learning management systems (LMS):
This refers to online learning platforms (such as Moodle or Blackboard) that are not designed with features and functionality to ensure accessibility for all users. Lack of compatibility with assistive technologies, lack of clear structure or customisation options can create barriers to participation for people with disabilities.

3. Lack of subtitles and transcripts:
Where video or audio material is not accompanied by subtitles or transcripts, people with hearing impairments or who use speech-reading technology cannot access the information content presented. This barrier particularly affects people with hearing or visual impairments.

4. Navigation and complex structures:
Online platforms can become inaccessible when they have a complicated navigation or unclear structure. People with cognitive disabilities or difficulties navigating online may have difficulty finding and using content.

5. Limited interactivity for some disabilities:
Online courses that rely on interaction, such as filling out forms or participating in discussions, can be difficult for people with cognitive or developmental disabilities to use. They may find it difficult to interact with materials and actively participate in courses.

6. Complex assessments and exams:
Online tests or exams that are complex or not designed to meet the needs of different types of disabilities can create significant barriers. People with disabilities may have difficulty completing or understanding certain types of assessments.

7. The digital divide and access to technology:
People with disabilities may find it difficult to access devices or internet connections needed to participate in online courses.

8. Lack of training for trainers:

Trainers/educators who are not familiar with accessible teaching methods and techniques may provide materials and instruction that are not appropriate for people with disabilities. This can lead to frustration and learning difficulties for these students.

By addressing these potential barriers, social workers can improve the accessibility and inclusiveness of their online courses and learning experiences for people with disabilities.

Sources:
World Wide Web (W3C), (2008), Web Content Accessibility Guidelines (WCAG) 2.0, https://www.w3.org/TR/WCAG20/

World Wide Web (W3C), (2016), Diverse Abilities and Barriers, https://www.w3.org/WAI/people-use-web/abilities-barriers/

NCDEAE - The National Center on Disability and Access to Education, https://ncdae.org/projects/past/

4.6 Assessment of the level of disability

Disability assessment plays a fundamental role in designing an inclusive and effective educational environment for students with special needs. This essential step enables educators to understand the individual needs of students and adapt teaching methods to maximise learning. This assessment must be individualised, sensitive and take into account the full range of students' needs and abilities.

In the following steps, we will explore how to identify and assess types and levels of disability, along with relevant sources for further information.

1. Identifying disabilities:

Identify the types of disabilities students may have, such as visual, hearing, learning, physical or neurological disabilities.

2. Collecting information:

Gather detailed information about each student, including medical reports, past evaluations, and feedback from family or specialists.

3. Standardised assessments:

Use standardized instruments or specialized tests to assess students' academic, functional and adaptive skill levels.

4. Observations and interactions:

Observe student behaviour and performance in the educational environment. Analyse how they interact with peers and respond to various learning activities.

5. Interdisciplinary collaboration:

Work with specialists in areas such as health, occupational therapy or speech therapy to gain a broader perspective on students' needs.

Sources:

- Best-universities.net, Online learning for students with disabilities. link https://best-universities.net/resources/online-college-learning-for-students-with-disabilities/
- Learning Disabilities Association of America - LDA, ldaamerica.org The Adult Learning Disability Assessment Process https://ldaamerica.org/info/adult-learning-disability-assessment-process/
- Salvia, J., Ysseldyke,J., Bolt, S. (2010), Assessment in Special and Inclusive Education, link https://www.researchgate.net/publication/230853249_Assessment_in_Special_and_Inclusive_Education
- Wendy W. Murawski, W.W., Hughes, C. E., (2009), Response to Intervention, Collaboration, and Co-Teaching: A Logical Combination for Successful Systemic Change DOI http://dx.doi.org/10.3200/PSFL.53.4.267-277

Assessing the level of disability in the educational context is essential to ensure an inclusive and adapted approach to learning for every student. Within Romania and the European Union, there are resources and guidelines that can support adapted education for students with disabilities. Here are some suggested sources:

Useful resources and links

- Ministry of Education and Research (MEC) - Special Education and Inclusive Education Service: This service provides guidelines and resources for the inclusion of students with special needs in the Romanian education system.
MEC official website - School Inclusion

- National Assessment and Examination Centre (CNEE): Here you can find information about possible adaptations for national exams for students with disabilities.
Official CNEE website

- Association "Save the Children" Romania: This organisation provides resources and information about inclusive education and support for children with disabilities.
Official website "Save the Children" Romania

Agencies and Institutions of the European Union:

- European Agency for Special Needs and Inclusive Education: the European Agency for Special Needs and Inclusive Education provides reports, studies and resources for improving inclusive education in Europe.
Official website European Agency for Special Needs and Inclusive Education

- European Union Agency for Fundamental Rights (FRA): This body provides reports and analysis on the rights of people with disabilities in the European Union.
Official website European Union Agency for Fundamental Rights

- European Commission - Education and Training: European Commission provides information and initiatives on inclusive education and special needs in the European educational context.
Official website European Commission - Education and Training

- European Association for the Education of Adults (EAEA): EAEA provides information and resources for adult education, including adults with special needs.
Adult education resources from the European Association for the Education of Adults

- World Education - Adults with Disabilities: World Education provides resources and guides for professionals involved in the education of adults with disabilities globally.
Resources for educating adults with disabilities from World Education

- Disability Equality in Education (DEE): This organization focuses on promoting equal education for people with disabilities and provides resources for adults with special needs.
Official website Disability Equality in Education

These resources can provide guidance and support for the development and application of appropriate methods for assessing the level of disability and adapting teaching methods accordingly.

4.7 Adaptation of teaching methods

There are a number of pedagogical approaches that can be used in online courses for people with disabilities. These include:

a) *Use of assistive technology.* This can help people with disabilities access and participate in online courses. Examples of assistive technology include:

- screen readers for blind or partially sighted people
- access interfaces for people with physical disabilities
- machine translation for people with hearing or speech impairments
- voice recognition software

b) *Adaptation of course content.* Course content can be adapted to meet the needs of people with disabilities. Some suggestions for adaptation:

- use simple and clear language
- providing subtitles or transcripts for videos
- presentation of material in different formats (e.g. text, audio, video)
- giving extra time to complete tasks

c) *Use of active learning methods*. These involve the active participation of learners in the learning process. This can be beneficial for people with disabilities as it can help them to stay engaged and learn more effectively. Examples of active learning methods include:

- group discussions
- group projects
- simulations
- role-playing games

d) *Providing individualised/supplementary support*. People with disabilities may need individualised support to succeed in online courses. This support can be provided by the teacher, teaching assistant or a tutor. Examples of individualised support:

- individual meetings with the teacher
- help in completing tasks
- providing feedback
- support groups

By using these pedagogical approaches, online courses can be made more accessible and inclusive for people with disabilities. Online courses can be an effective way to learn and graduate. But it is important that they are adapted and provide additional support to ensure the success of all learners.

4.8 Adapted learning activities

Learning activities are activities that should be included in a training programme, either as a set of practical exercises or as examples that serve to highlight issues related to the practical application of what is learned in theory. Learning activities can take different forms, but they must be chosen in such a way that the participant is aware that they are doing something that relates directly to the competences they are training.

In preparing learning activities, those setting the content of the programme must base their reasoning on the requirements of the occupational standard and the identified benchmarks.

The principles of learning activities are:

- Learning activities should involve the participant in a variety of active learning experiences as a way of acquiring knowledge and skills.
- The sequencing of learning activities should be structured from simple to complex; from theory to practice, but also from practice to theory.
- Learning activities should offer participants the possibility to choose the most appropriate learning mode.

Sources:

Ministry of National Education, Guide to the design and implementation of continuing vocational training programmes, 2018.
International Labour Organization, Guidelines on the development and implementation of vocational training programmes, 2010.
European Training Foundation, Guidelines on the design and development of vocational training programmes, 2012.

It is important that online learning activities are adapted to the needs of people with disabilities, as this will help them to participate in courses and achieve their learning objectives. It is also important to remember that each person with a disability is different and may have different needs. It is therefore important to have a lot of flexibility to implement learning activities adapted to the individual needs of learners.

Below are some suggestions for learning activities adapted to the context of online courses for people with disabilities:

- *Audio readings:* For people with visual impairments, it is important to provide the course content also in the form of audio readings. This can be done by providing transcripts of the lessons or recording the lessons and offering them as audio files.
- *Subtitles:* For people with hearing impairments, it is important to provide the course content also in the form of subtitles. This can be done by providing subtitles for videos or recordings of lessons.
- *Performers:* For people with hearing or speech impairments, it is important to provide interpreting services during online courses. This can be done by providing sign language interpreters, speech interpreters or sign language interpreters.
- *Accessible materials:* For people with physical disabilities, it is important to provide accessible materials in electronic formats. This can be done by providing documents in PDF format, presentations in PowerPoint format or videos in MP4 format.
- *Extra time:* For people with disabilities, it is important to provide extra time to complete course tasks. This can be done by giving extensions to deadlines or providing more opportunities to participate in discussions or activities.
- *Additional support:* For people with disabilities, it is important to provide additional support. This can be done by offering personal assistance, providing additional materials or offering opportunities to talk to a tutor or consultant.

These are just a few ideas for adapting learning activities to the context of online courses for people with disabilities. It is important to consider the specific needs of your learners when designing and implementing online courses. Want to learn more about how to adapt activities to the needs of learners with disabilities? We recommend the following resources:

Disability Rights Education and Defense Fund (DREDF): DREDF is a national non-profit organization that fights for the rights of people with disabilities. DREDF's website contains a section dedicated to educational accessibility, which includes information on how to adapt online courses for people with disabilities. Web: https://www.dredf.org/

National Center on Universal Design for Learning (UDL): UDL is a model that focuses on creating accessible learning environments for all people, regardless of their disabilities. The UDL website contains resources on how to implement UDL principles in online courses. Web https://www.udlcenter.org/

Center for Accessible Technology (CAT): CAT is a resource center for people with disabilities that provides information and assistance on accessible technology. CAT's website contains information on how to adapt online course content for people with visual, hearing or physical disabilities. Web: https://www.c4at.org/

4.8.1 Augmentative and alternative communication (AAC) methods

Alternative augmentative and alternative communication (AAC) is a broad term that refers to any method of communication that is used to supplement or replace speech. AAC can be used by people who have speech difficulties due to a variety of conditions such as autism, cerebral palsy or aphasia.

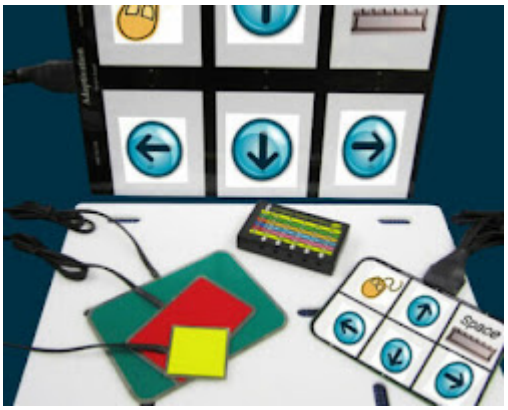
In developing a guide for social workers teaching online courses to people with disabilities, it is essential to consider alternative communication methods to ensure maximum accessibility of materials and information. These methods include:

Sign language: For people who are deaf or hard of hearing, sign language can be an effective way of communicating. Integrating videos with sign language interpretation into online courses can help convey information in an accessible form. Providing transcripts or subtitles for videos can also be useful for those who have partial knowledge of sign language or wish to learn. Sign language can be used by people who are deaf or hard of hearing, as well as people who have speech difficulties.
Read more at https://napacenter.org/aac-autism/

Speech technologies: For people with speech impairments or communication disorders, speech technologies can be extremely beneficial. The use of speech synthesis software or assistive communication devices can allow these people to actively participate in online courses. It is important to

provide training and support for the correct use of these technologies.

- *Speech generating devices (SGD*): SGDs are electronic devices that produce speech. They can be used to type text, which is then spoken by the device. SGDs can be very powerful tools and can be customised to meet the individual needs of the user. [Image of speech generating devices (SGDi) for AAC] Read more at https://aacspeechclinic.com/what-is-a-speech-generating-device/



- ***Oral motor aids:*** Oral motor aids are devices that help people with speech difficulties to produce speech. Oral motor aids can be used to improve articulation, pronunciation and fluency.
Read more at
https://www.speechpathologygraduateprograms.org/2017/11/top-10-aac-augmentative-and-alternative-communication-devices/

Alternative Text and Visual Materials: For people with visual impairments or cognitive disabilities, providing written materials in a format that is easy to read and understand can be essential. The use of textual descriptions for images and graphics also helps to convey content for people with visual impairments.

- *Symbols in pictures:* Symbols in pictures are a type of visual communication that uses images or symbols to represent words or concepts. Picture symbols can be used in a variety of ways, such as on communication boards, in books or on computers. https://www.opensymbols.org/

The best AAC method for a particular person will depend on their needs and preferences. It is important to work with a speech therapist to find the most appropriate method for each individual person. This gives them a chance to communicate with their families, friends and colleagues and they can live more independent and fulfilling lives.

Source:

- CAST - The Center for Applied Specialized Technology , Universal Design for Learning Guidelines https://udlguidelines.cast.org/
- ASHA - American Speech-Language-Hearing Association, Augmentative and Alternative Communication (AAC) https://www.asha.org/njc/aac/
- WebAIM https://webaim.org/resources/

4.8.2 Interaction, participation and evaluation

Interaction and participation

In order to promote interaction and participation of people with disabilities in the online environment, strategies based on accessibility and inclusion principles can be adopted. These focus on facilitating active engagement and effective learning, despite the diversity of individual needs:

Firstly, open and conscious communication plays a key role. Using preferred communication methods such as email, chat or video conferencing facilitates the fluid exchange of information and support. It is important that students are aware of the resources and support services available to enable them to tackle the challenges of online learning with confidence.

Another crucial aspect is to provide accessible and varied materials. Providing course content in multiple formats, including text, audio and video with subtitles, increases accessibility and diversifies ways of absorbing information. At the same time, compliance with web accessibility standards, such as the Web Content Accessibility Guidelines (WCAG), ensures that materials can be accessed without difficulty by all students.

The use of accessible platforms and technologies completes the range of strategies. Choosing online learning platforms that support assistive technologies, facilitate customisation of content and allow

flexibility in interactions is an important key to an inclusive learning experience. In addition, optimising the resources used for accessibility strengthens student engagement and participation.

Finally, encouraging discussion and collaboration through virtual discussion groups provides a safe and stimulating space for interaction and exchange of ideas. The opportunity to ask questions and submit queries anonymously encourages the participation of all students, removing possible inhibitions. Constant feedback and active support complement this approach, providing students with a solid foundation for continuous improvement and development in the online environment.

Sources:

CAST - The Center for Applied Specialized Technology, Universal Design for Learning Guidelines
https://udlguidelines.cast.org/

Evaluation

To adapt assessment methods in the online environment to reflect the knowledge and skills acquired by people with disabilities, you may consider the following:

- Various evaluation options:

Offer multiple assessment options, such as written tests, projects, video presentations or digital portfolios, so students can choose the method that works best for them.

- Extra time or breaks:

Allow extra time to complete assessments or allow breaks during assessments to allow students with special needs to work at their own pace.

- Inclusivity in scenarios:

Make sure assessment scripts are free of bias or discriminatory language and accessible to all students.

- Detailed feedback and individual support:

Provide detailed feedback and individual support to improve performance. Be open to questions and discussion about evaluation requirements.

Using digital technologies in the assessment process: a UDL-based framework for accessible assessment design

Digital technologies offer opportunities for assessing students' advanced knowledge and skills, especially in areas that are difficult to assess using traditional methods. These assessments can improve accessibility for students with special abilities, while also introducing potential accessibility barriers. Applying universal design principles to technology-enhanced assessment tasks can help address accessibility concerns. And understanding students' diverse abilities and how they interact with tasks is crucial.

The main ideas and principles used in designing accessible assessments, particularly those aligned with Universal Design for Learning (UDL) and accessibility considerations, include:

Multiple modes of representation, engagement and expression:
Assessments should provide information in a variety of formats (e.g. text, images, audio, video) to suit diverse learning preferences and sensory abilities. In this way, we ensure that students can access and understand content regardless of their individual needs.
Engaging assessments motivate students by offering varied options and ways to interact with the content, for example by providing options for different types of questions, scenarios or projects that align with their interests and strengths. To demonstrate their understanding and skills, students might choose the response format that best suits their abilities. (e.g. written, verbal, visual)

Clear instructions and expectations:
Assessments should have clear and concise instructions that are easy to understand. This helps all students, including those with cognitive or language difficulties, to understand the task requirements correctly.

Flexibility and customisation:
Design assessments that allow students to customize things like font size, color contrast, or navigation settings. Offering customisation options helps to adapt to individual needs and preferences.

Technological improvements:
Harnessing technology can improve accessibility. For example, the use of assistive technologies such as screen readers or voice recognition software can provide equitable opportunities for students with disabilities.

Reducing cognitive load:
Assessments should be designed to minimise cognitive load by avoiding unnecessary complexity or distraction. This supports students with cognitive disabilities or difficulties in processing information.

Feedback and support:
Design assessments that provide timely and constructive feedback to guide student learning and improvement. Encourage a supportive environment where students can ask for clarification or assistance when needed.

Consider the accessibility barrier:
Designers should be aware of potential accessibility barriers that may arise unintentionally and take proactive steps to address them. This includes ensuring compatibility with assistive technologies and addressing potential sensory or cognitive challenges.

Inclusive language and imagery:
Use inclusive and respectful language and imagery towards all students. Avoid jargon, ambiguous terms or cultural references that could create confusion or exclusion.

These principles collectively aim to create accessible and equitable assessments for diverse students, including those with disabilities. They encourage a transition from a "one size fits all" approach to a more inclusive and flexible assessment design.

Sources:

CAST - The Center for Applied Specialized Technology, Universal Design for Learning Guidelines https://udlguidelines.cast.org/

Dolan, P.R. & all, (2013), A Universal Design for Learning-based Framework for Designing Accessible Technology-Enhanced Assessments Research Report, DOI http://dx.doi.org/10.13140/RG.2.2.16823.85922

Salvia, J., Ysseldyke,J., Bolt, S. (2010), Assessment: In Special and Inclusive EducationWadsworth, Cengage Learning

Bibliography

1. Anderson, T., (2008). The theory and practice of online learning, AU Press, Athabasca University
2. ASHA - American Speech-Language-Hearing Association, Augmentative and Alternative Communication (AAC) https://www.asha.org/njc/aac/
3. Bandura, A., (1997), Self-Efficacy: The Exercise of Control, link https://www.academia.edu/28274869/Albert_Bandura_Self_Efficacy_The_Exercise_of_Control_W_H_Freeman_and_Co_1997_pdf
4. Bandura, (2001), Social Cognitive Theory: An Agentic Perspective DOI http://dx.doi.org/10.1146/annurev.psych.52.1.1
5. Biggs, J., (2003) Constructivist Approaches to Online Learning. RoutledgeFalmer.
6. Bruner, J. S. (1966). Toward a theory of instruction. Cambridge, MA: Harvard University Press.
7. CAST - The Center for Applied Specialized Technology, Universal Design for Learning Guidelines https://udlguidelines.cast.org/
8. Cerghit, I., (2006), Teaching methods. Iași, Polirom.
9. Cucos, C., (2006), Pedagogy. Iași, Polirom
10. De Toni, A.F., De Marchi, S. (2023). Self-Organised Schools: Educational Leadership and Innovative Learning Environments. Routledge, Link https://library.oapen.org/bitstream/handle/20.500.12657/57614/1/9781000643459.pdf
11. Dolan, R.P., Burling, K., Harms, M. & all. (2013) A Universal Design for Learning-based Framework for Designing Accessible Technology-Enhanced Assessments Research Report. DOI: http://dx.doi.org/10.13140/RG.2.2.16823.85922
12. Doyle, W. (1992). Curriculum and pedagogy. In P. Jackson (Ed.), Handbook of research on curriculum (pp. 494-526). New York: Macmillan.
13. European Training Foundation, (2012), Guidelines on the design and development of vocational training programmes
14. Howard Gardner (1999) Research-Based Approaches to Online Learning.Pearson Custom Publishing.
15. Iacob, I.-G., (2018) -Comparative study between traditional and modern methods used in the teaching-learning process. Edict.ro Link: https://edict.ro/studiu-comparativ-intre-metodele-traditionale-si-moderne-utilizate-in-procesul-de-predare-invatare/
16. International Labour Organization, (2010), Guidelines on the development and implementation

of vocational training programmes
17. Jonassen, D., (1999). Meaningful Learning with Technology. Collaborative Approaches to Online Learning. ETR Associates.
18. Kundu, A., (2020) - Toward a framework for strengthening participants' self-efficacy in online education https://www.emerald.com/insight/content/doi/10.1108/AAOUJ-06-2020-0039/full/html
19. McNeil, J. D. (1986). Curriculum: A comprehensive introduction. Boston: Little, Brown.
20. Ministry of National Education, (2018) Guidelines for the design and implementation of continuing vocational training programmes
21. Mitra, S., (Feb 2013), *Build a School in the Cloud*, link https://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud, retrieved July 2023
22. Murawski, W.W., Hughes, C. E., (2009), Response to Intervention, Collaboration, and Co-Teaching: A Logical Combination for Successful Systemic Change DOI http://dx.doi.org/10.3200/PSFL.53.4.267-277
23. NCDEAE - The National Center on Disability and Access to Education, https://ncdae.org/projects/past/
24. Oprea C.-L., (2008), Interactive teaching strategies, Bucharest, E.D.P.
25. Roche, S., (2016).Education for all: Exploring the principle and process of inclusive education, https://link.springer.com/article/10.1007/s11159-016-9556-7
26. Piaget, J., (1954). The construction of reality in the child. New York: Basic Books.
27. Purdueglobal, (2023) https://www.purdueglobal.edu/blog/online-learning/online-learning-self-motivation/
28. Salvia, J., Ysseldyke,J., Bolt, S. (2010), Assessment in Special and Inclusive Education, link https://www.researchgate.net/publication/230853249_Assessment_in_Special_and_Inclusive_Education
29. Thompson, S. J., Johnstone, C. J., & Thurlow, M. L. (2002) Universal design applied to large scale assessments (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved [today's date], from the World Wide Web: http://education.umn.edu/NCEO/OnlinePubs/Synthesis44.html
30. Vygotsky, L. S., (1978) Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.
31. WebAIM https://webaim.org/resources/
32. World Wide Web (W3C), (2008), Web Content Accessibility Guidelines (WCAG) 2.0, https://www.w3.org/TR/WCAG20/
33. World Wide Web (W3C), (2016), Diverse Abilities and Barriers, https://www.w3.org/WAI/people-use-web/abilities-barriers/

Chapter 5 - Determination of the means by which the objectives can be achieved

In this chapter we make a foray into the meanings of the middle term of education from classical pedagogy towards its updating in the new pedagogues innovated by the online environment, related to new frames of reference of the digital competence of the trainer. In the second part we analyze what are the characteristics of digital means, what conditions they must meet in the context of training and what are the most relevant typologies for the teaching context. We have sought to present in detail what are the digital tools suitable for use in training activities through online courses. Finally, we sought to summarize what are the recommendations for the new instructional design that integrates digital means into online courses.

Keywords: *means of education, digital competence frameworks, e-learning, digital educational resources, online instructional design*

5.1 The means of education between tradition and actuality

The education system has always been sensitive to technological and socio-political changes, leading to its evolution from the magistrocentric education of the sovereign teacher who held the monopoly of knowledge, to the student-centered education in the society of knowledge. Today the educator (teacher in the education system or trainer in various fields) is required to facilitate learning, rather than to deliver undeniable knowledge.

Thus, technological progress has been reflected in the educational context through the introduction of computers and access to Internet networks for learning. Gradually, concepts such as e-learning or m-learning have emerged at the formal and informal level in education. The Covid pandemic has led to a total reconsideration of the classical pedagogy by converting learning activities entirely online, with the help of technological devices. All acquisitions in the field of information and communication technologies for learning have been mobilized and integrated into innovative pedagogies that have definitively revolutionized education and teaching systems. Acquisitions acquired in the field of digital pedagogy are incorporated into viable and user-friendly learning frameworks in future educational programs.

With an immeasurable portfolio of digital resources for learning at their disposal, today's trainers will face dilemmas regarding choice, use and

recommending the means of learning in a digital context. In order to respond to this problem, it is

necessary to appeal to the elements of classical pedagogy on which any instructive-educational approach is built in order to lead us from one state to another, better, regardless of the peculiarities of the curriculum methodology. The means by which we can achieve our learning objectives are traditionally called educational means (Cucos, 2006). These are tools or complexes of tools that aim to facilitate the instructive-educational process through a series of operations of a pedagogical nature based on the transmission of knowledge, continued with the formation of skills or the realization of practical applications, but also the evaluation of some knowledge and acquisitions.

When we refer to the means of education, to the means used to achieve the educational objectives, we have in view practically the seen face of the educational instructive process, these presiding over the paid activity, from the classic blackboard to the actual digital tablet. The educational means are the most visible educational elements, amprentizing the experience of each educable, evoked through memories such as sitting in benches, the first writing instrument, the first book, a map, a drawing board, a count and so on. Their role was, according to the possibilities of the times and of the venue, the optimization of the educational process by adding new dimensions in the ratio between the verbal and the actional-productive side of the teaching practice, according to C. Cucoş (2006). Educational means have the ability to process at sophisticated levels, through specialized tools and techniques, objects, phenomena, hard-to-reach or rare actions - in order to be able to put them in contact with the educable. It must be appreciated that the educational means also have formative valences, in addition to their informative function, these putting the educable in the situation of learning to use them, to get acquainted with their peculiarities, to understand them, motivating and arousing curiosity, thinking and creativity. Many times, being in the learning situation, we have also learned to use and even to become experienced users in the use of educational means (tools, devices, software). In the end, we cannot mirror the aesthetic and ergonomic note that the educational means offers to the design of the entire learning situation. All these functionalities of the educational means are preserved and potentiated in the virtual environment, as we will see in consciousness.

To be able to discern between the value of the different means of education to be used in online learning it is necessary to consider their traditional classification. According to C. Cucos (2006), the educational means can have in themselves a didactic message or can facilitate the transmission of the didactic message. In classical learning, we used natural objects or substitutes, graphs, maps, figurative supports, symbolic or technical means, but we also used a series of tools,defenses or installations to facilitate the didactic path. Because there is an extremely large variety of educational means, a trend has emerged in the philosophy of education that criticizes their excessive use, precisely because it would weaken the power educated them (Maritain, 2021), the emphasis of didactic action falling on form and not on substance, losing sight of precisely the finality of education. In other words, it is pointed out that, for example, by using high-performance technological devices, the objective of using them for learning is not lost for learning, to the detriment of other adjacent reasons (fun, socialization, play, etc.). When we

refer to how useful, timely or convenient a didactic means is, we must bear in mind that your acesmust supplement the verbal explanations, provide educational actors with intuitive support and make accessible, familiarize with a reality that is difficult or impossible to access. At the same time, a means of education must provoke curiosity,interesults and motivation for learning, to strengthen the knowledge and skills taught and to streamline the time and the instructional space (Cucos, 2006). To the same extent, we must consider the risks that may arise in the case of teaching means that predispose to standardization and uniformization, to a passive reception without the involvement of educational actors in the learning process. Educational means must facilitate learning without creating an artificial image, through exaggerations or distortions of the reality to be learned. An overview of the traditional learning landscape shows the integration and adaptation of the educable to the context, methods and educational means, as opposed to online learning that adapts and is peculiar to the educational actors involved.

In a broad sense, the online courses are integrated in the concept of e-learning, the term denoting that educational reality, realized through electronic networks and through the involvement of new digital and multimedia technologies. At the level of the European Commission, elearning is defined as the use of new multimedia and Internet technologies to improve the quality of learning, facilitating access to resources and services, as well as to exchanges and distance collaboration (Cucos, 2006). So when we talk about online courses, the learning situation is defined by the technological support, oriented towards delivering learning resources in a form as accessible as possible, educational communication based on a collaborative relationship and directed towards learning. According to C. Ceobanu (2016) e-learning systems require a number of essential requirements to serve learning, possibly to be used in discriminating or evaluating an online learning situation: flexibility for the learner, timely dispatch of materials, integration of a variety of learning environments (text, graphics, sound, clips), access to materials from different sources and integration of the connection and collaboration between students and tutors n pages and online messaging. Personalized training and adaptation to the requirements of beneficiaries, along with increasing commitment to learning, seem to be by far the strengths of online courses. With

however, the seen face of the instructive process, as in the case of traditional learning, remain the means of education, in this context the use of multimedia in learning. In online learning, the teacher, trainer becomes an instructional designer, the one who must have the ability to select or create the most appropriate teaching means for achieving the learning objectives. The instructional design is defined as an "approach of anticipating the didactic scenario in an operational way, appropriate to the peculiarities of the educable and the educational goals concerned. The realization of the instructional design involves the design, organization and development of some instructive-educational activities as efficient as possible and the elaboration of some useful didactic instruments. In the case of instructional design, the foreshadowing of the instructive-informative component of the educational process is emphasized, but

the formative-educational component is not ignored either, given the indissoluble connection between the two (Bocoş, 2016, p. 316). In order to practice his role as a facilitator of learning and as an instructional designer, the trainer, the teacher refers to models of updated pedagogical competence in digital education, from where he extracts and orients his action towards the assumed educational finality.

5.2 Reporting digital learning means to new reference models for digital teaching competence

The teacher in the online environment exercises a different and augmented pedagogical competence compared to the traditional practice. One by one the educational means were updated with the help of technological devices, and the final leap took place with the complete digitization and the conduct of learning exclusively online. An integrative frame of reference with a view to online teaching, records exactly the psycho-pedagogical competences and abilities of the online trainer:

Professional skills of educators		**Pedagogical competences of educators**			**Skills of the educable**
Professional involvement	Digital Resources	Assessment	Teaching and learning	Empowering the educable	Facilitating digital skills of the educable
Organizational Communication; Professional Collaboration; reflective Practice; Continue digital Professional Development.	Check; Create and alteration; Management protection, and distribution.	Strategies assessment; Analyzing Activity; Feedback and planning.	Teaching; Guidance; Learning Collaborative; Learning self-taught.	Accessibility and inclusion; Differentiation , and customization; Employment active of the to students.	Information and digital literacy; Communication ; Creation of content; Use Responsible for; Resolution of Problems.

DigiCompEdu Model, (Redecker, 2017, p.8)

Following this model, we identify areas of competence with direct implications on the use of educational means to achieve goals in the online environment. Thus, competence in **digital resources** refers to:

a. ***Selection/choice of digital resources***: finding digital resources for teaching and learning, evaluating and choosing the best; taking into account the specific learning objective, context, pedagogical approach and group of learners when choosing and planning digital resources.

b. ***Create and adapt digital resources***: modify and add resources with open licenses and other resources where permitted; create or help build new digital resources for education.

c. ***Managing digital resources:*** keeping digital resources safe and prudently sharing them; organising digital content and making it available to students, parents and other teachers; keeping sensitive digital information safe; respecting privacy and copyright rules ; understanding how to use and create open educational licences and resources (Redecker, 2017, p. 20).

Further, **teaching** refers to how to design, plan and use digital technologies at different stages of the learning process:

a. ***Teaching and learning:*** refers to the teacher's ability to plan and use digital devices and resources in teaching so that teaching interventions are more effective; to manage and coordinate digital teaching strategies correctly; to try new ways of teaching and to come up with new formats and pedagogical methods.

b. ***Guidance***: use digital tools and services to improve interaction with learners, both individually and in groups, during and outside learning sessions; use digital technologies to provide timely and targeted advice and help, and try to create new ways to provide support and help.

c. ***Collaborative learning:*** use digital tools to help and improve the way learners work together; give students the chance to use digital technologies in group projects as a way to improve communication, teamwork and the creation of new knowledge.

d. ***Self-learning:*** using digital technologies to help learners learn on their own, which means providing learners with the tools they need to plan, track and reflect on their own learning, follow-up on indicators of progress, share ideas and come up with creative solutions (Redecker, 2017, p.20).

It is important to note that, according to this teaching model, the area of inclusion and facilitation of learning is provided as a basic didactic competence , using online teaching equal opportunities are provided for all learners, including those with special educational needs. The call for technology to assist daily life has evolved from a sign of luxury to an imperative necessity, for mankind as a whole; the assistance by technology of the person with limited operation by a dishabilitated condition is, all the more so, a concern for an essential component in the package of interventions aimed at facilitating autonomy and autonomy and its integration (Dănilă in Maftei A., coord. 2022, p. 283). Ozer Sanal, (2022) noted in the findings of a study on the implications of technology in the education of people with special educational needs that it offers a wide variety of forms, selling the potential to be diversified according to the qualifications and needs of educable people who need special education. Technology is an important factor that spreads in all areas of life and makes learning processes more comfortable,

accessible and interactive. Planning learning processes in a manner integrated with technology also means not wasting precious time of training and recovery with ways and means inappropriate to disability.

In the context of your virtual learning, the teacher's training requirements include integrated knowledge specific to a three-dimensional concept, consisting of the three spheres of knowledge – content (CK), pedagogical (PK) and technological (TK), materializing in an interdependent approach between them (Technological Pedagogical Content Knowledge – TPACK).

These dimensions of didactic competence converge in new areas of competence: knowledge of pedagogical content (PCK), knowledge of technological content (TCK) and technological-pedagogical knowledge (TPK). The TPACK concept ensures the effective planning of all teaching activities in the presence of a digital medium, based on the common denominator of the three dimensions, PCK, TCK and TPK (Akyuz, 2018).

A reference framework with immediate practical implications in the choice of educational means to learn online teaching was developed by Puertedura (2006), Model SAMR consisting of four levels, and the tools and ways of working are only changed with their digital versions:

• **Substitution:** the technology is a direct instrumental replacement, without any change in the way it works (for example, a word processor is used as a typewriter; in this way we can read / write texts online).

• **Augmentation:** Technology acts as a direct replacement for the instrument, with functional improvements to existing practices such as reading and writing as a multimode skill that remain the same but improve thanks to digitalization. The uses of the basic functions are enhanced, such as "copy-paste" and spell checking. Online text can have links to dictionaries, study guides, and websites.

• **Change:** technology allows for a significant redesign of tasks as a result of digitalization: it has connectivity to email, spreadsheets and applications. In this way we can share textual, visual and audio tools for acquiring knowledge, tasks can be developed (instead of answering questions in textbooks, students can use forms for active learning).

• **Redefinition:** technology allows the creation of new tasks, previously unthinkable. Workgroup and content management software can be incorporated, tools to see the content and how it is made up. Digitalization makes it possible to re-ally things that weren't possible before, such as a large number of students working together or making podcasts.

In order to ensure access to learning for all educables, Universal Design for Learning, UDL) has emerged, a theory that focuses on designing flexible, inclusive and student-centered learning environments. UDL provides flexibility in the way information is presented, students respond or demonstrate knowledge and skills as well as in mo where they are involved in learning activities; reduces barriers to instruction, provides adequate support, support and challenges, and maintains high expectations for all students,

including those with disabilities (Dalton, 2017).

The ULL Curriculum (Grosseck and Christmas 2020, p. 60) recognizes both the unique nature of each student and the need to address their differences through:

• **multiple means of representation**, giving learners the opportunity to acquire information and knowledge in a variety of ways (format, degree of difficulty, logical succession);

• **multiple means of action and expression**, to provide learners with alternatives to demonstrate what they know;

• **several means of involvement**, to satisfy the interests of the learners, to increase the motivation, to offer them adequate challenges (to offer them different ways of participation, interaction, dynamism, connection with real life) etc.

Thus, teaching is designed to be flexible and varied by incorporating a range of means to achieve learning outcomes, including the use of accessible technology for students with disabilities, and learning is designed to engage the student, to take into account their access points, interests, needs in the context of the course.

Elias (2011 apud Grosseck and Christmas 2020, p. 62) extracted 8 UDL principles particularly useful for digital learning.

Principles of UDL	***Recommendations for teaching activities***
Fair Use	provide digital content in the simplest possible format to store information in the cloud and on shared sites
Flexible Use	● deliver the information in small portions ● vary the didactic strategy, the type of resources, to change the approach we use most frequently ● always prepare a visual support (ppt, prezi, sway, etc.), to integrate, as much as possible, short relevant films, educational software, interactive lesson sequences ● evaluate the student in a diverse way
Simple and intuitive	keep the user interface in a simple form to use open resources and free software
perceptible Information	use subtitles, descriptors, transcripts
Face tolerance of errors	practice formative evaluation, along the way, giving frequent feedback, appreciating various products of the activities (in digital format, online), changing the format of the test, taking into account the evaluations of his colleagues or the significance of his contribution in a working group, etc.
Physical exertion and low psyche	avoid overloading and create students' well-being

Learning communities and support	● encourage multiple ways of communicating ● group as much as possible the pupils/learners according to their access and technical preferences
The climate of instruction: motivation	always consider motivating students and engaging them in learning activities.
Flexible use	use memos, questions, quizzes, various approaches and applications to support the introduction of digital content generated by learners

Useful UDL principles in digital learning
(Elias 2011, Grosseck and Christmas 2020, p. 62)

5.3 Types and characteristics of online learning means

The educational means useful for online learning are found in a variety of forms and combinations between the technological and human factors, at the intersection of multimedia forms (audio, video, text, graphics, etc.) and operations of critical thinking or predate for their passive takeover. Thus, we can determine some aspects of e-learning, according to the specialized literature, starting from databases, support and online collaboration and continuing with the structured presentation of information in synchronous or asynchronous learning on different digital media and devices. The online learning tools are based on principles that help the trainer's teaching effort and facilitate the learning of the educable:

1) The flipped-classroom principle for streamlining the lesson time, when the discussion time is maximized at the lesson, studying the theory individually and practicing it later, at the online meeting (or physics) with the trainer;

2) The principle of asynchronous learning, which means learning it anytime and anywhere, students can participate in the lesson, although they are in other places;

3) The concept of maximized social *learning* , refers to the interaction of students in relaxed environments, such as discussion forums, groups, learning from each other, not just from the trainer;

4) The concept of *gamification* for motivating and rewarding children, they are recomposedfor their work and are clearly presented with their progress, and even receive feedback immediately after active involvement;

5) The rich, accessible, immediate and adapted content to the personal device - the study materials are diverse, easy to obtain and visualize (Pisău, 2021). After Pisău (2021), achieving the learning objectives is possible by conducting online courses, through different forms of organizing distance learning: organizing learning on the site; creation of virtual classes; creatinggroups on social networks and creating groups through instant messaging systems. For the organization and more efficient conduct of online learning, a set of web tools are proposed that replace the means of education, adu u facilitating

learning at a level facilitated exclusively digitally. Thus, Pisău (2021) identifies tools that replace the traditional board; for creating live video; for creating virtual classes; for the creation of online conferences; for the creation oftheir video lessons; for presentations; for the verification of knowledge:

▪ Classic board tools: Idroo, Openboard, Miro, Awwapp, Tutorsbox, Classflow; ▪ Tools for creating live video: YouTube via streaming; Facebook via live video;

▪ Tools for creating virtual classes: Google Classroom, Edmundo, LearningApps, Easyclass, Tutorroom, Edulastic, Nearpod, Classflow, Moodle;

▪ Tools for online conferencing: Zoom, ReadyTalk, WebEx, ClickMeeting, Electa Live, Google Meet;

▪ Tools for creating video lessons: Screencast-O-Matic, Loom, Smart Notebook (recording), Webcam Video Recorder, Online Screen Recorder, Screen Castify; ▪ Presentation tools: Mentimeter, Prezi, Canva, Google Slides, StoryJumper, Wakelet, Spark Adobe, Venngage, Biteable, Powtoon, Flipsnack;

▪ Tools for checking knowledge: Kahoot, Word Wall, Google Forms, Testmoz, Kubbu, ClassMarker, Socrative, ProProfs, Quizizz, Quizlet, Quizalize. The resources of assisted training (Grosseck & Christmas 2020, p. 21) (respectively mediated learning) of technology (digital) concern both **the hardware component**, the device itself, and the **software applications** installed on it. The trainer can use various means and devices (computer, mobile phones, smartphones, PDAs, mini notebooks, etc.), methods and resources based on digital technology such as virtual environments, learning management systems (LMS), educational software, online tools, digital fo rmat learning materials, serious games, augmented and virtual reality applications, as well as other emerging technologies.

I. Virtual learning environment is the first didactic means we refer to in online learning, this being a context that allows interaction between teachers / tutors and students / students, including communication and information exchange and content distribution, i.e. online publications, management and recovery of documents and other information. Perhaps more well known is the system for the management of learning (in engl. Learning Management System, LMS), which is a software system that allows the organization of online education, by recording the training process, the test results, going through the entire educational material to be transmitted, etc. (Dobre, 2010). Work through a SML is asynchronous, except when online meetings are held through videoconferencing tools.

Logo	System learning management (LMS)	Description
	**G-Suite** (edu.google.com),	It allows teachers to create classes, distribute tasks, provide feedback and promote collaboration. Many online digital applications integrate well into G Suite.

	google Sep	
	Edmodo (edmodo.com)	It has gained popularity among teachers not only for its Facebook-like appearance, but also for the library of resources and professional community it offers.
	Schoology (schoology.com)	It's similar to Edmodo. Schoology apparently has a great interface with iPads, which is an important feature for some users. Schoology offers a free basic package for individuals and a platform based on subscriptions foreducational establishments.
	Weschool (weschool.com)	It works on all devices and has the ability to combine any website, resource or online application (such as YouTube, Google Docs, Dropbox, Khan Academy, etc.) into a single learning experience. Ratings can include different formate questions, including video-based. It can also be used in distance/online learning or in the case of inverted classroom.
	Microsoft Teams (https:// www.microsoft.com/en-us/ education/products/teams)	It allows organization on class-type structures, loading of materials and collaborative activities.
	Moodle (https://moodle.org/)	It is a platform for remote learning activities that require installation on a server. It is more suitable for a solution common to several classes/ standardized at the school level.
	easyclass (https://www. easyclass.com)	It is a platform that allows the management of learning activities by organizing classes, in which students can receive materials, tests and various work tasks. Students can receive feedback and assess and grade the products they make.
	Class Dojo	It is an online management system designed to encourage positive student behaviors and class culture. Students earn "Dojo Points" based on their behavior in class, the application relying on gamification techniques.

Table of Systems for Learning Management after Grosseck & Christmas (2020, p. 22)

II. Digital tools are those particular means, software or applications used in the virtual environment, to

facilitate learning.

Educational software refers to applications built for didactic purposes, aimed at achieving educational objectives folded ontheoretical contents, on e-xperimental/ practical activities and on the competences targeted by the curricula. Practical educational software interweaves the computer product with pedagogical design, being a digital alternative to traditional methods and means. There are various types of educational software, a possible classification (Grosseck & Christmas 2020) is as follows:

• interactive learning software (interactive presentation of some knowledge); • simulation software (simulation of real situations that the student can study in order to formulate various conclusions);

• practice software – drill and practice (for thetraining of specific skills and abilities);

• investigative software (develops critical thinking, involves solving problem situations);

• thematic software – tutorials (addresses various topics in the curriculum); • test software (administers various evaluation samples).

These types of educational software are generally offline applications. Examples of educational platforms online in Romanian language are Twinkl (https://www.twinkl.ro/resources/romania teaching-resources), MyKoolio (https://www.mykoolio.com/), Intuitex School (https://www.scoalaintuitext.ro), Kidibot (https://www.kidibot.ro/esti-profesor/)etc., where teachers can access diverse resources or engage students in interactive activities. **III. Online applications** (Grosseck & Christmas 2020) refer to those cloud-based tools, independent ofcurricular content, that can be used punctually in a didactic activity designed by the teacher. They are suitable for blended learning activities and are also a great resource for ERT. How to integrate online applications into teaching activities depends very much on the digital and pedagogical competences of teachers and their creativity in the educational design of learning resources and activities. For educators, free online technologies and applications are essential, they currently have access to hundreds of such online applications, for text creation, working with images, audio files, videos, multimodal resources, storytelling, web pages, resource organization, programming,formative value, software for translation **(**Microsoft Translator for Education**,** https://www.microsoft.com/ en-us/translator/education/, Google Translate, https://translate.google.com/), applications for videoconferencing, etc.

This type of applications began to be intensively integrated into learning activities from the moment when mobile technology, sensors, cloud computing became widely accessible, in conjunction with the desire of teachers to think about their ownteaching activities supported by technology. A ranking of the most used online applications, both for academia and in general, you can access on the website created by Jane Hart (Center for Learning and Performance Technologies, Great Britain), for 2020 it can be accessed at the address https:// www.toptools4learning.com/top-100s . In this ranking, the first place is the YouTube channel, a platform for hosting and sharing videos, followed by Power Point,the presentation re-ranking application and Google Search, the information search engine. The following

places are occupied by other well-known and relevant applications for academia: Microsoft Teams, Zoom, Google Docs and Drive, LinkedIn, Word, Canvas andWikipe dia.

Referring to ERT, (Grosseck & Christmas 2020, p. 25) presents a series of online applications that can be used **to create various types of resources in digital format and also form the basis of various online learning activities,** useful indidactic activity:

a) ***making electronic presentations:*** PowerPoint, Google Presentations, Prezi (https://prezi.com), Canva (https://www.canva.com/), Sway (https:// sway.office.com/); b) ***creation of virtual bulletin boards:*** Padlet (https://padlet.com/), Symbaloo (https://www.symbaloo.com/), Webjets (https://www.webjets.io/);

c) ***carrying out lesson plans or learning paths:*** Symbaloo Lesson Plans (https://symbalooedu.es/lessonplans/);

d) ***creating stories***: (Little Bird Tales https://littlebirdtales.com/), Storyjumper (https://www.storyjumper.com/), Storybird (https://storybird.com/), Mystorybook (https://www.mystorybook.com/), Storyboard That (https://www.storyboardthat.com/);

e) ***creation of videos, cartoons, comics***: Voki (https://l www.voki.com/), WeVideo (https://www.wevideo.com/), MakeBeliefsComics (https://www.makebeliefscomix.com/), Toondoo (http:// www.toondoo.com/), Toontastic (https://toontastic.withgoogle.com/), Pixton (https://www.pixton.com/), Edpuzzle (https://edpuzzle.com/);

f) ***creating collaborative documents*** (Google Docs);

g) ***creating concept maps***: Coggle (https://coggle.it/), LucidChart (https://www.lucidchart.com/), Bubbl.us (https://bubbl.us/), MindMeister (https://www.mindmeister.com/);

h) ***creating word clouds:*** Wordle (http://www.wordle.net/), WordArt (https://wordart.com/);

i) ***creating educational games and interactive exercises:*** ClassTools (https://classtools.net/), Kubbu (http://www.kubbu.com/);

j) ***development of evaluation tools:*** Google forms, Socrative (https://socrative.com/), Kahoot (https://kahoot.com/), Mentimeter (https:// www.mentimeter.com/), SurveyMonkey (https://www.surveymonkey.com/).

Applications for videoconferencing are an essential category for online courses because they allow an activity similar to the traditional learning situation, without physical presence in a given space. Without involving great transformations, online courses can be achieved through online videoconferencing systems, an easy technical solution, easy to implement, through which teachers and students interact from different spaces, using the Internet to simultaneously browse content or learning activity. Educational actors communicate audio and video, make presentations, seminars and other synchronous teaching activities. The feedback and interaction is direct, presenting low implementation difficulties and low costs. The examplesof videoconferencing platforms are numerous, starting with the Facebook

messenger network, discussion rooms can be created and up to 50 people can be invited to enter a video call, continuing with applications such as Zoom, Webex or Gooogle Meet.

Grosseck & Christmas (2020, p. 25) records the advantages of **conference platforms,** describing them as a space to meet online, where students and teachers can talk and/or see through webcams and microphones, sharetext, pdf, video or audio files, images and slides; allow recording of the meeting – so students can review what was presented live, and absent students can view the activity; they can post questions, answer them, having the possibility of working in a small group (for example, in the Zoom app, Microsoft Teams), students can be divided into small groups or different meeting rooms, working in these groups, chatting without interacting with the entire class group.

The means of education useful toonline bears represented by virtual environments, applications, software are complemented by emerging technologies and digital educational resources. From the category of emerging resources we mention games and gamification in education, extended reality (augmented, mixed and virtual), as well as resources that traditionally existed and have been updated in digital format, as is the case of the digital textbook, dictionaries, encyclopedias - which can be grouped into the category of open educational resources (OER).

Theintroduction of the concept of play in education began with the usual recreation activities of age, involving the learning of rules with a rewarding ending. Serious games, such as simulation videos, were aimed at acquiring professional skills or competenciesin order to gain autonomy of work. Finally, educational games have been specifically designed to meet learning goals. Today the field of play in a formative context has been developed by introducing learning bazate on the game and gamification. Learning based on play involves going through a learning scenario specific to the context of formation, and gamification refers to providing points and badges to participants to quantify progress towardsthe learning object.

Virtual reality can lead to hard-to-reach trips, such as in the Smithsonian museum: https://naturalhistory.si.edu/visit/virtual-tour6 or it can allow the teacher, through applications, to bring to life scientific concepts in fields such as STEM or spatial geography (https://edshelf.com/tool/science-ar/), (http://elements4d.daqri.com/), (https:// www.4danatomy.com/), (http://vitotechnology.com/star-walk.html), (http://zoo ar.com/animals/), etc.

Brower and Torrington (2020), published on the Educase platform the typology of free web-based learning technologies (2020) that provides educators with a list of 226 technologies arranged in 40 types and 15 groups that can be used through a browser to promote more productive and interactive learning. Below we present the complete inventory of the means of digital learning (Brower and Torrington, 2020):

1. text-based instruments:	- Synchronous text discussion: (http://twitter.com), (http://plurk.com), (http://chatzy.com), (http://backchannelchat.com), (https://slack.com) - Discussion forum: (http://proboards.com), (http://readups.com); - Taking notes and creating documents: (http://evernote.com), (https://keep.google.com), (https://www.office.com/launch/word), (http://docs.google.com),(http://zoho.com/docs), (https://www.canva.com);
2. Tools based on Images:	- Sharing images: (http://flickr.com), (http://instagram.com), (http://www.pics4learning.com), (https://burst.shopify.com), (https://www.pexels.com), (https://unsplash.com), (https://pixabay.com), (http://openclipart.org), - Create and edit images: (http://befunky.com), (http://pixlr.com), (http://sumopaint.com), (http://muro.deviantart.com). - Drawing and coloring: (https://sketch.io/sketchpad), (http://slimber.com), (http://flockdraw.com) - Online board: (http://awwapp.com), (http://docs.google.com/drawings), (http://board800.com), (http://cosketch.com), (http://twiddla.com), (https://www.autodraw.com).

	- Charts: (http://gliffy.com), (http://lucidchart.com), (http://draw.io), (http://creately.com), (http://cacoo.com). - Mental maps: (http://mindomo.com),(http://wisemapping.com), (http://mindmup.com),(http://popplet.com),(http://mind42.com),(http://mindmeister.com), (http://slatebox.com), (http://coggle.it), (http://debategraph.org) - Maps and mapping: (http://maps.google.com), (http://scribblemaps.com), (https://www.google.com/earth/education/tools/tour-builder). Verses of words: (http://wordclouds.com), (https://tagcrowd.com), (https://wordart.com/).
3. Audio instruments:	- Audio sharing: (http://soundcloud.com), (http://audioboom.com), (http://freesound.org), (http://chirbit.com), (http://soundbible.com). - Audio creation and editing: (http://vocaroo.com), (http://soundation.com).
4. Video Tools:	- Video sharing: (http://youtube.com), (http://vimeo.com), (http://teachertube.com). - Video creation and editing: (http://youtube.com/editor), (http://videotoolbox.com), (http://kizoa.com), (http://muvee.com), (https://info.flipgrid.com), (http://screencast-o-matic.com). - Video transmission: (http://youtube.com), (http://younow.com).

5. Multimodal production tools	- Digital panels: (http://pearltrees.com), (http://padlet.com), (http://stormboard.com), (http://en.linoit.com), (https://conceptboard.com), (https://miro.com). - Presentations: (http://prezi.com), (https://www.office.com/launch/powerpoint), (http://www.google.com/slides/about),(http://haikudeck.com), (http://photopeach.com), (http://photosnack.com), (http://vcasmo.com), (http://authorstream.com), (https://spark.adobe.com). - Creating lessons: (https://www.lessonlams.com), (http://blendspace.com), (http://softchalk.com), (http://easygenerator.com), (http://nearpod.com), (http://udutu.com), (https://composica.com), (http://edpuzzle.com).
6. Digital storytellin tools (storytelling)	- Online book creation: (http://www.storyjumper.com), (http://tikatok.com), (http://storybird.com), (http://mixbook.com), (https://bookcreator.com). - Create comics: (http://storyboardthat.com), (http://makebeliefscomix.com) (http://pixton.com), (http://wittycomics.com). - Animated videos: (http://powtoon.com), (http://moovly.com), (http://digitalfilms.com), (https://www.voki.com).
7. Tools for creating websites	- Creation of individual websites: (https://sites.google.com/new), (http://tripod.lycos.com), (http://wix.com) Jimdo (http://jimdo.com), (http://moonfruit.com), (http://weebly.com), (http://glogster.com). - Wikis: (http://pbworks.com), (https://www.atlassian.com/software/confluence), (https://www.nuclino.com), (https://www.zoho.com/wiki), (https://www.wikidot.com).

	- Blogs: (https://wordpress.com), (http://edublogs.org), (http://blogger.com), (https://rebelmouse.com), (http://penzu.com).
8. Tools for organizing and sharing Knowledge	- File sharing: (http://dropbox.com), (http://mediafire.com), (http://4shared.com), (http://onedrive.live.com), (http://google.com/drive). - Social bookmark sites (store, organize, annotate and share links to online sites): (http://diigo.com), (http://icyte.com), (http://memonic.com), (https://edshelf.com),(https://wakelet.com), (https://explore.participate.com/educlipper). - Aggregators (using Really Simple Syndication (RSS) to harvest web-based information in one place to organize, save, and share content on specific topics): (http://flipboard.com), (http://feedly.com), (http://www.bloglines.com). - Republication: (http://scoop.it), (http://pinterest.com), (http://livebinders.com). - Creating timelines: (http://timetoast.com), (https://www.preceden.com), (http://tiki-toki.com), (https://online.officetimeline.com).

9. Data analysis tools	- Conducting surveys: (http://www.google.com/sheets/about), (https://www.office.com/launch/excel), (http://www.zoho.com/docs), (http://www.live-documents.com/live_spreadsheets.html), (http://ethercalc.net), (http://smartsheet.com) - Online spreadsheets: (http://infogr.am), (https://live.amcharts.com), (https://venngage.com), (https://developers.google.com/chart), (http://www.easel.ly), (http://piktochart.com), (http://chartsbin.com), (https://figma.com). - Infographics: (https://grabcad.com), (https://repables.com), (https://3dwarehouse.sketchup.com), (https://www.thingiverse.com).
10. 3D Modeling Tools	- Archives of 3D models: (https://grabcad.com), (https://repables.com), (https://3dwarehouse.sketchup.com), (http://www.printmeasheep.com). - Creation of 3D models: (http://shapeshifter.io), (http://tinkercad.com), (https://www.3dslash.net), (https://www.sketchup.com)
11. Encoding tools:	(https://scratch.mit.edu), (http://code.org), (https://make.gamefroot.com), (https://www.codecademy.com).
12. Evaluation tools:	(http://quizstar.4teachers.org), (http://proprofs.com/quiz-school), (https://www.classmarker.com), (http://quizlet.com), http://cram.com), (http://cobocards.com), (http://easytestmaker.com), (http://peerwise.cs.auckland.ac.nz), (http://socrative.com), (https://kahoot.com), (https://www.gosoapbox.com).
13. Social media systems online:	(http://facebook.com), (https://www.classdojo.com), (http://www.classtools.net/FB/home-page),(http://twiducate.com), (http://researchgate.net), (http://academia.edu).
14. Learning management systems	(http://edmodo.com), (https://web.seesaw.me), (https://classroom.google.com), (https://moodlecloud.com), (http://www.latitudelearning.com), (http://myicourse.com), (http://www.schoology.com), (https://atutor.github.io), (http://www.formalms.org).
15. Videoconferencing systems:	(http://zoom.us), (https://apps.google.com/meet), (https://web.skype.com), (https://discordapp.com).

5.4. Designing digital learning means in the design of online courses

The concept of online learning is focused on two main dimensions: the design of the online learning process and the organization and conduct of the online learning process A. P the deconditioning of the online learning process begins with the selection of digital tools by selecting the template and designing the model, followed by the structuring of the digital content. In the final stages are stability different forms and types of verifications, offering additional material, as well as other administrative actions.

B. The organization and development of the online learning process is focused on the commitment to learning through the involvement of the teacher trainer and the educable. Given these two aspects, the contents are organized through different pedagogic technologies that involve ways of participation of students. It will be constantly taken into account the provision of feedback, evaluation, self-evaluation, so that in the end to provide methodical recommendations for all educational actors.

In the case of students with disabilities Grosseck & Christmas (2020) recommends the accessibility of the teaching materials offered (for example, so that they can also be accessed by visually impaired students using a screen reader).. There are various types of technology dedicated to accesibilization, such as tools to improve the display of information on the display, screen reading tools, writing tools with alternative access, speech recognition tools, for annotations, etc. In general, in order to make accessible the learning resources, the teacher must ensure that:

1. The materials shall be clear, organised and explanatory allowing access to information. The materials are provided in PDF formats. A PDF file can contain scanned images of each page of text, essentially static "images" of pages, or a copy of text that allows you to search and underline the text. Hyperlinks are included/present. To do this, make sure that the hyperlink text always describes one of the contents of the link.

2. The information in the images can be accessed alternately, by describing them using, for example, Alternative Text .

3. Video or audio resources are subtitled. You can use: the tools built into YouTube, tools and subtitle strategists in the Google suite, such as Voice to Text in Google Docs. Real-time subtitles in Google presentations (currently in English only). Live captions in Google Meet.

4. The tasks required of the students can also be accomplished without the need for quick text input/writing skills, manual dexterity or visual acuity.

Before planning an online training activity it is good for the trainer to bear in mind that both he and the educable have a good internet connection and a functional device. In order to prevent low commitment to learning, the trainer can use a visual/multimedia medium (collaborative presentations (Google), dynamic presentations (Prezi) or interactive presentations (Mentimeter); enriching PowerPoint presentations with quizzes, videos, interactive materials, etc.; designing various formative assessment activities, student-centered and the competences targeted in the lesson; gamifying the learning activity evaluation for at least the period of one unit; interspersion in the synchronous activity of activities on online or individual groups offline, etc. detailed organization of the activity and informing the students on the learning activity, but especially on the expected learning outcomes (in advance through audio, video, text posts on the e-learning or live platform at the beginning of the videoconference). It is also considered useful to send information in advance, both on the content and on the organization of the activity and expected results. Educables can intervene by presenting someof their activities, through

intercollegial evaluation as well as through self-evaluation activities.

A summary scenario of the training activity involves:

- establishing the communication environment and the learning management system; - motivating the educable for learning by organizing the detailed activity, capturing attention and proposing a way of gamification;
- directing learning through interaction with learning content, support presentations and online learning activities (with the help of the means presented in point 3); - asynchronous learning claims the other-time role of homework practice;
- assessment of learning through the reverse connection, by practicing the skills and competences that were proposed in the learning activity and their assessment.

Documenting on the educational means developed by the digital environment opens up optimistic and challenging perspectives for trainers. A lot of opportunities, high-performing resources and facilitating learning highlight a bright future for online learning. However, the manager of this universe remains the human, the most powerful link that can keep the digital scaffolding directed to the unchangeable axiological finality of education: a better life, a better version of each one and a better society for all.

Bibliography

1. Akyuz, D. (2018). Measuring technological pedagogical content knowledge (TPACK) through performance assessment. *Computers & Education*, *125*, 212-225. two: https://doi.org/10.1016/j.compedu.2018.06.012
2. Andron, D., Kifor, Ş. (2021). Digital technologies in didactic activity. Sibiu: "Lucian Blaga" University Publishing House of Sibiu.
3. Bocoş, M.-D. (coord.) (2016). *Praxiological Dictionary of Pedagogy*, vol. I *(A-D)*. Piteşti: Parallel 45.
4. Bower, M., & Torrington, J. (2020), *Typology of Free Web- based Learning Technologies, Educase Report*, https://library.educause.edu/ resources/2020/4/typology-of-free-web-based-learning technologies.
5. Ceobanu, C. (2016). Learning in the virtual environment. Computer user's guide in education. Iaşi: Polirom.
6. Ceobanu, C., Cucoş, C., Istrate, O., & Pânișoară, I. O. (2022). Digital Education Ed. a II-a. Iaşi: Ed. Polirom.
7. Cucos, C. (2016). Pedagogia. Iaşi: Polirom.
8. Dalton, E. M. (2017). Beyond Universal Design for Learning: Guiding Principles to Reduce Barriers to Digital & Media Literacy Competence. *Journal of Media Literacy Education*, 9(2), 17- 29. https://eric.ed.gov/?id=EJ1160465 .
9. Dobre, I. (2010). Critical study of the current e-learning systems, Romanian Academy, Research Institute for Artificial Intelligence, Bucharest.
10. Elias, T. (2011). Universal Instructional Design Principles for Mobile Learning. *International Review of Research in Open and Distance Learning*, 12 (2), 143–156.
11. Grosseck, G., Christmas, D. (2020). Practical Guide to Educational and Digital Resources for Online Training . Timişoara: Editura Universităţii de Vest.
12. Maritain, Jaques. (2021). A Philosophy of Education. Bucharest: Spandugino.
13. Maftei, A., Dănilă, O., Gherguţ, A. (2022). Disability A transdisciplinary approach. Iaşi: Editura Universităţii "Alexandru Ioan Cuza" Iaşi.

14. Özer Shanal, S. (2022). Special Education Teachers And Technology: A Metaphor Analysis., Necatibey Faculty of Education Electronic Journal of Science & Mathematics Education, 16(1), 64- 87, 10.17522/ balikesirnef.887466
15. Pisău, A. (2020). Digital toolsfor effective online learning in the context of societal challenges. *Pedagogical Universe*, *67*(3), 44-49.
16. Puentedura, R. (2006). Transformation, Technology, and Education [Blog post]. Retrieved from http://hippasus.com/resources/tte/ 17.08.2022.
17. Redecker, C. (2017). European Framework for the Digital Competence of Educators: DigCompEdu (No. JRC107466). Joint Research Centre (Seville site).

Chapter 6 - Presentation accompanied by technical means. Conversation, exercise, demonstration

Training methodology has benefited from fundamental updates with the penetration of technology into people's lives. In a first and most visible instance relating to the educational environment, one observes the technical means of learning that have replaced traditional tools such as the lecture hall as a meeting place or the blackboard and chalk updated into virtual conference rooms through applications that offer content sharing. At a deeper, methodical level, however, technical means assist, enhance and even replace traditional learning methods such as *exposition, conversation, exercise* or *demonstration*. Thus, in this chapter, we propose to analyse the links and mergers that have been created between classical methods and modern technical means (demonstration *versus* presentation; conversation *versus* messaging; exercise *versus* digital application; demonstration *versus* specialised software) in order to be able to use and implement them in future training activities.

***Keywords**: exposition, conversation, exercise, demonstration, technical means*

6.1. From traditional display to digital presentation

The expository method is one of the oldest known teaching methods in schools. This method has an expository character and is carried out verbally. Classical definitions of *exposure point* to the idea of transmitting information verbally from one or more teachers to an audience of pupils or students. According to Moise and Seghedin (in Cucoș, coord., 2009, p. 348), the classical variants of exposition are *narration* (narrative presentation of facts tailored to the specific audience); *explanation* (presentation predominantly marked by rational arguments) and *school lecture* (presentation in the form of a succession of ideas, theoretical frameworks and their separate interpretation).

By using exposure in teaching, a classical relationship is created in this way, consisting of a pole called *sender* (teacher/trainer) and another called *receiver* (learner/student). The advantage of such a relationship is that it reduces the time taken to learn and assimilate complex knowledge, enabling learners to find patterns in the content presented and even in the trainer's personality. However, the use of the exposure method also imposes certain limits and risks on the teaching approach. Barkley and Major (2014) call exposure *a form of passive pedagogy,* which would put learners in a situation of inactivity, as they have little authority and control over their learning; exposure is less effective if activating methods are not used, thus creating problems with attention, motivation or the possibility of taking notes at the pace of the trainer's presentation.

In an attempt to update such a teaching method with an impressive pedagogical antiquity, based on the verbal type of exposition and aiming at reducing its limits, Cerghit (2006, p. 14) proposes to extend it to *exposition with an opponent* (in the teacher's exposition seen as a didactic show, intervening with questions or opinions, another expert) and to *exposition-debate* (a combination of exposition - as the first part of the training time - and debate - this representing the second part of the working time). Regardless of how it is carried out in practice, there are certain widely accepted conditions for the application of the exposure method, which are also noted by L. E. Ciolan (in Pânișoară, I.-O., coord., 2022, p. 146):

- the content of the presentation must be original, authentic and convincing, and the trainer must prepare and document the activity rigorously;
- respect of the rules concerning time, objectives and purpose, indicated by the syllabus of the educational approach in which the exhibition takes place;
- the amount of information displayed is reasonable;
- the illustrative examples are sufficient to form an accurate picture of the content to be presented;
- the trainer's style of expression and language must be adapted to the level of competence of the audience, taking into account an expressive balance between the amount of words and the content expressed, as well as the impact of non-verbal and paraverbal communication.

The exposure that takes place in the context of e-learning takes on new connotations, as a direct result of the many benefits offered by the different technical platforms on which it can take place. Exposure of knowledge for various educational purposes can be achieved through the use of a rich and diverse range of supporting media, some of which include, according to Grosseck, G.; Christmas, D. (2020, p. 40), various texts and poems; graphs and pictures, diagrams, photographs, drawings and posters; audio, sounds, voice, podcasts and radio programmes; videos and films, TV shows, movies and *YouTube* clips*;* and digital media include animations, simulations, online discussion forums and virtual worlds. Educational resources presented in digital format are developed according to certain design principles, which emphasise expressive content, integration into the training action, as well as technical and social aspects:

- *foresight and consistency.* Once the presentation format of the material has been refined and brought to a stable state, it must be maintained at the same high level from one course unit to the next;
- *applying a style defined by standardisation and consistency;*
- *the ability to easily navigate through content.* The learner will have the ability to get immediate or very quick access to the unit of content they select from the menu;
- *cohesion and a focus on streamlining.* A course unit should provide both the primary concepts needed to be covered and instructions on how learners can obtain additional information;

- *design.* Organising components according to their meanings. To better organise information, it can be incorporated into various tables and lists;
- *to highlight certain sections of text, use properties such as underlining, bold or bold text*. Certain information that is seen as vital is highlighted using a different colour. (Grosseck, G.; Christmas, D. 2020, p. 41)

The most popular and widely used updated version of the exposure method is the *flipped classroom method.* Through this educational method, the teacher documents the topic set for learning, selects various resources or develops his/her own materials through which he/she wishes to convey content and then delivers them to the learners prior to the actual meeting (online or physical). Between 30 and 80% of the content (Snowman and McCown, 2014) is delivered online prior to the actual teaching activity, which is an effective digitally-mediated teaching method that removes some of the disadvantages of the traditional exposure method. Learners can thus benefit from autonomy and flexibility in learning, support in understanding content, collaboration with peers, motivation for learning and appropriate interaction with the teacher.

The *flipped classroom* model can be used to organise face-to-face or online teaching. In order to carry out a *flipped classroom* activity*,* the teacher must present the information or topic before the lesson begins. A good way of conveying this information can be done using video resources. Teachers can create video resources by recording short videos with dedicated apps, making various tutorials by recording the screen and using videos from *YouTube, Khan Academy* etc.

Following Grosseck, G.; Crăciun, D. (2020, p. 70), a brief description of the main digital tools used to produce these video resources is given below:

- Generating short videos with specialised applications such as *Movie Maker,* included in the *Windows* operating system*, which* is a freeware program developed by *Microsoft to* create and edit videos and then share them on websites such as *YouTube, Facebook* or *Flickr; Powtoon* is an online animation tool that allows users to create animated presentations by modifying previously produced objects, templates and imported photos with user-created music or *voice-overs.* The website for *Powtoon* can be found at: *https://www.powtoon.com/.* Simple *PowerPoint* presentations can be converted to video format using the program; *Animaker (https://www.animaker.com/),* an easy-to-use tool with five different video styles and over a hundred different animation types, allows for the creation of videos with successful explanations. Educational communities can also be created with *Animaker Class, an* application that also contains dedicated content creation tools specifically designed to enhance students' creativity and promote teamwork;
- *Biteable* is a web-based tool that allows users to produce short films with explanations of the topic being taught, as well as trivia, various examples and other related content. A wide range of visuals

and multimedia elements are used to express the content in a clear, concise and simple way, to arouse the viewer's interest and make the video interventions more engaging;

- *Screencastify (https://www.screencastify.com/)* is a *Chrome* extension that extends webcam functionality and makes it possible to record video of your computer screen. *Screencast-O-Matic* can be found online at *https://screencast-o-matic.com/.* It is an easy-to-use program that can record lectures, produce lessons, record the user's screen, edit videos and then distribute or manage. In the free edition, users are restricted to recording videos that are no longer than 15 minutes. This should not necessarily be seen as a hindrance, but rather as a useful method to help students understand and grasp large volumes of information or difficult concepts by breaking them down into shorter parts;
- *Loom* is a free tool (*Chrome* extension or desktop app) that is simple to use, with the technical means it has to capture the screen, it can record the voice and face of the presenter and then quickly distribute the recorded video. The tool can be found on the web at: *https://www.loom.com/.* There are no limitations imposed on the type of recordings that can be made or the amount of footage that can be saved while using the edition, and it is available free of charge to both students and teachers.
- *Kapwing* is a video editor that can be found at *https://www.kapwing.com/.* It essentially encompasses a suite of tools that allow users to create, edit, subtitle, apply filters and add sound effects, among many other facilities. This program is useful for both students and teachers and can be used on any device. It is a web-based program that requires no installation, is also free and allows collaboration. It works particularly well with *Google Drive, Classroom* and *YouTube*. Access can be gained either by using an institutional account (such as Google), which is available to children under 13, or by creating a *Kapwing* account, which requires approval from a parent or guardian.

Exposure is an appropriate method in online learning, with which easy topics can be presented, activities can be planned or theories and concepts can be presented, debates and discussions can be organised, feedback or collaboration can be provided to complete tasks, leading to increased group cohesion, involvement and engagement in learning. Thus, through online exposure, interaction with the content presented and all related digital resources is facilitated, as well as interaction with colleagues and trainers through associated applications.

When a trainer once used exposition as a teaching method in a classical lesson, he had in mind the lesson moments of Robert Gagné's Constructivist Theory of Learning, with almost the entire task of directing the learning process falling to him. Quite differently, in the online environment, the trainer must and can think about the presentation taking into account the fact that the self-regulating component of learning is present through the possibility of accessing, re-reading and interacting with the content presented at an individualised and personalised pace.

Grosseck and Christmas (2020) recommend that when delivering presentations in online courses, a number of suggestions for ensuring high engagement in learning should be considered:

- the use of a visual/multimedia medium, such as collaborative presentations *(Google),* dynamic presentations *(Prezi)* or interactive presentations *(Mentimeter);*
- enrich *PowerPoint* presentations with *quizzes*, videos, interactive materials, etc.;
- design various assessment and formative activities, centred on the learner and the competences targeted in the lesson;
- gamification of the learning-assessment activity for at least the duration of a learning unit;
- challenging learners to choose from a wide range of discussion topics and ask their own questions;
- use of *icebreakers*;
- using chat for communication;
- request for self-assessment of online activity etc.;
- detailed organisation of the activity and informing the audience about the structure of the learning process, but especially about the expected learning outcomes (in advance through audio, video, text postings on the *e-learning* platform or *live* at the beginning of the videoconference);
- advance transmission of information (audio recordings, videos, text files) related to the topic, inciting, enthusing, motivating, challenging the audience to seek information themselves, to come up with solutions, to present these solutions to colleagues, etc..;
- design group or individual activities in which learners apply, demonstrate what they have learned or produce various resources;
- design teaching sequences in which students present and/or evaluate products created by themselves or their peers;
- designing activities to reflect on their own learning, inviting the audience to share these reflections with colleagues in synchronous sessions as a basis for discussion, etc.

The great advantage of using the exhibition in online courses is precisely that the audience can skip the courses, as the content presented can be recorded, posted and distributed for later access.

6.2. Teaching conversation: communication, chat and messaging

Communication between people in the form of conversation has been taken up in education since the beginning of its history. Intellectual and affective exchanges between teacher and learner were used to achieve specific operational goals, so that *conversation* soon became a widespread teaching method.

Among the types of didactic conversation, the following forms have crystallised: *directed conversation* (a type of question-answer sequence that leads learners, from close to close, towards the proposed goal); *catechetical conversation* (a form of oral evaluation based on question and answer); *heuristic conversation* (a form of dialogical interaction between educational actors, trainers and learners, with the aim of discovering the new) and the *focused conversation method* (answering a series of organised questions corresponding to levels of information processing).

In order to differentiate the functions that didactic conversation can have, Bocos (2013, pp. 224-225) developed a taxonomy of these types of didactic conversation:

- *introductory,* used, as we can intuit, in the introductory, beginning stage of lessons in all categories, and having the following purposes: to capture and maintain the attention and interest of the students, to stimulate their motivation, to activate and update certain previous acquisitions;

- *acquisition and discovery,* for lessons in the categories "transmission and acquisition of new knowledge", "aimed at the formation of intellectual/practical skills and abilities", with the aim of deducing, acquiring, discovering new acquisitions, forming and practising intellectual and practical skills and abilities;

- *recapitulation and systematization,* used in lessons in the category "recapitulation and systematization of knowledge and skills (skills and abilities)", for selective activation and reactualization, repetition, repetition, restructuring, systematization, consolidation (fixing in long-term memory) of acquisitions;

- *fixation and consolidation,* for operationalising acquisitions, operating with acquisitions in different situational contexts, fixing acquisitions (embedding them in long-term memory), integrating acquisitions into one's cognitive system and ensuring their durability over time;

- for ***checking and evaluation,*** for analysing the process of knowledge acquired by pupils and their progress in knowledge, highlighting school progress by comparing school results with pre-established operational objectives;

- *final,* to draw and formalise conclusions of a theoretical or practical-applicative nature.

Hsu and Ching (2015) classify four broad groups of actions that can be related to digital communication tools and in which pedagogical dialogue can take place:

1) participation through individual presentation of assigned work (gallery tour can be implemented through a *Padlet/WordCloud* virtual board*,* knowledge can be updated through the development of cognitive maps and collaborative activities through *Coggle,* feedback can be presented through "word clouds" using the *WordArt* app, etc.);

2) implementing and facilitating online communication through interaction, including synchronous communication using *Skype (https://www.skype.com/ro/)* or *WhatsApp (https://www.whatsapp.com/)*

as well as asynchronous communication using *Dropbox (https: /www.dropbox.com/)* or *Slideshare (http://www.slideshare.net/mobile/);*

3) Formative assessment using *Kahoot!,* assessing and providing feedback and responses for group learning and teacher subject matter (student projects are created and assessed using the *Google* educational suite - *https://gsuite.google.com/);*

4) Learning management systems such as *Edmodo (https://new.edmodo.com/)* or *Google Classroom (https://classroom.google.com/),* video interaction with *Flipgrid (https://flipgrid.com/)* etc. can facilitate and manage student participation in group discussions. Last but not least, we can mention the creation of digital content on *TikTok (https://www.tiktok.com/en/)* and other social networking platforms (learning groups on *Facebook),* learning content sent on *Twitter (https://twitter. com/), Pinterest (https://www.pinterest.ca/)* or *Instagram (https://www.instagram.com/)* etc.

The most used online communities are: *G Suite, Google Meet (https://meet.google.com/), Microsoft: (https://www.microsoft.com/en-us/education/products/teams).* Learners can split into smaller groups or switch between multiple meeting rooms thanks to the chat, call and collaboration features of the main program: *Skype: skype.com* for video and audio calls with talk, chat and collaboration features; *Zoom* (most widely used during the https://www pandemic.zoom.us/. Video conferencing, online meetings, screen sharing and webinars (free, up to 100 people) can be done with *Webex (https://www.webex.com/),* while *Facebook Messenger* allows chat rooms to be built for up to 50 people.

For a trainer, video conferencing platforms are the new amphitheatres of learning, with a range of tools that facilitate and enhance the teaching conversation.

In the online environment, teachers can give all learners the opportunity to respond to the educational requirements and in turn provide feedback to each other. The dilemma of the teacher having to randomly give the floor when more hands are raised than teaching time allows is well known in the field of teaching conversation. Online, students and teachers can also communicate by sharing content as files. Furthermore, online content can be recorded, so learners can review what has been communicated *live*, and absent students can view the activity and take ownership of the knowledge taught. Also in cyberspace, learners can post questions and then answer them, as well as work in small groups.

Even if the didactic conversation takes place in the online environment, the types of questions used still retain the classic typology, referring in particular to the heuristic conversation, the most relevant in the learning process. Thus, open and closed, reproductive and recognition; cognitively productive and discovery; convergent, divergent and evaluation questions are used.

In the educational approach to teaching conversation, a number of recommendations are kept for the formulation of questions so that they serve the development of students' thinking and active, interactive, logical and creative learning (Bocos, 2013):

- establishing the didactic aim pursued by the teacher;
- ensuring a climate conducive to conversation;
- asking questions, but above all, adopting an open attitude towards students and encouraging them to adopt an open and questioning attitude themselves;
- attention to the danger of pseudo-dialogue;
- to have a genuine and multi-relational dialogue during the course;
- the use of a range of stimulating questions to encourage the student to seek the answer;
- to ensure that learners have made the minimum purchases or pre-purchases necessary to engage in mutually beneficial intellectual exchanges;
- Supporting students so that they can use their declarative, basic knowledge;
- understanding that it is not absolutely necessary to answer all questions on the spot;
- design concrete, coherent, clear, precise questions with internal logic;
- to help learners, through the way questions are formulated, to find and formulate answers, to carry out independent activities;
- giving special emphasis to problem/issue questions;
- activating the class not only through regular, direct questions, but also through rhetorical ones;
- avoid neglecting the issue of waiting time in the questionnaire sequences;
- practising flexibility as a proactive attitude, abandoning a particular wording if it was not well understood and being willing to reformulate it;
- carefully observing learners' listening behaviours: the extent to which they actively listen to or accept others' arguments (Bocos, 2013, pp. 229-230).

In terms of the teaching conversation in online courses, it is important to note the evolution of language from a form of computer encoding of information learned by one person to the understanding of language and different languages by computers. Today, there are countless voice recognition software, voice commands, translation software, dictation-based writing or text-to-speech. The development of multimedia has brought with it a multitude of benefits with a direct impact on education. The first online successes came in the form of remote conversations, which were later refined into online education programmes. The success of online learning is based on interactivity as a process, and to implement it in digital education, it is necessary to know the learner to whom it is addressed as well as the instructional design. The quality of online interaction is dependent on the requirements of the learner as well as the feedback that the operating system can express. School performance in turn depends on the interactive

nature of learning, from which perspective online communication benefits from a multitude of (technological) learning tools that traditional interaction in learning does not possess.

6.3. Exercise and application in e-learning

The exercise is the practical action necessary in the learning process to elaborate, fix and valorise the practical knowledge transmitted during the teaching activity. Through exercise, the learner acquires, automates and consolidates skills that are needed later on to solve specific problems.
The scope of the exercises is one of the criteria that ensure the sustainability of learning. In this respect, a distinction is made between algorithmic exercises, which are specific to logical-mathematical subjects, and heuristic exercises, which are of a broader nature and can be generalised to all fields and relate to the ability to solve problems in general. The function of the exercise in training is to achieve the operational objectives stipulated at the beginning of the course, which supports the didactic approach in achieving its aim: automating skills and exploiting knowledge. In terms of action structure, exercises are focused on certain objectives, such as planning, structuring and repetition, in an algorithmic sequence that allows for refined operations.
According to Cristea (2019, pp. 86-88), the application of the didactic method of the exercise requires the respect of psychological and pedagogical premises. Thus, from a pedagogical point of view, an exercise must be structured in such a way that the necessary stages in the formation of skills are exploited:
- *the preliminary stage,* during which the mode of action is presented;
- *the analytical stage, breaking down the action into distinct operations,* which must be learned separately;
- *the synthesis stage, a* time to unify the operations learned separately;
- *the skill setting stage,* designed to practice the skill for automation;
- *the stage of skill refinement,* when the integration of action at the activity level takes place.
Finally, the pedagogical purpose of the exercise will be achieved by moving from practice as automatism to the actual exercise of the operations, a process that undergoes significant developments, engaging the cognitive resources of the learner. In order to successfully promote exercise as a didactic method in online training activities, the trainer must take into account a number of aspects that are customised and realistically adapted to the learning situation in question (Cerghit, pp. 247-251):
- good knowledge of the trainees' personalities and their psychological and social potential;
- optimal choice of the type of exercises in relation to the learning stage;
- gradually increasing the difficulty of the exercises and their progressive sequence;

- checking the degree of integration of the separate operations into the set of actions characteristic of the method;
- gradually increasing the degree of independence of the type of exercise integrated into the overall training activity;
- alternating virtual exercises with those organised on the ground;
- use of exercises in the training activity, both as a form of assessment/auto-assessment and as an application for solving problems of interest.

Referring only to online courses, we appreciate that the transmission of information with the help of technological devices and multimedia resources adds the attribute of interactivity to the entire instructional process, which is a constant resource for the conduct of teaching exercises. Just as in classical pedagogy we talk about the quality of the trainer-learner communication relationship, in online learning the focus shifts to the quality of learner-device/teacher interaction, this relationship being sensitive to the learner's requirements and the feedback provided by the computer. Learners prefer learning through online practice because there is no immediate penalty for a failed exercise. An answer given online can be cancelled, retracted, redone until the best form is obtained. Also, in online, the learner receives immediate and objective feedback on the quality of their action, unlike in face-to-face learning where the teacher was limited in time, space and personal resources to give each individual learner immediate feedback. In general, learners prefer to practise a lot, without being embarrassed when corrected, but at the same time they want short, frequent and immediate feedback, as online practice applications allow.

Practice in online learning is therefore inherently linked to interactivity. Jonassen (1988, *apud* Ceobanu 2016, p. 145), highlighted five factors that influence interactivity and highlight learner engagement in the learning exercise activity: learner response mode; nature of the work task; level of information processing; type of educational program; quality and design of the educational program.

Sims (1997, *apud* Ceobanu 2016, p. 148) proposes a taxonomy classifying human-computer relationships that is particularly useful in understanding the didactics of online practice:

a. object-based interactivity: refers to applications with buttons and controls activated by *mouse* or *touch-screen,* particularly useful in the early stages of learning;

b. Linear interactivity: refers to applications that allow you to go through content in a linear fashion, allowing you to go back to previous sections, which is particularly useful in setting your own pace of learning, such as when reading a book online;

c. interactivity support: this is an important application in that it allows continuous access to a button/robot/operator that helps the learner with difficulties encountered online;

d. interactive feedback and updating: refers to those types of applications that provide immediate feedback to the learner's response. The behaviour/content expressed by the learner is evaluated instantly, giving the learner an individualised 'bar' for their exercise;
e. building interactivity refers to applications that simulate reality using exercises that put the learner in the situation of solving problems by organising the declarative and procedural knowledge he/she has previously acquired;
f. reflective interactivity gives the learner the opportunity to receive/offer feedback in the form of text comments inserted into the exercise application on the operations involved;
g. interactivity for simulation puts the learner in an algorithmic exercise in which he can advance only after solving the current section;
h. "hyperlink" interactivity links the applications in which the learner is involved to databases useful in solving them, so that the learner can access various carefully chosen sources in order to solve the current problem;
i. contextual interactivity implies the combination of several types of interactivity in the virtual educational environment, within which a context similar or close to the real one can be activated in order to practise skills close to the physical reality;
j. Immersive virtual interactivity refers to 3D reality, in which the learner can be immersed using specific virtual reality means (devices that control sensory activity: optical, auditory, kinaesthetic, proprioceptive) in order to experience very complex realities.
In order to select suitable apps for practising different skills, the full inventory of digital learning aids (Brower and Torrington, 2020), included in the previous chapter, can be consulted, or one can turn to apps specifically built to achieve course objectives, which may be delivered in the training kit.

6.4. Demonstration and tutoring through digital software

As with all teaching methods, the digital version is built on pedagogical principles that have been validated over time, and that need to be known in order to be used properly and to build a theoretical basis that any trainer must know in order to be able to update it as the educational situation requires.
Demonstration is a didactic method of indirect investigation of reality, presented in a formative context as a problem to be solved by involving higher psychological resources, namely inductive and deductive reasoning. This approach aims to support the learner in the process of grasping the basic meaning of the problem to be solved through didactic procedures based on well-structured operations.

In traditional learning, with chalk and blackboard, pencil and paper, problems were presented, methods of solving were applied and answers and solutions were found. It was even customary in the logical-mathematical subjects for the solving of a problem (the demonstration of knowledge and the application of different creative operations based on the training of general aptitude) to end with the Latin expression *quod erat demonstrandum / q.e.d*. which means "what was to be demonstrated".
But when it comes to online learning, we see that the demonstration has undergone a categorical change, with almost every operation practiced in classical demonstrations having a digital counterpart, from the computational operations we now perform with calculators or spreadsheets to creative operations such as drawing or writing and translating. What's more, we now work with specialised software that guides us, teaches us and solves problems in different fields of activity.
According to Ceobanu (2016, p. 152), "an educational software is or should be, first of all, a pedagogical product and, later, a computer product. It is the result of an initial pedagogical programming process, followed by a translation into a computer program. Obviously, with the spectacular development of computers, the range of educational software on offer has increased enormously; a multitude of extremely diverse educational software has been designed for increasingly narrow categories of learners." The same author exemplifies with a series of software that have appeared for various categories, followed by a typological structuring of them, here citing Doering and Veletsianos (2009):
- tutorial software;
- specialised software for computer-based practice;
- simulation software;
- educational games;
- problem-solving software.

Tutorial software refers to the use of a computer on which specialised software is installed to teach new content or laboratory lessons. In such software, the training programme is divided into sequences with presentations and hyperlink elements, following the principles of programmed instruction. There are linear or branching tutorials, and at the end of the tutorials, evaluation, verification and reinforcement of correct answers are carried out. In order to meet quality standards, an educational software is characterised by several distinct elements:
- the software has a high interactivity component;
- the learner has a high degree of control over the programme and the sequences, with the possibility to individualise/personalise their learning;
- tutorial software is built on solid pedagogical foundations;
- provides objective and appropriate reinforcement, verification and feedback to the work;
- is highlighted by intuitive, aesthetic, mnemonic and instructional graphics;

- has a learning management system that can keep accurate records of learning progress.

Specialised software for computer-based ***practice*** refers to programmes with repetitive tasks followed by assessment of the learner's performance. They can be simple, tree-based or extended, oriented towards their practical, not instructional, function, as is the case, for example, with tutorial software, previously presented. In a quality version relevant to the training process, the exercise software should allow the learner to manage the response time, except for tasks that also measure reaction speed; it should discriminate very well between responses and also provide motivating feedback to the learner.

Simulation software recreates, in a virtual environment, a physical system that is intended to be studied but which, for various reasons, is difficult or impossible to study in its real environment (e.g. dangerous weather phenomena or physical processes, complicated technological processes, complex experiments, etc.). A typology of simulation software includes:

- simulators of systems, phenomena or processes that help increase the level of knowledge about them, such as physical simulations (combining several chemicals) or iterative simulations (slowing down or speeding up biological processes);
- action simulators which allow the learner to learn, such as procedural simulators (machine simulators) or situational simulators (which put the learner in the situation of solving a problem, investing money, etc.).

Most simulation software has been developed in science and engineering, but it falls under the umbrella of most disciplines. Among the major advantages they have are (Ceobanu, 2016):

- the possibility of compressing time in terms of the unfolding of events (such as the movement of the Earth's crust);
- the possibility to slow down some fast processes to study them in slow motion;
- increase engagement, involvement and motivation for learning in learners using simulation software;
- conducting dangerous demonstrations in a safe and secure manner for learners;
- accessing situations that are difficult or impossible to penetrate in reality;
- economy of resources;
- repeat the simulations until solutions are determined/approved;
- the possibility of observing complex phenomena by breaking them down into smaller sequences.

Educational games have recently emerged as a variant of educational software in their own right, although initially and for a long time they were treated with a less than academic attitude, being perceived only as a form of entertainment. In short, educational games exploit the rules and competition characteristic of games in the process of carrying out learning activities. They come with great instructional potential, arousing curiosity and motivating learners to learn. In order to serve the learning

process, they must correspond to socio-emotional and moral requirements, while having a pedagogical basis that gives them the attribute of being able to form skills.

Grosseck, G. and Crăciun, D. (2020, p. 29) note that "game-based learning" "is a learner-centred learning approach in which games lead to the achievement of expected learning objectives". Digital educational play is a fun way for students to learn new things and develop as people, as it encourages active participation, promotes healthy competition, stimulates the development of cooperative, collaborative and negotiation skills, while simultaneously providing immediate positive feedback and reinforcement from the teacher. The authors differentiate between gamification, the use of game components to manage offline and online learning activities, and serious games, which are video or simulation applications in which the game forms knowledge and exercises various skills by overcoming difficulties experienced during play.

Problem-solving software refers to those systems specifically designed to solve problems in certain areas (e.g. mathematics) or to develop problem-solving skills in general by putting the learner in the situation of using heuristic strategies. By using this type of software in online training activities, we immediately bring the learner into the area of practical application, moving out of the abstract-theoretical area and giving him/her the opportunity to practise the knowledge acquired for problem solving.

To illustrate our exposition with some examples of software that are particularly relevant in digital demonstrations, we mention a number of examples also noted by Grosseck, G.; Crăciun, D. (2020):

- Educational applications that have pre-defined content: *Elements4d (http://elements4d.daqri.com/), Anatomy4d (https://www.4danatomy.com/), Star-Walk (http://vitotechnology.com/star-walk.html), Zoo-AR (http://zoo-ar.com/animals/);*
- using AR to build your own business: *Narrator AR (https://www.narratorar.com.au/), Augment (http://www.augment.com/), Layar (https://www.layar.com/)* or even *Snapchat (https://www.snapchat.com/);*
- AR application, particularly useful in scientific and technical disciplines, such as *Science-AR (https://edshelf.com/tool/science-ar/);*
- virtual tour visiting various tourist destinations, searching for images, identifying historical monuments through applications such as *Google Street View (google. com/streetview)* or *Google Expeditions (edu.google.com/products/vr-ar/expeditions),* virtual tours on *YouTube* or *360Cities (360cities.net);*
- creating virtual spaces through a specific virtual reality tool: *CoSpaces Edu (cospaces.io/edu);*
- *Gamar (gamar.com)* is a platform that allows any user to create augmented reality games or tours;
- *Brainly (https://brainly.ro/),* a useful app for stimulating collaboration and giving students the opportunity to explore questions and develop answers based on diverse concepts;

- Platforms such as *Coursera (coursera.org)* that use AI to identify activities and content that students are struggling with.

Bibliography

1. Barkley, E. F., Cross, K. P. & Major, C. H. (2014) Collaborative learning techniques: A handbook for college faculty. John Wiley & Sons.
2. Bocos, M. (2013) Interactive training: axiological and methodological landmarks. Polirom.
3. Ceobanu, C. (2016) Learning in the virtual environment. A guide to using computers in education. Iași: Polirom.
4. Cerghit, I. (2006) Teaching methods, 3rd edition, revised and added. Iași: Editura Polirom.
5. Grosseck, G., Christmas, D. (2020) Practical guide to educational and digital resources for online instruction. Timisoara: Western University Publishing House.
6. Hsu, Y.-C. & Ching, Y.-H. (2015). A Review of Models and Frameworks for Designing Mobile
7. Canadian Journal of Learning and Technology, 41 (3).
8. Pânișoară, I. O.,coord. (2022). Encyclopedia of teaching methods. Polirom Publishing House.
9. Seghedin E. and Moise C. "Teaching methods", pp. 343-387 in Cucoș, C., coord. (Psychopedagogy for final examinations and teaching degrees. 2nd edition, Iasi, Polirom.
10. Snowman, J. & McCown, R. (2014) Psychology applied to teaching. Cengage Learning.

Chapter 7 - Active participatory methods

7.1 Introduction

Adult education presents different challenges and opportunities than traditional education of children and young people. Adults come with a very different set of experiences, expectations and learning needs. In this context, the use of active and participatory methods is essential for effective learning. In the fast-paced and dynamic world we live in, the need for continuous learning has never been more apparent. But for adults with disabilities, this need often comes with a unique set of challenges and opportunities. Trainers working with this population must not only be good educators, but also empathetic, innovative and adaptive facilitators.

Active participatory methods are essential in this framework, not only to impart knowledge, but also to build an inclusive and effective learning environment. These methods involve learners in a direct way, allow them to use their prior experiences as a basis for learning and encourage engagement and interaction in a way that is tailored to their individual needs.

Adults with disabilities often face a variety of barriers to learning: physical, cognitive, or emotional barriers. At the same time, they bring with them a wealth of unique resources, skills, and perspectives that can enrich the learning experience for all participants. In this context, traditional teaching approaches may be inadequate or even counterproductive.

This chapter aims to provide a detailed understanding of the different active-participatory methods that can be applied in adult learning, with a particular focus on those with disabilities. We will explore the advantages and challenges of these methods, how to implement them effectively and how to adapt them to meet a wide range of needs. We will also address topics such as:

- Why are active-participatory methods essential in the training of adults, especially those with disabilities.
- How to select and adapt active-participatory methods according to learners' needs.
- The importance of feedback and evaluation in active-participatory methods.

Ultimately, our goal is to equip you with the tools and knowledge to create a learning environment that not only educates but also empowers adults with disabilities. In this way, you will be able to contribute to creating a more inclusive, diverse and equitable society.

7.2 What are active-participatory methods?

Active-participatory methods are pedagogical techniques that actively involve the learner in the learning process, whether through group discussions, case studies, simulations, role-playing, or other forms of direct experience. They represent a learner-centred pedagogical approach in which the learning process is seen as an interactive and collaborative experience, rather than just a one-way transfer of information from trainer to learner. These methods can take many forms and are designed to stimulate critical thinking, creativity and social skills. Interactive methods are designed to involve learners in the learning process, transforming them from mere receivers of information into active participants. They foster the development of skills such as problem-solving, critical thinking, communication and collaboration, making the learning experience deeper and more sustainable.

Key features of active - participatory methods

- **Interactivity** - These methods involve a high degree of interaction between trainer and learners and often between learners themselves. Interaction is facilitated through questions, discussions, practical exercises and other activities that require active involvement of all participants.
- **Engagement** - Active-participatory methods require active participation from learners. They are not just spectators, but active participants in their learning process, taking part in dialogue, problem solving, collaborating on projects and reflecting on their own learning experience.
- **Flexibility** - These methods are often adaptable, allowing trainers to adjust the level of difficulty and complexity according to learners' needs and abilities. This is a crucial feature when working with adults with disabilities, who may have varied and specific needs.
- **Contextualisation** - Through active-participatory methods, learners have the opportunity to understand and apply knowledge in a real or simulated context, which facilitates the transfer of knowledge and skills into everyday life.
- **Reciprocity** - In interactive methods, there is a reciprocal relationship between trainer and learner. Both parties contribute to the learning process. The trainer can also learn from the learners, whether it is new insights or feedback to improve course materials.
- **Shared Responsibility** - Both trainer and learner take responsibility for the success of the learning process. The trainer provides structure and guidance, while the learner is responsible for their own participation and engagement.

- **Active Learning** - Interactive methods involve active cognitive and emotional engagement. This means that learners don't just listen or read; they discuss, apply, analyse, evaluate and create.
- **Personalisation** - Interactive methods allow a certain amount of personalisation. Trainers can adjust the level of complexity and presentation of the material according to the needs and abilities of the learners.
- **Continuous Feedback** - One of the most valuable aspects of interactive methods is continuous feedback. This can come from both the trainer and peers, and provides opportunities for improvement and self-evaluation.
- **Cooperative Learning** - Learners work in small groups to solve a problem or complete a project.
- **Discovery Learning** - Learners are guided to use their own curiosity and research skills to explore a topic or problem

7.3 Types of active-participatory methods

- ***Open Discussion***

Within this framework, learners are encouraged to express their opinions, ask questions and contribute to the development of an idea or concept.
Here is an example of an Active-Participatory Method - Open Discussion:

Background

In a training session on effective communication techniques, a trainer works with a group of adults, including Ana, a learner with a hearing disability.

Objective

The trainer wants to engage the group in an open discussion about the importance of active listening in communication.

Here are the steps to follow:

Step 1: Introducing the Topic and Setting the Rules

Trainer: "Today we will discuss the importance of active listening. Before we start, I want to set out a few rules. Everyone should feel comfortable participating. If you want to share something, please

raise your hand. I have a special tablet for Ana, so she can write down her questions or comments, and I will read them out loud for the group."

Step 2: Propose an Open Question for Discussion

Trainer: "Why do you think active listening is important in communication?"

Ana (writing on tablet): "Because when we listen actively, we understand better what the other person wants to say and we can respond in a more appropriate way."

Trainer: "Very well observed, Ana. Active listening helps us understand not only the words, but also the feelings and intentions of the speaker. Any other opinions?"

Step 3: Moderating and Guiding the Discussion

Trainer: "I heard a lot of good responses. But what if we encounter barriers in the listening process, such as a hearing disability? How can we practice active listening in these circumstances?"

Ana (writing on tablet): 'Non-verbal communication can help. Lip reading, body language and facial expressions can convey a lot of information."

Trainer: "Exactly, Ana. Often non-verbal communication can say even more than words. It's an excellent point and shows how complex and adaptable human communication can be."

In this example, the trainer used the open discussion method to stimulate critical thinking and facilitate an exchange of ideas. The importance of this method is even greater when working with adults with disabilities such as Ana. She was included in the discussion through a technological adaptation and had the opportunity to share valuable insights that enriched the learning experience of the whole group.

The active-participatory method allowed not only the transfer of knowledge, but also the building of an inclusive and respectful learning community.

- ***Case Studies***

A real or imaginary situation related to the subject of the course is analysed. It allows learners to apply their knowledge and practise judgement and decision-making.

The case study method involves detailed analysis of a situation, either real or imaginary, in a context that is relevant to the learning objectives of the course. It allows learners to use and apply their theoretical knowledge in a practical scenario, while developing skills such as judgement, decision-making and critical thinking.

When working with people with disabilities, it is essential that case studies are accessible and inclusive. This may involve:

- Use of accessible materials such as transcripts for audio material or subtitles for videos
- Ensuring access to assistive technologies, if necessary
- Creating case study variants that take into account different types of disabilities

Here are the steps for Implementing a Case Study:

1. Presentation of the Situation: The trainer shares the details of a situation that requires analysis and decision. For example, in a course on employability, a case may be discussed where a person with a mobility disability wants to work in a particular field and faces various obstacles.

2. Individual or Group Analysis: Learners are given time to analyse the case, either individually or in small groups. In the case of groups, make sure that each member can contribute equally.

3. Discussion and Debate: Discuss possible solutions and debate the merits of each.

4. Presentation of Solutions: Each group or individual presents their solution and the arguments that support it.

5. Feedback and Reflection: the trainer gives feedback and the learners have the opportunity to reflect on what they have learned.

Example

Background: A course on accessibility in the workplace

***Case Study*:** Maria, a visually impaired employee, faces difficulties in her workplace where the IT system is not accessible.

***Analysis*:** Learners discuss possible solutions in small groups, with access to tablets with screen-reading software and other assistive technologies.

Discussion: Groups share their ideas and debate options such as staff training on accessibility issues, adapting technology, etc.

Feedback and Reflection: The trainer adds professional, legal and ethical perspectives and learners reflect on how this new information can be applied in real situations.

The case study method is an extremely useful and adaptable approach that can be successfully implemented in the context of training people with disabilities, providing valuable learning and development opportunities.

- Role **Play**

This method allows learners to simulate different situations, providing a safe environment for trying and failing different strategies. Role-play is a pedagogical method that involves simulating real or hypothetical situations to allow learners to explore their behaviours, attitudes and emotional reactions in a controlled environment. This method can be highly effective for developing social, communication, negotiation and decision-making skills.

Role-playing offers many advantages, such as:

- Experiential Learning: Learners have the opportunity to "learn by doing".
- Immediate feedback: Errors can be identified and corrected on the spot.
- Risk Reduction: Strategies and approaches can be tried without the risk of producing negative effects in reality.
- Personal Development: Improves social skills, empathy and emotional intelligence.

Key components of Role Play

- Scenario: Details of the situation to be simulated.
- Characters: the roles that participants will play.
- Rules: the parameters within which the role-play will take place.
- Learning Objectives: What learners should learn.

How to Implement Role Play

- Preparation: choose or create a scenario, define roles and objectives.
- Instructions: Explain to learners what will happen, what roles they will play and what is expected of them.
- Play: Let the learners act out the scenario.
- Discussion and Feedback: After the game is over, a discussion and analysis session follows.
- Reflection and Application: Opportunity for learners to reflect on their experience and discuss how to apply what they have learned.

Adaptations for People with Disabilities

- Physical Accessibility: Ensure that the role-play venue is accessible to all.

- Adapted Materials: Use visual, auditory or tactile materials, depending on the needs of the learners.
- Flexibility in Roles: Depending on the type of disability, certain roles can be adapted or modified.

Example

Scenario: Employing a disabled person in a company.

Character:

- Candidate with disabilities
- HR Manager
- A teammate

Learning Objectives:

- Understanding accessible employment procedures
- Developing empathy and communication skills
- Identifying possible obstacles and finding solutions

Unfolding

Learners are divided into groups of 3 and each plays a role. After 10-15 minutes, the roles rotate.

Debate and Feedback

They discuss what worked, what didn't work and what could be done differently in a real situation.

The Role Play method, when well thought out and implemented, can provide a deep and effective learning experience suitable for a variety of subjects and contexts, including training for people working with individuals with disabilities.

- **Group Work**

Teamwork promotes collaboration and communication, which are essential in any professional and social context. Group work is a pedagogical technique that encourages interaction and collaboration between participants. This type of approach fits perfectly in an adult education context, where the experience and perspective of each learner can add value. For people with disabilities, this method can provide valuable opportunities for socialising and developing communication skills, provided it is managed in an inclusive way.

Objectives of Group Work

- ***Social Skills Development***: Teamwork helps improve communication and collaboration skills.
- ***Content Enrichment***: Sharing different knowledge and perspectives can lead to a deeper understanding of course material.
- ***Self-assessment and Feedback***: Working in a group gives the opportunity to give and receive feedback, which is essential for professional and personal growth.
- ***Inclusion and Diversity***: Creating a learning environment that incorporates the diverse needs of learners, including people with disabilities.

Adapting this method for an online course for people with disabilities

- ***Technological Accessibility***: Ensure that all online platforms and tools used are accessible to people with different types of disabilities.
- ***Clarity and Structure***: Each task or topic discussed in the group should be clear and well structured. This is crucial for people with cognitive disabilities.
- **Additional Time**: Some learners may need more time to process the information or to respond, so it is advisable to plan flexible time slots.
- **Support and Additional Resources**: Each group member should have access to teaching materials in accessible formats (e.g. transcripts, subtitles, images with alternative text, etc.).

Example of group application

- ***Group Case Study -*** Learners are divided into small groups and each group is given a case study of situations that might arise in an inclusive work environment. The groups should analyse the case study and come up with solutions.
- ***Led Debates*** - Topics such as 'Barriers in Inclusive Education' can be debated in groups, with roles allocated to ensure every voice is heard.
- ***Group Project*** - Learners can work together to develop a project that incorporates inclusive design principles, such as a training program or an accessible web application.

Example of Group Interaction

Trainer: "We will divide the class into three groups. Each group will be given a case study on employing a person with a disability. The group should analyse the situation and come up with recommendations."

Visually impaired learner: "It's easier for me to access audio material. Can someone in the group read the case study to me?"

Another Trainee: "Of course, I'll read it out loud."

After the groups present their findings, the trainer facilitates a general discussion, addressing possible barriers and solutions to ensure inclusion of all learners.

By implementing the group work method in a conscious and inclusive way, trainers not only enrich the learning experience for all participants, but also promote a diverse and accessible learning environment.

- **Learning Method - Project-Based Learning (PBL)**

Project Based Learning (PBL) is a learner-centred pedagogical approach in which the learner becomes the main actor in the learning process by carrying out a complex project from conception to implementation. This method is particularly effective in developing a wide range of skills, from technical to teamwork and problem-solving skills.

Objectives of Project Based Learning

- ***Knowledge Application*** - Learners apply what they have learned in a real or simulated context, which improves understanding and retention of information.
- ***Soft Skills Development*** - Improves skills such as teamwork, communication, planning and self-evaluation.

- ***Autonomy and Self-Direction*** - Encourages independence and personal responsibility by taking on a project from start to finish.
- ***Interdisciplinary Understanding*** - Projects are often complex and involve knowledge and skills from several fields.

Special features for online courses for people with disabilities

- ***Accessibility*** - Ensure that the project and all associated resources are accessible to learners with disabilities, using multiple formats and assistive technologies if necessary.
- ***Flexibility*** - The project design should allow sufficient flexibility to accommodate the diverse needs of learners, including flexible deadlines or assignments that can be adjusted according to capacity.
- ***Additional Support*** - Provide detailed guides, examples and constant feedback to support learning and make the process as clear as possible.

- ***Inclusive Collaboration*** - If the project is carried out in a group, take care to facilitate collaboration between all members, including those with disabilities, using appropriate communication technologies.

Example of application of the method

Trainer - "For this course, each of you will work on a project aimed at improving accessibility in online education. The project can be done individually or in a group. You are free to choose your topic, but it must incorporate the elements of accessibility discussed in the course."

Learner with a motor disability - "I would like to explore ways to make course materials more accessible for people with motor disabilities. I was thinking of creating a prototype interface that would be easy to navigate."

Trainer - "Excellent, this is a very relevant project. Keep in mind to incorporate feedback from your peers and from people who face these challenges in real life."

Project Based Learning offers an excellent way to build an active, engaged and inclusive learning environment while meeting the diverse needs of learners, including those with disabilities.

- **Learning Method - Simulations and Practical Exercises**

Simulations and practical exercises are training techniques that give learners an opportunity to experiment in a controlled environment with different situations, techniques or approaches. They can be very effective in building specific skills, understanding abstract concepts and developing critical thinking. Learners have the opportunity to try, fail and learn from mistakes in a risk-free environment.

Objectives of Simulations and Practical Exercises

- ***Applied Understanding*** - Learners apply theoretical knowledge in a simulated context, facilitating understanding and retention of the material.
- ***Skills Development*** - Simulations help develop a wide range of skills, from technical skills to decision-making and problem-solving skills.
- ***Immediate Feedback*** - Allows real-time assessment of performance, providing immediate opportunities for correction and improvement.
- ***Confidence and Autonomy*** - The experience gained in simulations can increase learners' confidence in their own abilities.

Special features for online courses for people with disabilities

- **Accessibility** - Simulations and exercises should be designed to be accessible to all learners, regardless of the type of disability they have.
- **Clear Instructions and Guides** - Providing clear and explicit instructions, possibly in multiple formats (audio, video, text), can be essential for learners with cognitive or learning disabilities.
- ***Multiple Interaction Options*** - Providing multiple ways to interact with the simulation can help include learners with different types of disabilities.
- ***Additional Support*** - Providing additional support or adapted versions of exercises may be necessary in some cases.

Example of Application of the Method

- ***Mock Interview*** - Learners can practice for a job interview, incorporating elements of non-verbal communication, tone and technical language.
- ***Crisis Management Simulation*** - An emergency situation can be simulated in which learners have to make quick decisions, thus assessing their decision-making skills under stress.

Scenario of Method Application

Trainer - "Today we will conduct a simulation in which each of you will play the role of a project manager. You will be given a series of hypothetical situations in which you have to make decisions. We will then discuss the options and the results."

Hearing impaired learner - "Can you please provide subtitles or a sign language interpreter for this simulation?"

Trainer - "Of course, we will have active captioning throughout the simulation and a sign language interpreter will be available in a separate video window."

At the end of the simulation, the trainer and trainees can review the decisions made, addressing both strengths and areas for improvement.

- **The "Aquarium Method"**

The "Fishbowl" method is a group training and discussion technique often used to facilitate dialogue on complex or controversial topics. In this format, a small group of participants (in the "fishbowl") discuss a particular topic, while the rest of the learners watch and listen without intervening. After

the "fishbowl" discussion is over, the large group has the opportunity to comment, ask questions and reflect on the discussion.

Objectives

- ***In-Depth and Analysis*** - Facilitates a detailed discussion on a particular topic, allowing in-depth analysis and exploration of topics.
- ***Selective Participation*** - Encourages active participation, but also provides the opportunity to be an active observer.
- ***Self-evaluation and Reflexivity*** - Through observation, learners can evaluate their own perspectives and become aware of the diversity of viewpoints.

Special features for learners with disabilities

- ***Accessibility*** - If used in an online environment, make sure the technology is accessible to all, including those with special needs.
- **Inclusion** - If there are learners with communication disabilities, make sure there are alternative ways for them to express their views or participate in the discussion.

- ***Miscellaneous Instructions*** - Provide instructions in multiple formats, such as audio, video and text, to ensure that all learners can access them.

Example of Application of the Method

For an online course on inclusion in education for people with disabilities, the trainer chooses the "Aquarium" method.

- ***Trainer*** - "Today we will use the 'Aquarium' method to discuss the barriers people with disabilities face in accessing education. We have four volunteers who will initiate the discussion. The rest are observers and will have the opportunity to comment afterwards."
- ***Visually impaired aquarium trainee*** - "In my experience, access to educational materials is often a major barrier. For example, books are not always available in Braille or electronic format."
- ***Aquarium Cursant*** - "Yes, even online platforms can be hard to navigate if they're not designed for accessibility."

After the "fishbowl" discussion is over, the rest of the learners can ask questions and add new perspectives.

- ***Trainer*** "- What observations did you have while listening to the discussion?"
- ***Observant learner with hearing disability (via chat)***: 'I agree with the issue of accessibility of materials. In addition, subtitles are often inaccurate in video materials, which makes learning difficult."

The 'Aquarium' method is a powerful tool to stimulate discussion and reflection, and is flexible and adaptable to meet diverse needs, including those of people with disabilities.

- **Mosaic Method**

The Mosaic Method, also known as the "Jigsaw Classroom" in the literature, is a pedagogical approach that involves dividing a complex subject into several component parts. Each member or subgroup specialises in a particular part of the subject and then shares what they have learned with the other members of the larger group. This allows for collaborative and mutual learning between participants.

Objectives

- ***Collaborative learning -*** Promotes cooperation and information exchange between learners.
- ***Active Engagement*** - All trainees become experts in a particular sub-area, increasing their level of commitment and responsibility.
- ***Diversity of Perspective*** - As each subgroup focuses on a different aspect, a holistic understanding of the topic is promoted.

Special features for learners with disabilities

- ***Accessibility*** - Materials and resources must be accessible, adapted to the diverse needs of learners.
- ***Flexibility*** - The method allows for adjustments to suit different learning styles and abilities, including for learners with disabilities.
- ***Additional Support*** - Trainers can provide additional resources or ways to support those who need it.

Example of application of the method

Imagine an online course on "Assistive Technologies for People with Disabilities". The topic is divided into several parts: "Technologies for Visual Disabilities", "Technologies for Hearing Disabilities", "Technologies for Motor Disabilities" and "Web Accessibility".

- ***Trainer***: "Today we will use the Mosaic method. We have divided the topic 'Assistive Technologies' into four components. Each subgroup will become an expert in one of these areas and then share their knowledge with the rest of the class."
- ***Learner with motor disability***: "I'll be focusing on 'Technologies for the Motor Disabled'. We need an online platform that allows easy access for all. Can we use collaborative software that is accessible?"
- ***Trainer***: "Of course, we will use a platform that is compatible with screen readers and other assistive technologies, so everyone can participate."

After each group presents its findings, the trainer can open a discussion for questions, clarifications and application of knowledge in practical contexts.

The Mosaic method is useful not only for deepening understanding of a subject, but also for cultivating social and teamwork skills, making it very suitable for adult education and inclusion of people with disabilities.

Brainstorming Method in Adult Training for People with Disabilities

"Brainstorming", or "idea generation" in a rough translation, is a group technique used to solve problems, generate ideas and stimulate creative thinking. In a typical brainstorming session, participants are encouraged to think freely and come up with as many ideas as possible related to a particular topic or problem, without self-censorship or criticism.

Objectives

- ***Stimulating Creativity***: This method aims to stimulate lateral thinking and generate a wealth of ideas.
- ***Collaboration and Diversity of Perspectives***: By encouraging everyone to participate, the method allows for a wide range of ideas and opinions to be gathered.
- ***Speed and Effectiveness***: Brainstorming is often quick and can lead to innovative solutions in a relatively short time.

Special features for learners with disabilities

- ***Accessibility:*** Platforms and materials must be accessible to all participants, regardless of their disabilities.
- ***Inclusiveness:*** Trainers should create an environment where all learners feel comfortable to express their ideas, including those with disabilities.
- ***Adaptability***: the method can be adapted to include different communication modalities such as sign language, assistive technologies, etc.

Example of application of the method

In an online course on "Accessibility in Education", the trainer proposes a brainstorming session to identify various barriers to education for people with disabilities.

- ***Trainer:*** Today we will be brainstorming to identify what kind of barriers prevent access to education for people with disabilities. I encourage you to come up with any ideas you can think of. We will use an online board where you can write or add ideas in audio or video format if you prefer."
- ***Hearing impaired learner (through sign language and with the help of an interpreter):*** "A major obstacle is the lack of sign language interpreters in many educational institutions."
- ***Visually impaired learner (via audio):*** "Inaccessible educational materials, such as books without Braille or audio versions, are a major barrier."

After the brainstorming session, the trainer can synthesise the ideas and guide the group towards possible solutions or future actions.

Brainstorming is extremely flexible and can be adapted to meet the specific needs and conditions of different groups, including those with disabilities. This technique promotes free and creative thinking and is valuable in a variety of training contexts.

- **Advantages of Active-Participatory Methods in Online Training of People with Disabilities**

Promotes Independent Learning

Active-participatory methods encourage learners to become self-directed and responsible for their own learning. This is particularly important for people with disabilities, who often face barriers in accessing traditional education systems.

Inclusion and Diversity

These methods can be adapted to incorporate different learning styles and individual needs, including those of people with disabilities. This facilitates an inclusive learning environment where every participant has the opportunity to express themselves and participate.

Increased Engagement and Motivation

Active-participatory approaches tend to be more engaging and stimulating than traditional teaching methods. Increased levels of engagement are beneficial for all learners, but can be particularly valuable for people with disabilities who may need extra stimulation and motivation.

Social and Emotional Skills Development

Interaction and collaboration are often key components of active-participatory methods. This provides valuable opportunities for developing social and emotional skills, which are essential in both professional and personal life.

Learning by Doing

Most active-participatory methods involve a degree of hands-on or practical learning. This is particularly useful for learners with disabilities, who may need an applied context to understand theoretical concepts.

Stimulates Critical Thinking and Problem Solving

These methods promote an exploratory approach to learning, which can help develop critical thinking and problem-solving skills.

Immediate Feedback

Methods such as role plays, group discussions or case studies allow for immediate and constructive feedback from both trainers and colleagues. This kind of feedback is vital for continuous improvement and adaptation to the educational needs of each learner.

Adaptability to Diverse Learning Environments

Active-participatory methods can be easily adapted to suit different learning environments, including online learning, which is often more accessible for people with certain types of disabilities.

Positive Effects on Trainers

It's not just learners who benefit; trainers themselves can gain a deeper understanding of their learners' needs and develop better communication and adaptability skills.

7.4 Conclusion

In the context of a changing educational landscape, influenced by technology and the needs of an increasingly diverse population, traditional approaches to teaching and learning are often insufficient. This deficit becomes even more pronounced when we talk about education and training of people with disabilities, a segment that requires special attention to ensure accessibility, engagement and effectiveness of the learning process.

Active participatory methods are not only a solution to these challenges, but also an opportunity to reinvent the way we think about education. These methods focus on the learner as an individual and their ability to actively contribute to their own learning and the learning of others. They offer significant benefits, including promoting autonomy, increasing engagement, developing social-emotional skills, and much more.

In the case of training for people with disabilities, active-participatory methods provide a flexible and adaptable framework that can be tailored to meet the specific needs of this demographic. By engaging learners in a way that values and exploits their diversity, trainers not only enrich the learning experience for all, but also build an environment where differences are not just tolerated, but celebrated and valued.

Thus, the use of active-participatory methods in online training for people with disabilities should not be seen as an option, but as a necessity. This chapter has provided a detailed look at what these methods can bring to the education table, highlighting their importance in creating an equitable, inclusive and effective learning environment. With commitment, creativity and openness to innovation, trainers can use these methods to build courses that not only educate, but also empower, inspire and change lives.

In a world where access to quality education for all should be not just a goal but a right, active-participatory methods underpin an approach that makes this ideal a reality.

7.5 Examples: Case study and scenario to be worked on with course participants

7.5.1 Case study: "Assistive technology and accessibility in the classroom"

Background

The "Teach Me to Help" project focuses on training trainers in methods of teaching and facilitating courses for people with various types of disabilities. The case study is an important tool in this project to give trainers practical experience and help them develop crucial skills.

Script

Laura is a trainer with five years teaching experience, but no experience working with people with disabilities. She has been assigned to run a digital marketing course for a group of 10 adults, three of whom have disabilities:

- Andrei has a severe visual disability.
- Sarah has motor disabilities and uses a wheelchair.
- Mihai has a hearing disability and uses a hearing aid.

Laura wants to ensure that everyone participates and learns in an accessible and inclusive environment. She is unsure about the adaptations needed and the assistive technology to be used.

Tasks for trainers

- Identify the challenges Laura might face in the classroom with this diverse group.
- Propose practical solutions to make the course accessible to all participants.
- Create a simple lesson plan for the first day, taking into account the needs of all learners.

Unfolding

- The trainers (trainees in this context) are divided into small groups and given time to analyse the case and respond to tasks.
- Each group presents its solutions and lesson plan.

Sample Solutions and Lesson Plan Proposed by a Group

Challenges

- Course materials may be inaccessible to Andrei.
- Sarah's limited mobility in the classroom.
- Michael's difficulty hearing and participating in discussions.

Solutions

- Course materials in digital and print format, compatible with screen readers for Andrei.
- Providing an accessible workspace for Sarah.
- Using a sound amplification system and real-time subtitling for Michael.

First Day Lesson Plan

- Introduction and expectations (10 minutes)
- Discussion about what digital marketing is (15 minutes)
- Group exercise: Creating a simple digital marketing strategy (20 minutes)
- Feedback and questions (15 minutes)

Using a case study like this one in the Teach Me to Help project helps trainers become familiar with the complexities of teaching a diverse group and develop the skills needed to make education accessible and effective for all.

7.5.2 Role-play scenario: Managing a situation with a person with a disability in an online course

Background

The trainer and learners are part of a course on active-participatory methods in education. One of the online learners has a hearing disability and uses transcription software to understand the discussions.

Character

- Trainer - Laura
- Hearing impaired learner - David
- Other learner - Ana

Learning Objectives

- Raising awareness of the needs of learners with disabilities in online learning environments.

- Improving the ability to adapt and modify teaching methods to be inclusive.

Instructions

The trainer explains the purpose of the role play and the roles each participant will have.

Game Play

Laura (Trainer)

Hello everyone and welcome to this online session on active-participatory methods! Before we begin, I want to make sure everyone is comfortable and has access to all the resources. David, I know you're using transcription software. Is it working well so far?

David (Hearing impaired learner)

Yes, it works quite well, but there is a slight delay. If you can speak a little slower, that would be a big help.

Ana (Alt Cursant)

Of course, David. Thanks for mentioning that.

Laura

I understand, I will try to speak slower to help the software transcribe correctly. So, today we're going to talk about...

(Conversation continues, with Laura presenting the material and asking questions for interaction.)

Laura

Now I would like to do a group exercise. We will divide the participants into two groups and each group will use a separate chat to discuss. David, if you like, I can send you questions and chat discussions as a text message in a private message.

David

That would be very useful. Thank you!

Debrief and Feedback

Laura (Trainer)

I would like to know how this experience was for you and if you have any suggestions for the future.

David (Cursant)

It was fine, especially with the adaptations made. I liked that you sent the info via private message so I could participate in the discussion.

Ana (Alt Cursant)

I learned a lot about how to be more attentive to the needs of others in an online environment.

Conclusion

The trainer stresses that an inclusive learning environment is beneficial for all learners and encourages them to continue to look for ways to make courses accessible to all.

Through this **role-play,** learners and trainer gain a deeper understanding of how to manage situations with people with disabilities in an online learning environment without compromising the quality of the learning.

Bibliography

1. Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2015). "The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development." Routledge.
2. Kolb, D. A. (2014). "Experiential Learning: Experience as The Source of Learning and Development." Pearson Education.
3. Vygotsky, L. S. (1978). "Mind in Society: Development of Higher Psychological Processes." Harvard University Press.
4. Bonwell, C., & Eison, J. (1991). "Active Learning: Creating Excitement in the Classroom." ASHE-ERIC Higher Education Report No.1. George Washington University.
5. Rose, D. H., & Meyer, A. (2002). "Teaching Every Student in the Digital Age: Universal Design for Learning." Association for Supervision and Curriculum Development (ASCD).
6. Hockings, C. (2010). "Inclusive learning and teaching in higher education: a synthesis of research." Higher Education Academy.
7. Brown, J. S., Collins, A., & Duguid, P. (1989). "Situated Cognition and the Culture of Learning." Educational Researcher, 18(1), 32-42.
8. Moore, M. G., & Kearsley, G. (2011). "Distance education: A systems view of online learning." Cengage Learning.
9. Mayes, T., & de Freitas, S. (2004). "Review of e-learning theories, frameworks and models." JISC e-Learning Models Desk Study.
10. American Disabilities Act (ADA) Compliance Guidelines for Online Education.
11. W3C Web Accessibility Initiative (WAI). (2021). "Web Content Accessibility Guidelines (WCAG) 2.1.", link https://www.w3.org/TR/WCAG21/
12. Fisher, M., & Baird, D. E. (2005). "Online learning design that fosters student support, self-regulation, and retention." Campus-Wide Information Systems.
13. "Best Practices for Teaching Online: A Guide For Faculty." Center for Teaching and Learning, University of Texas.
14. Gilly Salmon (2000). "E-Moderating: The Key to Online Teaching and Learning." Kogan Page.
15. Fink, L. D. (2013). "Creating significant learning experiences: An integrated approach to designing college courses." Jossey-Bass.
16. Gagne, R. (1985). "The Conditions of Learning." Holt, Rinehart & Winston.
17. Smith, M. K. (1996, 2000) ‘Curriculum theory and practice’ The encyclopedia of pedagogy and informal education, www.infed.org/biblio/b-curric.htm.

Chapter 8 - Fixation and consolidation methods

8.1 Introduction

This chapter focuses on methods to ensure the sustainability and enduring impact of online courses and programs created by professionals in the social care system. The goal is to solidify the progress made and guarantee that the objectives of these online initiatives are maintained over time. Fixation methods involve embedding the changes and improvements into the social care ecosystem, while consolidation emphasizes strengthening and optimizing the implemented strategies. This phase is critical for cementing the outcomes of these online courses and programs, fostering a culture of continuous improvement, and maximizing the benefits for both educators and learners. By implementing effective fixation and consolidation methods, professionals aim to create lasting change in educational practices, ultimately leading to enhanced learning experiences and improved outcomes.

8.2 Fixation Methods

To ensure the sustainability and long-term effectiveness of online courses and programs, it's crucial to embed the changes and improvements generated by these initiatives into the social care system. This goes beyond merely implementing isolated interventions; it involves proper integration and assimilation into existing educational practices. By embedding these changes, the educational system can fully embrace and adopt the new knowledge, skills, and approaches developed through these online initiatives, leading to a transformative shift in educational practices.

The significance of embedding changes lies in the potential for systemic transformation within social care organizations. This comprehensive approach requires the incorporation of the outcomes of these online courses and programs into policies, procedures, and daily teaching routines. This process enables educators to internalize the knowledge and skills gained and apply them consistently in their interactions with learners. Furthermore, embedding the changes within the educational system fosters sustainability, as they become an integral part of routine practice rather than a temporary initiative.

Strategies for institutionalizing the outcomes of these online initiatives might include integrating new protocols, guidelines, or training programs into existing educational frameworks. To achieve this, align the objectives of these online initiatives with established educational policies and frameworks to ensure seamless integration and compatibility. Collaborate with key stakeholders, including educators, administrators, and relevant educational bodies, to gain their support and endorsement for the

outcomes of these online courses and programs. Integrating new protocols and guidelines into existing educational frameworks involves creating standardized procedures and best practices that reflect the knowledge and insights gained from these initiatives. These protocols can guide educators in delivering effective and inclusive online education, promoting a culture of continuous learning and improvement.

Recognize the pivotal role of leadership support and organizational commitment in facilitating fixation. Strong and visionary leadership is crucial for driving change and garnering support from stakeholders. Leaders should communicate the importance of the objectives and outcomes of these online initiatives, demonstrating a clear commitment to effective online education, inclusivity, and continuous improvement. Organizational commitment is equally important, as it provides the necessary resources, infrastructure, and policies to support the fixation efforts. This commitment involves allocating funding for training programs, incorporating the outcomes of these online courses and programs into performance evaluation metrics, and providing ongoing support and mentorship for educators. Moreover, organizational leaders should foster a culture that values and rewards the implementation of the objectives of these online initiatives, creating an environment where educators are encouraged and empowered to embrace the changes and improvements brought about by these online programs.

In conclusion, fixation methods within the context of online courses and programs involve embedding the changes and improvements into the social care ecosystem to ensure sustained impact. By integrating these outcomes into existing educational frameworks and collaborating with key stakeholders, educators can facilitate the long-term adoption of effective and inclusive online teaching practices. The role of leadership support and organizational commitment cannot be understated, as their involvement is crucial in driving change, securing resources, and fostering a supportive environment for educators. Through the implementation of effective fixation strategies, professionals can bring about enduring transformation in educational practices, ultimately improving the learning experiences and outcomes of their learners.

8.3 Consolidation Methods

Consolidation methods in the context of online courses and programs refer to the processes and approaches aimed at reinforcing and optimizing the implemented strategies. Once these online initiatives have been initially launched, consolidation becomes essential to solidify the changes and maximize their effectiveness. The significance of consolidation lies in its ability to ensure that the improvements achieved through these online courses and programs become ingrained in the routine practices of educators and are continuously refined to enhance learning outcomes.

One strategy for evaluating the effectiveness and efficiency of the implemented strategies is through rigorous monitoring and evaluation processes. These processes involve collecting and analyzing data to assess the impact of the strategies on key performance indicators, such as learner outcomes, satisfaction levels, and adherence to best practices. By systematically evaluating the outcomes, strengths, and areas for improvement, social care organizations can identify successful strategies and any gaps or challenges that need to be addressed. This data-driven approach allows for evidence-based decision-making and the allocation of resources to the most effective strategies.

Feedback and evaluation findings also present opportunities for refining and enhancing the strategies of these online courses and programs. By actively seeking feedback from educators and learners, valuable insights can be gathered to inform improvements. This feedback can shed light on the practicality, acceptability, and effectiveness of the implemented strategies. Evaluation findings can help identify areas where adjustments or modifications are needed to optimize outcomes and address any unintended consequences or barriers that may have arisen during implementation. By leveraging feedback and evaluation findings, these online initiatives can continuously evolve and adapt to better meet the needs of educators and learners.

Ongoing training and professional development are crucial for consolidating the knowledge and skills acquired through these online courses and programs. These initiatives may introduce new approaches, guidelines, or protocols that require educators to update their knowledge and enhance their skills. Continuous training opportunities can ensure that educators remain competent and confident in implementing the strategies developed through these online initiatives. Ongoing professional development can also facilitate the dissemination of best practices and the sharing of experiences among educators. By investing in ongoing training and development, educational organizations can sustain the momentum generated by these online initiatives and foster a culture of continuous learning, improvement, and innovation.

In summary, consolidation methods are vital in reinforcing and optimizing the implemented strategies within online courses and programs. Evaluating the effectiveness and efficiency of interventions, refining strategies based on feedback and evaluation findings, and investing in ongoing training and professional development are key elements of the consolidation process. By systematically consolidating the outcomes of these online initiatives, social care organizations can ensure that the changes brought about by these programs become integrated into routine practices and continuously improved to achieve better learning outcomes and experiences.

8.4 Monitoring and Evaluation

Monitoring and evaluation play a crucial role in assessing the progress and impact of the consolidation efforts within online courses and programs. These processes provide a systematic approach to gather data, measure outcomes, and evaluate the effectiveness of the implemented strategies. By employing rigorous monitoring and evaluation mechanisms, educators and social care organizations can track progress, identify areas of success or improvement, and make informed decisions for further consolidation.

Methods for collecting and analyzing data to measure the sustained outcomes of online courses and programs are essential for assessing their long-term impact. Quantitative data can be gathered through various sources such as surveys, questionnaires, and learner performance records. These data sources can provide valuable insights into learner outcomes, satisfaction levels, adherence to best practices, and other measurable indicators. Qualitative data, such as interviews or focus groups, can provide a deeper understanding of the experiences and perceptions of educators and learners regarding these online initiatives. By combining quantitative and qualitative data, a comprehensive evaluation of the sustained outcomes can be obtained.

Data analysis techniques, such as statistical analyses or thematic coding, can be employed to identify patterns, trends, and correlations within the collected data. Analyzing the data allows for the identification of factors that contribute to successful outcomes and areas that may require further attention or refinement. By conducting rigorous data analysis, online courses and programs can make evidence-based decisions and adjustments to their strategies, ensuring their sustained effectiveness.

Feedback loops and continuous improvement are crucial components of the consolidation process. Feedback loops involve actively seeking input and insights from educators, learners, and other stakeholders throughout the implementation of online courses and programs. Feedback can be collected through various means, such as surveys, focus groups, or regular meetings, to gather perspectives on the effectiveness of strategies, identify challenges, and receive suggestions for improvement. By incorporating feedback, these online initiatives can address any gaps, make necessary adjustments, and enhance the strategies based on real-world experiences and insights.

Continuous improvement is an iterative process that builds on the feedback received and the evaluation findings. It involves analyzing the data collected, identifying areas for improvement, and implementing changes to enhance the strategies and outcomes. This process ensures that online courses and programs remain responsive to the evolving needs of educators and learners and maintain their relevance and

effectiveness over time. Continuous improvement allows for ongoing learning and adaptation, fostering a culture of innovation and quality improvement within the organizations.

In conclusion, monitoring and evaluation play a critical role in assessing the progress and impact of consolidation efforts within online courses and programs. By employing robust data collection and analysis methods, the sustained outcomes of these initiatives can be measured and evaluated. Feedback loops and continuous improvement facilitate the incorporation of stakeholder insights and ensure ongoing refinement and optimization of strategies. Through a comprehensive monitoring and evaluation framework, online courses and programs can demonstrate their effectiveness, make data-driven decisions, and enhance the quality of education provided to learners.

8.5 Sustainability

The sustainability of online courses and programs is a critical aspect to consider to ensure their long-term impact and benefits. Sustainability refers to the ability of these initiatives to maintain their desired outcomes and continue their interventions beyond the initial implementation phase. Achieving sustainability requires careful planning, ongoing commitment, and the integration of the principles and practices of these initiatives into the fabric of the educational system.

One key element in promoting sustainability is the establishment of strong partnerships and collaborations. By engaging key stakeholders, such as educators, administrators, policymakers, and educational organizations, these initiatives can build a network of support and collective responsibility. These partnerships can facilitate the sharing of resources, expertise, and best practices, ensuring that the initiatives' interventions are embedded into existing educational structures.

Another crucial factor for sustainability is the integration of changes and improvements generated by these initiatives by aligning the objectives of the initiatives with the organisation's strategic goals and policies. By incorporating the protocols, guidelines, or training programs developed through these initiatives into routine practices, the desired outcomes can be maintained even as personnel change or organizational priorities shift. This integration helps to institutionalize the initiatives' interventions and ensures their longevity.

Financial sustainability is also a vital aspect to consider. Securing adequate funding to support the ongoing implementation and maintenance of these initiatives is essential. This may involve exploring diverse funding sources, such as government grants, philanthropic organizations, or collaborations with

private sector entities. Developing a sustainable financial model ensures the availability of resources for training, monitoring and evaluation, and continuous improvement efforts.

Additionally, capacity building and knowledge transfer play a crucial role in sustainability. Ensuring that educators have the necessary skills and knowledge to continue implementing the strategies developed through these initiatives is essential. This may involve providing ongoing training opportunities, creating communities of practice, or fostering mentorship programs. By empowering educators to take ownership of these initiatives' interventions, sustainability can be achieved through a culture of continuous learning and professional development.

Furthermore, fostering a culture of continuous improvement is vital for sustaining the impact of these initiatives. By embracing feedback loops, data-driven decision-making, and a commitment to ongoing evaluation, these initiatives can adapt and refine their interventions to address emerging needs and challenges. This continuous improvement mindset ensures that these initiatives remain relevant, responsive, and effective in a dynamic educational environment.

In conclusion, the sustainability of online courses and programmes is essential to ensure their long-term impact and benefits. By establishing partnerships, embedding change in the social care system, ensuring financial sustainability, building capacity and promoting a culture of continuous improvement, these initiatives can sustain their desired outcomes and contribute to the continuous improvement of education provision in the social care system. Through strategic planning and a collaborative approach, these initiatives can leave a lasting legacy of learning experiences and improved professional practice.

8.6 Engaging Stakeholders

Stakeholder involvement is an essential component to ensure the success and sustainability of online courses and programmes. It fosters collaboration, ownership and collective responsibility, which ultimately leads to the success of these initiatives. In this context, stakeholders refer to individuals or groups who have a direct interest in or are directly affected by these online initiatives, including educators, administrators, policy-makers, learners and educational and/or social welfare organisations. Stakeholder engagement involves actively involving stakeholders in decision-making processes, soliciting their input and perspectives, and creating a shared vision and commitment to the objectives of the initiatives.

First and foremost, the involvement of educators is crucial as they are directly involved in the implementation and delivery of these initiatives. By involving educators from diverse backgrounds and

experiences, their expertise and perspectives can contribute to the development and refinement of strategies. This can be achieved through regular meetings, discussion groups or workshops where educators can share their experiences, challenges and suggestions for improvement. Involving educators in initiatives creates a sense of ownership and increases their motivation to actively participate in the implementation and dissemination of strategies.

The involvement of public administration and policy makers is equally important, as their support and alignment with the objectives of the initiatives can facilitate their integration into the social care system. By engaging in dialogue with the administration and policy makers, initiatives can raise awareness of the importance of their objectives and outcomes. Building relationships with these stakeholders and demonstrating the value of the initiatives through evidence and success stories can help secure their commitment and support in terms of resource allocation, incorporating the initiatives' interventions into policies and guidelines, and promoting their sustainability at a systemic level.

Learners and educational/social work organisations are vital stakeholders in online courses and programmes as they are at the heart of education delivery and feel the direct impact of interventions. Involving learners involves actively soliciting their input, perspectives and feedback throughout the development and implementation of initiatives. This can be done through learner advisory boards, surveys or focus groups, where learners can share their ...experiences, preferences and needs regarding online courses and programmes. In addition, collaboration with educational and social care organisations can provide valuable input and help ensure that these initiatives address the specific concerns and priorities of both learners and educational institutions.

In order to effectively engage learners and educational organisations, it is essential to establish clear channels of communication and create a participatory environment that encourages open dialogue and collaboration. Regular communication through newsletters, meetings or online platforms can keep stakeholders informed about the progress, achievements and future activities of these initiatives. Creating opportunities for stakeholders to provide feedback and suggestions helps ensure that their voices are heard and incorporated into decision-making processes. In addition, involving them in the evaluation and feedback loops of initiatives allows for continuous improvement and adaptation based on their views and experiences.

In conclusion, the involvement of learners and educational organisations is vital for strengthening and fixing online courses and programmes. By involving them in the decision-making process, soliciting their views and promoting a participatory environment, these initiatives can benefit from their diverse perspectives, expertise and support, leading to improved outcomes and long-term impact in education.

8.7 Conclusion

In conclusion, the fixation and consolidation methods outlined in this chapter are essential for ensuring the sustainability and long-term impact of online courses and programs developed by professionals in the social care system. The journey from conception to implementation is a complex one, and it is in the stages of fixation and consolidation that the true transformative power of these initiatives comes to fruition.

Fixation methods focus on embedding the changes and improvements generated by these initiatives into the educational system. By integrating the initiatives' outcomes into existing frameworks, such as through the development of new protocols, guidelines, and training programs, educational organizations can facilitate the long-term adoption of innovative and effective educational practices. Leadership support and organizational commitment are crucial in driving this process, creating an environment where educators are encouraged and empowered to embrace the changes and improvements brought about by these initiatives.

Consolidation methods, on the other hand, are instrumental in reinforcing and optimizing the implemented strategies. Rigorous monitoring and evaluation processes provide the data-driven insights needed to assess the impact of these initiatives and make informed decisions for further improvement. Feedback loops and continuous improvement mechanisms ensure that the initiatives remain responsive to the evolving needs of educators and learners, fostering a culture of innovation and quality improvement within educational organizations.

Sustainability is the linchpin that holds the entire process together. The ability to maintain the desired outcomes and continue these interventions beyond the initial implementation phase is a testament to their success. Sustainability requires careful planning, ongoing commitment, and the integration of the principles and practices of these initiatives into the very fabric of the educational system. It relies on strong partnerships, financial sustainability, capacity building, knowledge transfer, and a culture of continuous improvement.

Engaging stakeholders is the thread that weaves through the entire process, connecting educators, administrators, policymakers, learners, and educational organizations in a collaborative effort. By actively involving stakeholders in decision-making processes, seeking their input, and creating a shared vision, these initiatives benefit from diverse perspectives, expertise, and support, ensuring their success and sustainability.

In the end, it is through effective fixation and consolidation methods, coupled with sustainability and stakeholder engagement, that these online courses and programs become catalysts for lasting change in the social care system. They have the potential to revolutionize the way education is delivered, enhance the skills and knowledge of professionals, and ultimately improve the quality of care and support provided to individuals with disabilities. As professionals in the social care system embark on the journey of creating and delivering online courses, they are not only shaping the future of education but also contributing to a more inclusive and compassionate society.

Bibliography

1. Barton, L. E., & Smith, J. D. (2015). "Effects of a self-monitoring device on the on-task behavior of students with disabilities in general education settings". Journal of Behavioral Education
2. Bennett S. et al (2013) "Engaging Stakeholders in Implementation Research: Lessons from the Future Health Systems Research Program Experience"
3. Mastropieri, M. A., & Scruggs, T. E. (2010). "The inclusive classroom: Strategies for effective differentiated instruction". Pearson.
4. Nierengarten, Mary Beth (2018) Health literacy: A challenge in diverse populations. Contemporary Pediatrics;
5. Pagliari, C., & Grimshaw, J. (2002). Impact of group structure and process on multidisciplinary evidence-based guideline development: An observational study. Journal of Evaluation in Clinical Practice
6. Shine, K. I. (2002). Health care quality and how to achieve it. Academic Medicine,
7. Tucker, A. L., & Edmondson, A. C. (2003). Why hospitals don’t learn from failures: Organizational and psychological dynamics that inhibit system change. California Management Review

Chapter 9 - Creating the course

Every individual is different from another, and the word “individual” itself reminds us of “individuality”, which is

> *“the quality or character of a particular person or thing that distinguishes them from others of the same kind, especially when strongly marked”* (Oxford Languages, 2023).

That said, it can be difficult tailoring a lecture or a session while generalizing the target group. Every individual has different needs and attention span. In this chapter we will learn what is attention and the types of disabilities that can affect one’s attention, and what metods can the social worker use to create a lesson and understand when it’s time to take a break.

Image 1: https://practicalpie.com/cocktail-party-effect-examples/

9.1 What is attention?

Attention is, as William James stated in his 1890 book The Principles of Psychology,

> *“the taking possession by the mind, in clear and vivid form, of one out of what may seem several simultaneously possible objects or trains of thought. It implies withdrawal from some things in order to deal effectively with others.”* (James. 1890 in Cherry, 2022),

or, simply,

> *“the ability to process information while ignoring other details.” (Cherry, 2022)*.

There are a variety of types of attention, such as (Cherry, 2022):

- Sustained attention, or concentration, is one’s ability to focus on just one thing for a certain period, during which the person keeps his or her focus on one task at time and continues to engage in the task until completed.

- Alternating attention, which includes multitasking or shifting one's attention between two or more tasks with different cognitive demands, which is not doing two things at once, but switching between tasks.

- Selective attention, which means being able to choose and selectively choosing a stimuli in the environment while at the same time keeping other things out of focus. For example, watching a movie while ignoring the phone ringing.

- Focused attention, which involves the individual in being able to rapidly drawn to a specific stimulus. It is a way of suddenly responding to an external stimuli, such as noise, flash of light, visual, auditory or tactile stimuli, in a situation where the environment requires an immediate action and attention from the individual.

- Limited attention or divided attention, involves multitasking, but differently than in the case of the alternating attention, the attention is divided between multiple tasks at once and responding to different tasks and stimuli at the same time.

The cocktail party effect is the ability to understand a situation even in a distracting environment with many distracting sounds and side conversations happening in the background. It can also be called selective auditory attention or selective hearing (Pellegrino, 2022). In a paper, dated 1953 and written by the MIT, it was theorized that there could be five potential ways a human could separate the voice of the person they were talking to from the voices of other conversations happening in the background, such as (Pellegrino, 2022):

- The direction the voice is coming from

- Body language, such as lip-reading and gestures

- Differences in speaking voices, such as the speed, pitch, sex)

- Differences in accents

- Transition probabilities

The most important thing for humans, listening to a particular person in a loud environment is the listener's ability to predict the words they couldn't hear, usually followed by the sound of the speaker's voice they're talking to.

There are some reasons on why we can focus on the person speaking and overcoming distracting noises in the background (Pellegrino, 2022):

- Special continuity, humans can focus on a message better if the person they are speaking to is in the same place as the listener.

- Loudness, someone speaking louder than the surrounding noise will be easier to listen to and pick out of the crown and noises.

- Continuity, when you are talking to someone, their sentence remains continuous: frequency, intensity and spatial origin remain consistent while the conversation is going on.

- Visual channel effects, our brain automatically connects sound to images, to speakers.

Many of us think that selecting a stimuli or the ability to focus our attention on one thing while blocking other distracting stimuli is something we do automatically, however, one's ability to selectively focus their attention on a specific stimuli while ignoring the others can be quite complex. There are some strategies that can be used to improve your attention and keep the focus on one task at once (Cherry, 2022):

- Avoid multitasking
- Get enough sleep
- Practice mindfulness

Image 2:
https://indianexpress.com/article/opinion/our-understanding-of-disability-must-expand-to-include-people-with-invisible-disabilities-5476146/

9.2 Types of disabilities and disorders involved with attention

Disabilities don't always come in the physical form, they can as well come in an invisible form, as psychological or neurodevelopmental disabilities.

To cite some of the disabilities that can come between attention and the individual (John Hopkins University, n. d.):

- ADD or ADHD (Attention deficit disorder; attention deficit / hyperactivity disorder), which we will see more accurately in the next pages
- Brain injuries are one of the fastest growing types of disabilities. In can occur typically from accidents, insufficient oxygen, stroke, poisoning, or infection. Depending on the area of the brain affected, a person can struggle with organizing thoughts; problem-solving; social interactions; generalizing and integrating skills; short-term memory; communication and speech. Some teaching strategies can include providing the students with tape recorders or computers; extended time for exams; breaks during exams; exams in a distraction-free environment; concise oral instructions, etc.

- Learning disabilities are neurologically based and can interfere with listening, speaking, reading, writing and reasoning. It can be characterized by a discrepancy between academic achievement and cognitive potential. Difficulties can be seen in the oral and writing expression: reading comprehension and skills; problem-solving; selective listening during lectures; interpreting social cues; mathematical calculation; time management; organization of tasks; following directions and focusing; short-term memory.

People on the autism spectre may also find it difficult to pay attention and focus on things that don't really interest them, so it is important to choose interesting activities with clear end points, give effective instructions and model their tasks. Noise, people and other distractions can make it difficult for the student to focus and keep their attention. It is important to minimise these factors before starting a lecture or an activity (Raising Children Network, 2021).

Attention deficit/ hyperactivity disorder (ADHD) is perhaps one of the most known neurodevelopmental disorders that interfere with one's ability to focus and keep the attention. In this sub-chapter we will learn about what ADHD is and the official way that psychologists and psychiatrists make a diagnose, using the Fifth edition of the diagnostic and statistical manual of mental d isorders (DSM-5) (APA, 2013). Most people assume that only children can get a diagnosis of ADD/ADHD, but that is not true. Many adults suffer from symptoms typically associated to ADHD, the problem is that many of them as well tend to suppose that it's just because of a lack of sleep or too stressed. This sub-chapter is not aiming at giving diagnoses to people, it is written in a purely informative way. If you think you might have ADHD or a person you know, you should always talk first to a doctor or a psychologist before giving or receiving diagnoses.

People with ADHD usually have troubles paying attention, have a controlling or impulsive behaviours or be overly active. People with ADHD tend to daydream a lot, lose or forget things, talk too much, take unnecessary risks or careless mistakes, have troubles waiting for their turn or getting along with others (Centers for Disease Control and Prevention, n. d.). As stated before, ADHD is in fact Attention deficit / Hyperactivity disorder, meaning that there are two types of ADHD (Centers for Disease Control and Prevention, n. d.):

I. Predominantly Inattentive, where people tend to have a hard time organizing or finishing a task they were given, paying attention to details or follow instructions or conversation. The person is easily distracted.

II. Predominantly Hyperactive-Impulsive, where people fidget or talk a lot. It is hard for them to stay still for a prolonged time, and they may feel restless and impulsive. People may interrupt others while speaking, speak at inappropriate times or listen while waiting for their turn.

and a third one

III. Combined, which is formed by both types and the symptoms may be equally present.

The causes for ADHD are still unknown, but there are research that show that ADHD may be link to genetiv factors. In addition to the genetic factors, there may be other possible causes for this disorders, which may be (Centers for Disease Control and Prevention, n. d.):

- Brain injury
- Exposure to environmental risks during pregnancy or at young age
- Alcohol and tobacco use during pregnancy
- Premature delivery
- Low birth weight

Table 1 *DSM-5* Diagnostic Criteria for ADHD

Inattentive Type	Hyperactive/Impulsive Type
Symptoms and/or behaviors that have persisted ≥6 mo in ≥2 settings (e.g., school, home, church). Symptoms have negatively impacted academic, social, and/or occupational functioning. In patients aged <17 y, ≥6 symptoms are necessary; in those aged ≥17 y, ≥5 symptoms are necessary. A. Displays poor listening skills B. Loses and/or misplaces items needed to complete activities or tasks C. Sidetracked by external or unimportant stimuli D. Forgets daily activities E. Diminished attention span F. Lacks ability to complete schoolwork and other assignments or to follow instructions G. Avoids or is disinclined to begin homework or activities requiring concentration H. Fails to focus on details and/or makes thoughtless mistakes in schoolwork or assignments	Symptoms and/or behaviors that have persisted ≥6 mo in ≥2 settings (e.g., school, home, church). Symptoms have negatively impacted academic, social, and/or occupational functioning. In patients aged <17 y, ≥6 symptoms are necessary; in those aged ≥17 y, ≥5 symptoms are necessary. *Hyperactive Symptoms:* A. Squirms when seated or fidgets with feet/hands B. Marked restlessness that is difficult to control C. Appears to be driven by "a motor" or is often "on the go" D. Lacks ability to play and engage in leisure activities in a quiet manner E. Incapable of staying seated in class F. Overly talkative *Impulsive Symptoms:* A. Difficulty waiting turn B. Interrupts or intrudes into conversations and activities of others C. Impulsively blurts out answers before questions completed
Additional Requirements for Diagnosis	
Symptoms present prior to age 12 y Symptoms not better accounted for by a different psychiatric disorder (e.g., mood disorder, anxiety disorder) and do not occur exclusively during a psychotic disorder (e.g., schizophrenia) Symptoms not exclusively a manifestation of oppositional behavior	
Classification	
Combined type: Patient meets both inattentive and hyperactive/impulsive criteria for past 6 mo *Predominantly inattentive type:* Patient meets inattentive criterion, but not hyperactive/impulsive criterion, for past 6 mo *Predominantly hyperactive/impulsive type:* Patient meets hyperactive/impulsive criterion, but not inattentive criterion, for past 6 mo Symptoms may be classified as mild, moderate, or severe based on symptom severity	

ADHD: attention-deficit/hyperactivity disorder; DSM-5: Diagnostic and Statistical Manual of Mental Disorders, 5th edition.
Source: Reference 1.

Image 3: https://journalce.powerpak.com/courses/116566/tbl1.gif

The following image shows the diagnostic criteria from the DSM-5 (APA, 2013) for ADHD.

According to a multitude of studies, results show that in people with ADHD, some areas of the brain are smaller than the averages: subcortical structures, deep in the center of the brain, such as the amygdala,

hippocampus and nucleus accumbens, all of them play a role in cognition, especially in emotional regulation and memory (Lockett, 2022). According to fMRI pictures and studies, people with ADHD have impairments in different brain functions, in particular executive functions (planning, timing, attention, working memory), other than different structures in areas involving motivation and emotional control. Other studies have found deficits in reward-related decision making areas (Lockett, 2022).

Some accomodations that the student can receive may include copies of the teacher's notes; extended time for exams; exams in a quiet and non distracting environment; multiple breaks during the exam or papers given by sections; clear arrangements of items on paper; calculator, thesaurus, reader or scribe during exams; use of a blank card or paper; laptops; taped texts and classroom materials; use of handouts and visual aids; extended time for correcting spelling, punctuation and grammar; direct oral instructions; syllabus provided before the start of the semester (John Hopkins University, n. d.).

Learning disability is a condition characterized by a diminution in cognitive performance (Hatton, 2000 in Sterr, 2003). Developmental neurobiology experiments (Emerson et al., 2000 in Sterr, 2003) show that dysfunctions of pre or postnatal neurodevelopmental processes could be the main contributing factors for learning disabilities. This hypothesis can be supported by the fact that learning disabilities are often associated with other neurological disorders, like epilepsy and cerebral palsy (McLaren & Bryson, 1987 in Sterr, 2003). We can't argue about the fact that cognitive performance, memory and learning heavily depend on attentional mechanisms. Johnson, Altmaier and Richman (1999) suggest that learning disabilities can be complicated by attention problems (Sterr, 2003), in fact, a neuroimaging study conducted by Hari, Renvall & Tanskanen (2001) showed that people with dyslexia tend to have a functional selective attention deficit (Sterr, 2003).

Image 4:
https://socialcare.blog.gov.uk/2020/12/16/respecting-diversity-in-social-care-we-must-do-better/

9.3 Methods that a social worker can use with disabled people in the educational process

The National Center for Learning Disabilities (2017) proposed some ways to help people with learning or attention disabilities:

- Raise awareness: for people who don't usually work with people with learning and attention issues, these problems can be assumed to be laziness or lack of intelligence. This is why is important to raise awareness about the existence of these problems so people can get the support they need and minimize the stigma.

- Equip teachers: teachers and social workers need more knowledge and strategies to meed the students' needs.

- Personalize learning: it is important to personalize the learning process according to the students' interests, strenghts and needs, in order to be able to help the student feel understood and ease the process of learning, no matter their attention issues and learning disabilities.

- Incorporate social and emotional learning

- Build self-advocacy skills: it is important to help students acknowledge their feelings and help them learn how to ask for help and accomodations for their issues or weaknesses.

- Advocate for increased funding to provide support and services for people with different learning needs.

If unaddressed, learning disabilities and attention issues can lead to extremes and conditions that may push students from school to prison. A study found that a vast number of young adults with learning or

attention issues have been, at some point, involved with the justice system, as well as having a completion rate for college of about 41%, compared to the 52% of students without learning or attention issues. In the case of completion, only 46% of working-age adults with learning disabilities have success in finding and keeping a job. Comparing people with learning disabilities to people without, adults with these issues are twice as likely to be jobeless (National Center for Learning Disabilities, 2017).

In the learning process, it is important for the teacher and/or social worker to acknowledge the student's needs, especially in private lectures, when it's easier to acknowledge the learning disabilities and attention issues. It is known that in order to be able to study better and remember things one should always take pauses after an hour or two of being behind books, but people with a short attention span may need them more often. A method to keep the student attention, for example in private lessons or lectures, could be to tailor the study session in a way to keep the student interested, like finding some practical examples that meet their hobbies or interests, use of different tools to stimulate their interest and attention. Some people may have a shorter attention span, and other longer. When the student will start losing interest or attention while doing a task, most probably the teacher will acknowledge this. When this happen, it is advised to take a short pause, maybe going for a walk or breathing fresh air, so the student can "recharge their batteries". The teacher or social worker will need to have a lot of patience and let go of the thought that the person they have in front of them is just lazy or uninterested, as, like we have seen before, these students live in a different way than other people do, and because of that, they can also have a low self-esteem. If the student thinks they are not capable to solve a mathematics problem because they find it difficult, the teacher should reassure the student that it doesn't mean that he or she is not capable to solve it, but they just need a little more time and a little more help to be able to focus appropriately on the problem.

Individualized Education Programs (IEP) are programs tailored as an individualized education program, eligible for people with conditions such as ADHD, autism, cognitive challenges, developmental delays, emotional disorders, hearing problems, learning problems, physical disabilities, speech or language impairment and vision problems. IEP can be offered in a general school enivonment, such as in a regular classroom, bringing together students with similar needs, or in a specialized classrom, which could be a more appropriate place for their needs, allowing more one-on-one interactions (O'Shea, 2022).

Bibliography

1. Centers for Disease Control and Prevention. (n. d.). *What is ADHD*?. https://www.cdc.gov/ncbddd/adhd/facts.html
2. Lockett, E. (26.10.2022). *How Does ADHD Affect The Brain?*. Healthline. https://www.healthline.com/health/adhd-neurology
3. Pellegrino, N. (13.3.2022). *Cocktail Party Effect + Examples.* Practical Psychology. https://practicalpie.com/cocktail-party-effect-examples/
4. Cherry, K. (10.11.2022). *How Psychologists Define Attention*. Verywell Mind. https://www.verywellmind.com/what-is-attention-2795009

5. John Hopkins University. (n. d.) *Types of disabilities*. https://studentaffairs.jhu.edu/disabilities/about/types-of-disabilities/
6. Sterr, A. M. (2004). Attention performance in young adults with learning disabilities. *Learning and Individual Differences, 14*(2), 125-133. https://doi.org/10.1016/j.lindif.2003.10.001
7. National Center for Learning Disabilities. (24.1.2017). *Understanding Learning and Attention Issues.* https://www.ncld.org/news/state-of-learning-disabilities/understanding-learning-and-attention-issues/
8. Raising Children Network (Australia). (19.5.2021). *Paying attention: autistic children and teenagers.* https://raisingchildren.net.au/autism/communicating-relationships/communicating/paying-attention-asd
9. O'Shea, C. (03.2022). *Individualized Education Programs (IEPs)*. https://kidshealth.org/en/parents/iep.html

Images

Image 1: https://practicalpie.com/cocktail-party-effect-examples/

Image 2: https://indianexpress.com/article/opinion/our-understanding-of-disability-must-expand-to-include-people-with-invisible-disabilities-5476146/

Image 3: https://journalce.powerpak.com/courses/116566/tbl1.gif

Image 4: https://socialcare.blog.gov.uk/2020/12/16/respecting-diversity-in-social-care-we-must-do-better/

Chapter 10 - Production of visual elements for the course

To make a course, especially the visual elements for it, it is important to maintain a certain harmony regarding the shapes and the colors, as if everything is mixed without a logical sense, the course and the visual elements can come out as unorganized, not serious or fake. In this chapter we will get some knowledge about the psychology of colors and shapes, in order to be able to better compose the course graphics.

Image 1: https://uxstudioteam.com/

10.1 The psychology of colors

Colors can affect people's decision making process, so in this sub-chapter we will get to know a little more the secrets behind the psychology of colors. Studies covering the psychological effects of colors on human behaviour show that it takes approximately 90 seconds for a customer to form an opinion about a product and 90% of the time, this opinion is influenced by the colors, making us understand that despite the fact color is usually seen as an aesthetic decision from the designers, it is nonetheless a core element for the cognitive and emotional impact of a design on users (Raspberry, 2019). If you're interested in the meaning behind every color, you can use the Canva's interactive tool on the meaning and symbolism on every color, other than getting an idea on some nice color palettes to use for the guide: https://www.canva.com/colors/color-meanings/

A well-considered color palette can upgrade a design for mediocre to great, while a lousy color palette can lessen the user's experience of the guide and even intervene with its understanding. Light and color can affect our mood, sleep, heart rate, our wellbeing etc. For example, blue and green light encourage us to wake up in the morning (blue for the sky, green for the nature): that is why many professionals recommend us against the use of mobile devices before going to bed, as the screen's light can cause insomnia and keep us awake (Raspberry, 2019).

Depending on the user's age, gender and impulsivity, users can have different reactions to different colors and shades. When making a guide, it is important to know who your target audience is in order to

tailor it accordingly: is it children, adults, seniors or students? Are there mostly women or men? Is your target group composed of EU citizens or Extra-EU citizens?

Your target audience's age will influence their perceptions of materials and texts, especially considering that the color tastes and preferences vary with age. In his book, Faber Birren investigates the different tastes in color in different age groups. He found that blue is consistently preferable throughout life, yellow is more preferred in childhood. As people get older, they tend to prefer colors of shorter wavelength (blue, green, violet), rather than colors of longer wavelength (red, orange, yellow). Older people think that bring colors are repulsive, so if the seniors are your target group, you should totally avoid using bright colors such as yellow, pink and orange!

Research on color perception shows that men prefer bright and contrasting colors, while women prefer softer shades: both men and women like blue and green, while the purple color repels men but is adored by women.

Besides age and gender, culture is also a factor that can influence the color preferences. In most of the Western cultures, the color white is linked with aspiration, innocence, chastity and hope, but in parts of Asia, this color can be associated with bad luck, death and mourning, meaning that it is crucial to have a background in other cultural connotations of the color palettes, especially if the product is meant to be shared in a wider and global audience (Raspberry, 2019).

However, especially if you're planning to build a web-site or app to accompany your guide, there are some questions you can ask your target audience regarding their color choices (Raspberry, 2019):

1. Before visiting this guide/website/app, please tell us how do you expect it to look like?
2. How would you like to describe this site/app/guide?
3. What are your first impressions? Share the first keywords that come to your mind when you see the website/app/guide
4. On a scale of 1 (very bad) to 5 (very good), how did this website/app/guide make you feel?
5. How likely or unlikely would you be to trust this guide?

Now that we know some basics on colors and the way their perception changes given the age, gender and culture, let's see the psychological meaning behind some colors (colorpsychology.org, n. d.):

- Red

Is one of the most evocative colors on the visible spectrum. It is a primary color, which means that is made entirely on its own. The color red is associated with energy, war, danger, strength, power, determination, passion, desire and love. Physiologically, the color red can enhance the human metabolism, increase the respiration rate and raises blood pressure. Also, it attracts more attention than any other color!

- Green

The color green hints at our primitive relationship with nature. It is as well a primary color. The color green is considered the key color that represents purity, health, freshness, sincerity, growth, harmony and fertility, and has been associated with brands that encourage growth, vitality and productivity. This

color also represents connection, as it is gentle, invigorating and relaxing. Connection to ourselves and our quiet moments in our lives, as it is not a coincidence that people run away from the concrete of the city to hide in wilderness of nature. Green means the return to the primal roots, to the pristine kingdom of innter peace and tranquillity. Physiologically, the color green slows the human metabolism and creates a calming effect, as it is strongly associated with tranquility and calmness.

- Blue

Blue is associated with calm and serenity: if I ask you to visualize a tranquil scene, what will be the chance of you imagining a scene with a great deal of blue? Probably in the form of a lake, ocean, sea or river? Blue represents a sense of inner reflection. Physiologically, research has indicated that blue's impact on the body is the total opposite of red, resulting in lower heart rate and slower metabolism. People who like the color blue usually are enthusiastic, symphatethic, and tend to seek meaning and significance in life. These people are warm, communicative, and compassionate, while being idealistic, spiritual and sincere. The people who like blue care about what they to, value integrity and unity in the relationships and are natural romantics.

- Brown

Traditionally associated with seriousness, stability and wisdom, this color is mostly worn by people who impose respect and appreciation through their status. Most people feel safe around people wearing brown, because they represent seriousness, reliance and support, as it is associated with the traits of dependability, reliability and resilience. While light-brown represents honesty and stability, dark-brown is considered more mature, predictable and dull. People who love this color are often reserved and not looking to attract attention.

- Orange

Orange combines the energy of red and the happiness of yellow: as red denotes love and dominance, and yellow denotes optimism and cheerfulness, orange stands right in between those extremities, as it promotes rejuvenation, communication and positivism. It also enhances extraversion, allowing people to let go of their inhibitions and express themselves more freely. It is associated to joy, sunshine and the tropics, while representing enthusiasm, fascination, happiness, creativity, determination, attraction, success, encouragement and stimulation.

- Yellow

Is commonly used in images depicting fresh ideas, creative projects or new business initiatives. This color has been scientifically proven to enhance mental activity and heighten awareness and energy levels: now you can also understand the meaning behind the light bulb in pictures of people brainstorming! Yellow can be thought as the color of the morning, when you are most alert, insightful and analytical: this color has been linked with increased activity of the lest side of the brain, the powerhouse of the rational thinking. Yellow indicates honor and loyalty, even though yellow can also be connected with cowardice. When overused, this color can have a disturbing effect: babies tend to cry more in yellow rooms. Do you know why taxicabs are usually painted in yellow? Because this color is a perfect attention-getter!

- Pink

Pink is one of the gentlest colors you can get, even though it varies depending on it context. It is a mixture between red and white. This color represents a gentle type of love, as it stands for tenderness, vulnerability and youth. It is linked to innocence, hope and optimism, and represents traditional femininity, childhood sweetness, innocence.

- White

This color makes us think of new beginnings, perfection, elegance and serenity: when you have a blank canvas, it is easier to start something new, to let your ideas take your hand and move in every possible direction. White is also found in the doctor's offices, as it associates to cleanliness, order and efficiency, giving patients a sense of trust in the services offered. This color is also associated with purity, virginity, faith and perfection. But beware! As previously stated, this color is differently perceived in other cultures.

- Black

It's one of the most complext colors of the spectrum: depending on the angle you approach it, you can see it as elegant, mysterious, or even downright, depressing. This color can be associated with fear and the unknown, with power, elegance and formality, but also with death, evil and mystery. It usually has a negative connotation. It is also the symbol of grief.

Color stimulates our brain, and since ancient times it has proven to be a useful alternative to psychotherapy: Egyptians and Chinese used colors to heal, a process called chromotherapy. If you are interested in the symbology meaning of every color, try checking the website https://www.colorpsychology.org.

Image 2: Renaldo, R. via Vecteezy.com

10.2 The psychology of shapes

Shapes, forms and figures are psychologically potent in affecting us, as they provide the framework for the physical word and influence the way we percieve the space surrounding us. In creating the visual elements for the guide, it is important to follow a certaing logic and certain aesthetics. To see some fantastic art involving many shapes, check the painter Wassily Kandinsky. We will now make a list of some psychologically significant shapes (Verzosa, n. d.):

- Triangles

Triangles are often used to represent perseverance and achievement. The base alludes to the struggles of the journey, and the tip embodies the goal, or the “peak”. In graphic art, the triangle symbolizes balance and stability. Many photographers and artists use the “golden triangle rule” in their compositions, which means arranging elements in a triangle to create an image full of harmony and symmetry: the point of the triangle will be in this case the focus point. The triangle can also be used to draw the viewer’s eyes towards the image’s point of interest, as people usually see it as a symbol for direction that they instinctively follow.

- Squares

Squares and rectangles are the most common shapes used to make objects: from picture frames to large buildings. Squares are simple, balanced, solid and secure, but the square’s positive attributes are not limited to physical entities, they also add emotional and aesthetic layers to images. The lines and angles make a perfect framing for a scene in a photo, and if put together it creates a pattern that feels orderly and industrial. The squares can also be used as “boxes” in a picture: it can isolate different components present in a photo. Placing the composition in squares can make it feel more organized and neat. The square’s neat angles can symbolize masculinity, strength, stability and dependability. However, its hard angles and rigidity can be interpreted negatively, since its inability to flow can prevent it from emotionally connecting to people.

- Circles

Many consider the circle as the symbol for the cycle of life, as it can be found in various forms in nature. Circles are smooth and don’t have sharp angles (as the squares do), making them pleasing to the eye, giving the image a youthful, happy and carefree feeling. When arranged in a pattern, the circle can make the photo feel synergetic due to its calming qualities, and in the case an image or pattern has a lot or too many lines, introducing a circle can help make the pattern feel more balanced. Just like the triangle, the circle naturally draws the eyes towards the main point of interest, as it can be used to frame an image.

- Polygons

The polygon, when stacked together to form a honeycomb, it creates a robust framework, making it an impressive engineering feat that even bees use to build their beehives. The complexity of the poligon’s shape can convey a futuristic aura, and that’s the reason behind their feature in sci-fi movies every now and then. Their intricate geometric patterns can keep the eyes busy, providing illusions of infinity in certain angles.

- Curves

While a straight line is rigid and immovable, a curve is smooth, giving us humans the tendence to respond more positively to a curve than to a straight line, as it makes us feel calm and relaxed. A curve can be also used to represent sensuality, and it goes often beyond the human figure: even architecture or automobiles can be considered sensual if they have a curvy design: objects that have curves look more stylish and contemporary. The curves can allow the viewer to explore the composition without tiring the eyes. If a composition looks too boxy with hard angles almost everywhere, incorporating

curves can help adding a sense of fluidity to the image: straight lines, curves and circles complement each other visually, so don't be afraid to put them together in a creation or photo!

- Spirals

Spirals can give one a feeling of watching an optical illusion, as it leads the eye towards the centre of the photo, making you feel hypnotic and dizzy at the same time. Ever heard of the golden spiral ratio, also known as the Fibonacci's ratio? It features a spiral as well, and it as been used by artists and photographers since the Renaissance to create a mathematically perfect and harmonical composition. However, like in the case of spiral stairs, looking down into it feels haunting and dangerous, it can evoke mystery, especially when we can't see what's hiding at the bottom. When the spiral is moving, it can cause dizziness or vertigo: movies use spirals as devices to show disequilibrium.

- Lines

Lines are as well incredibly versatile visual tools: different lines have a different effects on the viewer. The horizontal line is aligned with the Earth, and makes the viewer feel grounded and the area appears more expansive. A vertical line feels celestial since it's pointing upwards, and a column of vertical lines can make a picture or a person look taller. The diagonal line can evoke precariousness with its unstable angle, and can create the illusion that an image is off-kilter. Lines are commonly used for diving elements in an image, to create a more balanced composition: viewers can more easily take in a scene if it's divided into different sections, giving order to what could be considered messy layouts.

Now that we have seen how shapes and lines affect one's perception of the picture and space, you can start using them in your creations to lock into the user's subconscious, but remember! There's always more to a picture than meets the eye, shapes and colors used alone give the visual quality, but If you try using them together you can give the composition an emotional impact.

Since inclusivity is gaining more and more importance, it would be good to try and make your guide as inclusive as possible, with the use of audio readers for people with sight impairment.

10.3 Design tools for creating a guide

Let's see some design tools to create some cheap and fast visual elements for your guide (Warnimont, 2023):

- Canva

It provides a space for designing presentations and blogs, as well as social media posts and basic photo editing.

- Adobe spark

You can choose from thousands of free icons and images, with no limit in making social media and marketing designs: as long as you're okay with its watermark. Adobe spark offers lots of templates for unique designs and different occasions, with a branding feature to include your logo, color scheme, and font.

- Visme

It is great to generate charts and widgets to share.

- Crello

It is similar to Canva, with a quick search bar to search thousands of templates and presets for specific designs. You can add objects, color palettes with your branding kit, and drag-and-drop items and text boxes anywhere you want. It also offers an audio editing tool to add music to pictures and audio to videos.

- Stencil
- Snappa

It works well for making graphics for social media pages and has excellent options for bloggers. It has millions of free, high-resolution photos to help you make a rapid design process, and you can also upload your own font to it.

- Pixlr X
- Easil
- Fotor
- Piktochart
- BeFunky
- DesignBold
- Desygner
- Venngage +
- Microsoft Word & Pages

If you're the simpler type, you can just use Microsoft Word (for Microsoft) or Pages (for OS) to make the guide, as you can find on the world-wide-web a lot of pre-made patterns to just fill with your information and text and copyright-free images. Just remember to cite them to avoid plagiarism!

Whatever tool you will decide to use, if you're not an artist as well, most probably you'll need as well some illustrations or images to use in your newly created designs, so let's see some sites with copyright-free photos (Osman, 2023):

stocksnap.io	Canva	MyStockPhotos	Flickr

Startup Stock Photos	Negative space	Picjumbo	Death to the stock Photo
Freerange	Jay Mantri	Kaboompics	Fancy Crave
Morguefile	Life of Pix	ISO Republic	Gratisography
LibreShot	Moose	Burst py Shopify	Skitterphoto

Other than the photos, to make the design cuter and simpler, you will want to use illustrations as well, here are some sites where you can find them (Ivanovs, 2023):

Illu-station	unDraw	IRA Design	DrawKit
Absurd Illustrations	ManyPixels	Freebie Supply	Ouch!
Vivid.js	Humaaans	Interfacer	Open Doodles

Bibliography

1. Colorpsychology.org (n. d.). *The Psychology of Colors and Their Meanings.* https://www.colorpsychology.org
2. Verzosa, C. (n. d.) The science of shapes: Learn the psychology behind basic forms and figures in photography. https://www.canva.com/learn/science-shapes-learn-psychology-behind-basic-forms-figures-photography/
3. Raspberry, H. (20.11.2019). Color Psychology – Brilliant Helping Hand in UX Design. https://uxstudioteam.com/ux-blog/color-psychology-in-ux-design/
4. Warnimont, J. (26.3.2023). *6 Best Canva Alternatives Compared (There Are Free Options as Well)*. https://themeisle.com/blog/canva-alternatives/#gref
5. Osman, M. (23.3.2023). *Best Free Stock Photo Sites: 21 Options With Breathtaking Imagery*. https://themeisle.com/blog/best-free-stock-photo-sites/

6. Ivanovs, A. (23.2.2023). *10+ Best Spots to Find Free Illustrations for Your Next Design Project.* https://themeisle.com/blog/free-illustrations/

Images

Image 1: https://uxstudioteam.com/

Image 2: Renaldo, R. via Vecteezy.com https://www.vecteezy.com/vector-art/7036493-set-of-100-geometric-shapes-memphis-design-retro-elements-for-web-vintage-advertisement-commercial-banner-poster-leaflet-billboard-sale-collection-trendy-halftone-vector-geometric-shapes

Conclusions

The Practical Guide for the Design and Development of an Online Course in the Field of Education in Social Work carried out within the framework of the Erasmus project -KA220-VET-000085029 - Teach Me to Help manages to synthesize essential contents in the field of educational sciences in a form that is easy to access and use in the purpose of teaching in the field of social assistance, adapted for inclusive education facilitated by the digital environment.

The work is addressed to social workers, a professional category that developed majorly with the orientation of the paradigm of social assistance from assistance in the material field, of social protection to education, with an important emphasis on the inclusion of people with special educational requirements. In this context, today's social workers are called to carry out educational activities, teaching typical and special beneficiaries different useful contents. An additional challenge came with the digitization caused by the Covid pandemic. Thus, on the one hand, social workers are required to have psycho-pedagogical knowledge for teaching, special psycho-pedagogical knowledge for inclusive education, and, moreover, digital didactic knowledge imposed by the new ways of achieving online education.

This guide tries to transform the major challenges of social care workers: psycho-pedagogical training, educational inclusion and the digitization of teaching into professional development and updating to the current social context. The course of the work provides an updated general framework of pedagogy knowledge, easy to follow for those who have or do not have an initial pedagogic training, specific to the context of inclusive digital education. The teaching guide shows how to design a curriculum, starting from the formulation of teaching objectives, their correct statement and the definition of the problems addressed, and continues with the identification of teaching methods, which will become the means by which the objectives will be achieved. Special attention is paid to the transition from traditional to digital methods: the classic lecture becoming a digitized presentation, didactic conversation-messaging, exercises are updated in applications and software. Actively participative methods are presented, as well as those for fixing and consolidating knowledge, so that the trainer can ensure the commitment and efficiency of his activity. In the last part of the guide, the information presented along the way is assembled into the actual steps to follow in creating a course, what is the design of a course and how the visual elements on which it is supported are made.

The chapters of the work show numerous examples and references to particularly useful digital resources, versatile in teaching, easy to access, checked by the experts who wrote the guide, respecting a rigorous scientific bibliography. All this digital leap offers an extraordinary chance for beneficiaries of

social assistance services with special educational requirements, who in traditional conditions would have accessed education services much more difficult or not at all. At the same time, it facilitates the action of social workers in education, a field difficult to practice using the classic methods of the past.

Finally, through the manner of realization that subsumes a broad perspective on teaching in social assistance rendered by the five partners from 4 different European states, it brings a particularly valuable consistency in the theoretical approach to this topic. The authors of the partner entities are convinced that this work will find its use in the work of social workers with the pilot promotion that the partners of this project are starting. The praxeological practice of the theoretical elements recorded in the guide, through the training courses of the partners in the groups of social assistance practitioners in Romania, Italy, France and Cyprus, is proof of the usefulness of the *Practical Guide for the Design and Development of an Online Course in the Field of Education in Social Work* to be replicated everywhere.

Teach me to help

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