

UNIT 8. Learning Styles Adaptation



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Aim and Objectives

The aim of this unit is to help trainers design learning activities adapted to different learning styles by transforming the same content into multiple formats using CT principles.

OBJECTIVES

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| <ol style="list-style-type: none"> 1. Identify the aim and role of different learning styles in CT learning. 2. To present the main learning styles. 3. Employ AI tools to generate content for different learning styles. | <ol style="list-style-type: none"> 4. Apply CT principles to decompose content and reuse core elements across different formats. 5. Present the additional recourses which can be applied for diferen content format preparation. |
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Outcomes

An adult trainer will be able to design and adapt learning activities to different learning styles, structure them using CT principles, use different content formats as learning triggers, and adjust activities based on learner response.



Introduction

Adult learners perceive and process learning content differently; therefore, adaptation to different learning styles is essential for effective training. Trainers need practical ways to transform the content into visual, audio, and text-based formats using CT principles.

All examples in this unit are explored in the context of disinformation to illustrate how the same content can be adapted across different learning formats using AI. Real-world [example](#) includes text, video, and audio elements.



Main CT Principles Applied

Abstraction – learning activities focus on the core message, separating meaning from specific forms. This allows the same content to be reused and transformed across different learning formats without dependence on the original medium.

Pattern Recognition – trainers identify recurring interaction patterns when using AI tools, such as prompting, generating, and converting content between formats. Recognizing these similarities supports efficient transfer of skills across tools and activities.

These principles enable flexible adaptation of learning formats based on learner response, without technical expertise.



Relationship with WP2 Modules

M3: slide (17) "What makes adult students different" mentioned that CT should be introduced differently to visual, auditory, and tactile learners; slide (22) "Elements of a good lesson plan", one of the key features of engagement strategy is "Methods for varied learning styles".

M5: slide (35) "The methods of learning styles and preferences to meet the diverse needs of learners" presents learning styles such as Visual, Auditory, Kinesthetic, and Written.



Justification

Why adapt different content formats for different learning styles?

Adult learners differ in how they process information. Using multiple content formats helps reduce cognitive load and improves understanding and engagement.

Why use AI tools for different learning styles generation?

AI tools allow trainers to generate and convert learning materials quickly with limited time and technical skills.

AI tools enable trainers to prepare different formats for the same content.

Why focus on formats rather than learning styles?

Content formats are observable and adjustable during training. They allow trainers to respond flexibly to learner reactions without formal diagnosis

Why apply CT?

CT supports structured content reuse and transformation. It helps trainers decompose content, identify reusable elements, and apply them across formats.

Why simple observation is sufficient?

In adult learning, immediate feedback and engagement signals are often more reliable than formal tests. Observing questions, attention, and clarity needs supports timely format adjustment.



Activity 1: Preparation of Visual Content

AI-powered generation of slides, images, and short videos

Goal: To enable the preparation of visual learning materials using AI with minimal technical effort.

Outcome: Ability to prepare visual learning materials using AI tools.

SLIDES

1. Open <https://gamma.app/>
2. Click "Create new (AI)"
3. Choose "Generate"
4. Type a topic (e.g. "Disinformation")
5. Click "Generate"
6. Edit and download as PPTX

INFOGRAPHIC

1. Open <https://chatgpt.com/>
2. Start a new chat
3. Type-in a prompt (e.g. "Create an infographic about disinformation")
4. Download generated image

DISINFORMATION



False or misleading information used deliberately to mislead or manipulate people.

SOURCES



SOCIAL MEDIA



WEBSITES



TRADITIONAL MEDIA



INDIVIDUALS

HOW TO SPOT DISINFORMATION



SENSATIONAL HEADLINES



UNVERIFIED SOURCES



MANIPULATED CONTENT

APPEAL TO EMOTIONS



Some AI tools require sign-up, but the described functions are accessible via free or freemium access.



Activity 1: Preparation of Visual Content

VIDEO GENERATION FROM IMAGE*

1. Open <https://app.heygen.com/>
2. Click "Create" → "Create a video"
3. Choose "Photo to video"
4. Upload one image (e.g. a photo of a rat)
5. Paste a short script (e.g. "Rats never lie... Because they do not speak.")
6. Select voice and language
7. Click "Generate"
8. Download generated video



Results:

- AI-generated slide deck with visuals.
- AI-generated infographic suitable for visual explanation.
- AI-generated video example from a single image with synthetic voice.

CT principles:

- **Abstraction** – focuses on retaining the core message independently of visual details when generating slides, infographics, or short videos.
- **Pattern Recognition** – focuses on recognizing recurring interaction patterns with different AI tools, such as providing a prompt and supplying input in another format when generating or transforming visual content.



Visual content is a primary learning format when learners can decode meaning directly from images without additional verbal or text-based explanation.



Activity 2: Preparation of Audio Content

Generation and conversion of speech-based audio content

Goal. To enable trainers to prepare audio learning materials by generating speech from text and extracting audio from video content.

Outcome. Ability to generate, convert, and reuse speech-based content as standalone learning materials suitable for audio-focused activities.

SLIDE NARRATION*

1. Prepare slides with notes
2. Save the presentation as PPTX
3. Open <https://www.narakeet.com/>
4. Click "Tools" → "Slides to Video..." → "Try Now"
5. Upload the PPTX file
6. Click "Continue"
7. Click "Create video"
8. Download the video with narration



SPEECH FROM TEXT*

1. Open <https://elevenlabs.io/>
2. Click "Text to Speech"
3. Type-in text (e.g. "Hello, this is an automated security call from your bank. We have detected unusual activity on your account. Confirm your identity immediately to avoid account suspension.")
4. Select voice and language
5. Click "Generate speech"
6. Download audio file



Activity 2: Preparation of Audio Content

AUDIO GENERATION FROM VIDEO

1. Open <https://cloudconvert.com>
2. Upload a video file (e.g. slide narration video)
3. Select MP3 as output format
4. Click "Convert"
5. Download the audio file



Results:

- Automatically narrated slides based on speaker notes.
- Synthetic speech audio generated directly from text.

Audio-only file extracted from video content.

CT principles:

Abstraction – spoken content is separated from its original source (slides, text, or video) so that meaning is carried only through sound.

Pattern Recognition – trainers recognize that different audio tools follow similar interaction steps, such as providing text, selecting speech output, or converting existing media into audio.



Auditory learning becomes primary when learners can follow and explain content through listening alone, without requesting visual cues or written support.

T**Activity 3: Preparation of Text****Generation and conversion of text-based learning materials for reading, analysis, and diagnostic purposes**

Goal. To enable trainers to generate, extract, and use text-based content as a flexible learning format and support basic learning style diagnostics.

Outcome. Ability to prepare and reuse text-based learning materials for text-focused learning activities.

GENERATED TEXT MESSAGE

1. Open <https://chatgpt.com/>
2. Start a new chat
3. Enter a prompt (e.g. "Generate a short text message impersonating a family member who claims to be in urgent trouble.")
4. Review and copy the generated message

Generated example of short scam message:

"Mom, I had an accident and need help right now. I'll explain later – please message me back immediately."

CT principles:

- **Abstraction** – focuses on extracting meaning from spoken or visual content and representing it as text that can be reused independently of the original format.
- **Pattern Recognition** – focuses on recognizing recurring workflows when using text-based AI tools, such as entering prompts, refining outputs, and converting content from other formats into text.

T

Activity 3: Preparation of Text

TRANSCRIPT FROM VIDEO

1. Open <https://www.youtube.com/>
2. Select a video
3. Click "...more" below the video
4. Click "Show transcript"
5. (Optional) Toggle timestamps if needed
6. Select and copy the transcript text

LEARNING STYLE DIAGNOSTICS

1. Open <https://claude.ai/>
2. Start a new chat
3. Paste the following prompt: "You are assisting an adult trainer during a live training session. Explain how to identify which learning format (visual, audio, or text-based) works best for learners in real time. Focus on observable behaviors, typical learner reactions, and practical signals that indicate preference for one format over others."
4. Keep the guidance concise and actionable.
5. Review the generated guidance
6. Apply the suggested observation cues during activities

Results:

- Generated short text message illustrating a disinformation pattern.
- Text transcript extracted from video for reading and analysis.
- AI-generated guidance for real-time learning style diagnostics.



Text-based learning is dominant when learners prefer reading, annotating, and reflecting on written content and can understand and explain ideas more clearly from text.



Challenges

Challenges for adult trainers emerge when they have to deliver training content in different formats for different learning styles online and offline.

Cognitive Overload

Managing different content forms for different training styles requires a lot of efforts from trainers and attention shifts from monitoring CT reasoning to managing instructional complexity.

Trainer Confidence

Adult trainers may feel uncertain about facilitating CT activities, especially when required to use different content forms and/or unfamiliar content. This may affect their confidence.

Assessment and Feedback

If learners experienced CT through different forms, it may be challenging for adult learners to provide unified assessment tools.

Overconfidence of "learning styles"

Overreliance on the "Learning Styles" may distract from more effective training and can lead to fragmented training design that prioritizes format over learning outcomes.

Abstract CT Principles

CT principles are abstract by nature. Converting CT principles to different formats can cause them to be overly simplified or distorted.

Digital Technology Skills

Trainers may lack the practical proficiency with diverse digital tools required to transform CT content into different formats.



Additional Resources

Additional freemium tools for generating content in various formats are available. Most of them require a user sign-in, typically achievable with a standard Google account.

Text generation

<https://chatgpt.com/>
<https://claude.ai/>
<https://gemini.google.com/>
<https://www.perplexity.ai/>

Image generation

<https://chatgpt.com/images>
<https://leonardo.ai/>
<https://www.canva.com/>
<https://ideogram.ai/>

Speech generation

<https://elevenlabs.io/>
<https://www.narakeet.com/>
<https://murf.ai/>
<https://ttsmaker.com>

Video generation

<https://app.heygen.com/>
<https://runwayml.com/>
<https://pictory.ai/>
<https://pika.art/>

Slide generation

<https://gamma.app/>
<https://www.canva.com/>

Think

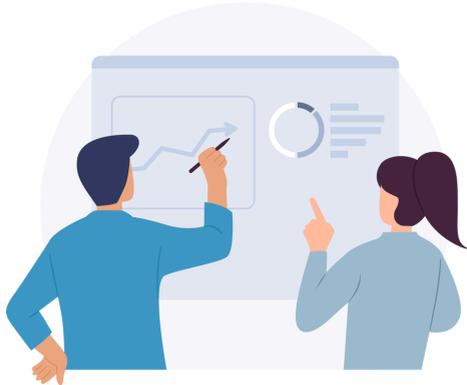
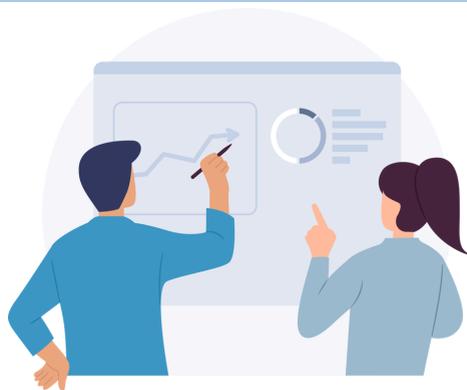
Which is your most favorite tool?



What is the value of this stage?

This unit justify the need for different training content formats for the different learning styles adaptation:

- Visual
- Auditory
- Kinesthetic
- Written



This unit provides practical recommendations how to prepare training content different formats:

- Visual content
- Audio content
- Witten content

This unit supports adult trainers:

- Providing practical examples how to adopt training content according different learning styles;
- In building confidence and cognitive awareness of adult trainers.

