TeachersID

Empowering VET practitioners to create effective and engaging digital micro-learning experiences through Instructional Design

PROJECT No: 2023-1-ES01-KA220-VET-000159464

TRAINING MODULES

Learner-centred Instructional Design for Micro-learning

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Introduction

The rapid evolution of digital technology is reshaping numerous aspects of our lives, including education. Recognising the significance of digital skills and literacy, the European Union's digital strategy emphasises enhancing digital competencies within Vocational Education and Training (VET). This initiative is vital for equipping both educators and learners with the necessary tools to thrive in an increasingly digital world. The urgency to adapt the VET system to digital education has been particularly underscored by the COVID-19 pandemic, which highlighted the need for effective and engaging digital learning experiences.

However, creating such experiences remains a challenging task for many VET practitioners. The Public Consultation on the Digital Education Action Plan 2021-2027 has revealed that education professionals are in dire need of practical guidelines for implementing inclusive and effective distance, online, and blended learning. Specific areas requiring guidance include the adaptation of content and assessments to fit the digital environment. Furthermore, the shift towards a digital society demands that educational content evolve to match learners' preferences for dynamic, interactive, and multimedia materials.

The changing landscape of teaching and learning, alongside the evolving demands of the labour market, necessitates that VET practitioners continually develop their skills. This includes designing and creating learner-centred digital experiences. Innovative approaches such as micro-learning and edutainment have been identified as effective methods to enhance engagement, interactivity, and motivation in digital learning contexts.

Introduction to the ID Teachers Project

The ID Teachers project is designed to empower VET practitioners by equipping them with the skills, pedagogies, and digital tools necessary for crafting effective and engaging micro-learning experiences. By focusing on instructional design, the project aims to support educators in transitioning to the digital environment, thus enhancing the overall learning experience for their students.

The project sets out to achieve several key objectives:

- Improved Learning Outcomes by developing micro-learning experiences designed with clear learning objectives, appropriate content, and engaging instructional strategies.
- Enhanced flexibility, with micro-learning experiences that can be accessed anytime, anywhere, and on any device, allowing learners to learn at their own pace and on their own schedule.

- Increased engagement by providing interactive and engaging micro-learning experiences which can help learners stay motivated and focused.
- Better assessment of learning outcomes aligned with the learning objectives and the provision of meaningful feedback to learners.
- Improved professional development by designing professional development opportunities, promoting a culture of continuous learning and improvement within the VET community.

Introduction to the Competence Framework

To ensure the success of the ID Teachers project, a robust Competence Framework has been developed. This framework draws on various methodological guidelines and established competency models, including:

- **European Skills/Competences, qualifications, and Occupations (ESCO)** for Instructional Designers.
- **Design Perspectives**: A design skills strategy launched by the Design Council.
- **OECD PISA Global Competence Framework** for students in an interconnected world.
- **EntreComp:** The Entrepreneurship Competence Framework by the European Commission.
- **DigComp 2.0**: The Digital Competence Framework for Citizens by the European Commission.
- **GreenComp**: The European Sustainability Competence Framework by the European Commission.

These frameworks collectively ensure that VET practitioners are well-equipped with the necessary scientific, empirical knowledge, key skills, and practical strategies required to design and deliver high-quality digital learning experiences. By aligning with these comprehensive guidelines, the ID Teachers project aims to foster a culture of continuous professional development and innovation within the VET sector, ultimately enhancing the quality and effectiveness of digital education across Europe.

Competence Units

The training is based on the following Competence Units:

Competence Unit 1 - Understanding Learner-Centred Instructional Design

Competence Unit 2 – Designing Micro-Learning Modules

Competence Unit 3 – Adapting Content for Micro-Learning

Competence Unit 4 – Technology Tools for Micro-Learning

Competence Unit 5 – Assessment Strategies

Competence Unit 6 – Accessibility and Inclusivity in Instructional Design

Competence Unit 7 – Facilitation and Support in VET

Competence Unit 8 - Ethical Considerations in Instructional Design

Training Programme

Based on the Competence Units, the Training Programme comprises a full plan of novel pedagogical approaches and material in Learner-centred Instructional Design for micro-learning. The Training Programme is aimed at supporting education providers in planning and conducting training activities based on the EU Competence Matrix (PR2).

The Training Programme has been designed as a pedagogical tool providing a proposal of training contents and practical activities with which VET practitioners can work to develop and implement the EU COMPETENCE MATRIX (PR2).

Thus, the Training Modules include:

- **Training Contents**

A Course Plan including a brief suggestion of contents, proposed methodology, instructions for assessment, and tips for teachers, trainers and educators as well as references.

- **Practical Activities**

Description of some practical activities to be applied with ID-Teachers target users.

The Training Programme, structured to be accessible as a PDF document from the Virtual Campus (PR4), is meticulously designed to align with the project's overarching goals and methodologies. The content within these modules is not only informative but also practical, ensuring that VET practitioners and stakeholders can effectively apply the learned concepts in real-world scenarios.

Each training unit in this section encompasses a comprehensive range of elements - from the unit's title and objectives to suggested contents, methodology, assessment criteria, tips for VET practitioners, and relevant references.

Practical Activities delve into the application aspect of the training. Each activity outlined includes its name, objectives, a detailed description, necessary resources, and additional references for further exploration.

Training contents and practical activities

Competence Unit 1 - Understanding Learner-Centred Instructional Design

Competence Unit 2 – Designing Micro-Learning Modules

Competence Unit 3 – Adapting Content for Micro-Learning

Competence Unit 4 – Technology Tools for Micro-Learning

Competence Unit 5 – Assessment Strategies

Competence Unit 6 – Accessibility and Inclusivity in Instructional Design

Competence Unit 7 – Facilitation and Support in VET

Competence Unit 8 - Ethical Considerations in Instructional Design

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Competence Unit 1

Understanding Learner-Centred Instructional Design

A. TRAINING CONTENTS

Aims of the Unit

The aim of the unit "Understanding Learner-Centred Instructional Design" is to equip VET practitioners with the knowledge and skills to create instructional materials and programs that place the learner at the centre of the educational experience. This unit focuses on understanding the principles of learner-centred design, the methodologies that support active and engaging learning, and the application of these principles to vocational education and training. By the end of this unit, practitioners will be able to design and implement instructional strategies that enhance learner autonomy, engagement, and achievement, ensuring that educational outcomes align with both individual learner needs and broader vocational competencies. This holistic approach promotes a deeper understanding of content, encourages critical thinking, and supports lifelong learning in vocational contexts.

Suggested contents

Module 1: Fundamentals of learner-centred Instructional Design

This module introduces the core principles of learner-centred instructional design, focusing on how to create educational experiences that prioritize the needs, preferences, and experiences of learners. VET practitioners will learn the foundational concepts that differentiate learner-centred approaches from traditional methods and how these principles can be applied in vocational education settings. Through this module, participants will gain a solid understanding of how to shift the focus from the instructor to the learner, fostering greater engagement and autonomy.

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Lesson 1. Principles of learner-centred design

This lesson covers the core principles of learner-centred design, emphasising the importance of focusing on learners' needs, preferences, and experiences in creating effective educational programs. It explores how a learner-centred approach empowers students by providing opportunities for active participation and personalised learning experiences, ensuring that the educational process is responsive to individual learners' needs.

Lesson 2. Theories supporting learner-centred instruction

This lesson presents the theoretical foundations that support learner-centred instructional design, including constructivism, social learning theory, and self-determination theory. It examines how these theories inform teaching practices that foster learner independence, collaboration, and intrinsic motivation. The lesson also highlights how to enhance the learning experience and improve learner outcomes.

Lesson 3. Comparing traditional and learner-centred approaches

This lesson analyses the differences between traditional instructional methods and learner-centred approaches, highlighting the benefits and challenges of each. This comparison focuses on the benefits of a learner-centred model, such as increased learner engagement and deeper understanding of content, as well as the challenges that educators may face when transitioning from traditional methods.

Module 2: Designing engaging learning experiences

In this module, VET practitioners will explore strategies for designing learning experiences that actively engage learners and cater to a variety of learning styles. The focus will be on incorporating active learning techniques, integrating technology, and creating inclusive learning environments. By the end of the module, participants will be equipped with practical tools and techniques to make learning more interactive and relevant, ensuring that learners remain motivated and fully engaged throughout the educational process.

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Lesson 1. Active learning strategies

This lesson introduces active learning strategies, including collaborative learning, problem-based learning, and inquiry-based learning, and their application in VET settings. It shows how these strategies can be applied in vocational training settings to encourage learners to take an active role in their education.

Lesson 2. Integrating technology in learner-centred design

This lesson explores how to effectively integrate technology to enhance learner engagement and personalise learning experiences. It also covers the use of digital tools such as learning management systems (LMS), multimedia resources, and interactive platforms to enhance learner engagement and personalise learning experiences. This helps to understand how to choose appropriate technologies to meet the needs of diverse learners and support a more flexible, learner-driven education environment.

Lesson 3. Creating inclusive learning environments

This lesson focuses on designing learning experiences that are inclusive and accessible to all learners, considering diverse backgrounds and abilities. It explores strategies for making learning environments more inclusive, such as using universal design principles, adapting materials for different learning styles, and providing support for learners with disabilities.

Module 3: Assessment in learner-centred Instructional Design

This module delves into the assessment strategies that support a learner-centred instructional design approach. Participants will explore both formative and summative assessment techniques, with an emphasis on providing meaningful feedback and using data to inform instructional decisions. The module also introduces authentic assessment practices, ensuring that learners are not only evaluated on their knowledge but also on their ability to apply skills in real-world contexts. By the end, VET practitioners will be able to create assessments that are aligned with learner-centred principles and promote continuous learning and improvement.

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Lesson 1. Formative and summative assessment techniques

This lesson introduces various formative and summative assessment techniques that support learner-centred instruction and focuses on how assessments can provide meaningful feedback to learners, helping them track their progress and adjust their learning strategies. It also explains how formative assessments can be used to guide instructional decisions, while summative assessments evaluate overall learning outcomes.

Lesson 2. Authentic assessment practices

This lesson explains how to implement authentic assessment practices that reflect real-world tasks and challenges. These assessments are designed to measure not only what learners know but also how well they can apply their knowledge and skills in practical situations. The lesson provides examples of authentic assessments, such as project-based tasks and simulations, that are particularly relevant in vocational education settings.

Lesson 3. Using assessment data to inform instruction

This lesson focuses on how to use assessment data to inform and adapt instructional strategies to better meet the needs of learners. By analysing data from both formative and summative assessments, educators can identify areas where learners are struggling and adjust their teaching methods accordingly. The lesson also covers how data-driven decisions can help improve the overall effectiveness of instructional design and support continuous improvement in learner outcomes.

Module 4: Implementing and evaluating learner-centred programs

This module focuses on the practical aspects of implementing and evaluating learner-centred programs. VET practitioners will learn how to plan programs that foster learner autonomy and engagement, as well as how to evaluate their effectiveness through both qualitative and quantitative methods. The module also emphasizes continuous improvement, encouraging educators to reflect on their instructional practices and seek opportunities for ongoing development. By the end of the module, participants will be prepared to design, implement, and refine learner-centred programs that meet the diverse needs of vocational learners.

Lesson 1. Planning and implementing learner-centred programs

This lesson covers the steps involved in planning and implementing learner-centred programs, including how to set clear learning objectives, to design a flexible curriculum, and to select instructional strategies that promote learner engagement and autonomy. It also covers the importance of aligning instructional methods with learner needs and vocational education goals.

Lesson 2. Evaluating program effectiveness

This lesson is about learning how to evaluate the effectiveness of learner-centred programs using a combination of qualitative and quantitative methods. It provides practical tools for gathering feedback from learners and measuring the impact of instructional strategies on learning outcomes.

Lesson 3. Continuous improvement in instructional design

This lesson focuses on strategies for continuous improvement in instructional design. VET practitioners will explore how reflective practice, ongoing professional development, and peer collaboration can help them refine their instructional approaches over time. By embracing a mindset of continuous improvement, educators can stay responsive to the changing needs of learners and ensure that their instructional practices remain effective and relevant.

Methodology

The methodology for the "Understanding Learner-centred Instructional Design" unit should be dynamic and interactive, promoting active participation and real-world application. Key methodologies include:

Case studies and real-world scenarios: Utilise case studies and real-world scenarios to help learners connect theoretical concepts with practical applications. By analysing real-life examples, VET practitioners can better understand the complexities of learner-centred instructional design and apply best practices to their own contexts.

Role-playing and simulations: Engage participants in role-playing and simulations to foster experiential learning. These activities enable learners to practise designing and delivering learner-centred instruction in a controlled, supportive environment, enhancing their confidence and competence.

Collaborative learning: Encourage collaborative learning through group projects, discussions, and peer feedback. Collaborative activities not only help participants learn from each other but also model the cooperative and interactive nature of learner-centred instruction.

Reflective practice: Integrate reflective practice throughout the unit, encouraging participants to reflect on their experiences, identify areas for improvement, and develop action plans for implementing learner-centred strategies. Reflection helps deepen understanding and supports continuous professional growth.

Blended learning: Implement a blended learning approach that combines face-to-face sessions with online learning. This flexibility allows participants to engage with content at their own pace while benefiting from in-person interactions and discussions.

Hands-on activities: Design hands-on activities that require participants to apply learner-centred principles to create instructional materials, design assessments, and plan lessons. Practical exercises help solidify understanding and provide opportunities for immediate feedback and adjustment.

Feedback and iteration: Emphasise the importance of feedback and iteration in instructional design. Provide opportunities for participants to receive constructive feedback from peers and instructors, encouraging continuous refinement and improvement of their designs.

Assessment

Continuous feedback is an integral part of the training program for "Understanding Learner-centred Instructional Design." After each major activity or exercise, participants receive constructive feedback from facilitators and peers to guide their development. The program concludes with a comprehensive assessment that evaluates participants' understanding and application of the skills learned. This assessment includes practical demonstrations, written tests, and reflective essays. These diverse assessment methods ensure a thorough evaluation of both theoretical knowledge and practical competencies.

Practical demonstrations

Practical demonstrations are crucial for assessing the application of learner-centred instructional design principles in real-world scenarios.

Participants are required to design and deliver a lesson or training session that incorporates active learning strategies, integrates technology, and addresses diverse learner needs.

These demonstrations are evaluated based on the effectiveness of the instructional design, the engagement level of the learners, and the adaptability of the approach. Facilitators provide detailed feedback on each demonstration, highlighting strengths and areas for improvement to help participants refine their instructional techniques.

Written assessments

Written assessments measure participants' theoretical understanding of learner-centred instructional design concepts and principles. These assessments include quizzes, essays, and case study analyses. Participants are asked to explain key theories, compare traditional and learner-centred approaches, and propose solutions to instructional design challenges. Written assessments are graded based on accuracy, depth of understanding, and the ability to apply theoretical knowledge to practical situations. These assessments ensure that participants have a solid grasp of the foundational concepts necessary for effective instructional design.

Reflective essays

Reflective essays encourage participants to critically analyse their learning experiences and the development of their instructional design skills. In these essays, participants discuss the challenges they faced, the strategies they employed, and the outcomes of their practical demonstrations. They also reflect on the feedback received and outline plans for future improvement. Reflective essays are evaluated based on the level of insight, self-awareness, and commitment to ongoing professional development. This component fosters a deeper understanding of learner-centred instructional design and promotes continuous growth in instructional practices.

Tips for teachers, trainers and educators

- **Active engagement**

Foster an active learning environment by incorporating interactive activities such as group discussions, hands-on projects, and problem-solving exercises. Encourage learners to participate actively, ask questions, and engage in collaborative learning. Active engagement not only enhances understanding but also helps retain knowledge by making learning more enjoyable and memorable.

- **Real-world relevance**

Connect instructional content to real-world scenarios and practical applications. Use case studies, industry examples, and simulations to demonstrate how theoretical concepts are applied in professional settings. This approach helps learners understand the practical significance of their training, making it more relevant and motivating for them to learn and apply new skills.

- **Diverse learning styles**

Recognize and accommodate the diverse learning styles and needs of your students. Use a variety of teaching methods, such as visual aids, auditory materials, and kinaesthetic activities, to cater to different preferences.

Providing multiple ways to engage with the content ensures that all learners can understand and absorb the material effectively.

- **Continuous feedback**

Implement a system of continuous feedback to guide learners' progress and development. Provide constructive feedback after each activity or assessment, highlighting both strengths and areas for improvement. Encourage peer feedback to promote collaborative learning and self-assessment. Continuous feedback helps learners stay on track and fosters a growth mindset.

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B. PRACTICAL ACTIVITIES

Activity 1: Designing a learner-centred lesson plan

Aims of the Activity

The aim of this activity is to help VET practitioners apply the principles of learner-centred instructional design by creating a detailed lesson plan. Participants will focus on integrating active learning strategies, technology, and assessment methods that cater to diverse learning styles. By the end of this activity, participants will have a practical, ready-to-implement lesson plan that promotes learner engagement and autonomy. This activity also aims to enhance participants' skills in reflective practice by evaluating and refining their lesson plans based on peer and facilitator feedback.

Description of the Activity

Participants will be divided into small groups and tasked with designing a lesson plan for a specific vocational subject of their choice. The lesson plan must incorporate the following elements:

1. **Learning objectives**: Clearly define what learners should know and be able to do by the end of the lesson.
2. **Active learning strategies**: Integrate at least three different active learning strategies (e.g., group discussions, hands-on activities, problem-solving tasks) to engage learners.
3. **Use of technology**: Include at least one technological tool or resource (e.g., interactive simulations, online quizzes, multimedia presentations) to enhance learning.
4. **Diverse learning styles**: Design activities that address visual, auditory, and kinaesthetic learning styles.
5. **Assessment methods**: Plan formative assessments (e.g., quizzes, peer assessments, self-assessments) to monitor learner progress and provide feedback.

Steps to follow:

1. **Introduction** (10 minutes): Facilitators introduce the activity and explain the key components of a learner-centred lesson plan.

2. **Group work** (60 minutes): Participants collaborate in groups to design their lesson plans, using provided templates and guidelines.
3. **Presentation and feedback** (30 minutes): Each group presents their lesson plan to the class. Facilitators and peers provide constructive feedback, focusing on the integration of learner-centred principles.
4. **Reflection** (20 minutes): Groups reflect on the feedback received and discuss possible improvements to their lesson plans.

Resources

- **Templates**: Lesson plan templates with sections for learning objectives, active learning strategies, technology integration, diverse learning styles, and assessment methods.
- **Guidelines:** Detailed guidelines on how to incorporate learner-centred principles into lesson planning.
- **Technology:** Access to computers or tablets with internet connectivity for research and design purposes.
- **Materials:** Flip charts, markers, and sticky notes for brainstorming and planning.
- **Examples**: Sample learner-centred lesson plans for reference.

To find out more

- **Book**: "The Learner-centred Classroom and School: Strategies for Increasing Student Motivation and Achievement" by Barbara L. McCombs and Jo Sue Whisler.
- **Website**: EDUTOPIA offers a wealth of resources on learner-centred education. Retrieved from https://www.edutopia.org/
- **Video**: TED Talks on education and learner-centred instructional design, Bring on the learning revolution! (Sir Ken Robinson | TED2010) Retrieved from https://go.ted.com/6RXR

Activity 2: Designing interactive e-learning modules

Aims of the Activity

The aim of this activity is to enable VET practitioners to design engaging e-learning modules that incorporate interactive elements and utilize technology effectively. Participants will focus on creating modules that foster active learning, accommodate diverse learning styles, and integrate formative assessment methods. By the end of this activity, participants will have developed a comprehensive e-learning module ready for implementation. Additionally, this activity aims to enhance participants' skills in using digital tools and platforms to create interactive and learner-centred online content.

Description of the Activity

Participants will work individually or in pairs to design an e-learning module for a specific vocational subject. The module must incorporate the following elements:

1. **Interactive content**: Develop interactive content such as quizzes, drag-and-drop activities, and discussion forums to engage learners actively.
2. **Multimedia integration**: Use multimedia elements like videos, audio recordings, and animations to cater to various learning styles and enhance the learning experience.
3. **Learning objectives**: Clearly define what learners should achieve by the end of the module, aligning with vocational competencies.
4. **Formative assessments**: Plan and include formative assessments (e.g., short quizzes, peer reviews, self-assessment tasks) to monitor progress and provide feedback.
5. **User-friendly navigation**: Ensure the module is easy to navigate with clear instructions and intuitive design.

Steps to follow:

1. **Introduction** (10 minutes): Facilitators introduce the activity, explaining the importance of interactive e-learning and the key components of an engaging e-learning module.
2. **Planning and design** (60 minutes): Participants use provided templates and digital tools to design their e-learning modules, incorporating interactive content and multimedia elements.

3. **Peer review and feedback** (30 minutes): Participants present their e-learning modules to peers. Facilitators and peers provide constructive feedback focusing on interactivity, engagement, and alignment with learning objectives.
4. **Reflection and refinement** (20 minutes): Participants reflect on the feedback received and make necessary adjustments to their modules.

Resources

- Guidelines: Detailed guidelines on designing interactive e-learning modules, including best practices for multimedia integration and formative assessments.
- Technology: Access to computers or tablets with internet connectivity, e-learning authoring tools (e.g., Articulate Storyline, Adobe Captivate), and multimedia resources.
- Materials: Handouts with tips on creating interactive content and examples of successful e-learning modules.
- Examples: Sample e-learning modules demonstrating effective use of interactivity and multimedia.

To find out more

- **Book:** "E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning" by Ruth C. Clark and Richard E. Mayer.
- **Blog:** How to develop a highly interactive online training program by Fiona McSweeny. Retrieved from https://www.talentlms.com/blog/how-create-interactive-online-training-program/
- **Video:** TED Talks on e-learning and educational technology, such as "The Future of Learning" by Salman Khan. Retrieved from https://youtu.be/Xq_VujZtjyQ?feature=shared

Competence Unit 2

Designing Micro-Learning Modules

A. TRAINING CONTENTS

Aims of the Unit

Competence Unit 2 “Designing Micro-Learning Modules” aims to equip VET practitioners with the skills and knowledge to design effective micro-learning modules tailored to specific learning objectives. By covering foundational principles, multimedia integration, and practical content development and delivery strategies, the unit ensures that participants can create engaging, bite-sized learning activities that enhance learner engagement and retention.

Suggested contents

Module 1: Principles of micro-learning design

This module focuses on the foundational principles and best practices for designing effective micro-learning modules. It covers the core aspects of micro-learning, its benefits, and how to tailor content to meet specific learning objectives.

Lesson 1. Understanding micro-learning

This lesson introduces the core characteristics of micro-learning, highlighting its focus on brevity, relevance, and accessibility. VET practitioners will explore how micro-learning fits into the broader spectrum of educational methodologies and its specific advantages in the context of vocational education and training (VET). The lesson will provide examples of micro-learning modules and demonstrate how these can be applied in various VET scenarios. This will help VET practitioners leverage its strengths to enhance learner engagement and retention. Unlike traditional learning methods, micro-learning is designed to fit into the learners' daily routines, making it more flexible and accessible.

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This approach is particularly beneficial for learners who need to balance their education with work or other responsibilities.

Lesson 2. Aligning micro-learning with learning objectives

This lesson focuses on the critical aspect of aligning micro-learning modules with specific learning objectives. VET practitioners will learn how to identify clear and measurable learning objectives and structure their content accordingly. The lesson will cover techniques for breaking down larger learning goals into smaller, manageable tasks that can be addressed through micro-learning. Examples of effective objective-based micro-learning will be provided to illustrate best practices. Aligning micro-learning with learning objectives ensures that the content is directly relevant to the learners' needs. This will help to create targeted learning experiences that address specific skills and knowledge areas.

By focusing on well-defined objectives, educators can design micro-learning modules that are more likely to result in meaningful learning outcomes, emphasising the importance of precision in educational design.

Lesson 3. Designing for engagement and retention

This lesson explores various techniques to enhance learner engagement, such as using compelling storytelling, interactive elements, and real-world scenarios. Additionally, it delves into the principles of cognitive load theory, which helps VET practitioners understand how to present information in a way that minimises cognitive overload and maximises retention. Designing engaging and retention-focused micro-learning modules is essential to ensure that learners not only absorb but also retain and apply the information. This lesson provides practical strategies for making learning experiences more engaging and memorable, such as incorporating multimedia elements and frequent knowledge checks.

Module 2: Integrating multimedia and interactive elements

This module covers the integration of various multimedia elements and interactive features into micro-learning modules. It emphasises how to use these elements to enhance learning experiences and maintain learner interest.

Lesson 1. Effective use of multimedia

VET practitioners will learn how to use videos, infographics, animations, and audio clips for micro-learning in this lesson. The session will address multimedia integration best practices, including how to choose the right media for specific topics and how to make multimedia aspects support learning objectives.

The tools to develop these multimedia elements will not be explored in this unit, they will be explored in Competence Unit 4: Technology Tools for Micro-Learning. Effective multimedia use in micro-learning makes content more interesting and accessible. Multimedia lets students learn visually, auditorily, and kinaesthetically. This lecture stresses the need of carefully integrating multimedia to enhance learning rather than overwhelm it.

Lesson 2. Interactive features in micro-learning

This lesson emphasises interaction in learning and gives examples of interactive features for micro-learning modules. VET practitioners will discover how quizzes, simulations, clickable features, and other interactive tools may engage students. It will also address interactive content design best practices for creating and executing them. Interactivity keeps students engaged and enhances learning. Active learning helps students internalise and apply material. Interactive features in micro-learning can turn passive information consumption into active learning, as seen in this lesson.

Lesson 3. Gamification in micro-learning

Gamification uses game-like aspects to motivate and engage students. VET practitioners will learn how to apply gamification to micro-learning in this lesson. Gamified micro-learning activities like point systems, leader boards, and badges will be shown and discussed to motivate and engage learners. Understanding and using gamification can make micro-learning modules more appealing and effective for vocational trainers. Gamification uses our innate desire for competitiveness and achievement to make learning fun and engaging.

Module 3: Developing and implementing micro-learning content

This module focuses on the practical aspects of developing and implementing micro-learning content, from initial creation to final delivery. It includes strategies for creating engaging bite-sized learning activities, effective delivery methods, and methods for collecting and acting on learner feedback.

Lesson 1. Developing bite-sized learning activities

Micro-learning relies on bite-sized learning tasks, which this lesson teaches. The lesson will explore chunking knowledge into smaller, manageable parts and will provide examples of effective bite-sized learning activities. VET practitioners will learn how to create interesting and educational micro-learning units using various tools and strategies.

These activities help students understand and remember knowledge, fitting into their hectic schedules. This helps vocational training professionals build effective micro-learning content by emphasising succinct, targeted learning experiences that address specific learning objectives.

Lesson 2. Effective delivery methods for micro-learning

This lesson examines micro-learning delivery options. Micro-learning tools such mobile apps, LMS, email, and social media will be covered. The lesson will discuss the advantages and downsides of each communication strategy and how to choose the best one for the target audience and learning objectives. Accessible and engaging micro-learning content requires effective delivery mechanisms. Effective delivery can improve learner experience, retention, and application. Understanding delivery techniques' strengths and weaknesses helps vocational training professionals choose the best method for their micro-learning modules.

Lesson 3. Collecting and utilising learner feedback

This lesson emphasises student feedback and how it might improve micro-learning courses. VET practitioners will learn how to collect feedback via surveys, quizzes, and direct input. Analysis of feedback data and modifications to improve micro-learning content efficacy and engagement will also be covered in the class. Continuous instructional design improvement requires student feedback. This helps educators understand how students are using the material and how to improve it.

Methodology

The most suitable methodology for VET practitioners to develop and implement the contents of this Competence Unit is a blended learning approach, incorporating both synchronous and asynchronous methods. This methodology leverages a combination of face-to-face workshops, online tutorials, and interactive e-learning activities to provide a comprehensive and flexible learning experience, combining it with these approaches:

Blended learning

- **Synchronous Learning:** Conduct live workshops and webinars to introduce core principles and facilitate real-time interaction and collaboration. This allows practitioners to ask questions, engage in discussions, and participate in group activities.

- **Asynchronous Learning:** Provide online modules that learners can complete at their own pace. This includes video lectures, interactive multimedia content, and self-paced quizzes to reinforce understanding.

Project-Based learning: Encourage VET practitioners to work on real-world projects where they can apply the concepts and techniques learned. This helps in the practical application of designing micro-learning modules tailored to specific learning objectives.

Collaborative learning: Facilitate peer-to-peer learning through group projects, discussion forums, and peer reviews. This fosters a collaborative environment where practitioners can share insights, provide feedback, and learn from each other's experiences.

Interactive content: Incorporate interactive elements such as simulations, quizzes, and gamified activities to enhance engagement. This aligns with the lesson on integrating multimedia and interactive features, making the learning process more dynamic and effective.

Continuous feedback and iteration: Implement regular feedback mechanisms, such as surveys and reflection sessions, to gather insights from participants. Use this feedback to continuously refine and improve the training content and delivery methods.

Micro-Learning principles: Break down the training content into bite-sized modules that are easy to digest and retain. This mirrors the micro-learning approach, ensuring that the training itself exemplifies the techniques being taught.

Assessment

- **Formative assessments**

Quizzes and knowledge checks

Incorporate short quizzes and knowledge checks throughout the modules to gauge understanding of key concepts. These should be integrated into lessons on multimedia integration, interactive features, and engagement techniques.

Peer reviews
Utilise peer review sessions where participants evaluate each other's micro-learning projects. This encourages collaborative learning and provides diverse feedback.

- **Summative assessments**

Project-Based assessment
Require participants to design and implement a complete micro-learning module as a final project.

This project should align with specific learning objectives and demonstrate the integration of multimedia, interactive features, and engagement strategies.

Presentation and defence
Have participants present their projects to peers and instructors, explaining their design choices and how they address the learning objectives. This allows for a comprehensive evaluation of their understanding and application of the module content.

Self-assessment and reflection
Encourage participants to engage in self-assessment and reflective practices. This can include journaling their learning journey, identifying areas of improvement, and setting personal learning goals.

Continuous feedback
Provide detailed feedback from instructors on quizzes, activities, and projects. This should highlight strengths, areas for improvement, and practical advice for enhancing their micro-learning designs.

Tips for teachers, trainers and educators

- **Develop clear learning objectives**

Ensure that each micro-learning module is in line with stated, measurable learning objectives. This clarity aids in the creation of targeted, relevant, and effective information, allowing learners to reach their goals more easily.

- **Utilise multimedia and interactivity**

Integrate a variety of multimedia components (videos, infographics, animations) and interactive features (quizzes, simulations) to increase engagement and

accommodate different learning styles. This technique promotes student interest and retention.

- **Prioritise bite-sized, practical content**

Create material in small, digestible portions that are readily digested and applied. Each bite-sized exercise should focus on a particular topic or ability, allowing for quick learning and immediate application.

- **Collect and act on feedback**

To analyse the effectiveness of your microlearning modules, collect feedback from learners and peers on a regular basis. Use this input to iteratively modify the content, ensuring that it remains relevant, interesting, and meets the needs of the learners.

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B. PRACTICAL ACTIVITIES

Activity 1 - Micro-learning module design sprint

Aims of the Activity

The aim of this activity is to enable participants to design a single micro-learning module from scratch within a short time frame, as a competition among groups. This will help them practise creating concise, targeted content that effectively uses multimedia and interactive elements.

Description of the Activity

Duration: 1 hour

Group size: 2-4 participants per group

Steps to follow:

1. **Introduction** (5 minutes): Brief participants on the activity goals and provide a quick overview of the micro-learning design principles.
2. **Topic assignment** (5 minutes): Assign each group a specific learning objective or topic.
3. **Design Phase** (30 minutes): Groups create a complete micro-learning module, including:
   - Content: Develop a brief but comprehensive learning unit (e.g., a 5-minute video script or a single interactive infographic).
   - Multimedia: Select or create relevant multimedia elements (images, audio, video clips).
   - Interactivity: Design one interactive element (e.g., a quick quiz or a clickable infographic).
   - Presentation and feedback (15 minutes): Groups present their module to the class. Each group receives feedback based on clarity, engagement, and effectiveness.

4. **Instructions**: Encourage creativity while ensuring the content remains focused and relevant to the learning objective. Use available design tools or templates to aid in module creation.

5. **Evaluation**: Alignment with the learning objective, quality and relevance of multimedia elements and effectiveness and engagement of the interactive component.

Resources

- Design templates (for video scripts, infographics).
- Online design tools (Canva, PowerPoint).
- Feedback forms for peer review.

To find out more

- **Blog:** eLearning Industry. Creating effective microlearning modules. Retrieved from https://elearningindustry.com/elevating-microlearning-modules-with-proven-strategies
- **Video:** Canva. Canva design tutorials. Retrieved from https://www.canva.com/designschool/tutorials/designing/

Activity 2 - Micro-Learning meme challenge

Aims of the Activity

The aim of this activity is to engage participants in creating a humorous and educational micro-learning module using memes. This will help them practise condensing information into a single, impactful visual format while making learning fun and memorable.

Description of the Activity

Duration: 45 minutes

Group Size: 2-3 participants per group

Steps to follow:

1. **Introduction** (5 minutes): Explain the activity's goal and show examples of educational memes that effectively convey concepts in a fun way.
2. **Topic assignment** (5 minutes): Assign each group a specific concept or learning objective to convey through a meme
3. **Meme creation** (20 minutes): Groups use online meme generators (like Imgflip or Canva) to create a meme that:
   - Clearly conveys the assigned learning concept.
   - Incorporates humour to enhance engagement.
   - Includes a brief explanatory caption or tex
4. **Presentation and sharing** (10 minutes): Groups present their memes to the rest of the participants. Encourage discussions on how humour can aid in learning and the effectiveness of their chosen approach.
5. **Reflection** (5 minutes): Discuss what worked well and what could be improved. Reflect on how this approach can be applied to other micro-learning scenarios.
6. **Instructions:** Use meme generators to create a visual representation of the learning objective. Focus on clarity and humour while ensuring the educational value is maintained.
7. **Evaluation:** Clarity and relevance of the learning concept, effectiveness of humour in engaging and quality of the explanatory text or caption.

Resources

- Meme generators (Imgflip, Canva).
- Internet access for finding images and meme creation tools.
- Handouts with guidelines and examples of educational memes.

To find out more

Blog: Learning Scientists. (2023, August 17). How to create educational memes. Retrieved from https://www.learningscientists.org/blog/2023/8/17-1

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Competence Unit 3

Adapting Content for Micro-Learning

A. TRAINING CONTENTS

Aims of the Unit

Competence Unit 3 “Adapting Content for Micro-Learning” aims to equip VET practitioners with the skills and techniques needed to effectively transform existing content into micro-learning modules, focusing on the processes of structuring, simplifying, and enhancing content to optimise learning in a micro-learning format. Through practical strategies like chunking, sequencing, and incorporating visual and interactive elements, practitioners will learn how to adapt complex materials into concise, engaging, and learner-friendly micro-learning experiences.

Suggested contents

Module 1: Structuring and sequencing existing content for Micro-Learning

This module focuses on the foundational techniques of adapting existing educational content into micro-learning formats as a guide through the process of identifying essential content, breaking it down into manageable units, and arranging these units in a logical sequence to ensure a coherent and effective learning experience.

Lesson 1. Identifying and selecting core content segments

This lesson covers how to simplify complicated concepts for micro-learning. Practitioners will learn how to reword and reduce information to retain its instructional value, utilising straightforward language, clear descriptions, and avoiding jargon to make the subject more accessible and understandable.

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In micro-learning, content must be simplified to convey impactful lessons quickly and participants will practise simplifying difficult information with examples and exercises in this lesson.

Lesson 2. Chunking content into Micro-Learning units

Once the core content has been identified, the next step is to break it down into smaller, manageable pieces that can be easily digested in short, focused sessions. This lesson will explore the concept of content chunking (method that divides longer content into segments that are easier for learners to process) and retain. Participants will learn practical techniques for chunking content, such as grouping related information together, maintaining a logical flow, and ensuring each chunk has a clear and focused learning objective.

Lesson 3. Sequencing content for logical progression

After chunking the content, the next step is to arrange these chunks in a sequence that supports logical progression and reinforces learning. This lesson focuses on sequencing strategies that ensure learners build on prior knowledge as they move through the micro-learning modules.

Practitioners will explore different approaches to sequencing, such as linear progression (simple to complex), thematic grouping, and hierarchical structuring, depending on the nature of the content and the learners' needs.

Module 2: Enhancing and simplifying existing content for Micro-Learning

In this module, practitioners will learn how to simplify complex content and enhance it with visual and interactive elements. The goal is to make adapted content more accessible and engaging, ensuring that it retains its educational value while being optimised for the concise format of micro-learning.

Lesson 1. Simplifying complex content for Micro-Learning

This lesson explores the techniques of simplifying complex concepts so that they are more accessible in a micro-learning context. Participants will learn how to rephrase and condense information, focusing on the essence of the content without sacrificing its educational value. The lesson emphasises the importance of using plain language, clear definitions, and avoiding jargon, which can make the material more relatable and easier to understand.

Lesson 2. Adding visual enhancements to adapted content

Visual elements play a crucial role in making micro-learning content engaging and easier to comprehend. In this lesson, practitioners will explore how to enhance adapted content with visual aids such as images, infographics, and diagrams. The lesson will cover best practices for selecting or creating visuals that complement and reinforce the learning material, making abstract or complex ideas more tangible and memorable.

Lesson 3. Integrating interactive elements to increase engagement

Engagement is a critical factor in the success of micro-learning, and interactivity is one of the most effective ways to achieve it. This lesson focuses on adding interactive components to adapted content, such as quizzes, polls, and short activities. Participants will learn how to design these interactive elements to reinforce key concepts and encourage active participation, turning passive learning experiences into dynamic, engaging ones.

Module 3: Storytelling and Gamification in Micro-Learning adaptation

This module explores the use of storytelling and gamification as powerful tools for adapting content into micro-learning. VET practitioners will learn how to create engaging narratives and incorporate game-like elements to enhance learner motivation, making the adapted content more memorable and interactive.

Lesson 1. Utilising Storytelling techniques to simplify and engage

This lesson introduces practitioners to the power of storytelling as a method for adapting content into micro-learning. Storytelling can transform complex or dry material into relatable and engaging narratives that resonate with learners. Participants will explore how to identify key concepts and translate them into stories that simplify understanding and enhance retention. The lesson will cover the components of a compelling story, such as setting, characters, conflict, and resolution, and how these elements can be used to convey educational content.

Lesson 2. Incorporating Gamification elements to enhance motivation

In this lesson, practitioners will learn how to integrate gamification techniques into adapted content to increase learner engagement and motivation. Gamification involves adding game-like elements, such as points, badges, levels, and challenges, to the learning process.

The lesson will explore how these elements can be woven into micro-learning modules to make them more interactive and enjoyable.

Lesson 3. Evaluating and refining Storytelling and Gamification techniques

This final lesson focuses on the evaluation of storytelling and gamification techniques within micro-learning modules. Practitioners will learn how to assess the effectiveness of their adaptations through learner feedback, engagement metrics, and performance data. The lesson will cover methods for gathering and analysing feedback, as well as strategies for making iterative improvements based on that data.

Methodology

The most suitable methodology for VET practitioners when adapting content for micro-learning is a blended approach that combines active learning with design thinking principles. This approach emphasises learner engagement, iterative content development, and continuous improvement based on feedback.

Active learning: VET practitioners should prioritise active learning strategies that encourage learners to engage directly with the adapted content. Techniques such as case-based learning, problem-solving activities, and interactive discussions can help learners apply the concepts immediately, enhancing retention and understanding. For example, when integrating storytelling or gamification elements, learners can participate in creating their own stories or game scenarios, which reinforces the material and makes the learning experience more immersive.

Design thinking: This methodology is centred around empathy, creativity, and iterative refinement. VET practitioners begin by understanding the learners' needs and challenges, which informs how existing content should be adapted. Practitioners should prototype their micro-learning modules, test them with small groups, and gather feedback to make improvements. This iterative process ensures that the adapted content is not only engaging and effective but also tailored to the specific needs of the learners.

Assessment

Formative assessments

These are ongoing evaluations that take place throughout the learning process, rather than at the end. Formative assessments can include quizzes, short reflective activities, interactive polls, or quick tasks that align with each micro-learning segment. For example, after a storytelling-based lesson, learners could be asked to summarise the story's key points or apply the story's lesson to a new context.

These assessments help practitioners gauge learners' understanding in real-time and adjust the content if necessary.

Learner feedback mechanisms

Gathering direct feedback from learners is crucial in assessing the success of the adapted content. This can be done through surveys, focus groups, or feedback forms that ask learners about their engagement, the clarity of the content, and the effectiveness of the storytelling and gamification elements. Feedback should be collected regularly and analysed to identify patterns and areas for improvement.

Micro-learning analytics

Where applicable, practitioners should utilise digital platforms that track learners' progress, such as completion rates, time spent on modules, and performance on assessments. These analytics provide insights into how learners are interacting with the content and whether they are achieving the intended learning outcomes.

Tips for teachers, trainers and educators

- Focus on creating interactive and engaging learning experiences that encourage active participation.
- Utilise design thinking to iteratively adapt content based on learner feedback and needs.
- Ensure that content is scaffolded appropriately to allow for gradual knowledge acquisition and retention.
- Blend storytelling and gamification effectively to enhance motivation and make learning memorable.

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B. PRACTICAL ACTIVITIES

Activity 1 - Micro-Learning escape room

Aims of the Activity

The aim of this activity is to encourage participants to practise content adaptation in a dynamic, time-pressured environment. Participants will adapt a given set of instructions or knowledge into micro-learning tasks that guide their team to solve puzzles and "escape" the room.

Description of the Activity

Duration: 90 minutes

Group Size: 4-6 participants per group

Steps to follow:

1. **Introduction** (10 minutes): Introduce the concept of micro-learning and how small, focused tasks can lead to larger learning outcomes. Explain that the participants will be creating micro-learning tasks to form the basis of an escape room challenge.
2. **Escape Room setup** (20 minutes): The facilitator provides each group with a topic related to their field (e.g., cybersecurity basics, project management steps, or first-aid procedures). Groups must quickly brainstorm how to break down the content into 3-5 micro-learning tasks or puzzles. These tasks should each teach or reinforce one key concept that, when completed, will lead to the next clue or step in the escape room scenario.
3. **Create and play** (50 minutes): Groups design their micro-learning tasks as puzzles, ensuring they are engaging and informative. This could include creating short quizzes, physical challenges, or code-breaking exercises that align with the content. Once the tasks are ready, groups swap their puzzles with another team. Each team then attempts to solve the other group's escape room challenge within a set time (e.g., 20-25 minutes). Teams must rely on their micro-learning tasks to successfully "escape."
4. **Debrief and feedback** (10 minutes): After completing the escape room, teams discuss what worked well and where they encountered difficulties. The facilitator provides feedback, focusing on how effectively the micro-learning tasks were designed to convey the intended knowledge.

5. **Evaluation**: Participants will be evaluated on the creativity and effectiveness of their micro-learning tasks. The key criteria include how well the tasks communicated the core content, the level of engagement, and the logical progression of the tasks.

Resources

- Printed materials or digital tools for creating puzzles
- Physical items for escape room setups (e.g., locks, boxes, clues)
- Smartphones or tablets for any digital components

To find out more

- **Blog:** Stanford d.school. (n.d.). How to design an education escape room. Retrieved from https://dschool.stanford.edu/resources/escaperoom

Activity 2 - Micro-Learning adventure map

Aims of the Activity

The aim of this activity is to engage participants in adapting content into a micro-learning format by creating an interactive "adventure map." Each group will design a series of micro-learning experiences that guide learners through a journey, with each step teaching a new concept or skill.

Description of the Activity

Duration: 75 minutes

Group Size: 3-4 participants per group

Steps to follow:

1. **Introduction** (10 minutes): Explain the concept of an adventure map as a learning journey where each step represents a micro-learning experience.

Discuss how storytelling and gamification can enhance learner engagement.

2. **Map Creation** (45 minutes):
   - Each group selects a theme for their adventure map that aligns with a training topic (e.g., "Navigating the Digital World" for digital literacy, "Climbing the Leadership Mountain" for leadership skills).
   - Groups brainstorm a series of 4-5 micro-learning tasks or challenges that correspond to different "locations" or steps on the map. Each task should build on the previous one, helping learners progress in their journey.
   - Design the tasks to be engaging and interactive, incorporating elements like quizzes, short videos, or quick hands-on activities. The map should also include a final challenge that ties together everything the learner has experienced.
3. **Presentation and Journey** (20 minutes): Each group presents their adventure map and explains the reasoning behind the sequence of tasks. The facilitator and other participants provide feedback, focusing on how well the map guides learners through the micro-learning experiences and how effectively the tasks teach the intended concepts.
4. **Evaluation**: Participants will be evaluated on the creativity of their adventure map and the effectiveness of the micro-learning tasks. Key criteria include the clarity and engagement level of the tasks, the logical flow of the learning journey, and the use of storytelling or gamification elements.

Resources

- Paper, markers, and art supplies for drawing adventure maps
- Digital tools for creating interactive elements (e.g., Google Forms, Kahoot)
- Optional: digital platforms for creating virtual maps or scenarios

Competence Unit 4

Technology Tools for Micro-Learning

A. TRAINING CONTENTS

Aims of the Unit

The aim of this training unit is to equip VET (Vocational Education and Training) practitioners with the skills and knowledge needed to effectively utilise technology tools for micro-learning. It focuses on integrating digital tools and platforms to deliver concise, targeted learning modules that enhance engagement, adaptability, and learner-centered approaches in Dual Vocational Education and Training environments. The unit promotes innovative teaching strategies to support flexible and personalised learning pathways.

Suggested contents

Module 1: Introduction to micro-learning in VET

This module introduces participants to the concept of micro-learning and its application within vocational education. The lessons explore how short, targeted learning experiences can boost engagement, flexibility, and retention. Participants will learn to identify and use the best digital tools, such as learning management systems and video platforms, to create effective micro-learning units. Additionally, the module emphasizes best practices for designing engaging, multimedia-rich content, ensuring that learners can easily digest and retain information. By the end, educators will have practical skills to implement micro-learning in their teaching environments.

Lesson 1. Understanding micro-learning

This lesson introduces the concept of micro-learning, defining its key characteristics within vocational education. It explains how micro-learning delivers short, targeted learning experiences and discusses its benefits, including flexibility, enhanced learner engagement, and improved retention.

Lesson 2. Digital tools for micro-learning

This lesson provides an overview of digital tools such as learning management systems (LMS), video platforms, and apps suitable for micro-learning. It guides participants in evaluating the pros and cons of different tools for specific vocational contexts, helping them explore and select the most appropriate tools for creating and delivering micro-learning content tailored to their teaching environment.

Lesson 3. Designing effective micro-learning units

This lesson focuses on effective micro-learning design techniques, exploring the principles of chunking content and creating concise learning modules. It also reviews best practices for integrating multimedia to enhance understanding and retention, ensuring that learning experiences are engaging and easily digestible.

Module 2: Implementing micro-learning strategies

Here we put focus on equipping educators with the tools and techniques to implement micro-learning strategies in vocational education. Participants will first explore how to create engaging, interactive content such as quizzes, dynamic videos, and games to actively involve learners in developing practical skills. The second lesson emphasizes the growing importance of mobile learning platforms, teaching participants how to optimize content for mobile devices and ensure accessibility in vocational training. Finally, the module demonstrates how to integrate micro-learning within Dual VET settings through real-world case studies, offering best practices for seamless implementation in both classroom and workplace environments.

Lesson 1. Creating interactive content

This lesson covers techniques for developing interactive and engaging content that supports vocational skills training, focusing on creating dynamic videos, quizzes, and games. It explores the use of authoring tools to design content that effectively builds practical skills and knowledge, ensuring learners are actively involved in the learning process.

Lesson 2. Using mobile learning platforms

This lesson explores the benefits of mobile-first micro-learning and emphasizes the importance of responsive design in creating accessible content.

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the European Union

It guides participants through the steps of selecting and implementing mobile apps effectively, particularly within dual vocational education, ensuring that micro-learning experiences are optimized for mobile devices.

Lesson 3. Integrating micro-learning in Dual VET settings

This lesson explores methods for embedding micro-learning seamlessly into both classroom and workplace-based training environments. It presents real-world case studies demonstrating successful integration of micro-learning in vocational education and training (VET) programs, highlighting best practices and effective approaches for incorporating these techniques.

Module 3: Enhancing engagement with micro-learning

Lessons are designed to help educators enhance learner engagement through micro-learning strategies by incorporating gamification, personalization, and social learning. Participants will first explore how to use game mechanics like points, badges, and leader boards to create motivating learning environments. The second lesson focuses on personalization through adaptive learning technologies, guiding educators on how to tailor content based on individual learner performance and data analytics. Finally, the module emphasizes fostering collaboration and peer-to-peer learning, showing participants how to integrate social learning platforms to promote teamwork and communication in micro-learning settings.

Lesson 1. Gamification and micro-learning

This lesson explores the use of gamification elements, such as points, badges, and leader boards, to motivate and engage learners in micro-learning environments. It guides participants in designing activities that incorporate game mechanics to reinforce learning objectives, ensuring that these elements align with and support the achievement of educational goals and outcomes.

Lesson 2. Personalization and adaptive learning

This lesson focuses on leveraging adaptive learning technologies to create personalized learning experiences by customizing content based on learner performance. It also covers the use of data analytics for ongoing personalization and improvement, teaching participants how to analyse data to tailor content effectively to meet individual learner needs.

Lesson 3. Social learning and collaboration

This lesson focuses on using micro-learning to foster peer-to-peer learning and collaboration through platforms such as discussion forums, social media, and group projects. It guides participants in integrating collaborative tools to enhance communication and teamwork skills, providing strategies for incorporating social and collaborative elements into learning environments to encourage engagement and interaction among learners.

Module 4: Evaluating and improving micro-learning approaches

Continuous evaluation and improvement of micro-learning approaches within vocational education are discussed here. Participants will first learn how to effectively assess learner progress using formative and summative assessment tools, ensuring that learning outcomes are met and instructional strategies are adapted. The second lesson emphasizes the importance of gathering both qualitative and quantitative feedback from learners, offering techniques for collecting and using feedback to iterate and refine micro-learning content. The final lesson explores future trends in micro-learning, highlighting emerging technologies like AI, VR, and AR, and how they can be integrated into VET programs to enhance learner engagement and outcomes.

Lesson 1. Assessing learner progress

This lesson focuses on utilizing formative and summative assessment tools to effectively measure learning outcomes. It guides participants in applying assessment results to refine and adapt micro-learning strategies, emphasizing the use of assessment data to continuously enhance learner progress and the overall effectiveness of instructional approaches.

Lesson 2. Gathering feedback and iteration

This lesson covers methods for collecting both qualitative and quantitative feedback from learners, emphasizing the importance of feedback in the micro-learning process. It teaches techniques for gathering feedback effectively and using it to make iterative improvements in micro-learning content and delivery, ensuring a responsive and continuously evolving learning experience.

Lesson 3. Future trends in micro-learning

This lesson examines the future landscape of micro-learning by exploring emerging technologies such as AI and VR/AR, focusing on their potential impact on vocational education.

Co-funded by the European Union

It discusses the challenges and opportunities these innovations present, providing insights into how they can be effectively integrated into VET programs to enhance learning experiences.

Methodology

To enhance this unit, apply an experiential learning methodology focused on active participation and reflection. Begin with brief theory sessions to introduce key concepts, followed by practical, hands-on activities using real-world tools and scenarios related to VET and micro-learning. Use collaborative projects and group work to promote peer-to-peer learning and problem-solving. Integrate digital simulations and role-playing exercises to help participants apply new skills in a safe environment. Facilitate regular feedback sessions and self-assessments to encourage reflection and adapt the training dynamically. This approach ensures deep learning and practical application of technology tools in diverse educational settings.

Assessment

To ensure comprehensive evaluation, employ three key assessment methods: diagnostic, formative, and summative. Diagnostic assessments identify participants' initial knowledge levels and learning needs. Formative assessments provide ongoing feedback and guidance during the training process. Summative assessments evaluate the participants' overall understanding and mastery of the skills and concepts taught.

Diagnostic Assessment

Begin with a pre-training test or survey to gauge participants' existing knowledge and skills, allowing instructors to tailor content and focus areas effectively.

Formative Assessment

Utilise quizzes, polls, and interactive activities throughout the training to provide continuous feedback, enabling participants to adjust their learning strategies and progress.

Summative Assessment

Conclude with a comprehensive final project or exam that requires participants to demonstrate their knowledge and skills in a practical, real-world context, ensuring understanding of the subject matter.

Tips for teachers, trainers and educators

- Start small and simple.
- Design with purpose.
- Use interactive elements.
- Encourage mobile learning.
- Gather and use feedback.

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B. PRACTICAL ACTIVITIES

Activity 1 - Implementing a support mechanism

Aims of the Activity

The aim of this activity is to empower Vocational Education and Training (VET) and Dual Vocational Education and Training (DVT) practitioners with the skills and knowledge to effectively integrate technology tools for micro-learning into their educational practices.

This activity equips VET and DVT practitioners with the skills to integrate technology tools for micro-learning into their teaching. It focuses on understanding micro-learning principles, exploring relevant technology tools, and developing practical skills for creating engaging, bite-sized content. Practitioners will learn to enhance learner engagement, implement micro-learning in their programs, and continuously improve their use of technology for effective educational outcomes.

It aims to ensure that VET and DVT practitioners can effectively harness technology to create impactful, flexible, and learner-centred educational experiences through micro-learning.

Description of the Activity

The activity provides a structured approach to help educators adopt technology tools that support micro-learning. It combines theoretical understanding with practical application to create bite-sized, engaging learning experiences that fit within modern digital and vocational settings.

Introduction to micro-learning

Objective: Introduce participants to the core concepts of micro-learning. This includes explaining how delivering small, targeted lessons can increase learner engagement and retention.

Activity: Participants will explore case studies where micro-learning has been successfully implemented in VET programs.

Exploration of technology tools

Objective: Familiarise participants with various tools such as LMS, mobile apps, and content creation platforms.

Activity: A hands-on demonstration where practitioners are shown how to use different tools to create short lessons, quizzes, and interactive content.

Content creation workshop

Objective: Allow practitioners to design their own micro-learning modules tailored to their specific vocational field.

Activity: Participants will create their own content using selected technology tools, with a focus on interactivity and learner engagement. They'll also incorporate assessments to evaluate understanding.

Implementation strategies

Objective: Equip educators with strategies to integrate micro-learning into existing VET and DVT programs.

Activity: Group discussions on challenges, solutions, and best practices for implementing micro-learning within vocational training environments.

Assessment and feedback

Objective: Help practitioners continuously improve their micro-learning efforts.

Activity: Participants will evaluate each other's modules, providing feedback on clarity, engagement, and effectiveness. Discussions will focus on how to measure the success of micro-learning implementations and iterate on improvements.

Outcomes

Skill development: Participants will gain practical skills in creating and managing micro-learning content using digital tools.

Learner engagement: Educators will learn strategies for maintaining learner attention and motivation through smaller, more frequent content delivery.

Enhanced delivery: VET and DVT practitioners will be able to deliver flexible, scalable, and engaging educational content aligned with the demands of modern vocational training.

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The activity not only empowers educators to better use technology but also prepares them to meet the evolving needs of students in a digital age.

Steps to Follow:

1. Introduction to Micro-Learning (20 minutes): Overview of micro-learning principles and benefits.
2. Exploring Technology Tools (40 minutes): Demonstration of platforms and tools for creating micro-learning modules.
3. Hands-on Tool Practice (60 minutes): Participants experiment with tools, creating short, interactive learning modules.
4. Designing Engaging Content (40 minutes): Guidance on crafting engaging, bite-sized content for various learner types.
5. Implementing Micro-Learning in VET/DVT Programs (50 minutes): Steps to integrating micro-learning into existing programs.
6. Feedback and Reflection (20 minutes): Discussion on improvements and sharing insights with peers.

This structured activity aims to equip practitioners with practical, tech-driven skills for creating effective micro-learning experiences in their training environments.

Resources

- Digital Content Creation Tools: Tools like Canva, Adobe Spark, or Google Slides for designing visually engaging micro-learning modules.
- Learning Management System (LMS) Access: Platforms like Moodle or Google Classroom for managing micro-learning content and tracking student progress.
- Mobile Learning Apps: Introduction to mobile-based learning platforms such as Kahoot! or Quizlet for creating interactive learning exercises.
- Templates and Frameworks: Pre-designed micro-learning templates to help practitioners structure their lessons (e.g., video, text, quiz formats).
- Case Studies: Real-world examples of successful micro-learning implementations in VET and DVT settings to inspire and guide practitioners.
- Video Tutorials: Step-by-step videos on using specific tools and platforms effectively.
- Assessment Tools: Quizzes and evaluation tools like Google Forms or Mentimeter for measuring learner engagement and understanding.
- User Guides and Manuals: Documentation on how to use key technology tools (e.g., LMS manuals, mobile app setup guides).
- Collaboration Platforms: Tools like Microsoft Teams or Slack for enabling peer discussion, feedback, and support among participants.

- Data Security Best Practices: Guidelines and resources on ensuring privacy and data security when using technology for micro-learning.

To find out more

- Book: Kapp, K. M., & Defelice, R. A. (2019). Microlearning: Short and sweet. Association for Talent Development (ATD). Retrieved from https://www.amazon.com/Microlearning-Short-Sweet-Karl-Kapp/dp/1562865852
- Blog: Docebo. The ultimate guide to microlearning. Retrieved from https://www.docebo.com/learning-network/blog/microlearning-/

  Whatfix. How microlearning can help close the skills gap. Retrieved from https://whatfix.com/blog/microlearning-examples/
- Video: TalentCards. What is microlearning? Retrieved from https://www.youtube.com/watch?v=1itJ8VIeeX4
- Platform: Axonify - A platform designed for microlearning, great for training and improving knowledge retention through gamification. Retrieved from https://axonify.com/

Activity 1 - Platforms for micro-learning

Aims of the Activity

The objectives of this unit are to help VET and DVT practitioners use digital platforms for delivering concise, targeted micro-learning modules. The focus is on creating adaptable, learner-centered content that promotes engagement and flexibility in vocational training environments. Practitioners will learn to utilize platforms effectively, design interactive modules, and adapt learning strategies to meet individual needs, ensuring that students stay motivated and involved in their own learning process. This will support learners in balancing both work-based and academic learning.

Description of the Activity

The activity designed to enable VET and DVT practitioners to use platforms for delivering concise, targeted learning modules in micro-learning environments is a structured training session aimed at empowering educators with practical, technology-driven skills.

Introduction to micro-learning and platform integration

Objective: A brief overview of micro-learning, its advantages, and how digital platforms can streamline the delivery of short, focused learning modules.
Activity: Discuss the role of adaptability and learner engagement in dual vocational education.

Exploring digital platforms

Objective: Hands-on demonstration of popular platforms (e.g., LMS, mobile apps) that can support micro-learning.
Activity: Show how these platforms can enhance interactivity, track learner progress, and customize the learning experience.

Designing concise learning modules

Practical exercise: Participants create micro-learning modules on their chosen topics, focusing on brevity, learner engagement, and adaptability.

Adapting to learner needs

Objective: Discuss the importance of creating learner-centred modules that allow for flexibility in pacing and content consumption.
Activity: Show how platforms can help personalize the learning experience for different vocational contexts.

Engagement strategies for micro-learning

Objective: Introduction to multimedia tools, quizzes, and gamification features that can increase learner motivation and participation.
Activity: Participants apply these elements to their own module designs.

Evaluation and reflection

Objective: A group discussion on the challenges and successes of creating micro-learning content.

Activity: Provide feedback on module designs, focusing on engagement, adaptability, and effectiveness.

Outcomes:

By the end of the activity, practitioners will have the skills to design and implement targeted, engaging micro-learning modules using digital platforms, tailored to the needs of vocational learners

Steps to follow:

1. Introduction to micro-learning and platform integration (20 minutes):
   - Brief explanation of micro-learning principles and its role in vocational education.
   - Overview of how digital platforms can be used to deliver focused, engaging learning content.

2. Exploring digital platforms for micro-learning (40 minutes)
   - Walkthrough of different platforms (LMS, mobile apps, etc.) that support micro-learning.
   - Demonstration of key features, including course creation, learner tracking, and content delivery.

3. Creating a concise micro-learning module (60 minutes)
   - Participants work on developing short, focused modules using the platform of their choice.
   - Emphasis on designing learner-centred, adaptable content.

4. Adapting to learner needs (30 minutes)
   - Discussion on flexibility and personalizing content for diverse learners.
   - Participants modify their modules to incorporate adaptable elements based on learner profiles.

5. Engagement strategies for micro-learning (30 minutes)
   - Introduction to tools that increase learner engagement (e.g., multimedia, quizzes, gamification).
   - Participants apply these strategies to their modules.

6. Group feedback and reflection (20 minutes)
   - Group presentation of modules with peer feedback.
   - Reflection on challenges, improvements, and successful strategies.

Co-funded by the European Union

Resources

- Digital content creation tools: Tools like Canva, Adobe Spark, or Google Slides for designing visually engaging micro-learning modules.
- Access to learning management systems (LMS) such as Moodle, Google Classroom, or Edmodo for participants to explore micro-learning features.
- Use of quiz and gamification tools, such as Kahoot, Quizizz, or H5P, to integrate interactive elements.
- Multimedia resources from stock libraries like Pexels or Unsplash for visual enhancements.
- Mobile learning apps such as TalentCards or Axonify to deliver micro-learning content through mobile devices.
- Micro-learning best practices guides, available as documentation, outlining effective strategies for creating concise learning materials.
- Accessibility tools, like Microsoft's Accessibility Checker or Wave, to ensure inclusive and accessible content creation.
- Peer-reviewed research papers on micro-learning to provide participants with theoretical foundations and evidence-based practices.

To find out more

- Book: Dirksen, J. (2011). Design for how people learn. New Riders.

  Kapp, K. M. (2020). Microlearning: Short and focused learning for professional development. ATD Press.

- Blog: Vyond. The complete guide to microlearning videos. Retrieved from https://www.vyond.com/blog/the-complete-guide-to-microlearning-videos/

  Elucidat. Best microlearning examples. Retrieved from https://www.elucidat.com/blog/microlearning/

- Video: YouTube. Microlearning explained. Retrieved from https://www.youtube.com/watch?v=gkfc5mKgGOQ

  YouTube. Microlearning in vocational education. Retrieved from https://www.youtube.com/watch?v=gGsVapQFJ98

- Publications: DC dVET. Dual vocational education and training insights. Retrieved from https://www.dcdualvet.org/topics-and-resources/

  OECD. Building future-ready VET systems. Retrieved from https://www.oecd-ilibrary.org/education/building-future-ready-vocational-education-and-training-systems

Competence Unit 5

Assessment Strategies

A. TRAINING CONTENTS

Aims of the Unit

This unit aims to empower VET practitioners to design and implement effective assessment strategies suited for micro-learning environments. By focusing on formative and summative assessments, adaptive approaches, and performance-based methods, practitioners will enhance their ability to evaluate learner outcomes and support continuous improvement. The unit emphasises developing skills in providing constructive feedback, facilitating reflection, and personalising learning experiences to meet diverse learner needs, ultimately guiding them towards achieving specific learning outcomes.

Suggested contents

Module 1: Designing effective assessments

This module aims to equip instructional designers with the skills and knowledge necessary to create effective formative and summative assessments in micro-learning environments. It covers techniques for evaluating learner progress, ensuring assessments align with learning outcomes, and providing feedback that supports continuous improvement.

Lesson 1. Formative assessments for Micro-Learning

Formative assessments are critical tools for monitoring learner progress and providing immediate feedback. This lesson explores various formative assessment principles and methods, such as quizzes, polls, and peer assessments, focusing on their role in supporting continuous learning and engagement in micro-learning contexts. Participants will learn to design formative assessments that reflect learner progress and enhance engagement, applying learning theories such as cognitivism and constructivism.

By creating actionable feedback mechanisms, they will develop their skills in assessment design and feedback provision, taking responsibility for fostering continuous learner development.

Lesson 2. Summative assessments in Micro-Learning

Summative assessments evaluate overall achievement at the end of a learning segment. This lesson guides participants in designing summative assessments, such as final quizzes and practical projects, that effectively measure whether learners have met the course objectives. Participants will utilise instructional design models to create assessments that reflect the completion of learning objectives and accurately measure learner achievement.

Lesson 3. Creating assessment blueprints

Assessment blueprints are essential for ensuring comprehensive coverage of learning outcomes. This lesson helps participants develop blueprints that align assessments with course objectives, providing a structured approach to evaluation. By mapping assessments to learning outcomes, participants will ensure that all objectives are addressed, developing their skills in creating detailed assessment plans and taking responsibility for the thorough evaluation of learner progress.

Module 2: Performance-based and adaptive assessments

This module explores performance-based and adaptive assessments, focusing on evaluating practical skills and personalising learning experiences. Participants will learn to design assessments that cater to individual learner needs and accurately measure skill application.

Lesson 1. Implementing performance-based assessments

Performance-based assessments evaluate learners' practical application of skills through real-world scenarios. This lesson covers designing tasks such as case studies and role-plays that effectively measure skill application and problem-solving abilities. Participants will apply theories of learning and instructional design to create realistic tasks and develop rubrics for evaluating performance-based assessments, enhancing their skills in creating and evaluating practical assessments.

Lesson 2. Designing adaptive assessments

Adaptive assessments tailor learning experiences to individual needs by adjusting to learners' responses. This lesson introduces principles of adaptive assessment design and the use of technology to create personalised learning experiences. Participants will design adaptive assessments that cater to diverse learner needs, applying adaptive learning theories to enhance engagement and personalization.

Lesson 3. Analysing and interpreting performance data

Analysing data from assessments helps evaluate their effectiveness and improve instructional strategies. This lesson focuses on techniques for interpreting performance data to refine assessment methods and enhance learning outcomes. Participants will apply data analysis techniques to evaluate assessment practices and make data-driven decisions for improvement.

Module 3: Feedback mechanisms and engagement techniques

This module focuses on feedback strategies and engagement techniques essential for supporting learner reflection and participation. Participants will learn to provide constructive feedback and design engaging micro-learning activities.

Lesson 1. Providing constructive feedback

Effective feedback is crucial for guiding learner development. This lesson explores strategies for delivering constructive feedback that encourages reflection and improvement, focusing on various feedback methods. Participants will learn to provide clear, actionable feedback and apply feedback principles to support learner growth and improvement.

Lesson 2. Enhancing learner engagement

Engaging learners is vital for their success in micro-learning activities. This lesson covers techniques for designing interactive and immersive learning experiences that maintain learner interest and foster active participation. Participants will apply engagement theories to create motivating learning activities and enhance learner participation.

Lesson 3. Implementing learner self-assessment

Self-assessment empowers learners to evaluate their progress and set personal goals. This lesson introduces methods for incorporating self-assessment into micro-learning to foster learner autonomy and reflection.

Participants will develop tools and methods for effective self-assessment, supporting learners in reflecting on their progress and setting goals.

Methodology

Case Studies: Case studies and real-world scenarios will provide context and practical examples of how assessment strategies are applied in micro-learning environments. By examining case studies from various industries and educational settings, practitioners can understand the nuances of effective assessment design and its impact on learner outcomes. Focus on diverse examples to illustrate different assessment methods. Encourage participants to analyse and discuss these cases to identify best practices and potential pitfalls. This approach helps bridge the gap between theory and practice.

Role-playing and simulations: Description: Role-playing and simulations allow participants to actively engage in designing and implementing assessments. Through these interactive exercises, participants can practise creating and applying assessments in simulated micro-learning scenarios, gaining first-hand experience in adapting their strategies to various contexts. Use realistic simulations that mirror common challenges in micro-learning. Encourage participants to adopt different roles (e.g., learner, instructor) to gain multiple perspectives. This experiential learning helps participants refine their skills and build confidence in their assessment practices.

Collaborative workshops: Collaborative workshops involve group activities where participants work together to design, critique, and improve assessment strategies. This methodology fosters peer learning, encourages the exchange of ideas, and helps participants develop a deeper understanding of assessment principles. Structure workshops to include brainstorming sessions, group discussions, and peer reviews. Provide guidance and feedback throughout the process to ensure participants are effectively applying assessment principles. This collaborative approach enhances learning and supports the development of practical skills.

Reflection and feedback sessions: Reflection and feedback sessions are integral for evaluating and improving assessment strategies. Participants will engage in structured reflection on their assessment designs and receive feedback from peers and facilitators. This process helps identify strengths, areas for improvement, and strategies for ongoing development. Incorporate reflective activities, such as journals or group discussions, to encourage participants to critically analyse their work.

Provide constructive feedback that focuses on both strengths and areas for growth. This methodology supports continuous improvement and the application of learning outcomes.

Assessment

Practical demonstrations

Participants will demonstrate their ability to design and implement formative, summative, performance-based, and adaptive assessments through practical exercises. These demonstrations will be assessed based on clarity, effectiveness, and alignment with learning outcomes.

Written assessments

Written assessments will test participants' theoretical knowledge and application of assessment principles. This will include short-answer questions and case studies to evaluate their understanding of assessment methods and their ability to apply them in micro-learning contexts.

Reflective essays

Participants will submit reflective essays discussing their experiences with assessment design and feedback implementation. These essays will assess their ability to critically analyse their practice, integrate feedback, and articulate their learning and development.

Tips for teachers, trainers and educators

- Design assessments that actively involve learners, using interactive methods and real-world scenarios to enhance motivation and learning outcomes.
- Incorporate adaptive assessment techniques to cater to individual learner needs, providing personalised feedback that supports diverse learning paths.
- Ensure feedback is provided promptly and is constructive, helping learners understand their progress and areas for improvement.
- Encourage learners to reflect on their performance and feedback to deepen their understanding and foster continuous improvement.

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B. PRACTICAL ACTIVITIES

Activity 1 - Designing and Implementing Formative Assessments

Aims of the Activity

The aim of this activity is to equip participants with practical skills in designing formative assessments that monitor learner progress and provide timely feedback in micro-learning environments. Participants will apply formative assessment principles and techniques, such as quizzes, polls, and peer assessments, to create effective tools for continuous learner engagement and improvement.

Description of the Activity

Participants will work in small groups to design and implement formative assessments tailored to a specific micro-learning scenario.

Steps to follow:

The activity will begin with a brief review of formative assessment principles, emphasising their role in tracking learner progress and providing immediate feedback.

Each group will select a micro-learning topic and create a set of formative assessments, including quizzes, polls, and peer assessments. They will outline the purpose of each assessment, the intended learning outcomes, and the feedback mechanisms.

Groups will then exchange their assessments with another group for peer review, providing constructive feedback on the design and effectiveness of the assessments.

Finally, participants will refine their assessments based on the feedback received and present their final versions to the class. The presentations will include a discussion on the rationale behind their design choices and how the assessments align with the learning outcomes.

Co-funded by the European Union

Resources

- Handouts on formative assessment principles and techniques
- Access to online tools for creating quizzes and polls (e.g., Google Forms, Kahoot, Mentimeter)
- Peer assessment guidelines and templates
- Whiteboards and markers for group discussions
- Computers or tablets for designing digital assessments

To find out more

- **Book:** Angelo, T. A., & Cross, K. P. (1993). Classroom assessment techniques: A handbook for college teachers (2nd ed.). Jossey-Bass.

  Organisation for Economic Co-operation and Development (OECD). (2005). Formative assessment: Improving learning in secondary classrooms. OECD Publishing.

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Activity 2 - Developing and Evaluating Performance-Based Assessments

Aims of the Activity

The aim of this activity is to enable participants to develop performance-based assessments that effectively measure practical skills and the application of knowledge in micro-learning contexts. Participants will design realistic tasks and scenarios, such as case studies and role-plays, and create rubrics for evaluating performance-based assessments.

Description of the Activity

Participants will be divided into pairs and tasked with developing a performance-based assessment for a specific micro-learning module.

Steps to follow:

The activity will start with an overview of performance-based assessment methods, focusing on their importance in evaluating practical skills and knowledge application.

Each pair will choose a micro-learning topic and create a performance-based assessment, such as a case study or role-play scenario. They will develop detailed rubrics and criteria for evaluating the assessment, ensuring alignment with the intended learning outcomes.

After designing the assessment, pairs will exchange their assessments with another pair for peer review. Participants will provide feedback on the clarity, feasibility, and alignment of the assessment with learning outcomes.

Based on the feedback, pairs will refine their assessments and present their final versions to the class. Presentations will include an explanation of the design process, the chosen assessment method, and the evaluation criteria.

Resources

- Handouts on performance-based assessment principles and methods
- Examples of case studies and role-play scenarios
- Rubric templates and guidelines for creating evaluation criteria
- Whiteboards and markers for brainstorming and drafting assessments
- Computers or tablets for typing and formatting assessment materials

To find out more

- **Book:** Brookhart, S. M. (1999). The art and science of classroom assessment: The missing part of pedagogy. ASCD.

  Howard, L. (2018). Performance-based assessment: Promoting achievement for all students. Teachers College Press.

- **Blog:** TeachThough. Performance-based assessment resources. Retrieved from https://www.teachthought.com

  National Education Association (NEA). Performance-based assessment strategies. Retrieved from https://www.nea.org

Competence Unit 6

Accessibility and Inclusivity in Instructional Design

A. TRAINING CONTENTS

Aims of the Unit

The aim of this training unit is to empower VET (Vocational Education and Training) practitioners to integrate accessibility and inclusivity into their instructional design practices. It focuses on developing the skills and knowledge needed to create learning environments and materials that accommodate diverse learners, including those with disabilities. The unit promotes strategies for designing accessible content, utilizing inclusive teaching methods, and ensuring equal access to learning opportunities in Dual Vocational Education and Training settings.

Suggested contents

Module 1: Foundations of accessibility and inclusivity

This module provides a foundational understanding of accessibility and inclusivity in education, with a focus on vocational training environments. It begins by introducing the concept of accessibility, highlighting the importance of ensuring that all learners, including those with disabilities, can fully participate in educational experiences. The module then delves into the principles of Universal Design for Learning (UDL), which supports diverse learners by offering multiple ways to engage, represent, and express understanding. Finally, participants will explore common barriers to learning and gain strategies to mitigate or remove these obstacles, fostering a more inclusive and supportive learning environment.

Co-funded by the European Union

Lesson 1. Understanding accessibility in education

This lesson introduces the concept of accessibility in education, emphasizing its role in ensuring all learners can participate fully. It covers relevant legal frameworks and standards.

Lesson 2. Principles of Universal Design for Learning (UDL)

This lesson explains the key principles of UDL, its multiple means of representation, action, and expression, how it supports diverse learners and practical strategies for implementing UDL principles in VET, creating inclusive learning environments.

Lesson 3. Identifying barriers to learning

This lesson guides educators in recognizing common barriers to learning that diverse learners, including those with disabilities, often encounter. It analyses the impact these barriers have on learning outcomes, engagement, and achievement. Additionally, it offers strategies for removing or mitigating these obstacles to create a more inclusive and supportive educational environment.

Module 2: Designing accessible learning materials

Those lessons equip educators with the tools and strategies to design accessible learning materials that support inclusivity in digital education. Participants will begin by learning how to create accessible digital content using features such as alt text, captions, and screen reader compatibility to ensure all learners can engage with the material. The second lesson focuses on inclusive visual and multimedia design, guiding participants on how to consider elements like colour contrast, text size, and accessible multimedia for learners with visual or hearing impairments. Lastly, the module covers developing accessible assessments, offering strategies to ensure fair evaluation for all learners, including those with disabilities, by using alternative formats and tools.

Lesson 1. Creating accessible digital content

This lesson provides practical guidance on using digital tools and resources to design accessible e-learning materials, ensuring that all learners can engage with the content effectively. It covers the implementation of accessibility features such as alt text, captions, and screen reader compatibility, emphasizing the importance of inclusivity in digital education.

Co-funded by the European Union

Lesson 2. Inclusive visual and multimedia design

This lesson focuses on designing visually inclusive materials by taking into account factors such as colour contrast, text size, and layout. It also guides participants in creating multimedia content that is accessible to learners with visual or hearing impairments. By applying best practices in design and multimedia, the lesson emphasizes the importance of promoting inclusivity through intentional and thoughtful visual and auditory choices.

Lesson 3. Developing accessible assessments

This lesson covers strategies for designing inclusive assessments that accommodate diverse learners, including those with disabilities. It emphasizes the implementation of alternative assessment formats and tools to ensure fairness and accessibility, allowing for accurate measurement of learning outcomes for all students, regardless of their specific needs.

Module 3: Inclusive teaching strategies

This introduces educators to key strategies for fostering inclusive teaching practices that cater to diverse learner needs and backgrounds. It begins with an exploration of differentiated instruction techniques, providing educators with tools and tips for tailoring learning experiences to individual student needs, including the use of adaptive technologies. The second lesson focuses on promoting a culturally inclusive classroom, guiding educators on how to respect and integrate cultural diversity into their teaching practices. The final lesson emphasizes fostering inclusive communication, ensuring that instructional delivery is clear and accessible to all learners through the use of plain language, visual aids, and adaptive communication tools.

Lesson 1. Differentiated instruction techniques

This lesson introduces differentiated instruction as a strategy for addressing diverse learning needs and preferences. It provides guidance on employing various techniques to tailor instruction accordingly and includes tips on using adaptive technologies and tools to support individualized learning paths, ensuring that each learner receives personalized support.

Lesson 2. Promoting a culturally inclusive classroom

This lesson explores methods for developing practices that respect and include cultural diversity in learning environments. It guides educators in implementing teaching strategies that reflect and support diverse cultural backgrounds,

emphasizing the creation of a culturally inclusive classroom that values and integrates learners' experiences, fostering a welcoming and supportive atmosphere.

Lesson 3. Fostering inclusive communication

This lesson focuses on applying communication techniques that are accessible and inclusive for all learners. It emphasizes the use of plain language, visual supports, and adaptive tools to enhance understanding, ensuring clarity and comprehension in instructional delivery. Educators will learn how to communicate effectively with all students by incorporating these inclusive strategies and support tools.

Module 4: Evaluating and improving accessibility and inclusivity

This module is designed to help educators enhance the accessibility and inclusivity of their teaching practices through ongoing evaluation and improvement. The first lesson offers practical guidance on assessing these elements using tools like checklists and rubrics, as well as performing accessibility audits to pinpoint areas for enhancement. The second lesson focuses on gathering learner feedback to drive continuous improvements in instructional design and delivery, ensuring a more inclusive learning experience. Lastly, educators will learn the importance of staying updated on the latest accessibility standards, technologies, and professional development opportunities, ensuring that their teaching methods evolve to meet current needs and guidelines.

Lesson 1. Assessing accessibility and inclusivity

This lesson guides educators in assessing the accessibility and inclusivity of their instructional materials and practices. It covers the use of checklists and rubrics for evaluation, as well as conducting accessibility audits to identify areas for improvement, providing educators with practical tools and methods for enhancing their instructional approaches.

Lesson 2. Gathering feedback for continuous improvement

This lesson teaches educators how to collect feedback from learners regarding the accessibility and inclusivity of their learning experiences. It emphasizes using this feedback to refine and improve instructional design and delivery, promoting continuous enhancement of teaching practices to better support all students.

Lesson 3. Staying updated on accessibility standards and practices

This lesson emphasizes the importance of staying informed about the latest accessibility guidelines, tools, and technologies, as well as participating in professional development opportunities focused on accessibility and inclusivity. It highlights the need for continuous improvement and compliance with current standards to enhance the learning experience for all students.

Methodology

To enhance this unit, adopt a **blended learning methodology** combining online self-paced modules with live interactive workshops. Start with foundational online lessons that include videos, readings, and quizzes to introduce key concepts of accessibility and inclusivity. Follow up with live sessions where participants engage in discussions, group activities, and case studies to apply these concepts in real-world scenarios. Integrate peer feedback and collaborative projects to encourage sharing of experiences and best practices. Use continuous formative assessments to provide feedback and adapt content dynamically based on participant needs.

Assessment

To effectively measure learning outcomes, employ three key assessment methods: diagnostic, formative, and summative. Diagnostic assessments identify initial knowledge and skills, formative assessments provide ongoing feedback during the training, and summative assessments evaluate overall mastery at the end. These methods ensure a comprehensive understanding of participants' progress and the effectiveness of the training.

Diagnostic assessment
Use pre-training surveys or quizzes to assess participants' baseline knowledge of accessibility and inclusivity, enabling tailored instruction.

Formative assessment
Implement interactive activities, such as quizzes, peer feedback, and discussions, to provide continuous feedback and support during the learning process.

Summative assessment

Conduct a final project or test requiring participants to demonstrate their ability to design accessible and inclusive learning materials, ensuring understanding of the unit's objectives.

Tips for teachers, trainers and educators

- Use diverse and inclusive examples.
- Incorporate Universal Design for Learning (UDL) principles.
- Provide multiple formats for content.
- Utilise assistive technologies and tools.
- Regularly seek feedback from learners on accessibility.

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Center for Teaching Excellence, Cornell University. Inclusive teaching strategies. Retrieved from https://teaching.cornell.edu/teaching-resources/building-inclusive-classrooms/inclusive-teaching-strategies

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B. PRACTICAL ACTIVITIES

Activity 1 - Incorporate accessibility and inclusivity

Aims of the Activity

The objectives of this activity are to enable VET and DVT practitioners to incorporate accessibility and inclusivity into their instructional design by understanding the principles of Universal Design for Learning (UDL), implementing practical strategies for accessible content creation (e.g., captions, alternative text), and fostering an inclusive learning environment. The activity also aims to equip participants with the skills to evaluate and continuously improve the accessibility of their materials, ensuring that all learners, regardless of ability or background, are supported.

Description of the Activity

This activity is structured as a hands-on workshop aimed at empowering Vocational Education and Training (VET) and Dual Vocational Education and Training (DVT) practitioners with the skills and knowledge to design instructional materials that are accessible to all learners, including those with disabilities and diverse learning needs.

Steps to follow:

1. **Introduction to accessibility and inclusivity** (20 minutes):
   - Overview of the importance of accessibility in education.
   - Discussion on the legal and ethical considerations for inclusive education, such as compliance with the Americans with Disabilities Act (ADA) or other regional accessibility standards.
2. **Understanding Universal Design for Learning** (UDL) (30 minutes):
   - Presentation on the principles of UDL and how they promote flexible learning environments.
   - Real-world examples of accessible and inclusive instructional design in vocational training.
3. **Practical session**: creating accessible content (60 minutes):
   - Participants are introduced to tools and techniques for designing accessible learning materials, including:
   - Adding alternative text for images.
   - Incorporating closed captions and transcripts for video and audio content.

- Designing for assistive technologies such as screen readers.

4. **Designing for inclusivity** (40 minutes):
   - Strategies for designing learning materials that cater to diverse learning styles, cultural backgrounds, and linguistic differences.
   - Activities to ensure that instructional content is inclusive and respects diverse perspectives.
5. **Evaluation and continuous improvement** (30 minutes):
   - Participants learn how to assess the accessibility of their instructional materials.
   - Introduction to tools and checklists for evaluating the accessibility of content and strategies for continual improvement.
6. **Group work and peer feedback** (30 minutes):
   - Participants work in groups to redesign a sample lesson plan or educational resource using the principles and tools they have learned.
   - Groups share their redesigned materials and provide feedback to each other on accessibility and inclusivity improvements.

By the end of this activity, participants will be equipped to:

- Design learning materials that accommodate a diverse range of learners.
- Implement tools and techniques that make content accessible to individuals with disabilities.
- Foster inclusive learning environments that support all students, regardless of their background or learning needs.

Resources

Accessibility guidelines and standards:
Web Content Accessibility Guidelines (WCAG): A detailed guide on making digital content accessible to all users, including those with disabilities.

ADA Compliance Documentation: Legal guidelines for ensuring your instructional materials comply with the Americans with Disabilities Act.

Assistive technology tools:

Screen readers (e.g., NVDA, JAWS) for demonstrating how visually impaired users navigate content.

Tools like Live Captioning Software for adding captions to videos.

Content creation tools:

Canva or Adobe Spark for creating visually accessible learning materials with alternative text for images.

Microsoft Office Accessibility Checker: A built-in tool in Word, PowerPoint, and Excel to evaluate accessibility.

Universal Design for Learning (UDL) Framework:

Online resources or PDFs on UDL principles from CAST (Center for Applied Special Technology).

Evaluation checklists:

Downloadable accessibility checklists to assess the inclusivity of educational content (e.g., from W3C or AHEAD).

These resources will help participants gain practical insights and tools to apply accessibility and inclusivity in their teaching practices.

To find out more

- **Video**: Understanding Universal Design for Learning (UDL) - This video introduces UDL principles and how they promote accessible and inclusive learning environments. Retrieved from https://www.youtube.com/watch?v=pGLTJw0GSxk

- **Book**: Design for How People Learn by Julie Dirksen - A popular book on effective instructional design that includes insights on making learning accessible and engaging for all learners.

- **Blog Post**: Inclusive Learning Design Handbook - CAST's guide to creating inclusive learning environments using UDL principles. Retrieved from https://udlguidelines.cast.org/

  Accessibility in Online Education - A detailed post on making online courses more accessible, including practical tips for educators. Retrieved from https://www.edtechupdate.com/accessibility/online-learning/

Activity 2 - Inclusive learning design

Aims of the Activity

The objectives of this unit are to help VET and DVT practitioners understand and apply the principles of Universal Design for Learning (UDL) to create accessible and inclusive learning environments. Practitioners will gain practical skills for designing instructional content that accommodates learners with intellectual disabilities, including the use of captions, alternative text, and assistive technologies. The unit also aims to foster an inclusive environment that encourages engagement and participation from all learners, while ensuring assessments are fair and adapted to diverse learning needs.

Description of the Activity

This activity is designed to help VET and DVT practitioners develop the skills and knowledge needed to incorporate accessibility and inclusivity into their instructional design, with a focus on learners with intellectual disabilities. Here's an overview of the activity structure:

Steps to follow:

1. **Introduction to universal design for learning (20 minutes):** A presentation on the key principles of Universal Design for Learning (UDL) and how it supports diverse learners, particularly those with intellectual disabilities. This segment will emphasize the importance of offering multiple means of engagement, representation, and expression in instructional design.

2. **Practical workshop on accessible content creation (40 minutes):** Hands-on session where participants create accessible content using tools like captioning software, alternative text, and assistive technology integrations. The goal is to provide practical experience in designing materials that cater to learners with intellectual disabilities, ensuring ease of access and engagement.

3. **Inclusive learning environment strategies (30 minutes):** Group discussions on strategies for fostering an inclusive classroom environment. Educators will explore techniques for adapting communication, learning tasks, and assessments to meet the needs of learners with intellectual disabilities, focusing on inclusion, flexibility, and respect for individual learning paces.

Co-funded by the European Union

4. **Developing adaptable assessments (30 minutes**): Participants will design assessments that are adaptable to different learners' needs. This session will focus on creating assessments that fairly evaluate the understanding and progress of learners with intellectual disabilities, while maintaining educational rigor.

5. **Reflection and feedback (20 minutes):** The session ends with a group reflection on the challenges and successes experienced during the activity. Participants will share their thoughts on how the practical strategies learned can be applied to their own instructional design practices.

By the end of the activity, participants will be equipped with the tools and strategies necessary to create inclusive, accessible learning environments that promote success for learners with intellectual disabilities.

Resources

- Access to Universal Design for Learning (UDL) guides and toolkits, offering foundational principles on inclusive teaching.
- Video tutorials or demonstrations on creating accessible content, including captions and alternative text, using tools like YouTube or Vimeo.
- Assistive technology tools such as screen readers (e.g., JAWS, NVDA) and text-to-speech software to demonstrate practical inclusivity.
- Access to learning management systems (LMS) with built-in accessibility features, like Moodle or Canvas.
- Multimedia creation tools like Canva, Adobe Spark, or Microsoft Sway to help educators develop engaging, accessible content.
- Research articles or case studies focused on inclusive teaching for learners with intellectual disabilities.
- Guides on accessible assessment design that include strategies for adapting tests for intellectual disabilities.
- Examples of inclusive lesson plans or activities for learners with intellectual disabilities.
- Templates for creating accessible documents (Word, PDF) that include guidance on structure, headings, and readability.
- Links to organizations that specialize in inclusive education, such as CAST (Center for Applied Special Technology) or the UDL Center.
- Supportive community forums or educator networks where practitioners can share experiences and get advice on inclusive education.
- Government or non-profit resources on the rights of learners with disabilities, like those from the ADA (Americans with Disabilities Act) or European Accessibility Act.

- A checklist for ensuring accessibility in digital learning environments, focusing on platform usability and content presentation.
- Access to open-source accessibility testing tools like WAVE or TAW.
- E-books or downloadable guides on micro-learning and its integration with accessibility.

To find out more

- Book: Fritzgerald, A. (2020). Antiracism and Universal Design for Learning: Building expressways to success. CAST.

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  Gronseth, S., & Dalton, E. (Eds.). (2020). Universal access through inclusive instructional design: International perspectives on UDL. Routledge.

- Blog: Brookes Publishing. Brookes blog: 9 free UDL resources. Retrieved from https://blog.brookespublishing.com/

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  Springer. TechTrends article on accessibility, usability, and UDL. Retrieved from https://link.springer.com/

- Video: Novak, K. Katie Novak's AHEAD keynote on UDL implementation. YouTube. Retrieved from https://www.youtube.com/watch?v=v1LwHrd5Z8Y

  CAST. UDL principles and practice video series. YouTube. Retrieved from https://www.youtube.com/watch?v=pGLTJw0GSxk&list=PLDD6870F2D42327F3

  CAST. UDL lesson planning webinar. YouTube. Retrieved from https://www.youtube.com/watch?v=x5bfpOXJouY

- Platform: CAST. *UDL Studio.* Retrieved from https://udlstudio.cast.org/

  Ohio Department of Education. UDL lesson planning tool. Retrieved from https://education.ohio.gov/

  Chico State. WSU universal lesson plan tutorial. Retrieved from https://www.csuchico.edu/

Competence Unit 7

Facilitation and Support in VET

A. TRAINING CONTENTS

Aims of the Unit

This unit aims to equip VET professionals with the skills and knowledge to develop effective support mechanisms tailored to vocational education and training. The unit focuses on fostering collaboration, building a learning community, and providing personalised coaching and mentoring to VET learners. By the end of this unit, practitioners will be able to create and implement support strategies that address the unique needs of VET learners, enhancing their overall educational experience and success.

Suggested contents

Module 1: Learner support mechanisms

This module provides an overview of support mechanisms in Vocational Education and Training (VET). It covers the importance of understanding learner needs and ensuring they receive appropriate support. VET professionals will learn how to assess these needs and apply practical strategies to address challenges, using real-world examples.

Lesson 1. Introduction to VET support mechanisms

This lesson provides an overview of various support systems available in vocational education and training (VET). It highlights the importance of being responsive to the needs of learners, ensuring they receive the necessary support to thrive in their educational journey.

Co-funded by the European Union

Lesson 2. Identifying learner needs

In this lesson, VET professionals will explore techniques for assessing the needs of VET learners. They will learn how to identify and address challenges faced by these learners, ensuring that their support strategies are effectively tailored to meet these needs.

Lesson 3. Implementing support strategies

Practitioners will be introduced to practical strategies for providing support to VET learners. This lesson includes case studies and examples to illustrate successful implementation of support mechanisms, helping learners to apply these strategies in real-world scenarios.

Module 2: Facilitating collaborative learning

This module introduces key concepts of collaborative learning in Vocational Education and Training (VET). It explains the benefits of collaborative learning and explores techniques to foster teamwork and manage group dynamics. VET professionals will also design and evaluate collaborative learning activities, ensuring learners can apply these strategies effectively in their education.

Lesson 1. Theories of collaborative learning

This lesson covers key theories and principles of collaborative learning. It will underline the benefits of collaborative learning in VET and how it can enhance the educational experience of learners.

Lesson 2. Facilitating teamwork

Practitioners will explore techniques for fostering effective teamwork in VET settings. This lesson will cover strategies for managing group dynamics and ensuring productive collaboration among learners.

Lesson 3. Practical applications

In this lesson, VET professionals will design collaborative learning activities and learn methods for evaluating and providing feedback on these activities. This practical approach ensures that learners can implement collaborative learning strategies effectively.

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Module 3: Building a learning community

This module focuses on building a supportive learning community in Vocational Education and Training (VET). It introduces strategies for fostering engagement and interaction, guiding VET professionals in creating and maintaining a strong learning environment.

Lesson 1. Community building strategies

This lesson focuses on effective strategies for creating a supportive learning community within VET. The importance of engagement and interaction in building a strong learning community will be presented.

Lesson 2. Promoting engagement

This lesson includes interactive activities to foster a more engaging learning environment with techniques for increasing learner engagement.

Lesson 3. Sustaining the learning community

This lesson provides long-term strategies for maintaining and improving engagement within the learning community. It will give VET professionals the chance to monitor and enhance the learning environment to ensure continuous support and interaction.

Module 4: Coaching and Mentoring in VET

This module focuses on the role of coaching and mentoring in Vocational Education and Training (VET). It introduces the principles behind coaching and mentoring, highlighting their impact on learners.

Lesson 1. Principles of coaching and mentoring

The VET Professionals will be introduced to the principles of coaching and mentoring in VET. This lesson covers the role of a coach or mentor and the impact they can have on the educational journey of learners.

Lesson 2. Providing personalised support

This lesson explores techniques for providing personalised coaching and mentoring to VET learners. The lesson will share the tips on how to address the individual needs of learners through tailored support strategies.

Lesson 3. Evaluating coaching and mentoring

This lesson will present methods for assessing the effectiveness of coaching and mentoring. It also includes strategies for providing feedback and making continuous improvements to support mechanisms.

Methodology

The training methodology will incorporate a blend of theoretical instruction and practical application. The content design will provide foundational knowledge, while interactive activities will include hands-on practices and real-world scenarios. The effectiveness of the group discussions and peer collaboration will be underlined knowledge exchange and diverse perspectives.

Additionally, role-playing and simulation exercises will be used to practise facilitation and support techniques. The use of case studies will illustrate successful implementations and provide opportunities for critical analysis and problem-solving.

Assessment

Assessment methods will include continuous evaluation through participation in activities, group projects, and individual assignments. Learners will be assessed on their ability to design and implement support mechanisms, facilitate collaborative learning, and provide coaching and mentoring. Practical demonstrations and presentations will be used to evaluate their skills in real-world scenarios. Additionally, reflective journals and self-assessment will be used to encourage learners to critically evaluate their own development and identify areas for improvement. Short quizzes will be also added to the assessment part to check the recent knowledge of the learners.

Diagnostic Assessment

Awareness questions regarding the Facilitation and Support in VET will be shared within the lesson materials.

Formative Assessment

Guiding questions will be created to design a discussion session for the learners to check if they are making good progress towards the learning outcomes.

Summative Assessment

At the end of the lessons, a well-structured quiz will be shared with learners to determine their general understanding of the topics.

Tips for teachers, trainers and educators

- Encourage active participation and engagement from all learners.
- Provide timely and constructive feedback to support learner development.
- Utilise a variety of teaching methods to cater to different learning styles.
- Foster an inclusive and supportive learning environment.

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B. PRACTICAL ACTIVITIES

Activity 1 - Developing and Implementing a VET Support Mechanism

Aims of the Activity

This activity aims to help learners develop and implement an effective support mechanism tailored to the needs of VET learners, demonstrating responsiveness and adaptability. By engaging in this activity, learners will gain practical experience in assessing learner needs and designing appropriate support strategies.

Description of the Activity

Learners will work in groups to design a support mechanism based on a given scenario. Each group will be provided with a case study detailing specific challenges faced by a group of VET learners.

Steps to follow:

1. Identify the key needs and challenges of the learners in the case study.
2. Propose a support mechanism that addresses these needs and challenges.
3. Create a detailed implementation plan outlining the steps, resources required, and timeline for the support mechanism.
4. Present their support mechanism and implementation plan to the class.
5. Receive feedback from peers and instructors to refine their approach.

Resources

European Commission. (2020). Vocational education and training in Europe: Recent trends and challenges. Retrieved from https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8264&furtherPubs=yes

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CEDEFOP. (2018). Insights into skills shortages and skill mismatch: Learning from Cedefop's European skills and jobs survey. Retrieved from https://www.cedefop.europa.eu/files/6118_en.pdf

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Publications: CEDEFOP. Delivering VET qualifications. Retrieved from https://www.cedefop.europa.eu/en/themes/delivering-vet-qualifications

Smith, C., & Worsfold, K. (2013). Enhancing employability: Integrating real-world experience in the curriculum. Retrieved from https://www.researchgate.net/publication/235282760_Enhancing_employability_Integrating_real_world_experience_in_the_curriculum

Activity 2 - Facilitating a collaborative learning session

Aims of the Activity

This activity aims to equip learners with the skills to design and facilitate a collaborative learning session, fostering teamwork and knowledge exchange. Through this activity, learners will develop an understanding of collaborative learning theories and practical techniques for facilitating group activities.

Description of the Activity

Learners will design a collaborative learning session on a vocational topic of their choice.

Steps to follow:

1. Outline the session objectives, including specific learning outcomes and skills to be developed.
2. Plan the collaborative learning activities, such as group discussions, problem-solving tasks, and peer teaching.
3. Develop an assessment method to evaluate the effectiveness of the session, such as rubrics, peer reviews, or reflective journals.

4. Facilitate the session with their peers, applying techniques to encourage participation, manage group dynamics, and foster a collaborative environment.
5. Conduct a reflection and feedback session to evaluate the session's success and identify areas for improvement.

Resources

Barkley, E. F., Major, C. H., & Cross, K. P. (2014). Collaborative learning techniques: A handbook for college faculty (2nd ed.). Wiley. Retrieved from https://www.wiley.com/en-us/Collaborative+Learning+Techniques%3A+A+Handbook+for+College+Faculty%2C+2nd+Edition-p-9781118761557

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Publications: Fiorella, L., & Mayer, R. E. (2020). What works and doesn't work with instructional explanations. Educational Psychologist, 55(4), 251-264. https://doi.org/10.1080/00461520.2020.1828086

Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. Retrieved from https://www.researchgate.net/profile/Marjan-Laal/publication/224766541_Benefits_of_collaborative_learning/links/0912f4fba453f0b43f000000/Benefits-of-collaborative-learning.pdf

Socrates Journal. (n.d.). Collaborative learning approaches in higher education. Retrieved from https://socratesjournal.org/index.php/pub/article/view/375

Means, B., Bakia, M., & Murphy, R. (2014). Learning online: What research tells us about whether, when, and how. Routledge. Retrieved from https://www.routledge.com/Learning-Online-What-Research-Tells-Us-About-Whether-When-and-How/Means-Bakia-Murphy/p/book/9780415630290

Competence Unit 8

Ethical Considerations in Instructional Design

A. TRAINING CONTENTS

Aims of the Unit

Unit 8, " Ethical Considerations in Instructional Design," aims to increase learners' awareness of ethical considerations related to privacy, data protection and intellectual property in micro-learning design. Strategies for promoting digital citizenship and responsible use of micro-learning environments will be explored. Additionally, learners will learn how to navigate ethical dilemmas and make informed decisions regarding ethical issues in micro-learning design.

Suggested contents

Module 1: Privacy and data collection in micro-learning

Module 1 examines key data protection principles and regulations, strategies to minimise the amount of data collected and processed, and the application of encryption and accessing controls to protect data.

Lesson 1. Understanding data protection regulations

This lesson will explain the importance of compliance with data protection regulations in micro-learning. Learners will be introduced to key principles of data protection and key data protection regulations, such as GDPR.

Lesson 2. Implementing data minimisation strategies

Data minimisation is a key principle of Data Protection. This lesson will outline some key Date Minimisation Strategies to ensure that only the necessary data for a specific purpose is collected and processed. Anonymization and pseudonymization methods will also be described.

Co-funded by the European Union

Lesson 3. Ensuring secure data storage and transmission

This lesson will outline encryption methods for data at rest and in transit for ensuring secure data storage and transmission. It will also describe the importance of implementing access controls and conducting regular security audits.

Module 2: Intellectual Property and Copyright in micro-learning

Module 2 will provide learners with knowledge regarding copyright laws relevant to Instructional Design. Additionally, learners will learn how to cite and acknowledge sources and develop strategies for creating original content while respecting intellectual property rights.

Lesson 1. Understanding copyright laws

This lesson will describe the basics of copyright laws across Europe that are relevant to Instructional Design. It will describe fair use and its implications and will consider the impact of the digital world on copyright.

Lesson 2. Acknowledging sources appropriately

This lesson will present the importance of citing sources, explore the different citing styles and will introduce tools for managing citations.

Lesson 3. Creating original content respecting IP rights

This lesson will identify strategies for original content creation while respecting Intellectual Property Rights. It will also discuss avoiding plagiarism and the use of licensing and creative commons, explaining how these licenses allow sharing and adaptation while respecting copyright.

Module 3: Ethical implications of learning analytics

Module 3 will provide insight into learning analytics (role and scope), providing information about the purpose of learning analytics, the types of data collected and the benefits and challenges. It will also identify how to implement transparent and fair data collection practices and as well as provide opportunities for learners to consider case studies on ethical issues in learner analytics.

Lesson 1. Understanding learner analytics

This lesson will provide a definition of learner analytics and describe their purpose. Types of data collected in learning analytics will be defined and the benefits and challenges will be introduced.

Lesson 2. Ensuring transparency and fairness

This lesson will explore the importance of transparency in data collection in micro-learning. It will outline ways Instructional Designers can ensure transparency and fairness in their work, for example, avoiding stereotyping during content creation, and will describe the importance of communicating analytical practices to learners.

Lesson 3. Ethical decision-making in learning analytics

In this lesson, the ethical implications of the use of learning analytics in micro-learning will be considered. Learners will analyse case studies on common ethical dilemmas in learning analytics, and will be introduced to ethical decision-making models, to help ensure transparency and fairness in data collection and analysis. The importance of obtaining learner consent for data collection and use will also be explored.

Module 4: Promoting digital citizenship and responsible use of technology

This module will provide learners with a better understanding of Digital Citizenship. It will also help them to develop strategies to encourage responsible technology use among learners and will also highlight the importance of obtaining and respecting learner consent for data collection and use.

Lesson 1. Understanding digital citizenship

By the end of this lesson, VET Practitioners will understand the concept of Digital Citizenship, as defined in the Council of Europe's 2022 edition of the Digital citizenship education handbook, as well as the key principles of responsible, ethical and safe digital behaviour. The role of educators in the promotion of Digital Citizenship will also be explored.

Lesson 2. Promoting the responsible use of technology

This lesson will introduce VET Practitioners to strategies for responsible and safe technology use to implement with their learners, including the importance of teaching digital literacy, critical thinking skills, digital etiquette and safety. This

unit will also address cyberbullying and online harassment: prevention and intervention.

Lesson 3. Respecting learner privacy preferences

This lesson will explore the importance of respecting learner privacy preferences: legal and ethical considerations. Methods for obtaining consent and tools and best practices will also be discussed.

Methodology

Blended approach to teaching and learning: VET Practitioners can access the Online Course Modules at their own pace, at a time and in a place that suits them. It allows for flexible learning.

The Practical Activities will be implemented by VET Practitioners on learners in person, face to face. This provides the opportunity for VET Practitioners to put what they've learned though the Online Course into practice with their learners. In these practical activities, the methodology is learner-centred, communicative, supportive and inclusive.

The transformative approach to teaching and learning has also been used within Activity 1 to encourage learners (final beneficiaries) to critically evaluate their past behaviours and consider a change in thinking, leading to transformed behaviours, in this case, in the way they ensure they are responsible and safe online.

Assessment

Assessment will feature at the end of each lesson. Learners will be presented with a set of multiple-choice or T/F questions to check their understanding of the lesson content.

Tips for teachers, trainers and educators

- Set yourself a learning goal or timetable to work on the Online course lessons if it helps to structure your learning and motivate you.
- When implementing the practical activities with learners be sure to establish a supportive, encouraging, inclusive and positive learning environment.

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B. PRACTICAL ACTIVITIES

Activity 1 - Staying safe online – How to be a responsible Internet user

Aims of the Activity

The aim of the activity is to provide VET Practitioners with tasks they can implement on their learners to Promote responsible and safe use of Technology.

The activity aims to provide VET Practitioners with a lesson plan/framework to which they can adjust to suit their particular students.

The activity aims to support VET Practitioners to impart knowledge about how to stay safe online to young people through the tasks set to them in this activity.

Description of the Activity

Steps to follow:

1. Icebreaker: Begin with a short icebreaker. Put learners into small groups and encourage them to share their most positive and most negative online experiences.
2. Write 'Digital Citizenship' on the board and ask learners to discuss the following in small groups: What is digital citizenship?
   - Key: 1/ Refers to the responsible and ethical use of technology, especially in online spaces.
   - Next, provide learners with a handout where they will match the aspects of Digital Citizenship with the explanations. Handout 1.
   - After the learners have completed the matching task, ask learners to discuss: Do you demonstrate these behaviours? Do you always treat others with respect when interacting online? Go through each aspect and discuss whether you do this.

Whole class feedback

3. Critically evaluating behaviours
   - Next, ask learners to consider which behaviours they don't do and why? Ask them to consider whether they might change this now and alter their behaviour? Can they advise each other? Discuss in pairs.

Whole group feedback

4. Group work and presentations: Staying safe online.
   - Divide learners into small groups (7 groups if possible). Assign each group an aspect and give them 45 minutes to research and prepare a presentation of 5 minutes to the group.
   - Learners give their presentations and answer any questions, leading to a whole class discussion about key points they've learned.

Resources

Handout 1: Trainers should mix up the definitions and explanations and the task should be to match them together. In the text below, the definitions are matched with the correct explanation.

Digital Citizenship

Digital citizenship: refers to the responsible and ethical use of technology, especially in online spaces. It encompasses various aspects, including:

Online Behaviour: It is important to treat others with respect, to be kind in digital interactions and to show empathy.

Privacy and Security: Safeguarding personal information, understanding privacy setting and avoiding risks.

Digital Literacy: Critically evaluating information, being able to identify misinformation and using technology effectively.

Cyberbulling Awareness: Being able to recognise and prevent cyberbullying, harassment and harmful online behaviour.

Copyright and Fair Use: Understanding intellectual copyrights and respecting copyright laws

Netiquette: Being able to follow correct online etiquette, for example, appropriate language use.

Digital Footprint: Being aware that our online behaviour leaves a track and this could have an impact later down the line.

To find out more

- **Publication:** Cyberwise, 2024. How to Encourage Responsible Behaviour Online. Retrieved from https://www.cyberwise.org/post/how-to-encourage-responsible-online-behavior-among-young-students

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Activity 2 - Ethical Considerations: Staying Safe Online

Aims of the Activity

The aim of this activity is to follow on from activity 1. Now, VET Practitioners should encourage their learners to put into practice the key points they learned from activity 1 through firstly, a discussion of a number of potentially risky and unethical online situations and how to resolve them, and secondly, through a role-play.

Description of the Activity

A different online situation will be presented, and learners will work together to find a sensible solution.

Next, ask learners to select a situation, preferably a different one to those already discussed, and write a role play where there is a dilemma, a discussion and a solution. It could be friend/friend, parent/child, teacher/learner, etc.

Act out your role play to the class. Discuss each role play as a whole class and share ideas about what you liked, what was effective and any tips you may have learnt as a result.

Resources

Here are some suggestions for situations. You can add more of your own as well.

Situation 1: Sharing Photos Online

Katie wants to post a photo of her and her friend Jenny online, but Jenny doesn't want her to. Should Katie post it anyway? What do you think? Discuss consent and respecting boundaries. What do you think about parents posting pictures of their children online?

Situation 2: Encountering inappropriate behaviour

One of your friends wants to show you something online which you feel uncomfortable about viewing. What do you do? Discuss how this situation could be handled.

Situation 3: Accepting requests from strangers

Your friend receives a connection request from a stranger. Should she accept it? Discuss online safety and stranger interactions. What would you tell your friend if the stranger asked to meet up her?

Situation 4: Cyberbullying

You receive a video of someone being bullied at school asking you to pass it on. What should you do? Discuss cyberbullying and consider how to help prevent it?

Situation 5: Suspicious links

You receive a text message saying your debit card has been stopped due to suspicious behaviour. Do you click on the link? Discuss the risks of clicking unknown links.

To find out more

- **Publications:** VeryWellMind, 2023. 10 Basic Netiquette Rules. Retrieved from https://www.verywellmind.com/ten-rules-of-netiquette-22285

- **Platforms:** European Commission, 2024. European School Education Platform: Netiquette- Rules for acceptable Online Behaviour. Retrieved from https://school-education.ec.europa.eu/en/etwinning/projects/love4math/twinspace/pages/netiquette-rules-acceptable-online-behavior