Competency Based Learning Materials

(CBLM)

Competency Based Training and Assessment (CBT&A) Methodology

Level-5

Module: Developing Digital Learning Materials

National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh

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This Competency Based Learning Materials (CBLM) on "Developing Digital Learning Materials" under the CBT&A Methodology for Trainers &Assessors, Level-5 qualification is developed based on the national competency standard approved by National Skills Development Authority (NSDA)

This document is to be used as a key reference point by the competency-based learning materials developers, teachers/trainers/assessors as a base on which to build instructional activities.

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This Competency Based Learning Materials is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been developed by NSDA in association with industry representatives, academia, related specialist, trainer and related employee.

Public and private institutions may use the information contained in this CBLM for activities benefitting Bangladesh.

List of Abbreviations

CS	-	Competency Standard
ISC	-	Industry Skills Council
NSDA	-	National Skills Development Authority
NSQF	-	National Skills Qualifications Framework
BNQF	-	Bangladesh National Qualifications Framework
OSH	-	Occupational Safety and Health
PPE	-	Personal Protective Equipment
SCVC	-	Standards and Curriculum Validation Committee
STP	-	Skills Training Provider
SOP	-	Standard Operating Procedure
TNA	-	Training Need Analysis
FGD	-	Focus Group Discussion
KIIs	-	Key Informant Interviews
UoC	-	Unit of Competency
EC	-	Executive Committee
CBT&A	-	Competency based Training & Assessment
CBC	-	Competency based Curriculum
CAD	-	Course Accreditation Document
CBLM	-	Competency Based Learning Materials

Approved by

---th Executive Committee (EC) Meeting of NSDA

Held on ----------

Deputy Director (Admin)
and
Officer of Secretarial Duties for EC meeting
National Skills Development Authority

How to use this Competency Based Learning Materials (CBLMs)

The module, Maintaining and enhancing professional & technical competency contains training materials and activities for you to complete. These activities may be completed as part of structured classroom activities or you may be required you to work at your own pace. These activities will ask you to complete associated learning and practice activities in order to gain knowledge and skills you need to achieve the learning outcomes.

1. Review the **Learning Activity** page to understand the sequence of learning activities you will undergo. This page will serve as your road map towards the achievement of competence.

2. Read the **Information Sheets.** This will give you an understanding of the jobs or tasks you are going to learn how to do. Once you have finished reading the **Information Sheets** complete the questions in the **Self-Check.**

3. **Self-**Checks are found after each **Information Sheet**. **Self-Checks** are designed to help you know how you are progressing. If you are unable to answer the questions in the **Self-Check** you will need to re-read the relevant **Information Sheet**. Once you have completed all the questions check your answers by reading the relevant **Answer Keys** found at the end of this module.

4. Next move on to the **Job Sheets. Job Sheets** provide detailed information about *how to do the job* you are being trained in. Some **Job Sheets** will also have a series of **Activity Sheets**. These sheets have been designed to introduce you to the job step by step. This is where you will apply the new knowledge you gained by reading the Information Sheets. This is your opportunity to practice the job. You may need to practice the job or activity several times before you become competent.

5. Specification **sheets**, specifying the details of the job to be performed will be provided where appropriate.

6. A review of competency is provided on the last page to help remind if all the required assessment criteria have been met. This record is for your own information and guidance and is not an official record of competency

When working though this Module always be aware of your safety and the safety of others in the training room. Should you require assistance or clarification please consult your trainer or facilitator.

When you have satisfactorily completed all the Jobs and/or Activities outlined in this module, an assessment event will be scheduled to assess if you have achieved competency in the specified learning outcomes. You will then be ready to move onto the next Unit of Competency or Module

Module Content

Unit of Competency: Develop Digital Learning Materials

Module Title: Developing Digital Learning Materials

Module Description: This module discusses the aspects that must be given attention when developing digital learning materials. It shows the knowledge and skills requirements for arranging learning recourses to be digitized, planning for digital learning contents development, collecting media elements, preparing digitally formatted contents, testing digitally formatted learning resources and uploading & using digital contents.

Nominal Duration: 30 Hours

Learning Outcomes:

Upon completion of this module the trainees must be able to:

1. Arrange learning recourses to be digitized
2. Plan for digital learning contents development
3. Collect media elements
4. Prepare digitally formatted contents
5. Test digitally formatted learning contents
6. Upload and use digital contents

Assessment Criteria:

1.1 Contents need to be digitized are selected
1.2 **Learning resources specifications** are established in line with target learners' requirements

2.1 Lesson plan is prepared incorporating **pedagogy aspect**
2.2 Digital contents to be developed are structured and segmented according to **lesson/ session plan steps and sequences**
2.3 **Types of presentation** are planned
2.4 **Content development software** and **content development tools** are selected and collected
2.5 **Media elements** of the presentation are planned
2.6 **Technology**, pedagogy and content knowledge (TPACK) principles are followed during the plan of content development

3.1. **Sources of media elements** for the presentation are selected and collected.
3.2. Media elements are downloaded or collected from appropriate source.
3.3. Media elements are **manipulated and edited** as required.
3.4. Video is cut and appended as required to use in presentation.
3.5. Open educational resources (OER) are selected and collected
4.1 Media elements are organized and appended with content development software as per lesson/ session plan.
4.2 Proper action verbs are used and maintained during the preparation of the objectives of the session / lesson.
4.3 Media elements used in digital content are formatted.
4.4 Appropriate **animation** is used to make the presentation attractive and interactive
4.5 OER are accessed and used during the content development process if required
5.1 Test criteria and instruments are developed in line with learning material specification.
5.2 Test sites and reviewers are identified in line with established target users
5.3 Testing of learning contents are undertaken in line with plan
5.4 Feedback and suggestions are addressed in line with plan and development cycle.
5.5 Developed digital contents are preserved in appropriate **storage**
6.1 Appropriate online media is selected for uploading digital contents
6.2 Digital content uploading **formalities** are done
6.3 Digital contents are uploaded in online media for users

Learning Outcome 1: Arrange Learning Recourses to be Digitized

Assessment Criteria:

1. Contents need to be digitized are selected
2. Learning resources specifications are established in line with target learners' requirements

Content:

1. **Digital Content**
2. **Type of digital content**
   - 2.1 Text
   - 2.2 Computer Graphic
   - 2.3 Video
   - 2.4 Audio
   - 2.5 Interactive Multimedia
3. **Learning Resources**
4. **Some common types of learning resources**
   - 4.1 Textbooks and Reference Books
   - 4.2 E-Learning/ Learning Management Systems (LMS) Platforms
   - 4.3 Educational Web & Mobile Application
   - 4.4 Multimedia Presentations
   - 4.5 Simulation and Virtual Labs
   - 4.6 Open Educational Resources (OER)
   - 4.7 Libraries and Digital Archives
   - 4.8 Collaborative Tools and Online Communities:
5. **Learning resource vs Learning Materials**

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion
- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test
- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 1: Arrange Learning Recourses to be Digitized

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	Resources specific instructions
1. Trainee will ask the instructor about Arranging Learning Recourses to be Digitized	1. Instructor will provide the learning materials "**Developing Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No:1 Arrange Learning Recourses to be Digitized
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 1 Arrange Learning Recourses to be Digitized Answer key No. 1 Arrange Learning Recourses to be Digitized
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No:1- Arrange Learning Recourses to be Digitized Specification Sheet1 – Arrange Learning Recourses to be Digitized

Information Sheet 1: Arrange Learning Recourses to be Digitized

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Select contents need to be digitized
2. Establish Learning resources specifications in line with target learners' requirements

1. Digital content

Digital content refers to any type of media or information that is created, distributed, and consumed in digital formats. It encloses a wide range of formats, including text, images, videos, audio, and interactive multimedia. Digital content can be accessed and transmitted through various electronic devices, such as computers, smartphones, tablets, and e-readers.

2. Type of digital content

There are various types of digital content based on the format and purpose. Here are some common types:

2.1 **Text**: Text is primarily composed of written words and is often used for conveying information, expressing opinions, storytelling, and providing educational or promotional material. This includes articles, blog posts, ebooks, quiz, online news, website content, social media posts, and email newsletters.

2.2 **Computer Graphic**: Computer graphics are visual representations captured or created digitally. They can include photographs, illustrations, graphics, logos, memes, and infographics. Images are widely used for visual storytelling, branding, advertising, and enhancing the visual appeal of websites, social media posts, and other digital platforms.

2.3 **Video:** Video content involves moving visuals and audio. It includes online videos, movies, TV shows, documentaries, tutorials, webinars, video blogs (vlogs), and advertisements. Videos are a popular medium for entertainment, education, marketing, and sharing information due to their ability to engage and captivate viewers.

2.4 **Audio:** Audio content allows users to listen and consume information while engaged in other activities, making it a convenient and portable medium. This type of digital content includes sound tracks, podcasts, audiobooks, radio programs and sound effects.

2.5 **Interactive Multimedia:** Interactive digital content engages users by allowing them to actively participate and interact with the content. This can include games, simulations, virtual reality (VR) experiences, augmented reality (AR) applications, and interactive educational content. Interactive multimedia offers immersive and engaging experiences that often blend elements of text, images, videos, and audio.

These are just a few examples of the diverse types of digital content available. The digital landscape continues to evolve, and new forms of content emerge as technology advances and user preferences change.

3. Learning resources

Learning resources are materials, tools, or platforms that are designed/ developed to facilitate and support the process of learning. They provide learners with information, instruction, and activities to acquire knowledge, develop skills, and enhance understanding in a particular subject or field. Learning resources can be used in various educational settings, including schools, universities, online courses, and self-directed learning environments.

4. Some common types of learning resources:

4.1 **Textbooks and Reference Books:** Printed or digital books that provide structured information, explanations, and examples related to specific subjects or disciplines. Textbooks are commonly used in formal education settings to support curriculum objectives.

4.2 **E-Learning/ Learning Management Systems (LMS) Platforms:** Web-based platforms for delivering educational content, lessons, assessments, and interactive activities. LMSs often include features such as course organization, content management, communication tools, and assessment capabilities such as ebook, videos, quizzes, H5P, assignment and discussion forums.

4.3 **Educational Web & Mobile Application**: Websites that offer educational content, articles, tutorials, videos, and resources on various topics. These sites can provide supplemental learning materials, research sources, and interactive tools to support learning. Besides mobile applications designed specifically for learning purposes. These apps can provide interactive exercises, quizzes, flashcards, language learning tools, and educational games.

4.4 **Multimedia Presentations:** Visual presentations, such as slideshows, videos, and animations, that convey information and concepts in a dynamic and engaging manner. Multimedia presentations are commonly used in classrooms and online learning environments.

4.5 **Simulation and Virtual Labs**: Interactive software applications that simulate real-world scenarios, experiments, or processes and experience. Simulations allow learners to experiment, make decisions, and observe outcomes in a controlled virtual environment.

4.6 **Open Educational Resources (OER):** These are freely accessible learning resources available online, including textbooks, lecture notes, multimedia materials, and interactive modules. OER promotes open sharing and collaboration in education.

4.7 **Libraries and Digital Archives:** Libraries and digital repositories offer access to a wide range of books, journals, research papers, and other scholarly resources. Digital archives provide digitized historical documents, artifacts, and cultural materials for educational purposes.

4.8 **Collaborative Tools and Online Communities:** Platforms that facilitate collaboration, discussion, and knowledge-sharing among learners. Online communities, forums, and social media groups allow learners to connect, ask questions, and exchange ideas.

5. Learning resource vs Learning Materials

Learning resources and learning materials are closely related but have slightly different meanings.

Learning Resources	Learning Materials
A broader category of materials, tools, or platforms	Subset of learning resources
Used to facilitate learning	Directly used by learners
Encompasses physical and digital materials	Can be tangible or digital resources
Designed to support the learning process	Used for hands-on practice, exploration, or reference
Examples include textbooks, online courses, educational websites, multimedia presentations, simulations, etc.	Examples include worksheets, textbooks, workbooks, manipulatives, online quizzes, interactive modules, multimedia presentations, etc.
Provide a range of tools and platforms	Provide content, activities, and exercises
Support the learning process as a whole	Facilitate acquisition of knowledge or skills
Can be used by educators to create learning environments	Offer learners opportunities for engagement and practice

In summary, learning resources are a broader category of materials and tools that support the learning process, while learning materials specifically refer to the resources that learners directly interact with for acquiring knowledge or practicing skills. Learning materials are a subset of learning resources and provide content, activities, and exercises necessary for learning to occur.

Self-Check Sheet 1

1. How can educators determine which contents are most suitable for digitization in a learning environment?

2. What are the key factors to consider when establishing learning resource specifications to meet the specific requirements of target learners?

3. In what ways can interactive multimedia content enhance the learning experience compared to traditional text-based resources?

Answer Key 1

Activity Sheet 1.1:

Activity Sheet 1.0: Identify Learning Resources
Title: Identify Learning Resources
Performance Objective: At the end of this task, the trainee should be able to:
1. Identify and select the learning resources that need to be digitized based on their relevance and importance for the target learners.
2. Justify their selection based on target learners' needs and subject matter importance.
Policy and Documents Required:
• Training Need Analysis report
• Curriculum Outline
• Course Syllabus
Tools and Materials Required:
• List of available learning resources
• Knowledge of target learners
• Notebook/Paper for note-taking
• Pens/Markers
Equipment:
• Laptop/Computer
• Internet connection for research
Steps/Procedures:
1. **Review the List of Available Learning Resources:**
• Examine the existing list of learning resources that may be considered for digitization. These resources could include textbooks, handouts, presentations, videos, and other relevant materials.
2. **Refer to the Training Need Analysis Report, Curriculum Outline, and Course Syllabus:**
• Study the Training Need Analysis (TNA) report to understand the specific needs and preferences of the learners. Analyze the curriculum outline and course syllabus to identify key topics and learning objectives.
3. **Determine Relevant and Important Resources:**
• Based on the information from the TNA report, curriculum outline, and course syllabus, determine which learning resources are most relevant and important for the target learners. Focus on materials that align closely with the learning objectives.
4. **Justify Selections:**
• For each selected resource, provide a justification explaining its relevance to the course objectives and learner needs. Highlight how the chosen materials can effectively support the learning process and enhance understanding.
Assessment Method: Submission of a detailed report including the list of identified resources and the justification for their selection. The report should demonstrate the trainee's ability to critically evaluate learning resources, prioritize based on relevance, and align them with the needs of the target learners and the course's subject matter. The report will be assessed based on the clarity of the trainee's reasoning and the appropriateness of the selected resources for digitization.

Activity Sheet 1.2:

Activity Sheet 1.2: Establish Learning Resources Specifications
Title: Establish Learning Resources Specifications
Performance Objective: At the end of this task, the trainee should be able to:
1. Define the quality and format requirements for the digital learning materials.
2. Ensure that the specifications meet the needs of the learners and the technical requirements of the chosen delivery platform(s).
Policy and Documents Required:
• Training Need Analysis report
• Digital content guidelines
• Technical specifications of the chosen delivery platform(s)
Tools and Materials Required:
• Quality criteria checklist
• Format specifications guideline
• Notebook/Paper for note-taking
• Pens/Markers
Equipment:
• Laptop/Computer
• Internet connection for research
Steps/Procedures:
1. **Refer to the Training Need Analysis report:**
• Review the Training Need Analysis report to understand the specific requirements and preferences of the learners. Pay attention to their learning styles, prior knowledge, and areas of improvement.
2. **Review Digital Content Guidelines:**
• Familiarize yourself with the digital content guidelines provided by the organization or institution. These guidelines may include standards for visual design, accessibility, interactivity, and multimedia integration.
3. **Check Technical Specifications of the Delivery Platform(s):**
• Review the technical specifications of the chosen delivery platform(s). Ensure that the digital learning materials comply with the platform's requirements for file formats, size limitations, and compatibility.
4. **Define Quality Criteria:**
• Based on the Training Need Analysis and the digital content guidelines, define the quality criteria that the digital learning materials must meet. Consider factors such as accuracy, relevance, clarity, and engagement.
5. **Define Format Specifications:**

- Determine the format that the digital learning materials must follow. This could include specific layout guidelines, file types, resolution for images and videos, and interactivity features.

6. **Document Specifications:**

- Document the quality criteria and format specifications in a clear and organized manner. Create a comprehensive document that will serve as a reference for content developers and designers in the next stages of the process.

Assessment Method: Submission of a detailed report including the quality criteria and format specifications for the digital learning materials. The report should demonstrate an understanding of the learners' needs, adherence to technical requirements, and consideration of best practices in digital content development. The report will be assessed based on clarity, completeness, and alignment with the given policy and guidelines.

Specification Sheet 1.1

A. Policy and curriculum documents required

- National Technical and Vocational Qualifications Framework (NTVQF)
- National Skills Development Policy
- National Quality Assurance Document
- Competency Standard Document

B. Tools and Materials required

- Notebook
- Handbook
- Office Stationeries

Learning Outcome 2: Plan for digital learning contents development

Assessment Criteria:

2.1 Lesson plan is prepared incorporating pedagogy aspect
2.2 Digital contents to be developed are structured and segmented according to lesson/ session plan steps and sequences
2.3 Types of presentation are planned
2.4 Content development software and content development tools are selected and collected
2.5 Media elements of the presentation are planned
2.6 Technology, pedagogy and content knowledge (TPACK) principles are followed during the plan of content development

Content:

1. **Digital Transformation of Learning Material**
    1.1. Ideology and Purpose|
    1.2. ADDIE Model
    1.3. Audience Centric Material Design
    1.4. Training Modality
    1.5. Universal Design and Accessibility
    1.6. Simulations and Real-World Examples
    1.7. Impact of Storytelling
2. **Pedagogy Aspect for Planning Digital Learning Content**
    2.1 Learner-Centered Approach
    2.2 Active Learning
    2.3 Personalization
    2.4 Feedback and Assessment
    2.5 Social Learning
    2.6 Reflective Practice
    2.7 Multimodal Approach
3. **Learning Materials Digitalization steps and sequences**
    3.1. Introductions
    3.2. Outline of Objectives/Content to be Addressed
    3.3. Ice Breakers to be used
    3.4. Delivery Methods for Each Part of the Session
    3.5. Plan of Learning Activities to be Used Within the Session
    3.6. Timelines/Duration for Each Learning Activity
    3.7. Gamifying Assessment Points/Opportunities
    3.8. Learning Materials Required
    3.9. Activity: Work Plan

3.10. Activity: Study Guide
3.11. Activity: Course Blueprint
3.12. Activity: Instructional Design
3.13. Activity: Courseware Content/Storyboard
3.14. Summary/Overview/Wrap Up

4. **Structure and segmentation of digital contents**
   - 4.1 Clear Organization
   - 4.2 Chunking Information
   - 4.3 Sequential Flow
   - 4.4 Navigation and Signposting
   - 4.5 Visual Hierarchy
   - 4.6 Interactive Elements
   - 4.7 Consistent Design

5. **Technology, Pedagogy and Content Knowledge (TPACK) principles**
   - 5.1 Content Knowledge (CK)
   - 5.2 Pedagogical Knowledge (PK)
   - 5.3 Technological Knowledge (TK)
   - 5.4 Technological Pedagogical Knowledge (TPK)
   - 5.5 Technological Content Knowledge (TCK)
   - 5.6 Technological Pedagogical Content Knowledge (TPACK)

6. **Digital Learning Materials/Media Elements**
   - 6.1 Importance and Role of Media Elements
   - 6.2 Types of Media Elements
   - 6.3 Text
   - 6.4 Images
   - 6.5 Videos
   - 6.6 Audio
   - 6.7 Interactive Content

7. **Types of presentation for digital learning production**
   - 7.1 Slideshow Presentations
   - 7.2 Video Presentations:
   - 7.3 Interactive Multimedia Presentations elements.
   - 7.4 Webinars and Live Streaming
   - 7.5 Augmented Reality (AR) and Virtual Reality (VR) Presentations
   - 7.6 Podcasts and Audio Presentations
   - 7.7 E-books and Digital Textbooks

8. **Digital Learning Production Phase: Preproduction**
   - 8.1 Preproduction
   - 8.2 Production
   - 8.3 Post Production

9. **Content Development Software**
   - 9.1 Word Processors
   - 9.2 Image Editors

9.3 Video Editors
9.4 Audio Editors
9.5 Screen casting Software

10. **Content Development/Authoring Tools**
    10.1 Course authoring tools: For creating online courses (iSpring Suite, Articulate Storyline, Adobe Captivate).
    10.2 Quiz creation tools: For creating quizzes or assessments (Google Forms, Quizlet, Quizizz, Slido, Kahoot).

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion
- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test
- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 2: Plan for digital learning contents development

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	Resources specific instructions
1. Student will ask the instructor about planning for digital learning contents development.	1. Instructor will provide the learning materials "**Developing Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No: 2 Plan for digital learning contents development
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 2 Plan for digital learning contents development Answer key No. 2 Plan for digital learning contents development
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No:2- Plan for digital learning contents development Specification Sheet: 2 – Plan for digital learning contents development

Information Sheet 2: Plan for Digital Learning Contents Development

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Lesson plan is prepared incorporating pedagogy aspect
2. Digital contents to be developed are structured and segmented according to lesson/ session plan steps and sequences
3. Types of presentation are planned
4. Content development software and content development tools are selected and collected
5. Media elements of the presentation are planned
6. Technology, pedagogy and content knowledge (TPACK) principles are followed during the plan of content development

1. Digital Transformation of Learning Material

1.1. Ideology and Purpose The initial phase in the digital transformation of learning materials involves establishing a clear ideology and purpose. This foundational step involves articulating the overarching vision and instructional philosophies that underpin the digital learning environment. The purpose is a detailed, well-articulated set of objectives and outcomes you aim to achieve with your digital content.

Work Instructions:

- **Step 1:** Conduct a thorough ideation process to align stakeholders on the ideological underpinnings and overall purpose of the digital transformation process.
- **Step 2:** Document these guiding principles in an accessible format, ensuring they are clear, measurable, and actionable.
- **Step 3:** Regularly refer back to these principles throughout the project, ensuring that all decision-making aligns with your established ideology and purpose.

1.2. ADDIE Model: The ADDIE model (Analysis, Design, Development, Implementation, Evaluation) is a tried and tested instructional system design (ISD) framework used by educators and instructional designers worldwide. It offers a systematic, step-by-step roadmap to creating high-quality, effective digital learning materials.

Work Instructions:

- **Step 1:** In the Analysis phase, pinpoint your audience's needs, define clear learning objectives, and identify any potential limitations or constraints.

- **Step 2:** The Design phase involves conceptualizing the learning content and creating detailed design documents like storyboards. Formulate assessment strategies to measure learners' attainment of the objectives.
- **Step 3:** During the Development phase, your concepts become tangible learning materials. This stage involves content creation, integration of multimedia and interactive elements, and initial testing.
- **Step 4:** The Implementation phase sees your digital learning materials put into action. Here, ensure your content is accessible, usable, and effectively meets learners' needs.
- **Step 5:** Lastly, the Evaluation phase involves continuous feedback collection, learning outcome measurement, and iterative content refinement. This phase feeds back into all other stages, reflecting the cyclical nature of the ADDIE model.

1.3. Audience Centric Material Design: Designing digital learning materials that cater to the needs, preferences, and abilities of your target audience enhances the overall learning experience. It contributes to personalizing the learning process, which increases content relevance and accessibility.

Work Instructions:

- **Step 1:** Begin by conducting a detailed analysis of your target audience. This should cover aspects such as their existing knowledge base, learning preferences, cultural and linguistic backgrounds, and any specific accessibility requirements.
- **Step 2:** Utilize the insights gathered from your audience analysis to tailor your digital content accordingly. This could mean providing comprehensive explanations for novice learners or incorporating audio descriptions for visually impaired learners.
- **Step 3:** Establish a feedback loop with your audience. Regularly gather and use their feedback to make necessary adjustments to the digital learning materials, ensuring they continue to meet their evolving needs.

1.4. Training Modality: The choice of training modality, i.e., the mode or method in which the learning content is delivered, plays a crucial role in shaping the learning experience. Digital learning can occur through various modalities, such as self-paced e-learning modules, virtual instructor-led training, webinars, blended learning, and more. The chosen modality should align with the learning objectives, learner needs, and logistical considerations.

Work Instructions:

- **Step 1:** Start by identifying the training modalities that are feasible and suitable in your context. If your learners are geographically dispersed, modalities like self-paced e-learning or live webinars might be optimal.
- **Step 2:** Weigh the pros and cons of each modality with respect to your learning objectives and learner needs. For instance, while self-paced learning offers flexibility,

it might lack the sense of community and real-time interaction provided by virtual instructor-led training.

- **Step 3:** Select the most appropriate training modality and design your digital learning content accordingly. Keep in mind that the most effective learning experiences often utilize a mix of different modalities.

1.5. Universal Design and Accessibility

Universal Design refers to a broad-spectrum of ideas meant to produce buildings, products and environments that are inherently accessible to older people, people without disabilities, and people with disabilities.

Work Instructions:

Step 1: Familiarize yourself with the seven principles of Universal Design, including equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use.

Step 2: Incorporate these principles into your design process, ensuring that all elements of your course — from course content to technology platforms — are accessible to all users, regardless of their ability.

Step 3: Regularly evaluate your course's accessibility, seeking feedback from learners and other stakeholders and making necessary adjustments.

1.6. Simulations and Real-World Examples

Simulations and real-world examples help students apply their learning in practical, meaningful ways. They offer safe spaces for learners to practice skills and make mistakes without real-world consequences.

Work Instructions:

Step 1: Identify areas within your content where simulations and real-world examples would enhance understanding and engagement.

Step 2: Develop or source relevant simulations and real-world examples, ensuring they align with your learning objectives.

Step 3: Integrate these elements into your course, providing clear instructions and support to ensure learners understand how to make the most of these opportunities.

1.7. Impact of Storytelling

Storytelling can significantly impact learning by making content more engaging, memorable, and relatable. Through stories, abstract or complex concepts can be made more understandable, and learning can be more enjoyable and impactful.

Work Instructions:

Step 1: Identify opportunities within your content to incorporate storytelling, such as case studies, anecdotes, scenarios, or narrative passages.

Step 2: Develop engaging and relevant stories that align with your learning objectives. Good storytelling involves characters, conflicts, resolutions, and messages.

Step 3: Integrate storytelling into your course design, ensuring it complements the learning experience rather than distracting from it. Seek feedback from learners and adjust your approach as necessary.

2. Pedagogy Aspect for Planning Digital Learning Content

This area focuses on effective teaching strategies and approaches that enhance the learning process and facilitate the achievement of learning outcomes in a digital environment.

2.1 Learner-Centered Approach

A learner-centered approach is one that prioritizes the needs, experiences, and interests of the learners, giving them a greater sense of ownership and control over their learning journey.

Work Instructions:

Step 1: Know your learners. Understand their backgrounds, learning styles, strengths, and areas for development.

Step 2: Create learning experiences that are relevant, engaging, and responsive to your learners. Ensure content and activities resonate with their interests, experiences, and real-life contexts.

Step 3: Foster an environment that encourages learners to take an active role in their learning process. Offer opportunities for learners to make decisions, solve problems, and create their learning paths.

2.2 Active Learning

Active learning involves learners actively participating in the learning process, such as through problem-solving, discussion, or creating, rather than passively receiving information.

Work Instructions:

Step 1: Incorporate a variety of interactive activities that encourage learners to actively engage with the content.

Step 2: Provide opportunities for learners to apply their knowledge and skills in meaningful and practical ways.

Step 3: Encourage learners to reflect on their learning and to think critically about the content.

2.3 Personalization

Personalization involves tailoring learning experiences to meet individual learners' needs, preferences, and abilities, thus making the learning more relevant and effective.

Work Instructions:

Step 1: Gather information about your learners' needs, abilities, interests, and learning preferences.

Step 2: Use this information to create personalized learning paths, content, activities, and assessments.

Step 3: Regularly review and adjust the personalization strategies as needed based on learner feedback and performance data.

2.4 Feedback and Assessment

Feedback and assessment are critical components of the learning process. They provide learners with insights into their progress and areas for improvement and inform the educator about the effectiveness of the instruction.

Work Instructions:

Step 1: Establish clear, measurable learning objectives and criteria for success.

Step 2: Implement a variety of formative and summative assessment methods to gauge learner understanding and progress.

Step 3: Provide timely, constructive feedback that helps learners improve. Encourage self-assessment and peer feedback as well.

2.5 Social Learning

Social learning theory emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others.

Work Instructions:

Step 1: Encourage collaboration and interaction among learners through group projects, discussions, peer review, etc.

Step 2: Utilize social media and other collaborative tools that facilitate social learning.

Step 3: Provide guidance and support to ensure that social learning activities are effective and respectful.

2.6 Reflective Practice

Reflective practice involves learners thinking about their learning process, analyzing their experiences, and drawing insights to improve future learning.

Work Instructions:

Step 1: Encourage learners to reflect on their learning experiences, successes, challenges, and areas for improvement.

Step 2: Incorporate activities that foster reflective thinking, such as journaling, discussions, or reflective essays.

Step 3: Provide support and feedback on learners' reflective practices to help them gain deeper insights and enhance their learning skills.

2.7 Multimodal Approach

A multimodal approach involves using multiple modes or methods of communication and learning, such as text, images, audio, video, and interactive activities.

Work Instructions:

Step 1: Identify the most suitable modes of representation for your content and learning objectives.

Step 2: Design your digital learning content using a mix of these modes to cater to different learning styles and preferences.

Step 3: Ensure all modalities are accessible to all learners, adhering to principles of universal design.

3. Learning Materials Digitalization steps and sequences

This area focuses on the detailed steps and sequences that should be followed to digitize learning materials effectively and efficiently.

3.1 Introductions

Introductions are an important first step in any digital learning resource. They provide an opportunity to engage learners, introduce the subject, and set expectations.

Work Instructions:

Step 1: Clearly state the topic of the digital learning material.

Step 2: Briefly outline what learners can expect from the material.

Step 3: Create an engaging introduction that captures the learner's attention and piques their interest.

3.2 Outline of Objectives/Content to be Addressed

Creating an outline of objectives and content helps to structure your digital learning material and ensure that it covers all necessary areas.

Work Instructions:

Step 1: Identify the key objectives and content areas that the digital learning material should cover.

Step 2: Arrange these objectives and content areas in a logical sequence.

Step 3: Create an outline that clearly presents these objectives and content areas.

3.3 Ice Breakers to be used

Ice breakers are activities designed to get learners engaged and comfortable. They are especially useful in a digital learning environment where learners may initially feel isolated.

Work Instructions:

Step 1: Identify appropriate ice breaker activities that are relevant to the content and suited to your audience.

Step 2: Prepare instructions and materials necessary for the ice breaker activities.

Step 3: Incorporate the ice breakers into your digital learning material at appropriate points.

3.4 Delivery Methods for Each Part of the Session

Different parts of your digital learning material may be best suited to different delivery methods.

Work Instructions:

Step 1: Consider each part of your material and the most effective way to deliver that information or facilitate that activity.

Step 2: Identify the best delivery method(s) for each part, considering methods such as direct instruction, guided practice, interactive activities, etc.

Step 3: Incorporate these delivery methods into your digital learning material.

3.5 Plan of Learning Activities to be Used Within the Session

Learning activities are opportunities for learners to engage with the content, apply their knowledge, and build their skills.

Work Instructions:

Step 1: Identify the learning activities that will support your objectives and content.

Step 2: Plan how these activities will be incorporated into the digital learning material.

Step 3: Prepare any instructions, resources, or materials needed for these activities.

3.6 Timelines/Duration for Each Learning Activity

Effective timing can enhance the flow of your digital learning material and ensure that learners have adequate time for each activity.

Work Instructions:

Step 1: Consider each learning activity and estimate how much time learners will need to complete it.

Step 2: Create a timeline or schedule that outlines when each activity should begin and end.

Step 3: Incorporate this timeline into your digital learning material, ensuring that it is clear and visible to learners.

3.7 Gamifying Assessment Points/Opportunities

Gamification involves using game elements in non-game contexts, such as digital learning materials, to make them more engaging and motivating.

Work Instructions:

Step 1: Identify opportunities within your digital learning material to incorporate gamified assessments.

Step 2: Design these assessments to be interactive, challenging, and fun, while still aligned with your learning objectives.

Step 3: Integrate these gamified assessments into your digital learning material at appropriate points.

3.8 Learning Materials Required

In addition to the digital learning material itself, learners may need additional resources or materials to support their learning.

Work Instructions:

Step 1: Identify any additional learning materials that learners will need.

Step 2: Make these materials accessible to learners, whether that's through direct provision, links, or instructions on where/how to find them.

Step 3: Clearly indicate within your digital learning material when and how these additional materials should be used.

3.9 Activity: Work Plan

WORK PLAN
Qualification: NTVQF, Level-2

Title: Interpreting Design Principle and Colour Sense

Objectives:

1. Inspect for safe work environment.
2. Interpret elements of design principle.
3. Interpret colour.
4. Prepare different colour.

Area of Concentration	Challenges met	Activity/ies	Description	Strategy/ies	Resources	Budgetary Requirements	Duration
Interpret colour • Colour theory • Colour modes • Colour psychology	• People has no concept of color • Most critical part of graphic design is Color psychology that not address by the designer.	• Explain color theory, mode and psychology. • Set example. • Activity	• Develop detail content of color theory, mode and psychology for explanation. • Set example of different design to explain color psychology. • Activity with color theory, mode and	• Presentation • Discussion • Interactive Video • Test • Activities • Brainstorming • Feedback	• LMS, • Internet, • Content, • Infographics • E-book, • Quiz • Task Sheet • Audio-Visual • Video editing software • PC+ webcam/ Laptop • Docx • Smart Phone, • micro phone	10000	3 Days

			psycho logy				

3.10 Activity: Study Guide

Developing Digital Contents for Face to Face Delivery
30 Hours
Study Guide

INTRODUCTION

Welcome to this blended training of Interpret Design Principle and Colour Sense. This unit covers the knowledge, skills and attitudes required to interpret design principle and colour sense. It includes inspecting for safe work environment, interpreting elements of design principle and colour and preparing different colour.

OBJECTIVES

At the end of this module, you should be able to:

1. Inspect for safe work environment.
2. Interpret elements of design principle.
3. **Interpret colour.**
4. Prepare different colour.

LEARNING RESOURCES

1. PC/Laptop and Smart Phone with Internet connection
2. Infographics, E-book, Audio-Visual
3. Software- Docx & Video editing
4. LMS
5. Self-paced Learning Material (CBLM)
6. Task Sheets and Performance Criteria Checklist

KEY IDEAS

- Color Theory
- Colour modes
- Colour psychology

STUDY QUESTIONS

1. What is colour theory?
2. Importance of color application
3. How many types of colour?

4. Which colour are primary colour?
5. What is secondary colour? Which colour are secondary colour?
6. What is colour wheel?
7. Write down the different colour mode.
8. What is the meaning of RGB and CMYK?
9. What is the uses of CMYK colour mode?
10. Define tints?
11. What is colour psychology?
12. What is the psychology of green color?
13. What is the psychology of red color?

ACTIVITIES

A. Face to face Activities (guided online activities)

Module : Interpreting Design Principle and Colour Sense

Learning Outcome-3: Interpret colour

PowerPoint presentation/discussion on coordinating and assessment arrangements-

A. Take the pretest exam
B. Post in the forum
C. Do Activity sheet 3.1, 3.2, 3.3

B. Offline Activities

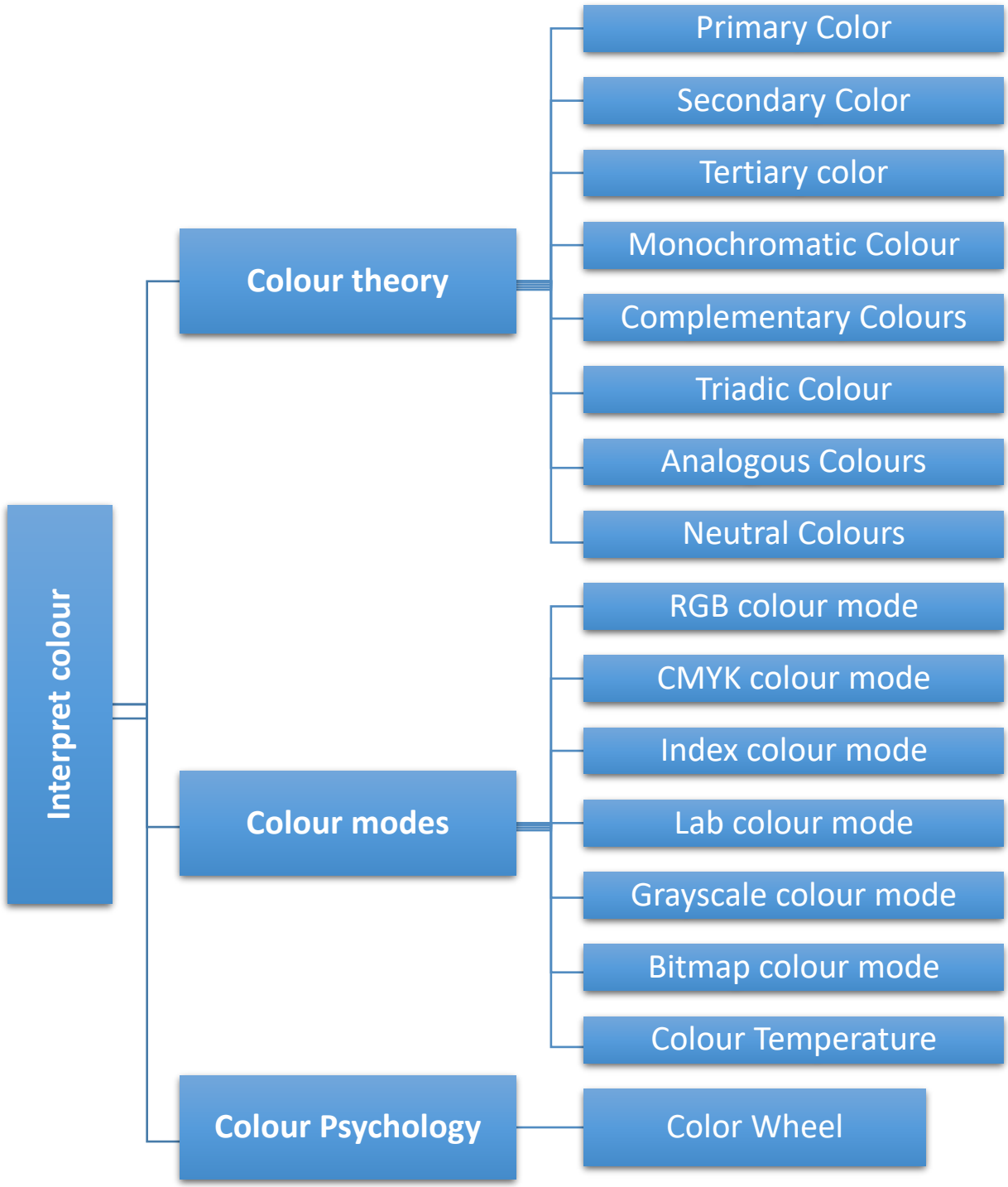
1. Completion of task sheets, assessment of activities and oral questioning.
2. Feed backing, mentoring and coaching.
3. Sharing and discussion of gained insights and learning from the elective course

STUDY SCHEDULE

DATE/ PERIOD	TOPICS	ACTIVITY	Delivery Mode	NO OF HOURS
DAY 4	LO 3: Interpret colour	Presentation with discussion of PPT about colour theory	Face to face	2 hours
		Do Activity Sheet 3-1: Interpret Colour theory	LMS	1 hours
		Presentation with discussion of PPT about colour modes	Face to face	1 hours
		Do Activity Sheet 3-2: Interpret colour modes	LMS	1 hours
DAY 5		Presentation with discussion of PPT about colour psychology	Face to face	2 hours
		Do Activity Sheet 3-3: Interpret colour psychology	LMS	3 hours

3.11 Activity: Course Blueprint

Title **: Instructional Blue Print**
Qualification **: NTVQF, Level-2**
Sector **: ICT**
Unit of Competency **:** Interpret Design Principle and Colour Sense
Module **Title**



: Interpreting Design Principle and Colour Sense

3.12 Activity: Instructional Design

Sector:	ICT
Qualification:	NTVQF, Level-2
Unit of Competency:	Interpret Design Principle and Colour Sense
Module Title:	Interpreting Design Principle and Colour Sense
Course Descriptor:	This unit covers the knowledge, skills and attitudes required to interpret design principle and colour sense. It includes inspecting for safe work environment, interpreting elements of design principle and colour and preparing different colour.
Developer/s:	Md. Younus Ali Mashud

Learning Outcome	**Topic**	**Content**	**Multimedia**			**Activities**	**Notes**
			Graphics	**Video**	**H5P**		
Interpret colour	Interpret Colour theory.	Colour theory • Color Wheel • Primary Color • Secondary Color • Tertiary color • Monochromatic Colour • Complementary Colours • Triadic Colour • Analogous Colours • Neutral Colours	Image of all content	Animation of color change (primary to secondary to tertiary)	Quiz	• Identify different color according to color theory. • Quiz • Develop and use different colors	
	Interpret Colour modes.	Colour modes • RGB colour mode (millions of colors) • CMYK colour mode (four-printed colors) • Index colour mode (256 colors) • Lab colour mode • Grayscale colour mode (256 grays) • Bitmap colour mode (2 colors) • Colour Temperature	Image of all content	Work with color mode • Screen record with voice over	Quiz	• Identify different color mode. • Quiz • Change different color mode	
	Interpret Colour psychology.	Colour psychology • Red	Different company Logo Image of	Exoplanar video • Explain logo's	Quiz	• Identify different	

		• Orange • Yellow • Green • Bule • Purple • Pink	all defined colors	color psychology • Screen record with voice over		color psychology. • Quiz • Design logo using color psychology	

3.13 Activity: Courseware Content/Storyboard

Sector: ICT	**Qualification: NTVQF, Level-2**
Unit of Competency: Interpret Design Principle and Colour Sense	**Module Title: Interpreting Design Principle and Colour Sense**
Developer: Md. Younus Ali Mashud	

Learning Objective/s:

1. Inspect for safe work environment.
2. Interpret elements of design principle.
3. Interpret colour.
4. Prepare different colour.

Learning Outcomes	**WEBSCRIPT**				**MEDIASCRIPT**		REMARKS
	Topics	**Content**	**Assignment**	**Unit Quiz**	**Text/Image/ Audio**	**Video**	
Interpret colour	• Colour theory is interpreted.	Colour theory • Color Wheel • Primary Color • Secondary Color • Tertiary color • Monochromatic Colour • Complementary Colours • Triadic Colour • Analogous Colours • Neutral Colours	**Self Check Sheet-4.3-1**	**Quiz-4.3-1**	Image of all content	• Animation of color change (primary to secondary to tertiary)	
	• Interpret Colour modes.	Colour modes • RGB colour mode (millions of colors) • CMYK colour mode (four-printed colors) • Index colour mode (256 colors) • Lab colour mode	**Self Check Sheet-4.3-2**	**Quiz-4.3-2**	Image of all content	• Screen record with voice over	

		• Grayscale colour mode (256 grays) • Bitmap colour mode (2 colors) • Colour Temperature					
	• Interpret Colour psychology.	Colour psychology • Red • Orange • Yellow • Green • Bule • Purple • Pink	**Self Check Sheet-4.3-3**	**Quiz-4.3-3**	Image of all content	• Explain logo's color psychology	

3.14. Summary/Overview/Wrap Up

The wrap-up or summary of a digital learning session serves as a crucial link between what has been learned and how that learning will be applied moving forward. It's an opportunity to reinforce the main points, address any remaining questions, and prompt learners to think about how they will use what they've learned.

Work Instructions:

Step 1: Review the main points of the session. Recap the key takeaways, learning objectives achieved, and any milestones reached during the session.

Step 2: Facilitate a Q&A session. Encourage learners to ask questions and discuss any areas they found challenging. Clarify misunderstandings and provide additional resources where necessary.

Step 3: Connect the learning to future applications. Ask learners to consider how they can apply their new knowledge or skills in their own contexts. This could involve sharing examples, facilitating discussions, or setting follow-up tasks or projects.

Step 4: Solicit feedback. Invite learners to share their thoughts on the session, what worked well for them, and any suggestions for improvement. This feedback can be invaluable in refining future digital learning content.

Step 5: Provide information on next steps. This could include details of the next session, follow-up tasks, further resources to explore, or where and how to access additional support if needed.

Remember, the summary/overview/wrap up is your last chance to make an impression on the learners and set the stage for their continued learning journey. So, make it count!

4. Structure and Segmentation of Digital Contents

The structure and segmentation of digital content is a key factor in how effectively learners can absorb and understand the information presented. Well-structured content contributes to a more engaging and effective learning experience.

4.1 Clear Organization

Organization in digital content refers to how the content is structured and ordered, including the grouping of similar topics and the logical flow from one topic to another.

Work Instructions:

Step 1: Define the main topics and subtopics. Organize these into a logical order, typically from general to specific or in the sequence of their application.

Step 2: Group related information together. This can be achieved through modules, sections, or chapters.

Step 3: Create a content map or outline to visualize the organization of the content. This can be used as a guide in content development.

4.2 Chunking Information

Chunking refers to breaking down information into smaller, manageable parts or 'chunks'. This technique makes content easier to digest and remember, making it particularly useful for complex or dense topics.

Work Instructions:

Step 1: Identify natural breakpoints in the content where it can be divided into smaller chunks.

Step 2: Keep each chunk focused on a single concept or learning objective.

Step 3: Aim to keep chunks short. A common guideline is that each chunk should take no more than 5-10 minutes to consume.

4.3 Sequential Flow

Sequential flow refers to arranging the content in a logical and linear order, where each topic builds on the previous one.

Work Instructions:

Step 1: Determine the natural or necessary sequence for your content. This could be based on a process flow, difficulty level, or prerequisite knowledge.

Step 2: Ensure each segment clearly leads to the next. Use transitional phrases or summary and preview statements to reinforce the flow.

4.4 Navigation and Signposting

Navigation and signposting help guide learners through the content. They include elements like a table of contents, breadcrumb trails, navigation buttons, and clear headers and sub-headers.

Work Instructions:

Step 1: Incorporate a variety of navigation aids into your digital content.

Step 2: Use clear and descriptive labels for all navigation elements.

Step 3: Consistently place navigation elements in the same location across different pages or modules.

4.5 Visual Hierarchy

Visual hierarchy in digital content refers to the use of design elements to indicate the importance of content. It helps learners identify key points and understand how information is related.

Work Instructions:

Step 1: Use size, color, and placement to indicate the importance of various elements.

Step 2: Use whitespace strategically to group related elements and separate different sections.

Step 3: Be consistent in your use of design elements to avoid confusion.

4.6 Interactive Elements

Interactive elements, such as quizzes, discussions, and interactive graphics, can increase engagement and improve learning outcomes.

Work Instructions:

Step 1: Identify opportunities to incorporate interactive elements that align with your learning objectives.

Step 2: Design and develop these elements, ensuring they are user-friendly and accessible.

Step 3: Test the interactive elements for functionality and ease of use.

4.7 Consistent Design

Consistent design enhances usability and learner confidence by making content predictable and easier to understand.

Work Instructions:

Step 1: Develop a style guide that outlines consistent use of fonts, colors, imagery, and other design elements.

Step 2: Apply these design guidelines consistently throughout your digital content.

Step 3: Regularly review your content for consistency, making updates as necessary.

5. Technology, Pedagogy and Content Knowledge (TPACK) principles

TPACK is a framework that identifies the knowledge teachers need to teach effectively with technology.

5.1 Content Knowledge (CK)

Content Knowledge refers to the teacher's understanding of the subject matter that is to be learned or taught. This includes knowledge of concepts, theories, ideas, organizational frameworks, knowledge of evidence and proof, etc.

Work Instructions:

Step 1: Begin with a deep understanding of the subject matter. This could involve extensive reading, research, and consultation with subject matter experts.

Step 2: Identify the key concepts, theories, or ideas that learners need to understand. This will form the backbone of your digital content.

5.2 Pedagogical Knowledge (PK)

Pedagogical Knowledge involves understanding how to facilitate learning. This includes knowledge of teaching methods, lesson planning, learner assessment, and classroom management strategies.

Work Instructions:

Step 1: Understand various teaching methods and strategies, and identify those that would be most effective for your digital content.

Step 2: Develop lesson plans that incorporate these teaching methods and facilitate learner engagement and understanding.

5.3 Technological Knowledge (TK)

Technological Knowledge involves understanding of various technologies, software, hardware, and tools that can be used in teaching.

Work Instructions:

Step 1: Familiarize yourself with the various technologies that can be used to deliver digital content. This could include learning management systems, multimedia tools, interactive technologies, etc.

Step 2: Select the technology tools that will be most effective in delivering your content and facilitating learning.

5.4 Technological Pedagogical Knowledge (TPK)

Technological Pedagogical Knowledge refers to an understanding of how teaching and learning can change when particular technologies are used. This includes knowing the pedagogical affordances and constraints of a range of technological tools as they relate to disciplinarily and developmentally appropriate pedagogical designs and strategies.

Work Instructions:

Step 1: Investigate how different technologies can change or enhance teaching methods and learning experiences. Explore their potential uses, benefits, and limitations.

Step 2: Integrate suitable technologies into your teaching practices, considering how they align with your pedagogical strategies and goals.

5.5 Technological Content Knowledge (TCK)

Technological Content Knowledge refers to an understanding of the relationship between your subject matter and the technology that can be used to communicate it.

Work Instructions:

Step 1: Understand how technology can be used to represent and formulate your subject matter in new ways. This may involve using multimedia to demonstrate concepts, employing interactive features to engage learners, etc.

Step 2: Apply these technological tools and strategies when designing and delivering your digital learning content.

5.6 Technological Pedagogical Content Knowledge (TPACK)

Technological Pedagogical Content Knowledge represents a class of knowledge that is central to teachers' work with technology. The interaction of these three types of knowledge - content, pedagogy, and technology - both with each other and with the context, creates the knowledge base necessary for effective teaching with technology.

Work Instructions:

Step 1: Start by reflecting on your current teaching practices, focusing on areas where content, pedagogy, and technology intersect.

Step 2: Identify where improvements or changes could be made. How could technology enhance your pedagogical strategies or the way you present your content? Are there ways you could be using technology that you haven't explored yet?

Step 3: Continue to expand and refine your TPACK knowledge base through ongoing professional learning and practical application. The goal is to create a balance where technology, pedagogy, and content knowledge interplay seamlessly, leading to effective teaching and engaging learning experiences.

6. Digital Learning Materials/Media Elements

Digital learning materials or media elements are the various components used to build digital learning experiences. The choice of elements and their effective integration significantly influences learner engagement and knowledge retention.

6.1 Importance and Role of Media Elements

Media elements, such as text, images, video, audio, and interactive content, contribute to the richness of digital learning experiences. They cater to diverse learning styles and preferences, foster better understanding and retention of information, and make learning interactive and engaging.

Work Instructions:

Step 1: Recognize the value of varied media elements in enhancing learning experiences. **Step 2:** Depending on the learning objectives and target audience, identify suitable media elements to include in the course content.

Step 3: Seamlessly integrate these elements to complement the core content and make learning more engaging and effective.

6.2 Types of Media Elements

There is an array of media elements that can be used in digital learning, including but not limited to text, images, videos, audio, animations, infographics, quizzes, interactive simulations, augmented reality (AR), virtual reality (VR), and social media elements.

Work Instructions:

Step 1: Understand the role and application of different media types in digital learning. Tools such as Adobe Creative Suite can be used to create various types of media. **Step 2:** Aim for a balanced and diverse mix of media types that cater to different learning styles and enhance the overall learning experience.

6.3 Text

Text is a basic yet vital component of digital learning materials. It can be used to deliver crucial information, instructions, explanations, and more.

Work Instructions:

Step 1: Use clear, concise language and maintain a logical flow in the text.

Step 2: Leverage formatting tools to enhance readability. For instance, headings, bullet points, and highlighted text can aid in easy navigation and understanding. Tools such as Microsoft Word or Google Docs can help with text formatting.

Step 3: To emphasize key points, consider using text highlighting techniques, like bold or italic.

6.4 Images

Images, including photographs, diagrams, infographics, and illustrations, can supplement textual content and aid comprehension. They can be created or edited using tools like Adobe Photoshop or Canva.

Work Instructions:

Step 1: Use relevant images that support or enhance the textual content.

Step 2: Ensure images are clear, high-quality, and are properly attributed if they are not original.

Step 3: Provide alternative text (alt text) for all images to ensure accessibility for all users.

6.5 Videos

Videos, including tutorials, demonstrations, animated explainers, or recorded lectures, can enhance understanding and retention. They can be created using tools like Adobe Premiere Pro or simpler alternatives like Lumen5.

Work Instructions:

Step 1: Create or source relevant, high-quality videos.

Step 2: Keep videos concise and engaging to sustain learner attention.

Step 3: Include transcripts or captions for all videos to ensure accessibility.

6.6 Audio

Audio elements, such as podcasts, narrations, or sound effects, can offer a different mode of content delivery. Audacity or GarageBand can be used to create and edit audio content.

Work Instructions:

Step 1: Create or source relevant, high-quality audio content.

Step 2: Use audio to enrich other media elements, but ensure it doesn't become a distraction.
Step 3: Provide transcripts for all audio content to ensure accessibility.

6.7 Interactive Content

Interactive content such as quizzes, simulations, drag-and-drop activities, or clickable infographics can boost learner engagement and retention. Tools like Articulate Storyline or Adobe Captivate can be used to create interactive elements.

Work Instructions:

Step 1: Identify opportunities to incorporate interactive content relevant to your learning objectives.

Step 2: Design and develop interactive elements, ensuring they are user-friendly and accessible.

Step 3: Conduct functionality and user experience testing before integrating interactive content into the course.

7. Types of Presentation for Digital Learning Production

Digital learning offers various presentation types, each offering unique advantages. The choice of presentation type depends on factors such as the subject matter, learning objectives, learner preferences, and available resources.

7.1 Slideshow Presentations

Slideshow presentations, typically using PowerPoint, Keynote, or Google Slides, are a staple in many learning environments. They allow for the systematic presentation of information, often supplemented with images, audio, video, and interactive elements.

Work Instructions:

Step 1: Begin with a clear outline of the information to be covered.

Step 2: Use a combination of text, images, and other media to convey information effectively. Avoid overcrowding slides and maintain a balance between text and visuals.

Step 3: Enhance your slideshow with built-in animation and transition effects, but use them sparingly to avoid distraction.

7.2 Video Presentations

Video presentations can include recorded lectures, animated explainer videos, or demonstration videos. They are particularly effective when visual demonstration or storytelling is necessary for understanding.

Work Instructions:

Step 1: Develop a script or storyboard before starting the video production process.

Step 2: Depending on your needs, you can either record live footage or create animated videos using tools like Adobe Premiere Pro or Vyond.

Step 3: Keep the video concise, engaging, and supplemented with captions or transcripts for accessibility.

7.3 Interactive Multimedia Presentations

Interactive multimedia presentations integrate various media types and interactive elements like quizzes, simulations, or clickable infographics. Tools like Adobe Captivate or Articulate Storyline can be used to create these.

Work Instructions:

Step 1: Identify opportunities to incorporate interactivity within the presentation.

Step 2: Design and develop the interactive elements, ensuring they are intuitive and user-friendly.

Step 3: Conduct thorough testing of the interactive components before deploying the presentation.

7.4 Webinars and Live Streaming

Webinars and live streams provide real-time interaction between the presenter and the audience, making them ideal for live lectures, discussions, or Q&A sessions.

Work Instructions:

Step 1: Choose a reliable webinar or live streaming platform, like Zoom or OBS Studio.

Step 2: Prepare your presentation material and ensure your technical setup (internet connection, audio-video equipment, etc.) is in place.

Step 3: Engage the audience during the live session through polls, chats, or Q&A sessions.

7.5 Augmented Reality (AR) and Virtual Reality (VR) Presentations

AR and VR offer immersive, experiential learning experiences, well-suited for fields like medicine, engineering, or history. They require specialized tools and equipment, such as Unity for creating the presentations and VR headsets for experiencing them.

Work Instructions:

Step 1: Identify the learning objectives that could benefit from an immersive, experiential presentation.

Step 2: Collaborate with AR/VR developers or use AR/VR creation tools to develop the presentations.

Step 3: Test the AR/VR experience for usability and effectiveness.

7.6 Podcasts and Audio Presentations

Podcasts and audio presentations allow learners to absorb information while multitasking. They are effective for storytelling, interviews, or narrative-driven content.

Work Instructions:

Step 1: Plan your content and create a script.

Step 2: Record the audio content using a good-quality microphone and audio recording/editing software like Audacity.

Step 3: Edit the audio for clarity and coherence, add intro/outro music if needed, and ensure it is accessible with a text transcript.

7.7 E-books and Digital Textbooks

E-books and digital textbooks provide text-heavy, self-paced learning resources. They can be supplemented with images, interactive elements, and embedded multimedia.

Work Instructions:

Step 1: Outline the book's structure, including chapters and sections.

Step 2: Write the content, supplementing it with appropriate images, interactive elements, and embedded multimedia.

Step 3: Use an e-book creation tool like iBooks Author or Adobe InDesign to format and publish your e-book or digital textbook. Include a table of contents for easy navigation.

8. Digital Learning Production Phase

The production of digital learning content can be broadly divided into three phases: preproduction, production, and post-production. Each phase involves specific tasks that contribute to the overall quality and effectiveness of the final learning material.

8.1 Preproduction

The preproduction phase is the planning stage. This involves conceptualizing the content, defining learning objectives, and outlining the course structure. This phase often includes creating a detailed storyboard or script and setting up a production timeline.

Work Instructions:

Step 1: Begin by identifying the learning objectives and target audience for your digital learning content.

Step 2: Create a detailed outline or storyboard of the content. This should include the sequence of topics, the types of learning materials (text, video, audio, interactive elements), and any assessment methods.

Step 3: Develop a production timeline that outlines when each task needs to be completed.

8.2 Production

The production phase is when the actual creation of the digital learning content occurs. This can include writing, recording, designing, coding, and more, depending on the type of content being produced.

Work Instructions:

Step 1: According to your storyboard or script, start creating the content for your digital learning material.

Step 2: This can involve writing text, recording audio or video, designing visuals or graphics, and creating any interactive elements.

Step 3: Ensure you follow the best practices for each type of content. For example, for video content, ensure good lighting and audio quality.

8.3 Post Production

In the post-production phase, the raw materials created during the production phase are edited and polished. This can include adding effects or enhancements, testing the material, gathering initial feedback, and making necessary revisions.

Work Instructions:

Step 1: Review the content created during the production phase and perform necessary edits. This could include editing video or audio, proofreading text, and testing interactive elements.
Step 2: Add any final enhancements such as transitions, effects, or additional multimedia elements.

Step 3: Test the digital learning content and gather feedback. Based on this feedback, make any necessary revisions to improve the content's quality and effectiveness.

9. Content Development Software

The production of digital learning content involves the use of various content development software. Each type of software has a specific role in the creation, editing, or organization of different content types.

9.1 Word Processors

Word processors are vital for creating and formatting written content, including text for e-learning courses, scripts for videos, and content for e-books.

Work Instructions:

Step 1: Choose a word processor that suits your needs. Popular options include Microsoft Word and Google Docs, both of which offer robust tools for creating, editing, and formatting text.

Step 2: Use the features of your chosen word processor to create and format your text. This might include using styles for consistent formatting, tables for organizing information, and comments for collaborative editing.

Step 3: Save and export your text in a format suitable for your digital learning content.

9.2 Image Editors

Image editors are used to create or edit images for digital learning content. They can be used for tasks ranging from simple cropping or resizing to complex graphic design.

Work Instructions:

Step 1: Select an image editor based on your needs. Adobe Photoshop, Canva, and Microsoft Design are popular options with varying levels of complexity.

Step 2: Use the features of your chosen image editor to create or edit your images. This could include adjusting color and contrast, adding text or effects, and cropping or resizing the image.

Step 3: Save your images in an appropriate format for your digital learning content.

9.3 Video Editors

Video editors are essential for creating and editing videos, an increasingly important component of digital learning content.

Work Instructions:

Step 1: Choose a video editor that meets your needs. Camtasia, VSDC, Adobe Premiere Pro, Adobe After Effects, and Final Cut Pro are some popular choices.

Step 2: Use your chosen video editor to create or edit your videos. This can involve tasks such as trimming or splitting clips, adding transitions or effects, and adding audio or subtitles.

Step 3: Save your video in an appropriate format for your digital learning content.

9.4 Audio Editors

Audio editors are used for recording or editing sound files, such as voice-overs for videos or audio for podcasts.

Work Instructions:

Step 1: Select an audio editor that suits your needs. Audacity and Adobe Audition are well-known options.

Step 2: Use your chosen audio editor to record or edit your sound files. This could involve tasks such as adjusting volume levels, removing background noise, and adding effects.

Step 3: Save your audio in an appropriate format for your digital learning content.

9.5 Screen casting Software

Screen casting software is used to create screencasts, which are video recordings of your computer screen. They are often used for software tutorials or demonstrations.

Work Instructions:

Step 1: Choose a screencasting software that meets your needs. Camtasia and OBS Studio are popular options.

Step 2: Use your chosen screencasting software to record your screen while performing the tasks you wish to demonstrate. You can also record voice-over narration during this process.

Step 3: Save your screencast in a suitable format for your digital learning content. Most screen casting software will also have basic editing tools for trimming the start and end points of your video or adding simple annotations.

10. Content Development/Authoring Tools

Developing digital learning content often requires specialized authoring tools. These tools allow for the creation of structured, interactive learning experiences, such as online courses, quizzes, or assessments.

10.1 Course Authoring Tools

Course authoring tools are software applications used to create online courses. These tools typically offer features for creating and organizing content, incorporating multimedia elements, and building interactive components.

Work Instructions:

Step 1: Select a course authoring tool that fits your needs. iSpring Suite, Articulate Storyline, and Adobe Captivate are popular options, each with unique features and capabilities.

Step 2: Use your chosen course authoring tool to create your online course. This usually involves creating a sequence of screens or pages, each containing a mix of text, images, videos, and interactive elements.

Step 3: Test and publish your course. Most course authoring tools include options for previewing your course and publishing it in a format suitable for delivery via a learning management system (LMS) or other distribution method.

10.2 Quiz Creation Tools

Quiz creation tools allow you to create quizzes or assessments to test learners' understanding of the content. These tools often provide options for multiple question types, automatic grading, and feedback.

Work Instructions:

Step 1: Choose a quiz creation tool that meets your requirements. Google Forms, Quizlet, Quizizz, Slido, and Kahoot are all commonly used tools.

Step 2: Use your chosen tool to create your quiz. This usually involves selecting a question type, inputting the question and answer choices, and specifying the correct answer.

Step 3: Distribute your quiz to learners. This could be through a link, embedded within an online course, or as part of a live session. Remember to configure any necessary settings for grading or feedback.

Self-Check Sheet 2.1

1. In the context of digital learning, what are the key elements of color theory that instructional designers should consider while creating visually engaging content?

2. How does the use of different color modes, such as RGB, CMYK, and grayscale, impact the quality and visual representation of digital learning materials

3. Explain the significance of understanding color psychology in the design of digital learning materials. How can color choices influence learners' emotions, attention, and overall learning experience?

4. How can clear organization and segmentation of digital content contribute to a more effective learning experience for learners?

5. What are some common types of media elements used in digital learning materials, and how can each type enhance the learning experience?

6. In the context of digital learning production, what are the main tasks involved in the preproduction phase, and why is careful planning crucial for creating effective learning content?

7. How can interactive elements, such as quizzes and simulations, improve learner engagement and knowledge retention in digital learning materials?

8. What is the significance of incorporating technology, pedagogy, and content knowledge (TPACK) principles in the development of digital learning materials?

9. How does the choice of presentation type, such as slideshow presentations, videos, or interactive multimedia, impact the effectiveness of digital learning materials in different educational contexts?

10. What are some popular content development software tools used to create and edit various media elements, and how can they be effectively utilized in the production of digital learning content?

Answer Key 2.1

Task Sheet 2.1

Task Sheet 2.1: Prepare Lesson Plan
Title: Prepare Lesson Plan
Performance Objective: At the end of this task, the trainee should be able to:
1. Develop a comprehensive lesson plan that incorporates pedagogical aspects to guide the content development process.
2. Structure the lesson plan to ensure a logical progression of topics and activities.
Policy and Documents Required:
• Curriculum or course outline
• Teaching and learning policy guidelines
• Previous lesson plans (if any)
Tools and Materials Required:
• Lesson plan template
• Notebook or paper for note-taking
• Pens/Markers
Equipment:
• Laptop/Computer
• Access to pedagogical resources for reference
Steps/Procedures:
1. **Analyze the Curriculum or Course Outline:**
• Review the curriculum or course outline to understand the key learning objectives and outcomes. Identify the topics and concepts that need to be covered during the lesson.
2. **Identify Instructional Strategies and Teaching Methodologies:**
• Determine the most effective instructional strategies and teaching methodologies that align with the learning objectives and outcomes. Consider interactive activities, group discussions, demonstrations, and multimedia elements to engage learners.
3. **Design the Lesson Plan:**
• Use the lesson plan template to structure the lesson plan. Include sections for objectives, materials/resources, instructional strategies, assessment methods, and a timeline for each activity.
4. **Sequence Topics and Activities:**
• Organize the topics and activities in a logical progression. Ensure that the lesson flows smoothly from one topic to another, building upon learners' understanding.
5. **Incorporate Assessment Methods:**

• Integrate formative and summative assessment methods into the lesson plan to measure learners' progress and understanding. Align assessments with the learning objectives to ensure meaningful feedback.
6. **Review and Refine the Lesson Plan:**
• Review the completed lesson plan to ensure it meets the learners' needs and aligns with best pedagogical practices. Make necessary adjustments to improve clarity and effectiveness.
Assessment Method: Submission of a comprehensive lesson plan that incorporates effective pedagogical strategies. The lesson plan will be assessed based on its alignment with the learning objectives, the appropriateness of instructional strategies, the logical flow of topics and activities, and the incorporation of relevant assessments to measure learners' progress.

Task Sheet 2.2

Task Sheet 2.2: Structure and Segment Digital Content
Title: Structure and Segment Digital Content
Performance Objective: By the end of this task, the trainee should be able to:
1. Organize and break down the digital content according to the steps and sequences outlined in the lesson plan.
2. Ensure the content is logically structured and facilitates easy navigation for the learners.
Policy and Documents Required:
• Digital Content Development Policy
• Lesson plan
Tools and Materials Required:
• Digital Content
• Laptop or Computer
Equipment:
• Digital Content Management Software
• Learning Management System
Steps/Procedures:
1. **Review the Lesson Plan:**
• Carefully examine the lesson plan to understand the sequence of topics, activities, and learning objectives. Identify the essential elements that need to be included in the digital content.
2. **Break Down the Digital Content:**

- Divide the digital content into manageable segments or "chunks" that align with the lesson plan. Each segment should focus on specific topics or learning points.

3. **Organize the Content Logically:**

- Arrange the segmented digital content in a logical order that allows for smooth progression. Ensure that related topics are grouped together, and the content flows cohesively.

4. **Facilitate Easy Navigation:**

- Create clear navigation points within the digital content to help learners move between sections effortlessly. Include interactive elements, such as hyperlinks and menus, to improve user experience.

5. **Review and Adjust the Structure:**

- Evaluate the structured and segmented digital content to ensure it effectively represents the lesson plan. Make any necessary adjustments to enhance clarity and alignment.

Assessment Method: Submission of structured and segmented digital content that aligns with the lesson plan. The assessment will evaluate how well the trainee organized the content, the logical flow of topics, and the implementation of navigation elements for ease of use by learners.

Task Sheet 2.3

Task Sheet 2.3: Plan Types of Presentation

Title: Plan Types of Presentation

Performance Objective: By the end of this task, the trainee should be able to:

1. Determine the most effective presentation types for different content areas.
2. Plan to implement various types of presentations, such as PowerPoint, video, audio, and web-based platforms, based on the content and learner preferences.

Policy and Documents Required:

- Instructional Design Guidelines
- Content Development Policy

Tools and Materials Required:

- Lesson Plan
- Digital Content
- Laptop or Computer

Equipment:

- Presentation Software (PowerPoint, Google Slides)
- Video Editing Software (Adobe Premiere Pro)
- Audio Editing Software (Audacity)

Steps/Procedures:

1. **Review the Content and Understand Learner Needs:**
    - Thoroughly examine the content that needs to be delivered in the digital learning materials. Gain a clear understanding of the specific learning objectives and the preferences and needs of the target learners.
2. **Decide on Effective Presentation Types:**
    - Determine the most effective presentation types for each content area. For example, consider using video for demonstrations or practical applications, audio for lectures or explanations, and interactive web-based platforms for engaging activities.
3. **Outline a Plan for Each Presentation Type:**
    - Create a detailed plan for implementing each presentation type. Ensure that each type aligns with the lesson plan and effectively conveys the content. Consider incorporating multimedia elements, interactivity, and clear visuals to enhance learner engagement and comprehension.
4. **Select and Utilize Appropriate Tools and Software:**
    - Choose the suitable tools and software for each presentation type. Utilize presentation software such as PowerPoint or Google Slides for slide-based presentations, video editing software like Adobe Premiere Pro for video content, and audio editing software such as Audacity for audio elements.
5. **Ensure Alignment with Lesson Plan:**
    - Ensure that the planned presentation types complement the lesson plan and support the achievement of learning objectives. Adjust and refine the presentation plan as needed to ensure coherence and consistency.

Assessment Method: Submission of a detailed presentation plan that aligns with the content and learner needs. The assessment will evaluate the trainee's ability to identify effective presentation types, plan their implementation, and align them with the lesson plan. Additionally, the presentation plan will be assessed based on the inclusion of suitable multimedia tools and software for each type of presentation.

Task Sheet 2.4

Task Sheet 2.4: Select Content Development Software and Tools

Title: Select Content Development Software and Tools

Performance Objective: By the end of this task, the trainee should be able to:

1. Evaluate various software and tools available for content development.
2. Select the most suitable ones considering the content requirements and learner preferences.

Policy and Documents Required:

- Instructional Design Guidelines
- IT Policy

Tools and Materials Required:

- Lesson Plan
- List of Available Software and Tools
- Laptop or Computer

Equipment:

- Software and Tools for evaluation (e.g., PowerPoint, Adobe Suite, Canva, Google Tools)

Steps/Procedures:

1. **Review the Content and Understand Technical Requirements:**
    - Carefully review the content that needs to be developed and delivered in the digital learning materials. Understand the technical requirements for compatibility, file formats, and interactivity.
2. **Evaluate Available Software and Tools:**
    - Assess the various software and tools available for content development. Consider popular options such as PowerPoint, Adobe Suite, Canva, Google Tools, and any other relevant applications.
3. **Consider Functionality and Ease of Use:**
    - Evaluate the functionality and features offered by each software and tool. Assess how well they align with the specific content development needs, such as multimedia integration, interactivity, and ease of use for content creators.
4. **Assess Cost and Budget Considerations:**
    - Consider the cost implications of each software and tool. Evaluate whether the chosen options fit within the allocated budget for content development.
5. **Consider Compatibility with Content and Learner Preferences:**
    - Ensure that the selected software and tools are compatible with the content format and delivery platforms. Consider learner preferences, such as accessibility features and user-friendly interfaces.
6. **Make a Selection and Justify Choices:**
    - Based on the evaluation, make a clear selection of the most suitable software and tools for the content development process. Provide justifications for each choice, explaining how they meet the content requirements and learner needs.

Assessment Method: Submission of a detailed report outlining the chosen software and tools with justifications for their selection. The report will be assessed based on the trainee's ability to evaluate and compare different options, make informed decisions based on content requirements and learner preferences, and demonstrate adherence to policy guidelines and budget considerations.

Task Sheet 2.5

Task Sheet 2.5: Plan Media Elements
Title: Plan Media Elements
Performance Objective: By the end of this task, the trainee should be able to:
1. Identify the media elements needed for the presentation.
2. Develop a plan for sourcing, modifying, and integrating these elements into the content.
Policy and Documents Required:
• Instructional Design Guidelines
• Media and Copyright Guidelines
Tools and Materials Required:
• Lesson Plan
• Content Development Software and Tools
• Media Planning Template
Equipment:
• Laptop or Computer
• Internet Access
Steps/Procedures:
1. **Analyze the Content for Media Elements:**
• Thoroughly analyze the content to identify specific areas where media elements could enhance understanding and learner engagement. Consider where visual aids, images, audio clips, video demonstrations, interactive elements, and other media can be used effectively.
2. **Determine Types of Media Elements Required:**
• Based on the analysis, determine the types of media elements needed for the content. This may include text, images, audio, video, animations, infographics, and interactive elements.
3. **Plan for Sourcing Media Elements:**
• Develop a plan for sourcing the identified media elements. Consider reputable sources, open educational resources (OER), or materials with proper copyright permissions. Ensure that the chosen media elements align with the content's learning objectives.
4. **Ensure Copyright Compliance and Quality:**
• Verify that all sourced media elements are copyright compliant and adhere to the organization's media and copyright guidelines. Ensure that the media elements are of suitable quality for the intended purpose.
5. **Plan Modifications if Needed:**

- Determine if any modifications are necessary to fit the media elements seamlessly into the content. This may include resizing images, editing audio or video clips, or adapting interactive elements to suit the content flow.

6. **Integrate Media Elements into the Content:**

- Develop a plan for integrating the selected media elements into the content using the chosen content development software and tools. Ensure that the media elements enhance the overall learning experience.

Assessment Method: Submission of a media planning document outlining the media elements needed for the presentation, their sources, and any necessary modifications. The document should demonstrate the trainee's ability to identify appropriate media elements, adhere to copyright guidelines, and effectively plan for their integration into the content.

Task Sheet 2.6

Task Sheet 2.6: Apply Technology, Pedagogy, and Content Knowledge (TPACK) Principles

Title: Apply Technology, Pedagogy, and Content Knowledge (TPACK) Principles

Performance Objective: By the end of this task, the trainee should be able to:

1. Understand the integration of technology, pedagogy, and content knowledge.
2. Implement TPACK principles during the content development process.

Policy and Documents Required:

- TPACK Framework
- Digital Learning Best Practices

Tools and Materials Required:

- TPACK Implementation Guide
- Digital Learning Tools
- Content Development Tools

Equipment:

- Laptop or Computer
- Internet Access

Steps/Procedures:

1. **Familiarize Yourself with the TPACK Framework:**

- Study and familiarize yourself with the TPACK framework, understanding how technology, pedagogy, and content knowledge intersect to create effective digital learning experiences.

2. **Understand TPACK Principles:**

- Gain a comprehensive understanding of how TPACK principles can be applied to develop engaging and impactful digital learning materials. Recognize the importance of balancing technology integration, pedagogy, and content knowledge to achieve successful learning outcomes.

3. **Plan Learning Materials with TPACK Principles:**

- Plan the development of learning materials with TPACK principles in mind. Consider how technology can enhance the pedagogical strategies and support the delivery of content in a meaningful and effective manner.

4. **Ensure Effective Technology Integration:**

- While integrating technology, ensure that it aligns seamlessly with pedagogical approaches and does not compromise the integrity of content knowledge. Aim to enhance the learning experience rather than merely incorporating technology for its own sake.

5. **Implement the Plan in Content Development:**

- Apply the TPACK principles during the content development process. Continuously review and adjust the implementation to achieve the desired learning outcomes and ensure a harmonious integration of technology, pedagogy, and content.

Assessment Method: Assessment of the trainee's understanding and application of TPACK principles in the developed content. The assessment will review the content to ensure effective integration of technology, pedagogy, and content knowledge and assess whether the TPACK principles were effectively applied to enhance the digital learning experience.

Specification Sheet 2.1

A. Supplies Documents

- Sample format of a TNA Questionnaire
- Copy of existing Course Accreditation Document or competency standard (related to your qualification)

B. Tools and Material required:

- Notebook
- Handbook
- Office Stationeries

C. Equipment:

- Laptop/Computer

Learning Outcome 3: Collect Media Elements

Assessment Criteria:

1. Sources of media elements for the presentation are selected and collected.
2. Media elements are downloaded or collected from appropriate source.
3. Media elements are manipulated and edited as required.
4. Video is cut and appended as required to use in presentation.
5. Open educational resources (OER) are selected and collected

Content:

1. **Guidelines for Selecting Media Elements**
2. **Researching and Validating Media Sources**
    - 1.1. Reliable Media Sources
    - 1.2. Downloading/Collecting Process of Media Elements
    - 2.3. Assessing Media Quality and Relevance
3. **Legal and Ethical Guidelines for Media Usage**
    - 4.1. Understanding Copyrights and Fair Use
    - 4.2. Citing and Acknowledging Media Sources
4. **Accessibility and Universal Design in Media Selection**
    - 5.1. Principles of Accessible Media
    - 5.2. Inclusive Design in Media Selection
5. **Accessing OER (Open Educational Resources)**

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion
- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test

- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 3: Collect Media Elements

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	Resources specific instructions
1. Student will ask the instructor about Collecting Media Elements.	1. Instructor will provide the learning materials "**Developing Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No:3-1 Collect Media Elements
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 3-1 Collect Media Elements Answer key No. 3-1 Collect Media Elements
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No:3-1 Collect Media Elements Specification Sheet: 3-1 Collect Media Elements

3. Information Sheet 3.1: Collect Media Elements

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Select and collect Sources of media elements for the presentation.
2. Download or collect Media elements from appropriate source.
3. Manipulate and edit Media elements as required.
4. Cut and append Video as required to use in presentation.
5. Select and collect Open Educational Resources (OER)

Content:

1. Guidelines for Selecting Media Elements

Selecting the right media elements can be the difference between effective and ineffective digital learning content. Media elements should be chosen carefully to support learning objectives, cater to diverse learning styles, engage learners, and enhance content comprehension.

Work Instructions:

Step 1: Identify your learning objectives. What knowledge or skills do you want your learners to acquire? How can media support these objectives?

Step 2: Understand your learners. Consider their age, cultural backgrounds, literacy levels, accessibility needs, and learning styles. These factors can influence the types of media elements that will be most effective.

Step 3: Select high-quality media elements that are relevant to the content, appropriate for the learners, and supportive of the learning objectives.

For further guidance, you can refer to the "Instructional Design Models and Theories" series by eLearning Industry here.

2. Researching and Validating Media Sources

2.1 Reliable Media Sources

When sourcing media for your digital learning content, it's vital to use reliable and credible sources. This will ensure that the information you're providing is accurate and of high quality.

Work Instructions:

Step 1: Identify potential sources for your media elements. This could be databases, libraries, online platforms, or commissioned work.

Step 2: Evaluate each source for its reliability. Consider factors such as the author's credibility, the source's reputation, and the quality and accuracy of the content.

Step 3: Always cross-check information across multiple sources when possible.

2.2 Downloading/Collecting Process of Media Elements

Sourcing media elements requires an organized and efficient process for downloading and collecting materials.

Work Instructions:

Step 1: Always download media elements from trusted sources. Be wary of potential malware or security threats.

Step 2: Organize your downloaded materials in a way that's easy to locate and reference.

Step 3: Maintain a record of your sources. This is important for citation purposes and for potential future use.

2.3 Assessing Media Quality and Relevance

Not all media elements are created equal. It's important to assess each element for its quality and relevance to your digital learning content.

Work Instructions:

Step 1: Evaluate the quality of the media element. This includes its resolution, sound or image quality, and the clarity of its message.

Step 2: Assess the relevance of the media element. Does it align with your learning objectives and support your content?

Step 3: Make a decision to include or discard the media element based on your assessments.

3. Legal and Ethical Guidelines for Media Usage

3.1 Understanding Copyrights and Fair Use

When using media elements in your digital learning content, it's crucial to understand the legal and ethical guidelines around copyrights and fair use.

Work Instructions:

Step 1: Educate yourself about copyrights and fair use policies. Understand what you can and cannot do with copyrighted materials.

Step 2: Always respect copyrights. Do not use copyrighted materials without permission unless your usage falls under fair use.

Step 3: If you're unsure about whether your use of a copyrighted material is permissible, seek legal advice.

3.2 Citing and Acknowledging Media Sources

It's important to always cite and acknowledge your media sources. This not only respects the original creator's rights but also enhances the credibility of your content.

Work Instructions:

Step 1: Keep track of all the sources of your media elements.

Step 2: Provide accurate citations and acknowledgments for each media element in your content. Follow the appropriate citation format for your field or industry.

Step 3: Include a references or works cited section in your content to list all your sources.

4. Accessibility and Universal Design in Media Selection

4.1 Principles of Accessible Media

Accessible media is a crucial component of inclusive digital learning. It ensures that all learners, including those with disabilities, can fully engage with your content.

Work Instructions:

Step 1: Familiarize yourself with the principles of accessible media. The World Wide Web Consortium (W3C) offers comprehensive guidelines known as the Web Content Accessibility Guidelines (WCAG) here.

Step 2: Incorporate accessibility principles in your media selection and content design. This can include adding captions to videos, providing text transcripts of audio content, using sufficient color contrast, and adding alt text to images.

Step 3: Regularly test and update your content to ensure it continues to meet accessibility standards.

4.2 Inclusive Design in Media Selection

Inclusive design involves designing your digital learning content to be accessible and usable by the widest range of learners possible, irrespective of their abilities, age, or cultural backgrounds.

Work Instructions:

Step 1: Understand the principles of inclusive design. The Inclusive Design Research Centre provides a useful guide here.

Step 2: Choose media that represents diversity and is sensitive to different cultures, abilities, and learning preferences.

Step 3: Seek feedback from a diverse range of learners and use it to refine your content and make it more inclusive.

5. Accessing OER (Open Educational Resources)

OERs are free resources that can be used for teaching, learning, and assessing. They can include textbooks, lesson plans, quizzes, games, simulations, videos, and more.

Work Instructions:

Step 1: Identify reliable OER platforms such as OER Commons, MERLOT, or OpenStax.

Step 2: Use the search and filter functions on these platforms to find resources that are relevant to your content.

Step 3: Review the licensing information for each resource. OERs are typically released under a Creative Commons license that can stipulate how the resource may be used.

Self-Check Sheet 3.1

1. Why is it essential to select media elements carefully in digital learning content? How can media elements support learning objectives and enhance content comprehension?

2. What are some key factors to consider when researching and validating media sources for digital learning materials? How can you ensure that the media elements you use are reliable and credible?

3. Explain the importance of understanding copyrights and fair use policies when using media elements in digital learning content. What are some best practices for respecting copyrights and avoiding potential legal issues?

4. How does accessible media contribute to inclusive digital learning? Provide examples of accessibility features that can be incorporated into different types of media elements to make content more inclusive for learners with disabilities.

5. What are Open Educational Resources (OERs), and how can they benefit digital learning content development? How can instructional designers effectively utilize OER platforms to find relevant and high-quality resources for their content?

Answer Key 3.1

Task Sheet 3.1

Task Sheet 3.1: Collect Media Elements
Title: Collect Media Elements
Performance Objective: By the end of this task, the trainee should be able to:
1. Source media elements from appropriate sources.
2. Organize collected media elements for ease of use.
Policy and Documents Required:
• Copyright and Fair Use Policies
• Citing Sources Guidelines
Tools and Materials Required:
• Internet access for sourcing media
• System for organizing media
Equipment:
• Laptop or Computer
• Internet Access
Steps/Procedures:
1. **Identify Necessary Media Elements:**
• Refer to the lesson plan and content outline to identify the specific types of media elements required for the digital learning materials. These may include images, videos, audio clips, graphics, or interactive elements.
2. **Source Media from Appropriate Sources:**
• Use various internet resources, textbooks, social media platforms, and Open Educational Resources (OER) to source relevant media elements. Ensure that all media elements chosen are permitted for use or reuse under copyright law and adhere to fair use policies.
3. **Ensure Copyright Compliance and Citation:**
• Verify that all sourced media elements are properly attributed and comply with copyright and fair use policies. Provide proper citations for each media element used.
4. **Store and Organize Collected Media:**
• Establish a logical and efficient system for storing and organizing the collected media elements. Create folders or categories that make it easy to access the media during the content development phase.
5. **Review and Quality Check:**

• Review the collected media elements to ensure they meet the required quality standards and align with the learning objectives. Discard any media elements that may not be suitable for the content.
Assessment Method: Evaluation of the trainee's collection of relevant, high-quality media that adheres to copyright and citation guidelines. The assessment will also evaluate the efficiency and effectiveness of the organization system for media, ensuring ease of access during the content development phase.

Task Sheet 3.2

Task Sheet 3.2: Manipulate and Edit Media Elements
Title: Manipulate and Edit Media Elements
Performance Objective: By the end of this task, the trainee should be able to:
1. Perform basic media editing functions.
2. Adapt media elements to align with the digital content.
Policy and Documents Required:
• Media editing tools User Manuals
Tools and Materials Required:
• Media editing software (e.g., Adobe Photoshop for images, Adobe Premiere Pro for videos)
Equipment:
• Laptop or Computer
• Media editing software
Steps/Procedures:
1. **Open Collected Media Elements in Editing Software:**
• Open the collected media elements (images, videos, audio clips, etc.) in the respective media editing software (e.g., Adobe Photoshop for images, Adobe Premiere Pro for videos).
2. **Modify Media Elements as Necessary:**
• Use the features and functions of the editing software to perform necessary modifications on the media elements. This may include:
• Cutting or trimming video or audio clips to remove unwanted segments.
• Appending or combining different media elements to create a seamless sequence.
• Compressing images or videos to reduce file size without compromising quality.
• Resizing images or videos to fit specific dimensions within the digital content.

- Applying filters or effects to enhance the visual or auditory experience.

3. **Ensure Compatibility with Digital Content Development Software:**

- Save the edited media elements in appropriate formats that are compatible with the digital content development software or tools being used. Consider the file formats and resolutions required for optimal performance and seamless integration.

4. **Review and Quality Check:**

- Review the edited media elements to ensure they align with the content and meet the required quality standards. Make any necessary adjustments or refinements to improve their effectiveness.

Assessment Method: Assessment of the trainee's ability to use media editing software to modify media elements to align with the digital content. The assessment will evaluate the trainee's proficiency in performing basic media editing functions and ensuring the edited media elements are compatible with the digital content development software or tools.

Specification Sheet 3.1

A. Supplies Documents

- Sample format of a TNA Questionnaire
- Copy of existing Course Accreditation Document or competency standard (related to your qualification)

B. Tools and Material required:

- Notebook
- Handbook
- Office Stationeries

C. Equipment:

- Laptop/Computer

Learning Outcome 4: Prepare Digitally Formatted Contents

Assessment Criteria:

1. Media elements are organized and appended with content development software as per lesson/ session plan.
2. Proper action verbs are used and maintained during the preparation of the objectives of the session / lesson.
3. Media elements used in digital content are formatted.
4. Appropriate animation is used to make the presentation attractive and interactive
5. OER are accessed and used during the content development process if required

Content:

1. **Principles of Digitizing Learning Content**
    - 1.1. Digitization Techniques
    - 1.2. Enhancing Learning Experience through Digital Formats
2. **Selecting Software and Tools for Digital Formatting**
    - 2.1. Overview of Popular Formatting Tools
    - 2.2. Aligning Tool Selection with Content Requirements
3. **Digitizing Content**
    - 3.1. Step-by-step Process of Digitizing Content
    - 3.2. Ensuring Quality and Consistency
4. **Enhancing Engagement with Digital Formats**
    - 4.1. Interactive Elements in Digital Content
    - 4.2. Using Digital Formats for Active Learning
5. **Accessibility in Digital Formats**
    - 5.1. Principles of Digital Accessibility
    - 5.2. Tools and Techniques for Ensuring Accessibility

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion

- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test
- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 4: Prepare Digitally Formatted Contents

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	Resources specific instructions
1. Student will ask the instructor about Preparing Digitally Formatted Contents.	1. Instructor will provide the learning materials "**Develop Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No: 4 Prepare Digitally Formatted Contents
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 4 Prepare Digitally Formatted Contents Answer key No. 4 Prepare Digitally Formatted Contents
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No:4-1 Prepare Digitally Formatted Contents Specification Sheet: 4-1 Prepare Digitally Formatted Contents

Information Sheet 4: Prepare Digitally Formatted Contents

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Organize and append Media elements with content development software as per lesson/ session plan.
2. Use and maintain Proper action verbs during the preparation of the objectives of the session / lesson.
3. Format Media elements used in digital content.
4. Use Appropriate animation to make the presentation attractive and interactive
5. Access and use OER during the content development process if required

1. Principles of Digitizing Learning Content

1.1. Digitization Techniques

Digitizing learning content is a process that involves converting physical or analog educational content into a digital format. This can enhance accessibility, interaction, and learning experiences for students.

Work Instructions:

Step 1: Identify the types of content you need to digitize. This could be textbooks, lesson plans, images, audio recordings, or videos, among others.

Step 2: Choose an appropriate digitization technique for each type of content. For instance, text can be digitized using Optical Character Recognition (OCR) software, images using scanners, and audio or video using recording and editing software.

Step 3: Use the selected technique to digitize your content. Follow best practices for digitization to ensure high-quality results.

1.2. Enhancing Learning Experience through Digital Formats

Digital formats can greatly enhance learning experiences by making content more engaging, interactive, and accessible.

Work Instructions:

Step 1: Identify ways to enhance your content through digital formats. For example, you can incorporate multimedia elements, interactive quizzes, or virtual simulations.

Step 2: Implement these enhancements using appropriate software or tools.

Step 3: Test the enhanced content with learners to ensure that it improves their learning experience.

2. Selecting Software and Tools for Digital Formatting

2.1. Overview of Popular Formatting Tools

There are numerous tools available for digital formatting, each with different features and suited to different content types.

Work Instructions:

Step 1: Research popular formatting tools. Some examples include Microsoft Word for text, Adobe Photoshop for images, and Adobe Premiere Pro for video.

Step 2: Compare the features of these tools. Consider their ease of use, capabilities, cost, and compatibility with your content and learning platform.

Step 3: Choose the tool or tools that best meet your needs.

2.2. Aligning Tool Selection with Content Requirements

The software and tools you select should be capable of fulfilling your content requirements.

Work Instructions:

Step 1: Identify your content requirements. What types of content do you need to create? What functionalities are required?

Step 2: Review the capabilities of potential tools in relation to these requirements.

Step 3: Choose tools that can fulfill your content requirements.

3. Digitizing Content

3.1. Step-by-step Process of Digitizing Content

Work Instructions:

Step 1: Organize your content. Have all physical or analog content ready for digitization.

Step 2: Choose the appropriate tool or software for digitization.

Step 3: Digitize your content. Ensure you maintain the quality and integrity of the original content during the process.

Step 4: Review and refine the digitized content. Check for errors or omissions and correct them.

3.2. Ensuring Quality and Consistency

Ensuring quality and consistency is crucial in digitization to maintain the integrity of the content and provide a seamless learning experience.

Work Instructions:

Step 1: Establish quality standards for your digitized content. This could be related to the resolution of images, the accuracy of text, or the clarity of audio.

Step 2: Regularly review your digitized content against these standards. Correct any deviations or inconsistencies.

Step 3: Use consistent formatting and design elements across your digital content to provide a cohesive learning experience.

4. Enhancing Engagement with Digital Formats

4.1. Interactive Elements in Digital Content

Incorporating interactive elements in your digital content can increase student engagement and participation.

Work Instructions:

Step 1: Identify places in your content where interactive elements could be beneficial. This could be a complex concept that can be better explained with an interactive diagram, or a topic that can be reinforced with a quiz.

Step 2: Use a tool that supports interactivity to add these elements. Tools like Articulate Storyline and Adobe Captivate allow you to add various types of interactive elements.

Step 3: Test the interactive elements to ensure they work properly and enhance the content as expected.

4.2. Using Digital Formats for Active Learning

Digital formats can support active learning, where students are actively involved in their own learning process.

Work Instructions:

Step 1: Identify opportunities for active learning in your content. This could be an exercise that students can do on their own, or a discussion that they can participate in.

Step 2: Use the features of your digital format to support these active learning activities. For example, you could use interactive elements, collaborative tools, or multimedia content.

Step 3: Provide guidance for students on how to engage in these active learning activities.

5. Accessibility in Digital Formats

5.1. Principles of Digital Accessibility

Digital accessibility is crucial to ensure that all learners, including those with disabilities, can access and benefit from your content.

Work Instructions:

Step 1: Familiarize yourself with the principles of digital accessibility. The Web Content Accessibility Guidelines (WCAG) provide a comprehensive guide to these principles.

Step 2: Apply these principles to your content. This could involve using alt text for images, captions for videos, or keyboard navigation for interactive elements.

Step 3: Test your content for accessibility. There are various tools available that can help you with this, such as the W3C's Web Accessibility Evaluation Tool.

5.2. Tools and Techniques for Ensuring Accessibility

There are various tools and techniques you can use to ensure your digital content is accessible.

Work Instructions:

Step 1: Identify the accessibility features of your chosen digital tools. Many tools have built-in features that support accessibility, such as alt text for images in Microsoft Word.

Step 2: Utilize these features when creating your content.

Step 3: Use additional tools to test and improve the accessibility of your content. For example, you could use a screen reader to test whether your content is accessible to visually impaired users.

Self-Check Sheet 4.1

1. What is the importance of digitizing learning content, and how can it benefit students in terms of accessibility, interaction, and learning experiences?

2. What are some examples of digitization techniques for different types of content, such as text, images, audio recordings, and videos? How can instructional designers ensure high-quality results during the digitization process?

3. How do digital formats enhance learning experiences? Provide specific examples of how multimedia elements, interactive quizzes, or virtual simulations can be incorporated into digital content to make it more engaging.

4. When selecting software and tools for digital formatting, what factors should instructional designers consider? How can they align tool selection with specific content requirements to ensure the chosen tools fulfill their needs?

5. Why is it crucial to ensure digital content is accessible to all learners, including those with disabilities? What are some principles of digital accessibility, and how can instructional designers use tools and techniques to make their content more accessible?

Answer Key 4.1

Task Sheet 4.1:

Task Sheet 4.1: Format Media Elements
Title: Format Media Elements
Performance Objective: By the end of this task, the trainee should be able to:
1. Format media elements to align with the digital content.
2. Ensure media elements are suitable for the chosen presentation method.
Policy and Documents Required:
• Media formatting guides
Tools and Materials Required:
• Media editing software (e.g., Adobe Photoshop for images, Adobe Premiere Pro for videos)
• Document formatting software (e.g., Microsoft Word for text)
Equipment:
• Laptop or Computer
• Media editing software
• Document formatting software
Steps/Procedures:
1. **Review Selected Presentation Method:**
• Review the chosen presentation method (e.g., PowerPoint, video, audio, web-based platform) to understand the specific formatting requirements for each media element. Consider aspects like aspect ratios, resolution, file formats, and compatibility with the chosen presentation medium.
2. **Open Media Elements in Editing Software:**
• Open each media element in the appropriate editing software that corresponds to its type (e.g., images in Adobe Photoshop, videos in Adobe Premiere Pro, text in Microsoft Word).
3. **Format Media Elements as Needed:**
• Format the media elements to meet the requirements of the selected presentation method. This may involve various adjustments such as:
• Resizing images to fit the slide dimensions or video frame.
• Adjusting video resolution and aspect ratio to suit the display platform.
• Setting appropriate audio levels and ensuring clear audio quality.
• Styling text with appropriate fonts, sizes, and colors for readability.
4. **Save Formatted Media Elements:**
• Save the formatted media elements in appropriate formats that are compatible with the digital content development software or tools being used. Ensure the media elements are optimized for smooth integration and playback.

5. **Review and Quality Check:**
• Review the formatted media elements to ensure they align with the content, meet the requirements of the selected presentation method, and maintain high-quality standards.
Assessment Method: Assessment of the trainee's ability to format media elements according to the requirements of the selected presentation method. The assessment will evaluate the trainee's proficiency in formatting images, videos, audio, and text to ensure they are suitable for the chosen presentation medium and aligned with the digital content.

Task Sheet 4.2:

Task Sheet 4.2: Use Appropriate Animation
Title: Use Appropriate Animation
Performance Objective: By the end of this task, the trainee should be able to:
1. Identify where animation can be effectively used in the digital content.
2. Use animation tools to create engaging and interactive elements for the digital content.
Policy and Documents Required:
• Animation design guides
Tools and Materials Required:
• Animation software (e.g., Adobe After Effects, Blender)
Equipment:
• Laptop or Computer
• Animation software
Steps/Procedures:
1. **Review Digital Content for Animation Opportunities:**
• Review the digital content (e.g., presentations, videos, interactive modules) to identify areas where animation can enhance learning and engagement. Consider using animation for visualizing processes, illustrating complex concepts, or creating interactive elements.
2. **Open Animation Software and Create Animations:**
• Open the chosen animation software (e.g., Adobe After Effects, Blender) and begin creating the required animations based on the identified opportunities. Use animation tools to bring static elements to life, add motion to objects, and create dynamic effects.
3. **Ensure Alignment with Content Design and Style:**
• Ensure that the animations align with the overall design and style of the digital content. Maintain consistency in visual elements, color schemes, and branding if applicable.

4. **Export Animations in Suitable Format:**

- Once the animations are completed, export them in suitable formats that can be easily incorporated into the digital content. Consider the file formats and compatibility with the content development software or tools.

5. **Review and Quality Check:**

- Review the created animations to ensure they effectively enhance the learning experience and align with the learning objectives. Make any necessary adjustments to improve their effectiveness.

Assessment Method: Assessment of the trainee's ability to create and use animations effectively in digital content. The assessment will evaluate the trainee's proficiency in identifying animation opportunities, using animation tools, and ensuring the animations align with the overall design and style of the digital content. The effectiveness of the animations in enhancing the learning experience will also be assessed.

Specification Sheet 4.1

A. Policy and documents required:

- Bangladesh National Qualifications Framework (BNQF)
- Competency Standard or “Training Package”

B. Tools and Material required:

- Notebook
- Handbook
- Office Stationeries
- Interview questionnaire
- Observation checklist

C. Equipment:

- Laptop/Computer

Learning Outcome 5: Test Digitally Formatted Learning Contents

Assessment Criteria:

1. Test criteria and instruments are developed in line with learning material specification.
2. Test sites and reviewers are identified in line with established target users
3. Testing of learning contents are undertaken in line with plan
4. Feedback and suggestions are addressed in line with plan and development cycle.
5. Developed digital contents are preserved in appropriate storage

Content:

1. Designing Content for Various Devices and Platforms

1.1. Responsive Design Principles

1.2. Testing and Adjusting Content for Different Devices

2. Understanding the Importance of Testing

3. Testing All Functional Elements

4. Ensuring Responsiveness

5. Accessibility Testing for Inclusivity

5.1. Guidelines for Accessible Content

5.2. Tools for Accessibility Testing

6. User Experience Testing

6.1. Gathering User Feedback

6.2. Incorporating Feedback into Design Changes

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion
- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test
- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 5: Test Digitally Formatted Learning Contents

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	**Resources specific instructions**
1. Student will ask the instructor about Test Digitally Formatted Learning Contents.	1. Instructor will provide the learning materials "**Develop Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No:5-1 Test Digitally Formatted Learning Contents
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 5 Test Digitally Formatted Learning Contents Answer key No. 5 Test Digitally Formatted Learning Contents
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No: 5-1 Test Digitally Formatted Learning Contents Specification Sheet: 5-1 Test Digitally Formatted Learning Contents

Information Sheet 5: Test Digitally Formatted Learning Contents

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Develop Test criteria and instruments in line with learning material specification.
2. Identify Test sites and reviewers in line with established target users
3. Undertake Testing of learning contents in line with plan
4. Address Feedback and suggestions in line with plan and development cycle.
5. Preserve developed digital contents in appropriate storage

Content:

1. Designing Content for Various Devices and Platforms

1.1. Responsive Design Principles

Responsive design ensures that your content looks good and functions well on various devices and screen sizes.

Work Instructions:

Step 1: Familiarize yourself with the principles of responsive design. This involves designing your content to be flexible and adapt to different screen sizes.

Step 2: Implement these principles when designing your content. Many digital tools support responsive design and allow you to preview how your content will look on different devices.

Step 3: Test your content on various devices to ensure it adapts properly and provides a good user experience on all of them.

1.2. Testing and Adjusting Content for Different Devices

It’s important to test your content on different devices and adjust it as necessary to ensure a good learning experience for all students, regardless of the device they are using.

Work Instructions:

Step 1: Test your content on various devices. This should include different types of devices (such as smartphones, tablets, and desktop computers) and different operating systems.

Step 2: Identify any issues with how your content displays or functions on these devices.

Step 3: Adjust your content to resolve these issues. This may involve modifying the design, changing the format, or using different features of your digital tools.

2. Understanding the Importance of Testing

Testing is a crucial step in the development of digital learning content. It helps identify issues or shortcomings in the content and ensure that the learning experience meets the intended objectives.

Work Instructions:

Step 1: Create a detailed testing plan. This plan should outline what aspects of the content will be tested, how the testing will be carried out, and who will be involved in the process.

Step 2: Carry out the testing as planned. Ensure to be thorough and cover all aspects of the content.

Step 3: Document the results of the testing. Note down any issues identified, as well as potential solutions or improvements.

3. Testing All Functional Elements

It's important to test all functional elements in your digital content to ensure they work as expected and enhance the learning experience.

Work Instructions:

Step 1: Identify all functional elements in your content. This includes interactive elements, links, multimedia content, and any other features that require user interaction.

Step 2: Test each functional element individually. Ensure that it works as intended and contributes to the overall learning objectives.

Step 3: Document any issues found and plan for necessary modifications or improvements.

4. Ensuring Responsiveness

Responsiveness is a key aspect of digital content, ensuring that it works well on various devices and screen sizes.

Work Instructions:

Step 1: Test your content on various devices. This should include different types of devices (e.g., smartphones, tablets, desktop computers) and different operating systems.

Step 2: Identify any issues with how your content displays or functions on these devices.

Step 3: Adjust your content to resolve these issues. This may involve modifying the design, changing the format, or using different features of your digital tools.

5. Accessibility Testing for Inclusivity

5.1. Guidelines for Accessible Content

Making your content accessible ensures that all learners, including those with disabilities, can access and benefit from it.

Work Instructions:

Step 1: Familiarize yourself with guidelines for accessible content. The Web Content Accessibility Guidelines (WCAG) provide a comprehensive guide to these principles.

Step 2: Apply these principles when creating and reviewing your content.

Step 3: Use tools and techniques to test your content for accessibility, and make necessary modifications based on the results.

5.2. Tools for Accessibility Testing

Various tools can help you test the accessibility of your content.

Work Instructions:

Step 1: Identify suitable tools for accessibility testing. This could include screen readers, color contrast analyzers, and accessibility checkers integrated into content creation tools.

Step 2: Use these tools to test your content for accessibility.

Step 3: Make necessary modifications based on the results of the testing.

6. User Experience Testing

6.1. Gathering User Feedback

User feedback can provide valuable insights into the user experience and help identify areas for improvement.

Work Instructions:

Step 1: Plan for user feedback collection. Decide when and how you will gather feedback from users.

Step 2: Collect user feedback. This could be through surveys, interviews, or observation of user behavior.

Step 3: Analyze the feedback and identify common themes or issues that need to be addressed.

6.2. Incorporating Feedback into Design Changes

User feedback should be used to inform design changes and improve the overall user experience.

SL No.	Testing Question	Please place a tick in the appropriate column				
		Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
FUNCTIONALITY TESTING:						
01	▪ Interactive elements (buttons, links, forms) work as intended.	☐	☐	☐	☐	☐
02	▪ Media players (video, audio) function properly.	☐	☐	☐	☐	☐
03	▪ Quizzes, assessments, and simulations operate correctly.	☐	☐	☐	☐	☐
04	▪ Navigation within the content is smooth and intuitive.	☐	☐	☐	☐	☐
COMPATIBILITY TESTING:						
05	▪ Content displays and functions correctly across different devices	☐	☐	☐	☐	☐

	(desktop, mobile, tablets**).**					
06	▪ Compatibility across various web browsers (Chrome, Firefox, Safari, Edge).	☐	☐	☐	☐	☐
07	▪ Responsive design adapts well to different screen sizes and resolutions.	☐	☐	☐	☐	☐
USABILITY TESTING:						
08	▪ Clear and logical content structure and organization.	☐	☐	☐	☐	☐
09	▪ Intuitive user interface with easy-to-understand instructions.	☐	☐	☐	☐	☐
10	▪ Adequate navigation options and menu structure.	☐	☐	☐	☐	☐
11	▪ Proper labeling and positioning of interactive elements.	☐	☐	☐	☐	☐
ACCESSIBILITY TESTING:						
12	▪ Compliance with accessibility standards (WCAG 2.1, Section 508).	☐	☐	☐	☐	☐
13	▪ Alternative text for images.	☐	☐	☐	☐	☐
14	▪ Keyboard accessibility for navigation and interaction.	☐	☐	☐	☐	☐
15	▪ Sufficient color contrast for readability**.**	☐	☐	☐	☐	☐

INTERACTIVITY TESTING:						
16	▪ Interactive elements provide appropriate feedback.	☐	☐	☐	☐	☐
17	▪ Assessments and quizzes provide accurate scoring and feedback.	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
18	▪ Simulations and interactive exercises perform as expected.					
19	▪ User inputs are captured accurately.					
RECOMMENDATIONS:						

Work Instructions:

Step 1: Review the feedback gathered and identify potential design changes.

Step 2: Prioritize these changes based on their potential impact on the user experience.

Step 3: Implement the changes and test the updated content to ensure the changes have improved the user experience.

Self-Check Sheet 5.1

1. What is the significance of responsive design principles in designing digital learning content? How does responsive design ensure a good user experience on various devices and screen sizes?
2. Why is testing an essential step in the development of digital learning content? How can instructional designers carry out effective testing to identify and resolve issues in the content?
3. What are the key functional elements that should be tested in digital content? How can instructional designers ensure that interactive elements, multimedia content, and other features work effectively and align with the learning objectives?
4. How does accessibility testing contribute to inclusivity in digital learning content? What are some guidelines for creating accessible content, and how can tools be used to test and improve accessibility?
5. How can user feedback be beneficial in the improvement of digital learning content? What steps should instructional designers take to gather user feedback and incorporate it into design changes to enhance the overall user experience?

Answer Key 5.1

Task Sheet 5.1

Task Sheet 5.1: Develop Test Criteria and Instruments
Title: Develop Test Criteria and Instruments
Performance Objective: By the end of this task, the trainee should be able to:
1. Develop appropriate test criteria to assess the quality and effectiveness of the digital learning content.
2. Develop instruments to facilitate the testing process, such as questionnaires or feedback forms.
Policy and Documents Required:
• Quality assurance guidelines
• Testing procedures
Tools and Materials Required:
• Office Stationeries
• Digital Assessment Tools like Google Forms, SurveyMonkey

Equipment:

- Laptop/Computer

Steps/Procedures:

1. **Identify Lesson Objectives and Content:**
    - Review the lesson objectives and content to be covered in the digital learning material. Understand the learning outcomes and specific areas that need to be evaluated.
2. **Develop Test Criteria:**
    - Based on the lesson objectives and content, develop a set of test criteria that can be used to assess the quality and effectiveness of the digital learning content. These criteria should be clear, specific, and aligned with the desired learning outcomes.
3. **Create Measurable Indicators:**
    - For each test criterion, create clear and measurable indicators that will serve as evidence of the content's effectiveness. Ensure that the indicators can be observed or measured objectively.
4. **Develop Testing Instruments:**
    - Develop instruments, such as questionnaires or feedback forms, that can be used to gather data for each of the test criteria. These instruments should capture relevant information from the learners or reviewers to evaluate the content.
5. **Ensure Clarity and Ease of Use:**
    - Review the testing instruments to ensure they are clear, easy to understand, and user-friendly. Avoid ambiguous questions or instructions that could lead to inconsistent or unreliable responses.
6. **Test the Instruments:**
    - Conduct a pilot test of the developed instruments to identify any issues or areas for improvement. Make necessary adjustments based on the feedback received.
7. **Finalize Test Criteria and Instruments:**
    - Finalize the test criteria and instruments after incorporating the improvements identified during the pilot testing.

Assessment Method: Assessment of the trainee's ability to develop suitable test criteria and instruments for assessing digital learning content. The assessment will evaluate the clarity, relevance, and effectiveness of the test criteria in evaluating the quality and effectiveness of the digital learning material. The developed testing instruments will also be assessed for clarity, ease of use, and appropriateness for gathering the necessary data.

Task Sheet 5.2

Task Sheet 5.2: Conduct Testing and Address Feedback
Title: Conduct Testing and Address Feedback
Performance Objective: By the end of this task, the trainee should be able to:
1. Conduct testing of the digital learning content using the developed test criteria and instruments.
2. Collect and analyze feedback from test users.
3. Make necessary revisions to the digital content based on the feedback received.
Policy and Documents Required:
• Quality assurance guidelines
• Testing procedures
• Feedback and revision procedures
Tools and Materials Required:
• Test criteria and instruments
• Digital feedback tools
Equipment:
• Laptop/Computer
Steps/Procedures:
1. **Conduct Testing:**
• Use the developed test criteria and instruments to conduct testing of the digital learning content. This can be done through pilot tests with a small group of learners or reviewers. Ensure that the testing process is well-organized and that data is collected systematically.
2. **Collect Feedback:**
• Use digital feedback tools or other appropriate methods to collect feedback from the test users. Encourage honest and constructive feedback to identify strengths and areas for improvement in the content.
3. **Analyze Feedback:**
• Analyze the feedback collected to identify common themes, patterns, and specific issues mentioned by the test users. Categorize the feedback based on its significance and relevance to the learning objectives.
4. **Revise Digital Content:**
• Based on the feedback received, make necessary revisions to the digital learning content. Address identified issues, clarify confusing points, and improve areas that require enhancement.
5. **Re-Test Revised Content:**

- After making the revisions, re-test the digital content using the same test criteria and instruments. Ensure that the changes have effectively addressed the feedback and improved the content.

6. **Document Revisions:**

- Document all the revisions made to the digital content, along with the reasons for the changes. This documentation will be useful for future reference and quality assurance purposes.

Assessment Method: Assessment of the trainee's ability to conduct effective testing, analyze feedback, and make necessary revisions to the digital content. The assessment will evaluate the trainee's proficiency in using the developed test criteria and instruments, analyzing feedback from test users, and implementing improvements to the digital content based on the feedback received.

Specification Sheet 5.1

A. Policy and documents required:

- Bangladesh National Qualifications Framework (BNQF)
- Competency Standard or “Training Package”

B. Tools and Material required:

- Notebook
- Handbook
- Office Stationeries
- Interview questionnaire
- Checklists

C. Equipment:

- Laptop/Computer

Learning Outcome 6: Upload and Use Digital Contents

Assessment Criteria:

1. Appropriate online media is selected for uploading digital contents
2. Digital content uploading formalities are done
3. Digital contents are uploaded in online media for users

Content:

1. **Platforms for publishing learning materials**
2. **Uploading Digital Content**
   - 2.1 Procedures of sign-in/registration on Publishing Platform
   - 2.2 Process of Content Uploading/Sharing
   - 2.3 Necessary steps to check the published Contents.

Resources Required/ Conditions:

The trainees must be provided with the following:

- Handouts or reference materials/books/ CBLMs on the above stated contents
- PCs/printers or laptop/printer with internet access
- Digital projector and Screen
- Bond paper
- Ball pens/pencils and other office supplies and materials
- Relevant learning materials
- Workplace or simulated environment

Methodologies

- Lecture/discussion
- Demonstration/application
- Presentation
- Blended delivery methods

Assessment Methods

- Written test
- Demonstration
- Observation with checklist
- Oral questioning
- Portfolio

Learning Experience 6: Upload and Use Digital Contents

In order to achieve the objectives stated in this learning guide, you must perform the learning steps below. Beside each step are the resources or special instructions you will use to accomplish the corresponding activity.

Learning Steps	Resources specific instructions
1. Student will ask the instructor about uploading and using Digital.	1. Instructor will provide the learning materials "**Develop Digital Learning Materials"**
2. Read the Information sheet/s	2. Information Sheet No:6-1 Upload and Use Digital Contents
3. Complete the Self Checks & Check answer sheets.	3. Self-Check/s Self-Check No: 6 Upload and Use Digital Contents Answer key No. 6 Upload and Use Digital Contents
4. Read the Job Sheet and Specification Sheet and perform job	4. Job- Sheet No:6-1 Upload and Use Digital Contents Specification Sheet: 6-1 Upload and Use Digital Contents

Information Sheet 6: Upload and Use Digital Contents

Learning Objectives:

After completion of this information sheet, the learners will be able to:

1. Select Appropriate online media for uploading digital contents
2. Ensure Digital content uploading formalities
3. Upload Digital contents in online media for users

Content:

1. Platforms for Publishing Learning Materials

There are several platforms available for publishing digital learning materials. Each platform comes with its unique features and functionalities. Here are a few prominent ones:

- **Google Drive**: Google's cloud storage service that allows you to store, share, and collaborate on files and folders from any mobile device, tablet, or computer.
- **Dropbox**: A file hosting service providing personal cloud, file synchronization, cloud storage, and client software.
- **Amazon S3 (Simple Storage Service)**: An object storage service that offers industry-leading scalability, data availability, security, and performance.
- **Microsoft OneDrive**: Microsoft's storage service for hosting files in the "cloud". It's available for free to all owners of a Microsoft account.
- **Box**: A cloud content management and file sharing service for businesses, offering secure, scalable content-sharing that both users and IT love and adopt.

2. Uploading Digital Content

2.1. Procedures of Sign-In/Registration on the Publishing Platform:

Depending on the chosen platform, the steps may vary slightly, but they generally include:

1. **Navigate to the platform's website**: Open a web browser and type in the URL of the service you wish to use.
2. **Create an account or sign-in**: If you're new to the platform, you'll have to create an account by providing necessary details such as email address and password. If you already have an account, just log in with your credentials.

2.2. Process of Content Uploading/Sharing:

Let's consider Google Drive as an example:

1. **Navigate to Google Drive**: Once logged in, you'll be directed to your Drive.
2. **Upload Files/Folders**: Click on the "+ New" button on the left side of the page, then select either "File upload" or "Folder upload". Navigate through your files, select what you want to upload, and click "Open".
3. **Share files/folders**: Right-click on the uploaded file/folder and select "Share". You can then add the email addresses of people you want to share the file/folder with, or you can generate a link that you can send to them.

2.3. Necessary Steps to Check the Published Contents:
Once your files are uploaded, it is important to check if the uploading process was successful and if the content appears as expected.

1. **Check the upload status**: Most platforms will notify you once the upload is complete.
2. **Open the file**: Open the uploaded file to ensure it appears as expected.
3. **Test the sharing settings**: If you've shared the content, check if the recipients can access it properly. You may do this by either signing in from a different account or asking a recipient to confirm.

This completes the uploading process. However, each platform may have specific steps or requirements, so it's always best to refer to the official documentation or help resources for exact instructions.

Self-Check Sheet 6.1

1. What are some popular platforms for publishing digital learning materials, and what unique features and functionalities do they offer?
2. What are the typical procedures involved in signing up or registering on a publishing platform to upload digital content? How does the process vary across different platforms?
3. Using Google Drive as an example, explain the step-by-step process of uploading and sharing digital content. How can users ensure that the content appears as expected and that the sharing settings are functioning correctly?

Answer Key 6.1

Task Sheet 6.1:

Task Sheet 6.1: Upload Digital Contents
Title: Upload Digital Contents
Performance Objective: By the end of this task, the trainee should be able to:
1. Select an appropriate online media platform for uploading the digital contents.
2. Complete the necessary formalities for the chosen platform.
3. Upload the digital contents and ensure they are accessible to users.
Policy and Documents Required:
• Digital content upload policies
• User manuals or guides of the chosen platform
Tools and Materials Required:
• Final digital learning content
• User credentials for the chosen platform
Equipment:
• Laptop/Computer with internet access
Steps/Procedures:
1. **Select an Appropriate Platform:**
• Consider user accessibility, platform reliability, storage capacity, and other relevant factors to choose an appropriate online media platform for uploading the digital contents.
2. **Complete Necessary Formalities:**
• Sign in or register on the chosen platform using the provided user credentials or follow the registration process.
3. **Prepare Digital Contents for Upload:**
• Ensure that the final digital learning content is ready for upload and is in the appropriate format as required by the chosen platform.
4. **Upload the Digital Contents:**
• Follow the platform's procedures for uploading digital content. This may involve selecting the right file or folder, adding relevant metadata, and providing appropriate descriptions.
5. **Check Accessibility:**
• After uploading the digital contents, verify that they are accessible to users. Test access from different devices and ensure all media elements, links, and interactive components work correctly.
6. **Ensure Compliance with Policies:**
• Review the digital content upload policies to ensure that all requirements and guidelines are followed during the upload process.

7. **Document the Upload Process:**

- Document the details of the upload process, including the chosen platform, upload date and time, and any issues encountered and resolved.

Assessment Method: Assessment of the trainee's ability to select an appropriate platform, complete the necessary formalities, and successfully upload and check the digital contents. The assessment will evaluate the trainee's understanding of platform selection criteria, ability to follow upload procedures, and confirmation that the uploaded contents are accessible to users.

Specification Sheet 6.1

A. Policy and documents required:

- Bangladesh National Qualifications Framework (BNQF)
- Competency Standard or "Training Package"
- Draft TNA report

B. Tools and Material required:

- Notebook
- Handbook
- Office Stationeries

C. Equipment:

- Laptop/Computer

Review of Competency

Below is yourself assessment rating for module **"Developing Digital Learning Materials"**

SL no	Assessment of performance Criteria	Yes	No
1.	Contents need to be digitized are selected		
2.	Learning resources specifications are established in line with target learners' requirements		
3.	Lesson plan is prepared incorporating pedagogy aspect		
4.	Digital contents to be developed are structured and segmented according to lesson/ session plan steps and sequences		
5.	Types of presentation are planned		
6.	Content development software and content development tools are selected and collected		
7.	Media elements of the presentation are planned		
8.	Technology, Pedagogy and Content Knowledge (TPACK) principles are followed during the plan of content development		
9.	Sources of media elements for the presentation are selected and collected.		
10.	Media elements are downloaded or collected from appropriate source.		
11.	Media elements are manipulated and edited as required.		
12.	Video is cut and appended as required to use in presentation.		
13.	Open educational resources (OER) are selected and collected		
14.	Media elements are organized and appended with content development software as per lesson/ session plan.		
15.	Proper action verbs are used and maintained during the preparation of the objectives of the session / lesson.		
16.	Media elements used in digital content are formatted.		
17.	Appropriate animation is used to make the presentation attractive and interactive		
18.	OER are accessed and used during the content development process if required		

19.	Test criteria and instruments are developed in line with learning material specification.		
20.	Test sites and reviewers are identified in line with established target users		
21.	Testing of learning contents are undertaken in line with plan		
22.	Feedback and suggestions are addressed in line with plan and development cycle.		
23.	Developed digital contents are preserved in appropriate storage		
24.	Appropriate online media is selected for uploading digital contents		
25.	Digital content uploading formalities are done		
26.	Digital contents are uploaded in online media for users		

I now feel ready to undertake my formal competency assessment.

Signed:

Date:

REFERENCE:

1. https://www.semrush.com/blog/content-creation-tools/
2. https://byjus.com/govt-exams/microsoft-powerpoint/
3. https://www.teachmeprezi.com/what-is-prezi/
4.

Review Workshop of Competency Based Learning Material (CBLM)

The Competency Based Learning Material (CBLM) of Developing Digital Learning Materials for National Skills Certificate in Competency Based Training and Assessment, Level-5 is reviewed by NSDA on 18-19 July 2023.