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# FAIR-by-Design Quiz Answers and More

FAIR-by-Design Methodology  
Q&A

IDCC25 Workshop



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Skills4EOSC T2.3

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This is a Q&A presentation that accompanies the FAIR-by-Design activity held on the Open Science in Action: Building Skills, Crafting FAIR Resources, and Recognizing Achievement in Skills4EOSC workshop held at IDCC'25. It was produced as a result of the work done in T2.3 in the Skills4EOSC project. The project has received funding from the European Union's Horizon Europe research and innovation Programme under Grant Agreement No. 101058527 and from UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10040140].

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# Section 1: Prepare Q1

1. Which is the MOST SMART learning objective for an OA module?

- a) Learners will be able to understand OA.
- b) Learners will be able to list OA models.
- c) Learners will be able to choose the best OA publishing route for their research.**
- d) Learners will be able to discuss OA benefits.

# How to make SMART learning objectives



## Specific

Clearly define what the learner will achieve. Avoid vague terms like “learn” or “understand.”

✗: “Learn about Open Access publishing.”

✓: “Identify and describe the differences between Gold, Green, and Hybrid Open Access



## Measurable

Use criteria to track progress and determine when the goal is achieved.

✗: “Understand Open Access policies.”

✓: “List three key funder Open Access requirements and explain how to comply with them.”



## Achievable

Ensure the objective is realistic given the resources, time, and learner’s abilities.

✗: “Convert all previous publications to Open Access in one month.”

✓: “Locate an Open Access repository and submit one preprint of your current research within two weeks.”



## Relevant

Align the objective with the overall learning goals and learner’s needs.

✗: “Memorize the history of Open Access.”

✓: “Explain how Open Access supports the principles of Open Science and increases research impact.”



## Time-bound

Specify a deadline or time frame for achieving the objective.

✗: “Adopt Open Access practices.”

✓: “Develop an Open Access publication strategy for the next research project by the end of the semester.”

# Section 1: Prepare Q2

1. Researcher disciplines are irrelevant in the "Prepare" stage.

- True / **False**

# Conext + Target Audience



## Content Relevance and Contextualization

Different disciplines require learning materials that reflect their unique practices and terminology.

**Example:** For life sciences, materials might focus on **data sharing in biomedical repositories**, while for humanities, they might emphasize **metadata for digitized historical texts**.



## Discipline-Specific Challenges

Researchers in various fields face different challenges regarding the same topic.

**Ex. Social sciences:** ethical concerns

**Physics:** Large-scale datasets and interoperability

Addressing the specific challenges in the learning materials makes them more actionable.



## Target audience

Knowing the range of disciplines helps ensure the content is relevant to everyone while still offering practical, tailored examples.

# Section 1: Prepare Q3

1. Which is LEAST relevant to the "Prepare" stage?
- a) Defining learning objectives
  - b) Analyzing audience needs
  - c) Developing metadata**
  - d) Learning about IPR

# When and Why to Develop Full Metadata



**Prepare Stage** – Draft basic metadata (title, author, keywords, audience, initial standards).



**Design Stage** – Add most info to metadata (syllabus) following the metadata schema, except PID



**Publish Stage** – Validate and review metadata for accuracy before publishing, Add PID.



# Section 2: Discover

## Q1

1. Best keywords for finding OA resources?
  - a) Research, Publications, Journals
  - b) Open Access, Scholarly Publishing, Author Rights**
  - c) Copyright, Licensing, Permissions
  - d) Impact Factor, Citation Metrics, Bibliometrics

# Effectively search for existing learning materials

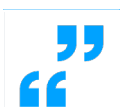


## 1. Be Specific and Contextual

Use keywords that reflect the learning material's **topic, discipline, and intended use**.

### Examples:

- "Open Access publishing tutorial"
- "FAIR metadata humanities"
- "Self-paced course on data ethics"



## 2. Use Synonyms and Related Terms

Different repositories or creators may describe the same concept using different terms.

### Examples:

- Instead of only searching for "FAIR data," try "data stewardship," "open data management," or "research data sharing."
- Include alternate terms: "educational resources," "teaching materials," or "learning modules."



## 3. Include Metadata Elements as Keywords

Search using **metadata elements**, such as:

- **Target audience:** "FAIR data for early-career researchers"
- **Format:** "Interactive tutorial," "MOOC," "PowerPoint slides"
- **Licensing:** "Openly licensed teaching materials"



## 4. Combine Keywords for Advanced Searches

Use **Boolean operators** to combine multiple terms and narrow or broaden your search.



## 5. Search in Specialized Repositories

Focus on repositories and platforms that host educational resources:

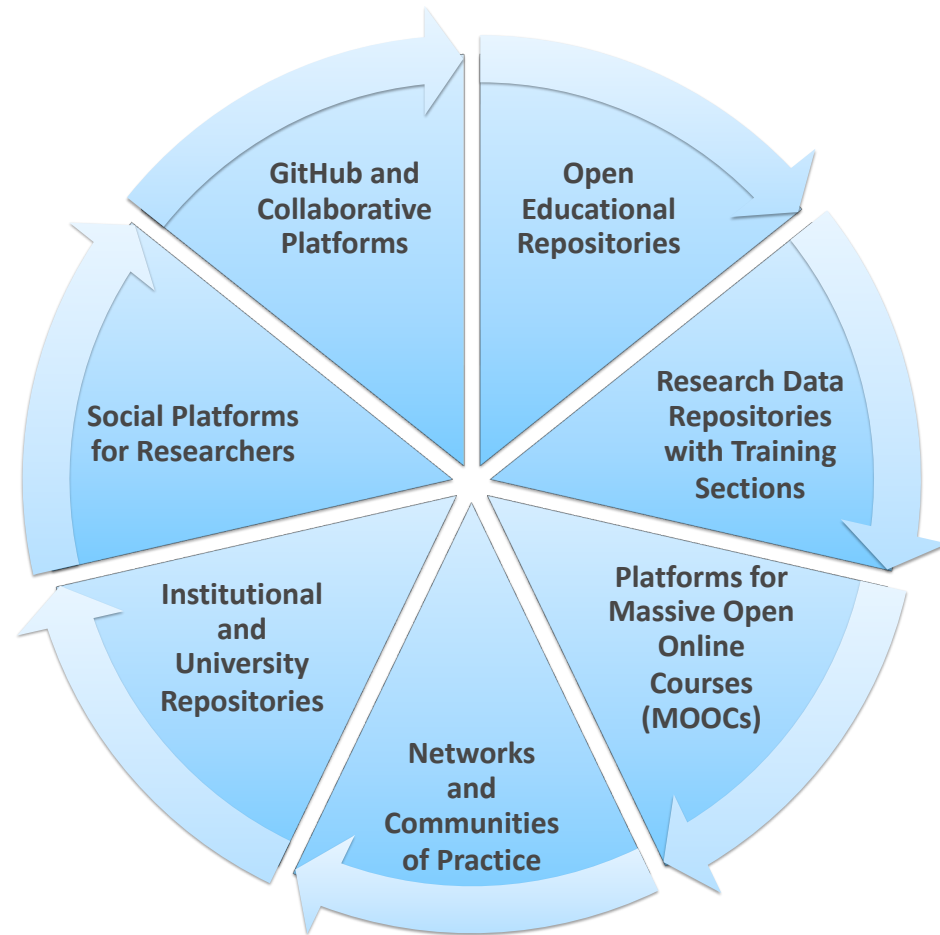
## Section 2: Discover

### Q2

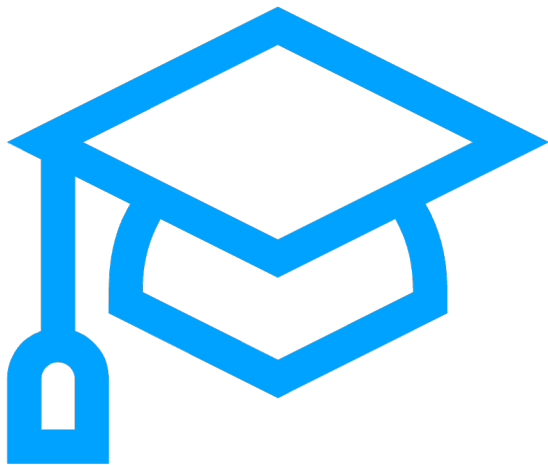
1. Where to look for reusable materials on OA?

- a) Web searches
- b) OER repositories
- c) Zenodo
- d) All of the above**

Where to look  
for reusable  
learning  
materials?



## Section 2: Discover Q3



1. Which one is NOT a challenge in discovering reusable OS learning resources?

- a) Finding the right repository
- b) Clear licensing
- c) Unclear learning context
- d) A single, agreed-upon catalogue**

# Single catalogue

We are still lacking a single catalogue that will unite multiple repositories.

The EOSC training catalogue was available for a while, but is currently not in service.

Future EOSC infra projects should create a new version of this catalogue.

## Section 2: Discover Q4



1. Place these steps in the typical order you would follow when searching for existing learning materials to reuse in a new module:

- a) Evaluate the quality and relevance of the resources.
- b) Identify your learning objectives and target audience.
- c) Search for potential resources using relevant keywords and platforms.
- d) Check the licensing terms to ensure you can reuse the material.

• **Correct Order: b, c, a, d**

# Search and find



You need to know what you want to achieve (your learning objectives and target audience) *before* searching.



Then you search, evaluate, and finally check licensing.



## Section 3: Design Q1

1. What would be the most effective teaching activity on OA?
  - a) Video on the history of publishing
  - b) Text and images that explain copyright
  - c) Interactive examples of different OA models**
  - d) Discussion on publishing conference proceedings



# Effective teaching strategy



Cater to different learning modalities



Combine theory, practice and interaction

## Section 3: Design Q2

1. Which one is the LEAST suitable assessment for the OA module?

- a) Quiz on models/licensing
- b) Comparing OA pathways
- c) Case study analysis
- d) Submitting a mock article**

# Assessment of understanding



Submitting is application, not assessment of understanding



Knowledge Checks and Quizzes



Practical Exercises and Hands-On Tasks



Case Studies and Problem-Solving Scenarios



Peer Review and Reflection



Project-Based Assessment



Surveys and Concept Maps



Performance-Based Assessment

## Section 3: Design Q3

1. What would help MOST to boost the OA module accessibility?
- a) Technical jargon
  - b) Clear language, transcripts, keyboard navigation**
  - c) Text-only
  - d) Assuming prior knowledge

# Accessible learning materials

Use clear and simple language

Use Headings and Structure

Use high contrast and large font size

Use Alt Text for Images

Provide Captions for Videos

Provide Transcripts for Audio

Ensure keyboard accessibility

Use accessible links and buttons

Provide Summaries and Key Points

Simplify complex concepts

Use visual aids

Offer multiple formats

Use Accessibility Checkers

## Section 3: Design Q4

1. Addressing APC concerns in the OA module content is important.

- **True** / False

# Relevant content

APCs are a key researcher concern.

## Align with the Module's Scope and Focus

- **Stay within the scope:** Make sure the content stays within the **scope** and **focus** of the module.
- **Example:** If the module is about Open Access policies in scholarly publishing, avoid going too far into technical aspects like repository management or metadata standards unless they are essential.
- **Prioritize foundational content:** Focus on the most critical concepts, tools, or skills that will provide the greatest value to learners.



## Section 3: Design

### Q5

1. How would you address OA practicalities in the module?
  - a) Provide only theory
  - b) Provide links to resources (funder policies, repositories)**
  - c) Assume learners have knowledge of publishing
  - d) Tell learners to avoid closed journals

# Practical help

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The links provide practical help

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**Incorporate Real-Life Examples**

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**Use Step-by-Step Guides and Instructions**

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**Provide Practical Exercises or Simulations**

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**Use Tool Demonstrations**

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**Provide Problem-Based Learning Activities**

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**Link Theory to Practice with Reflection Activities**

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**Provide Access to Resources and Templates**

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**Real-World Scenarios and Role Play**

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## Section 4: Produce Q1

1. Which Creative Commons license is generally BEST for Open Access articles to maximize reuse?

- a) CC BY
- b) CC BY-NC
- c) CC BY-SA
- d) CC0

# When to use



## When to Use CC-BY:

**Academic Research:** When you want your work to be widely shared and used but still retain credit for your contributions.

**Creative Works:** If you want to allow others to remix or build on your work but insist they give you proper credit.

**Publicity/Recognition:** If you want your work to be shared freely but want to ensure your authorship is always acknowledged.



## When to Use CC0:

**Maximize Sharing and Usage:** If your goal is to contribute to the public domain and have your work freely used without any limitations or obligations (including attribution).

**Creative Commons for the Public Good:** When you want your work to be adopted or reused without concern for attribution (e.g., educational content, artworks, software).

## Section 4: Produce Q2

1. You are using a Creative Commons licensed image (CC BY-NC 3.0) in your Open Access training module. Which of the following attributions is MOST compliant with the license terms?
- a) "Image from [Website Name]."
  - b) "Image by [Author's Name]."
  - c) "Image courtesy of [Author's Name]."
  - d) "Image: [Image Title] by [Author's Name] is licensed under CC BY-NC 3.0. Available at [URL]."**

# What is TASL?



**Title:** The title of the work being reused. This helps identify the specific work being attributed.



**Author:** The creator(s) or author(s) of the work. This ensures proper credit is given to the individuals or organizations responsible for the work.



**Source:** The location where the work is available. This is often a URL, but it could also refer to a specific repository, journal, or platform where the work can be accessed.



**License:** The type of Creative Commons license the work is under (e.g., CC BY, CC0, etc.). This tells users what they are allowed to do with the work and under what conditions.

## Section 4: Produce Q3

1. You have significantly modified a section of text from an OER for your Open Access training module. Which of the following is the MOST accurate way to attribute the original source?
- a) "Text from [Title of OER] by [Author's Name] is licensed under [License]. Available at [URL]."
  - b) "Original text by [Author's Name]."
  - c) **"Adapted from [Title of OER] by [Author's Name] is licensed under [License]. Available at [URL]."**
  - d) "Inspired by [Title of OER] licensed under [License]. Available at [URL]."

# Adaptation vs remix



Because the text  
was *adapted*, it's  
important to state  
that explicitly.

This distinguishes your work  
from the original and clarifies  
the extent of reuse.



## Remix

A **remix** typically refers to taking an existing work (often a musical or digital piece) and altering it by adding, removing, or rearranging parts of the original.

- A remix tends to be less about creating something entirely new and more about **reinterpreting** or **reworking** the original in a creative way.



## Adaptation

An **adaptation** involves modifying or transforming an original work to fit a new context or medium.

- While the original work's core elements are usually retained, an adaptation may involve **significant changes to make it suitable for a different purpose**, audience, or format.



## Section 4: Produce Q4

1. Free online resources don't need attribution.

- True / **False**

# Which resources need attribution



**Attribution is required for any resources that are shared under an open license or that have specific usage terms that require proper credit to be given to the creator or rights holder.**



## **When Attribution is Not Required**

**Works in the Public Domain:** Once a work has entered the public domain (either because the copyright has expired or because the creator has explicitly waived rights), attribution is not legally required. However, it's still often recommended to acknowledge the work as a courtesy.

### **Works Released Under a License That Does Not Require**

**Attribution:** Some licenses, like **CC0**, do not require attribution but can still be attributed voluntarily as a gesture of respect to the creator.

# Section 5: Publish

## Q1

1. Which is MOST important when publishing your OA module?
- a) Ensuring the metadata is open, and accessible to all.**
  - b) Making the module visually appealing.
  - c) Choosing a catchy title.
  - d) Hosting the module on a popular platform.

# Minimum FAIR Requirements for a Learning Module:



**Findable:** Persistent identifier, descriptive metadata, indexed.



**Accessible:** Open access, usable formats, device compatibility, accessibility features.



**Interoperable:** Standardized metadata schema, machine-readable data formats, cross-platform compatibility.



**Reusable:** Clear open license, guidelines for reuse, modular structure.

# Section 5: Publish

## Q2

1. Which action LEAST contributes to making your OA module "Findable"?
- a) Using relevant keywords in the module's description.
  - b) Submitting the module to relevant repositories.
  - c) Creating a detailed table of contents.
  - d) Designing visually appealing graphics for the module.**

# Create **Findable** learning content

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While visuals are important, they don't directly impact findability in search results.

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**Use a Persistent Identifier**

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**Create Rich and Standardized Metadata**

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**Publish on Repositories or Open Access Platforms**

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**Use the right keywords in the title, description, and metadata**

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**Share on Social Media and Networks**

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**Integrate with Learning Management Systems (LMS)**

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**Encourage Collaboration and External Sharing**

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## Section 5: Publish Q3

1. Choosing a stable URL or DOI for your module is crucial for ensuring it remains accessible over time.

- **True** / False

# Why PIDs?

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Stable URLs and DOIs provide persistent links, preventing broken links and ensuring long-term access.

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**Long-term access** and stability of links.

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**Easy citation** and attribution for academic credibility.

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**Increased findability** and discoverability via search engines and repositories.

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**Cross-platform compatibility** and interoperability.

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**Tracking impact and usage** to measure engagement and recognition.

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**Compliance with FAIR principles** and supporting open access initiatives.

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**Version control** to track updates and revisions.



## Section 5: Publish Q4

1. Which aspect is NOT directly related to "Interoperability" when publishing your module?
- a) Using standard file formats (e.g., HTML, SCORM).
  - b) Providing metadata using a standardized schema.
  - c) Using SMART learning objectives.**
  - d) Ensuring the module can be accessed on different devices.

# Interoperability

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SMART learning objectives are important, but interoperability focuses on technical compatibility and exchange of information

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**Use standardized formats** (e.g., SCORM, xAPI, LTI).

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**Integrate with LMS** using tools like SCORM, LTI, or xAPI.

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**Leverage open APIs** for content integration across platforms.

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**Make content responsive** on different devices.

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**Use open data standards** for linking content with external resources.

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**Encourage use of open standards** for content delivery (xAPI, OpenID, OAuth).

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**Ensure content is linked and referenced** for wider use and integration.

# Section 5: Publish

## Q5

1. Which action LEAST contributes to making your OA module "Reusable"?
- a) Applying a Creative Commons license.
  - b) Including a comprehensive instructor kit.
  - c) Providing clear attribution information for any OERs used.
  - d) Hosting the module on a specific learning platform.**

# Reusability

While hosting is important, it doesn't inherently make the module *reusable*. Licensing, instructor kits, and attribution are key to reusability.

**Modular Design:** Break content into small, independent units.

**Open Standards and Formats:** Use open, compatible formats and standards (SCORM, xAPI, LTI).

**Clear and Flexible Metadata:** Provide comprehensive metadata and licensing information.

**Adaptability and Customization:** Ensure content can be easily customized by others.

**Accessibility:** Follow accessibility guidelines (WCAG) and ensure compatibility with different devices.

**Modular Learning Objectives and Assessments:** Design objectives and assessments that are flexible.

**Instructions for Use:** Provide clear guidelines on how to implement and modify the content.

**Easy Access and Sharing:** Host materials on open platforms and allow easy downloads.

**Collaboration and Feedback:** Encourage collaboration and provide version control.

**Test for Reusability:** Pilot test the module to ensure it is adaptable and reusable.

## Section 6: Verify & CI Q1

1. Which method is BEST for gathering feedback from researchers on the Open Access module *after* it has been used?
- a) Survey
  - b) Focus group
  - c) Usage statistics
  - d) All of the above (Survey, Focus group, Usage statistics)**

# Getting Feedback



A combination of methods provides the most comprehensive feedback.



Surveys can reach a large number of users



Focus groups allow for in-depth discussion



Usage statistics provide quantitative data

## Section 6: Verify & CI Q2

1. You receive feedback that some researchers found the module too technical. Which action would be MOST appropriate for continuous improvement?
- a) Revise the module to simplify the language, provide more examples, and add a glossary of terms.**
  - b) Ignore the feedback, as some level of technical detail is necessary.
  - c) Create a separate, more advanced version of the module.
  - d) Remove the technical content entirely, even if it is essential.

# Always Improve



Simplifying language and adding examples makes the module more accessible to a wider audience without sacrificing essential content.



**Continuous improvement** allows learning modules to stay **relevant, effective, and engaging** over time.



It helps you **respond to learner needs, incorporate new technologies, and ensure quality and consistency.**



It enhances **learning outcomes**, keeps content **innovative**, and makes materials more **adaptive** to changing educational contexts.



## Section 6: Verify & CI Q3

- Continuous improvement is a one-time activity done after the module is launched.
  - True / **False**

# Iterative process

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Continuous improvement is an iterative process. Feedback should be collected and the module should be revised regularly to ensure it remains effective and relevant.

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**Ensures Relevance:** By continually adapting based on feedback, you ensure that the module stays up-to-date and reflects the latest research and educational trends.

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**Improves Learner Engagement:** Iteration helps keep the material engaging, as adjustments are made to meet the evolving needs of learners and the educational environment.

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**Enhances Learning Outcomes:** The focus on regular improvements means that the module can be tailored to achieve the best learning results over time, aligning with learners' changing needs and feedback.

## Section 6: Verify & CI Q4

1. Which of the following is NOT a typical aspect of verifying the effectiveness of a learning module?

- a) Collecting feedback from learners
- b) Analyzing learner performance data (e.g., quiz scores)
- c) Tracking module usage statistics
- d) Promoting the module to new audiences**

# Verifying

Promoting the module is a dissemination activity, not part of verifying its effectiveness. Verification focuses on evaluating the module's impact on learning.

**Ensure Findability:** Verify unique identifiers and comprehensive metadata.

**Ensure Accessibility:** Check that materials are open access and usable by all learners.

**Ensure Interoperability:** Confirm compatibility with common formats and systems.

**Ensure Reusability:** Verify clear licensing and modular structure for reuse.

**Validate Learning Outcomes:** Ensure alignment with objectives and effective assessments.

**Verify Quality and Accuracy:** Ensure correctness, up-to-date content, and pedagogical soundness.

**Engage Stakeholders:** Gather and act on feedback from learners and educators.

**Ensure Sustainability:** Confirm long-term accessibility and track ongoing usage.

## Section 6: Verify & CI Q5

1. You notice from usage statistics that a particular section of the module is rarely accessed. What's the next best step?
  - a) Assume the section is not important and remove it.
  - b) Add more content to the section to make it more comprehensive.
  - c) Investigate why the section is underutilized (e.g., is it difficult to find, is the content unclear, is it irrelevant?) and revise accordingly.
  - d) Promote the section more heavily to increase its visibility.

# “Why” is the key



Understanding the *reason* for low usage is key to effective improvement.



Simply removing or promoting the section without investigation might not address the underlying problem.



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