



D4.2 QUESTIONS FOR COMPETENCE AREA 1 (EN)

DSW
DIGITAL SKILLS WALLET



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Authors	Neofytos Xenofontos
Contributors	EDITC LTD, Cyprus
Reviewers	ALL Partners

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1 Introduction

1.1 Overview of the deliverable as described in the Application

The Digital Skills Wallet project aims to develop an eco-system supported by a digital platform for the **Acquisition and Assessment of Digital Competences** with the use of [Micro-credentials \(MCs\)](#) on the 5 [digital competence](#) areas as per the [DigComp Framework](#). The full title of the project is “Acquiring and Assessing Digital Competence using Micro-credentials” and is funded by Erasmus+ funding from the European Commission where 8 partners will collaborate across all work packages over 44 months of the project.

Within Work Package 4 **Content for Digital Competence Area 1 and Proof of concept with a Large-Scale Pilot Test** and in relation to Deliverable 4.2. QUESTIONS FOR COMPETENCE AREA 1 the following tasks were undertaken:

T4.4 CREATE AN INITIAL POOL OF DIFFERENT TYPE OF QUESTIONS

The partners will develop at least **600 Questions** for the issuance of micro-credentials for Competence Area 1. The questions will be of various types (those types supported by the authoring tool) and will cover ALL the LOs of Competence Area 1. Each question will be categorized based on

1. The Competence area it assesses
2. The related MC - >LO
3. The nature of the Question: Generic Question, Application-specific Question (and relevant application)

T4.5 USE THE AUTHORING TOOL TO CREATE QUESTIONS

Partners will develop the questions on the platform using the authoring tool

T4.6 TRANSLATION OF QUESTIONS AND UPLOAD ON PLATFORM

Translation of questions and upload on platform

1.2 Description of Deliverable 4.2: Questions for Competence 4.1

1.2.1 Overview of Questions

The guidelines as presented in Deliverable 4.1 GUIDE FOR LEARNING CONTENT AND ASSESSEMENT QUESTIONS WITH MICROCREDENTIALS **were followed**.

A total number of **1688 Questions** have been developed. These questions have been created using the authoring tool available in the platform and then downloaded and translated in all languages. The questions are linked with:

- A [Competence Area](#) (in our Case Competence Area 1)
- A [Competence](#)
- A [Micro-credential](#)
- A [Learning Outcome](#) and [Topic](#)

The types of questions as per the Guide (deliverable 4.1) are:

Single Choice Questions (SCQs)

These should have 4 answers to choose from, should pose a question and prompt the learner to choose the correct answer. Please note that only one option (1, 2, 3, 4) can be the correct option. Answers will be shuffled and therefore not suitable for sequencing.

Multiple Choice Questions (MCQs)

These should have 4 answers to choose from, should pose a question and prompt the learner to choose the correct answers (one or more answers maybe correct). Answers will be shuffled and therefore not suitable for sequencing.

TRUE/FALSE Question (TFQs)

The learner is presented with a statement and the learner has to select whether the statement is TRUE or FALSE. The learner is prompted to choose the correct answer.

Put in the Right Order Question (POQs)

A sequence question requires a showcase of a particular arrangement within the answers. Learners need to arrange 4 answers in the correct order. The learner is prompted to choose the correct sequence and to rearrange the statements from the 1st to 2nd, to 3rd and finally the 4th.

Matching Question (MQs)

These questions are designed to involve pairing a set of statements with a set of responses. There should be 4 statements and 4 corresponding responses. The learner is prompted to pair these and will do this by rearranging the statements and responses to align for the correct answer. The statements and responses will be shuffled.

The partnership developed a total of **1688** Questions for assessing **59 Micro-credentials** related to Competence Area 1. ***The consortium decided that a minimum of 20 questions should be available to award a Micro-credential.***

Therefore, we have exceeded the 600 questions (as promised in the application) to cover this requirement.

The table below shows the questions distribution per

- [Competence](#) addressed. (Competence Area 1)
 - 1.1: BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT
 - 1.2: EVALUATING DATA, INFORMATION AND DIGITAL CONTENT
 - 1.3: MANAGING DATA, INFORMATION AND DIGITAL CONTENT
- The level from A-D:
 - A: Foundation
 - B: Intermediate
 - C: Advanced
 - D: Expert
- The [Micro-credential](#) that is assessed

DSW Assessment Questions for Competence Area 1 - INFORMATION AND DATA LITERACY	No
1.1: BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT	646
A. FOUNDATION LEVEL	223
1.1.A.1: Internet Essentials – What, How and Why	46
1.1.A.2: Navigating the Internet while recognizing the risks	49
1.1.A.3: Understanding and using Search Engines	32
1.1.A.4 Information In Social Media	40
1.1.A.5 Finding Information on Devices	56
B. INTERMEDIATE LEVEL	181
1.1.B.1 Advanced Browsing and Searching the Internet	57
1.1.B.2 Downloading and opening a variety of file types	26
1.1.B.3 Internet and Privacy	24
1.1.B.4 Searching on Devices using metadata	31
1.1.B.5 Sorting and Filtering Data, Digital Content and Information	43
C. ADVANCED LEVEL	148
1.1.C.1 Evaluating Sources for Information and Advanced Search Techniques	36
1.1.C.2 Strategies for Finding and classifying information effectively	36
1.1.C.3 In depth knowledge of how various factors influence search results, Social Media activity streams and content	20
1.1.C.4 AI technology used in Search Engines and Social Media Platforms	20
1.1.C.5 Use tools and services to enhance Privacy and User Rights Online	36
D. EXPERT LEVEL	94
1.1.D.1 Combine Advanced Search Techniques to find and filter information	24
1.1.D.2 Use advanced filtering techniques with a set of combined criteria to filter structured data	21
1.1.D.3 Filtering Data using a Query Language	29
1.1.D.4 Acknowledging limitations of technologies for people with impairments and know the possibilities for improvements	20
1.2: EVALUATING DATA, INFORMATION AND DIGITAL CONTENT	570
A. FOUNDATION LEVEL	137
1.2.A.1 Misinformation and Disinformation: WHAT, HOW AND WHY	33
1.2.A.2 Credibility of Online Sources – Elements that support/not support online sources credibility	24
1.2.A.3 Credibility of Online Content – Viewing with a Critical Eye	35
1.2.A.4 Misinformation, Disinformation and Bias in AI generated content	24
1.2.A.5 Information verification with fact-checking websites, tools and extensions	21
B. INTERMEDIATE LEVEL	198
1.2.B.1 Verifying credibility of online Content with Fact-Checking Websites, tools and extensions	36
1.2.B.2 Investigating the Credibility of Online Content	23
1.2.B.3 Analysing and Evaluating the Credibility of Online Content	37
1.2.B.4 Ethical Practices in Using and Disseminating Online Content	21
1.2.B.5 Legal Issues to Social Media Use	40
1.2.B.6 Tools available for Data analysis	19
1.2.B.7 Visualise data to draw conclusions using a spreadsheet software	22
C. ADVANCED LEVEL	145
1.2.C.1 Combine Fact-Checking Techniques to Verify, Analyse and Critically Evaluate Search Results	25
1.2.C.2 Analyse and critically evaluate social media activity streams	20
1.2.C.3 Filter Bubbles in AI	40
1.2.C.4 Evaluating Structured Data with Pivot Tables	20
1.2.C.5 Evaluating Structured Data from multiple flat files with Power Pivot	20
1.2.C.6 Evaluating Structured Data from multiple flat files with Business Intelligence tools	20
D. EXPERT LEVEL	90
1.2.D.1 Create solutions to complex problems with limited definition that are related to analysing and evaluating credible and reliable sources of information	20
1.2.D.2 Create Solutions to solve complex problems that are related to analysing and evaluating credible and reliable sources of structured data	20
1.2.D.3 Contributing to a positive and informed online community	50
1.3: MANAGING DATA, INFORMATION AND DIGITAL CONTENT	452
A. FOUNDATION LEVEL	84
1.3.A.1 Digitization and Data Collection Processes – WHAT, HOW AND WHY	23
1.3.A.2 Save preferences and results while working online or in an app	20
1.3.A.3 Data collected while working online	21
1.3.A.4 Local, Cloud and Network Storage – Pros and Cons	20
B. INTERMEDIATE LEVEL	168
1.3.B.1 Access and Configure information collected while working on various platforms	20
1.3.B.2 Using online applications and apps and accessing stored data	22
1.3.B.3 Use Data Collection online applications and apps	26
1.3.B.4 Basic statistical procedures for data representation with visuals	40
1.3.B.5 Interacting with dynamic data visualization	20
1.3.B.6 Selecting and using the appropriate storage	20
1.3.B.7 Cloud storage: Synchronization and synchronizing on a local storage	20
C. ADVANCED LEVEL	100
1.3.C.1 Visualizing Structured Data from a local or online database with Business Intelligence Tools	20
1.3.C.2 Visualizing Structured Data from a local or online Sources such as RSS or Google Analytics with Business Intelligence Tools	20
1.3.C.3 Data transformation and visualization in a spreadsheet software	20
1.3.C.4 Processing Data – Cleaning, Normalizing data with BI tools	40
D. EXPERT LEVEL	100
1.3.D.1 Data processing using DAX functions	20
1.3.D.2 Introduction to Data Mining	40
1.3.D.3 Data Mining with RStudio	20
1.3.D.4 Using SPSS for Statistical Analysis	20
Grand Total	1668

2 Actual Questions Translated

The questions can be found in 2 separate Excel Spreadsheets.

1. *DSW_Matching_Pairs_EN_RO_IT_GR Submitted.xlsx*
2. *DSW_Multiple_Choices_Pairs_EN_RO_IT_GR Submitted.xlsx*

Questions initially developed in English were subsequently translated in Romanian, Italian and Greek.

2.1 Matching Question (MQs)

Can be found in the following Excel.

DSW_Matching_Pairs_EN_RO_IT_GR Submitted.xlsx

Table below shows the columns in above file with an **indicative example** of the instruction (name_LL) and corresponding pairs (prompt and answer in all 4 languages). The ID related columns are unique identifiers required for importing in the platform.

Table 1: Columns of DSW_Matching_Pairs_EN_RO_IT_GR Excel with Example

QUESTION TYPE	Match: Match the following items with their descriptions:
Id	10
name_EN	Match the following Internet terms with their definitions:
name_RO	Potriviți următorii termeni de internet cu definițiile lor:
Name_IT	Abbinare i seguenti termini di Internet alle relative definizioni:
Name_GR	Αντιστοίχισε τους παρακάτω όρους του Διαδικτύου με τους ορισμούς τους:
created_at	29/01/2025 16:08
learning_outcome	1.1.2 Describe basic functionality of the Internet and the main terminology used
microcredential	1.1.A.1: Internet Essentials – What, How and Why
pair_1_id	12
pair_1_prompt_EN	HTTP
pair_1_answer_EN	Protocol for transferring data over the web
pair_1_prompt_RO	HTTP
pair_1_answer_RO	Protocol pentru transferul de date pe web
pair_1_prompt_IT	HTTP
pair_1_answer_IT	Protocollo per il trasferimento di dati sul web
pair_1_prompt_GR	HTTP
pair_1_answer_GR	Πρωτόκολλο για μεταφορά δεδομένων μέσω του ιστού

pair_2_id		11
pair_2_prompt_EN	URL	
pair_2_answer_EN	The address used to access resources on the Internet	
pair_2_prompt_RO	URL	
pair_2_answer_RO	Adresa folosită pentru accesarea resurselor de pe Internet	
pair_2_prompt_IT	URL	
pair_2_answer_IT	L'indirizzo utilizzato per accedere alle risorse di Internet	
pair_2_prompt_GR	Διεύθυνση URL	
pair_2_answer_GR	Η διεύθυνση που χρησιμοποιείται για πρόσβαση σε πόρους στο διαδίκτυο	
pair_3_id		10
pair_3_prompt_EN	Domain Name	
pair_3_answer_EN	The human-readable address of a website	
pair_3_prompt_RO	Nume de domeniu	
pair_3_answer_RO	Adresa care poate fi citită de om a unui site web	
pair_3_prompt_IT	Nome del dominio	
pair_3_answer_IT	L'indirizzo di un sito internet facilmente leggibile da un uomo	
pair_3_prompt_GR	Όνομα domain	
pair_3_answer_GR	Η αναγνώσιμη από τον άνθρωπο διεύθυνση μιας ιστοσελίδας	
pair_4_id		9
pair_4_prompt_EN	IP Address	
pair_4_answer_EN	A unique identifier for a device on the Internet	
pair_4_prompt_RO	Adresa IP	
pair_4_answer_RO	Un identificator unic pentru un dispozitiv de pe Internet	
pair_4_prompt_IT	Indirizzo IP	
pair_4_answer_IT	Identificatore univoco di un dispositivo su Internet.	
pair_4_prompt_GR	Διεύθυνση IP	
pair_4_answer_GR	Ένας μοναδικός αναγνωριστικός αριθμός για μια συσκευή στο Διαδίκτυο	

2.2 Multiple Choices Questions (MCQs)

Can be found in the following Excel [*DSW_Multiple_Choices_EN_RO_IT_GR Submitted.xlsx*](#)

Table2 in next page shows the columns in above file with an **indicative example** of the instruction (name_LL) and corresponding choices (name and correctness) The ID related columns are unique identifiers required for importing in the platform.

One example for each **question types** has been presented

1. **Single Choice:** Select the correct answer option
2. **True/False:** Choose whether the statement is true or false
3. **Multiple Choice:** Select one or more correct answers
4. **Sequence:** Arrange the following items in the correct order

Table 2: Columns of DSW_Multiple_Choices_EN_RO_IT_GR Submitted Excel with Example for each Question Type

QUESTION TYPE	Single Choice: Select the correct answer option	True/False: Choose whether the statement is true or false	Multiple Choice: Select one or more correct answers	Sequence: Arrange the following items in the correct order
id	7	38	57	531
name_EN	What is digital information?	Cross-referencing information means checking if a piece of information appears in multiple trustworthy sources.	Which of the following statements about digital data representation are correct?	Arrange the steps in the correct order for finding a file using a File Manager app.
name_RO	Ce este informația digitală?	Încrucișarea informațiilor înseamnă a verifica dacă o informație apare în mai multe surse de încredere.	Care dintre următoarele afirmații despre reprezentarea datelor digitale sunt corecte?	Aranjați pașii în ordinea corectă pentru a găsi un fișier folosind o aplicație File Manager.
name_IT	Che cos'è l'informazione digitale?	Incrociare le informazioni significa verificare se un'informazione compare in più fonti attendibili.	Quali delle seguenti affermazioni sulla rappresentazione dei dati digitali sono corrette?	Disporre i passaggi nell'ordine corretto per trovare un file utilizzando un'applicazione File Manager.
name_GR	Τι είναι η ψηφιακή πληροφορία;	Διασταύρωση πληροφορίας σημαίνει να ελέγχεις αν ένα δεδομένο εμφανίζεται σε πολλαπλές αξιόπιστες πηγές.	Ποια από τις παρακάτω δηλώσεις για την ψηφιακή αναπαράσταση δεδομένων είναι σωστή;	Ταξινομήστε τα βήματα με τη σωστή σειρά για την εύρεση ενός αρχείου μέσω της εφαρμογής File Manager.
created_at	29/01/2025 14:15	11/03/2025 12:47	14/03/2025 16:49	28/03/2025 12:54

learning_outcome	1.1.1 Enlist the different types of digital information sources	1.2.1 Describe what is misinformation and disinformation and the difference of the two	1.3.1 Recognize that data collection processes and digitization of data take place by systems and devices	1.1.21 Enlist various locations of data storage on a mobile device
microcredential	1.1.A.1: Internet Essentials – What, How and Why	1.2.A.1 Misinformation and Disinformation: WHAT, HOW AND WHY	1.3.A.1 Digitization and Data Collection Processes – WHAT, HOW AND WHY	1.1.A.5 Finding Information on Devices
choice_1_id	26	5991	6636	1802
choice_1_name_EN	Handwritten notes shared online	False	Text is represented using standards like ASCII or Unicode in binary format.	Open the file or move it to a different location if needed
choice_1_name_RO	Note scrise de mână partajate online	Fals	Textul este reprezentat folosind standarde precum ASCII sau Unicode în format binar.	Deschideți fișierul sau mutați-l într-o altă locație dacă este necesar
choice_1_name_IT	Note scritte a mano e condivise online	Falso	Il testo viene rappresentato utilizzando standard come ASCII o Unicode in formato binario.	Aprire il file o spostarlo in una posizione diversa, se necessario.
choice_1_name_GR	Χειρόγραφες σημειώσεις που μοιράζονται στο διαδίκτυο	Λάθος	Το κείμενο αναπαρίσταται χρησιμοποιώντας πρότυπα όπως το ASCII ή το Unicode σε δυαδική μορφή	Άνοιγμα του αρχείου ή μετακίνησή του αν χρειαστεί
choice_1_correct	FALSE	FALSE	TRUE	FALSE

choice_2_id	25	5990	6639	1801
choice_2_name_EN	Information that is only found on government websites	True	Video consists of sequences of images and sound, compressed into formats like MP4 and AVI.	Locate the folder where the file is stored
choice_2_name_RO	Informații care se găsesc doar pe site-urile guvernamentale	Adevărat	Videoclipul constă din secvențe de imagini și sunet, comprimate în formate precum MP4 și AVI.	Localizați folderul în care este stocat fișierul
choice_2_name_IT	Informazioni che si trovano solo sui siti web governativi	Vero	I video sono costituiti da sequenze di immagini e suoni, compressi in formati come MP4 e AVI.	Individuare la cartella in cui è memorizzato il file
choice_2_name_GR	Πληροφορίες που βρίσκονται μόνο σε κυβερνητικές ιστοσελίδες	Σωστό	Το βίντεο αποτελείται από ακολουθίες εικόνων και ήχου, συμπιεσμένες σε μορφές όπως MP4 και AVI	Εντοπισμός του φακέλου στον οποίο αποθηκεύτηκε το αρχείο
choice_2_correct	FALSE	TRUE	TRUE	FALSE

choice_3_id	24	6637	1800
choice_3_name_EN	Information that exists in electronic format	Images are always stored in uncompressed formats like BMP.	Navigate to Internal Storage or SD Card
choice_3_name_RO	Informații care există în format electronic	Imaginile sunt întotdeauna stocate în formate necomprimate, cum ar fi BMP.	Navigați la Stocare internă sau Card SD
choice_3_name_IT	Informazioni esistenti in formato elettronico	Le immagini vengono sempre memorizzate in formati non compressi come BMP.	Navigare nella memoria interna o la scheda SD
choice_3_name_GR	Πληροφορίες που υπάρχουν σε ηλεκτρονική μορφή	Οι εικόνες αποθηκεύονται πάντα σε μη συμπιεσμένες μορφές όπως BMP.	Πλοηγηθείτε στην εσωτερική αποθήκευση ή στην κάρτα SD
choice_3_correct	TRUE	FALSE	FALSE

choice_4_id	23	6638	1799
choice_4_name_EN	Data stored in physical books	Sound is digitized using Analog-to-Digital Conversion (ADC) and stored in formats like MP3 and WAV.	Open the File Manager app
choice_4_name_RO	Date stocate în cărți fizice	Sunetul este digitizat utilizând conversia analog-digital (ADC) și stocat în formate precum MP3 și WAV.	Deschideți aplicația File Manager
choice_4_name_IT	Dati memorizzati in libri fisici	Il suono viene digitalizzato mediante la conversione analogico-digitale (ADC) e memorizzato in formati come MP3 e WAV.	Aprire l'applicazione File Manager
choice_4_name_GR	Δεδομένα αποθηκευμένα σε φυσικά βιβλία	Ο ήχος ψηφιοποιείται μέσω Μετατροπής Αναλογικού σε Ψηφιακό (ADC) και αποθηκεύεται σε μορφές όπως MP3 και WAV.	Άνοιξε την εφαρμογή Διαχείρισης Αρχείων
choice_4_correct	FALSE	TRUE	FALSE

3 Glossary of Terms

Bite Size: Bite size courses are short videos that cover one or more topics in a specific Learning outcome

MicroCredential: “A micro-credential is the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity”. (European Commission, 2021). A MicroCredential in the practical context of the DigitalSkillsWallet platform comprises of areas of specific learning within each competence to be examined at 4 levels (foundation, intermediate, advanced and expert) according to the DigComp Framework. The number of MicroCredential changes for each competence and competence area so best to check the table to assess which area your bite size course is providing information on. You can then attribute the learning to that MicroCredential and it will guide your content.

Digital Competence: “digital competence involves the "confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It is defined as a combination of knowledge, skills and attitudes.” (European Commission, 2018)

DigComp: The DigComp Framework identifies the key components of digital competence in 5 areas (Dimension 1). Information and data literacy, Communication and collaboration, Digital content creation, Safety, Problem solving (Vuorikari et al., 2022)

Competence Area: “A cluster of related Knowledge and Skill statements that correlates with one’s capability to perform Tasks in a particular domain. Competency Areas can help learners discover areas of interest, inform career planning and development, identify gaps for knowledge and skills development, and provide a means of assessing or demonstrating a learner’s capabilities in the domain” (Wetzel, 2023, p. 3). For the purpose of this project and the DigComp, the Competence Area is the first dimension of which there are 5 areas. 1. Information and Data Literacy, 2. Communication and Collaboration, 3. Digital Content Creation, 4. Safety, 5. Problem Solving

Competence: In the context of this project and the DigComp, a competence is a subset of the Competence Area of which 21 exist.

Learner: In this document the learner is the recipient of the learning material.

Contributor: In this document the contributor is the provider of the learning material, namely an educator.

Learning Outcome: “A learning outcome is a statement of what a learner is expected to know, understand and be able to do at the end of a period of learning. (European Commission, 2017) Learning outcomes are linked to the relevant level and since they should generally be assessable they should be written in terms of how the learning is represented” (Moon & Moon, 2004, p. 12). A learning outcome in the practical context of the DigitalSkillsWallet platform comprises of the specific and particular learning that can be demonstrated as a result of assessing the MicroCredential. Eg. there could be 3 learning outcomes for 1 MicroCredential. When examining for MicroCredential “finding information on devices” **MC 1.1.A.5**, the learning outcomes are:

- Enlist different data storage devices (hard disk, USB etc.), describe how data is organized on a hard disk
- Perform simple searches on a Personal Computer
- Enlist various locations of data storage on a mobile device
- Perform a simple search on a mobile device

Topic: A Learning Outcome can contain one or more Topics making it easier for the contributors to focus on a specific topic relevant to their expertise.

Competence Level: In the context of the DigComp Framework there are 4 competency levels. These levels are Foundation, Intermediate, Advanced and Expert.

- **At a foundation level** contributors are examining at a basic level with guidance or autonomously and with appropriate guidance learners satisfy the learning outcomes.
- **At an intermediate level** contributors are examining whether the learner can independently solve straightforward problems and can solve well-defined, non-routine problems to satisfy the learning outcomes.
- **At an advanced level** contributors are examining, that as well as guiding others in a complex context learners can satisfy the learning outcomes.
- **At an expert level** learners should be able to demonstrate a highly specialised and advanced level of knowledge linked to the learning outcomes.

4 References

Copyright in the EU: How to get copyright protection. (2024). Your Europe.

https://europa.eu/youreurope/business/running-business/intellectual-property/copyright/index_en.htm

European Commission. (2017). *European Qualifications Framework for lifelong learning.*

European Commission. (2018). *Council Recommendation on Key Competences for Life-long Learning.*

European Union. https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en

European Commission. (2021). *A EUROPEAN APPROACH TO MICRO-CREDENTIALS.* European Union.

chrome-extension://efaidnbmninnibpcajpcgclclefindmkaj/<https://education.ec.europa.eu/sites/default/files/2022-01/micro-credentials%20brochure%20updated.pdf>

Forehand, M. (2010). Bloom's taxonomy. *Emerging Perspectives on Learning, Teaching, and Technology*, 41(4), 47–56.

Moon, J., & Moon, J. (2004). *Linking Levels, Learning Outcomes and Assessment Criteria.*

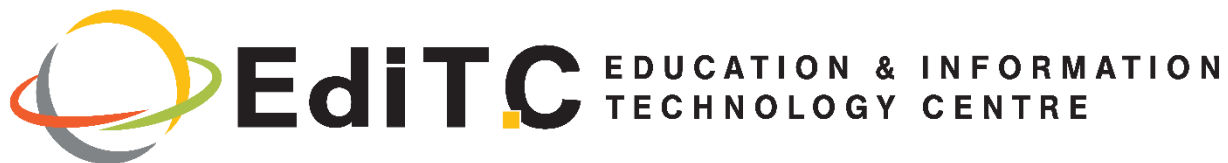
Stanny, C. (2016). Reevaluating Bloom's Taxonomy: What Measurable Verbs Can and Cannot Say about Student Learning. *Education Sciences*, 6(4), 37.

<https://doi.org/10.3390/educsci6040037>

Vuorikari, R., Kluzer, S., & Punie, Y. (2022). *DigComp 2.2, The Digital Competence framework for citizens: With new examples of knowledge, skills and attitudes.* Publications Office of the European Union.

Wetzel, K. A. (2023). *NICE framework competency areas: Preparing a job-ready cybersecurity workforce* (NIST IR 8355; p. NIST IR 8355). National Institute of Standards and Technology (U.S.). <https://doi.org/10.6028/NIST.IR.8355>

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