

APPENDIX 2 OVERVIEW OF THE CATEGORIZATION OF THE BASES OF DIGITAL COMPETENCE ACCORDING TO THE TAXONOMY OF BLOOM AND KRATHWOHL *

based on A. Churches (2009).

Process Category/ Stage	Cognitive process/ Key verbs of competence formulation	Digital taxonomy verbs	Example of digital competence bases	Competence reference
<p>1. remember (know, know): access relevant knowledge in long-term memory.</p>	<p>recognize, remember/ cite, indicate list, enumerate, name, emphasize, denote, depict, define, extract, ascertain, find, organize, assign, identify, have knowledge of, present, reproduce, describe, write, sketch, outline, repeat, reproduce, draw, cite, measure</p>	<p>copy define find locate cite listen google repeat retrieve outline highlight memorize remember network search identify select tabulate duplicate Matching curate and bookmark Set bullets</p>	<p>Search, research, access, and navigate among data, info, and content in digital environments.</p>	<p>Acquisition of knowledge, skills fundamentals, and attitudes</p>
<p>2. comprehend on: assign meaning to oral, written, or graphical information.</p>	<p>In one's own words, render, interpret, illustrate, classify, summarize, infer, compare, explain/demarcate, infer, arrange, express, select, justify, report, describe, determine, characterize, depict, demonstrate, discuss, explain by example, classify, extrapolate, point out, contrast, illustrate, clarify, localize, rewrite, transform, paraphrase, illustrate, predict, demonstrate.</p>	<p>comment tweet Associate tagging summarize Create references categorize rewrite predict compare contrast Write diary interpret group Derive estimate extend collect Give examples express</p>	<p>Understand appropriate digital communication in a given context Understand how to improve one's own digital competence</p>	
<p>3. apply: carry out or use a course of action (scheme, method) in a specific situation</p>	<p>execute, implement/modify, apply, make, fill in, select, edit, operate, influence, give examples, use, calculate, evaluate, demonstrate, perform, enter, discover, design, develop, explain, calculate, create, make, find, format, figure out, illustrate, delete, solve, make, modify, use, organize, plan, practice, calculate, transfer, implement, illustrate, verify, use, predict, prepare, select, draw, show, dissect</p>	<p>live out articulate comprehend upload select determine show search again from Keywords execute investigate implement outline experiment chop interview paint prepare play integrate present charting</p>	<p>Exchange of data, info and digital content by means of digital technologies Using private and public digital services Use digital tools and technology for collaboration processes</p>	<p>Apply knowledge, skills/abilities, attitudes</p>

<p>4.Analyze: Decompose learning content into its constituent elements and determine how they are connected to one another to form an overarching structure or purpose.</p>	<p>differentiate, organize, assign/derive, analyze, break down, divide, point out, evaluate, determine, refer to, present, debate, diagnose, divide, illuminate, recognize, determine, experiment, conclude, contrast, divide, question, identify, isolate, categorize, contrast, criticize, examine, solve, justify, conclude, infer, sort, divide, test, separate, outline, transform, distinguish between, examine, subdivide, judge, compare, use</p>	<p>calculate Categorize (e.g. web content, search results) break down into individual steps correlate deconstruct strategic hyperlinking support (e.g. a cause) Mind mapping organize rate advertise share Derive distinguish illustrate question structure integrate assign explain</p>	<p>Identify information needs</p> <p>Be able to assess health risks and threats to physical and psychological well-being due to the use of digital technologies</p> <p>Analyze digital needs and find technical answers</p>	<p>Knowledge transfer; apply knowledge skills/abilities and attitudes to analysis and problem solving.</p>
<p>5.judge: Make judgments based on criteria or standards</p>	<p>review, evaluate/draft, deduce, modify, argue, arrange, build, justify, refer to, grade, form, represent, decide, develop, explain, expand, narrate, generate, evaluate, formulate, generate, design, produce, integrate, classify, combine, criticize, teach, manage, modify, recreate, arrange, organize, plan, examine, collect, estimate, write, propose, choose, evaluate, summarize, compose,</p>	<p>discuss validate test, diagnose rate criticize comment iterate or pivot (e.g., a startup or app). discover defend experiment grade Hypothesize assess moderate publish predict Rate on a scale reflect Verification (e.g., a service or platform) edit</p>	<p>Analyze, compare, interpret, and critically evaluate credibility and reliability of data, info, and content in digital environments.</p> <p>Find and evaluate digital tools and technological responses to problems;</p>	<p>Knowledge transfer; apply knowledge skills/abilities and attitudes to analysis and problem solving.</p>
<p>6 (Create): Putting parts together in a new way and showing a constructive, creative solution.</p>	<p>generate, plan, develop/derive, select, describe, determine, judge, evaluate, assess, classify, discover design, develop, invent, create, generate, evaluate, contrast, question, interpret, construct, create, criticize, prepare, justify, relativize, conclude, persuade, distinguish, compare, represent, evaluate, compose, cross-curricular represent.</p>	<p>Blogging network build animate customize cooperate compose coordinate design podcasting Build Wiki write film program simulate Perform role play solve remix facilitate design (a presentation or a Prezi or YouTube channel) negotiate lead Manage projects</p>	<p>Use digital tools and technology to co-construct and co-create data, resources, and knowledge;</p> <p>Change, refine, improve, and integrate info and content in a body of knowledge to create new, original, and relevant content and knowledge</p> <p>Plan and develop a set of understandable instructions for a computer system to solve a given problem.</p>	<p>Reflection based on knowledge, skills/abilities, attitudes.</p> <p>Expansion and innovation of knowledge, skills/abilities and attitudes.</p>