

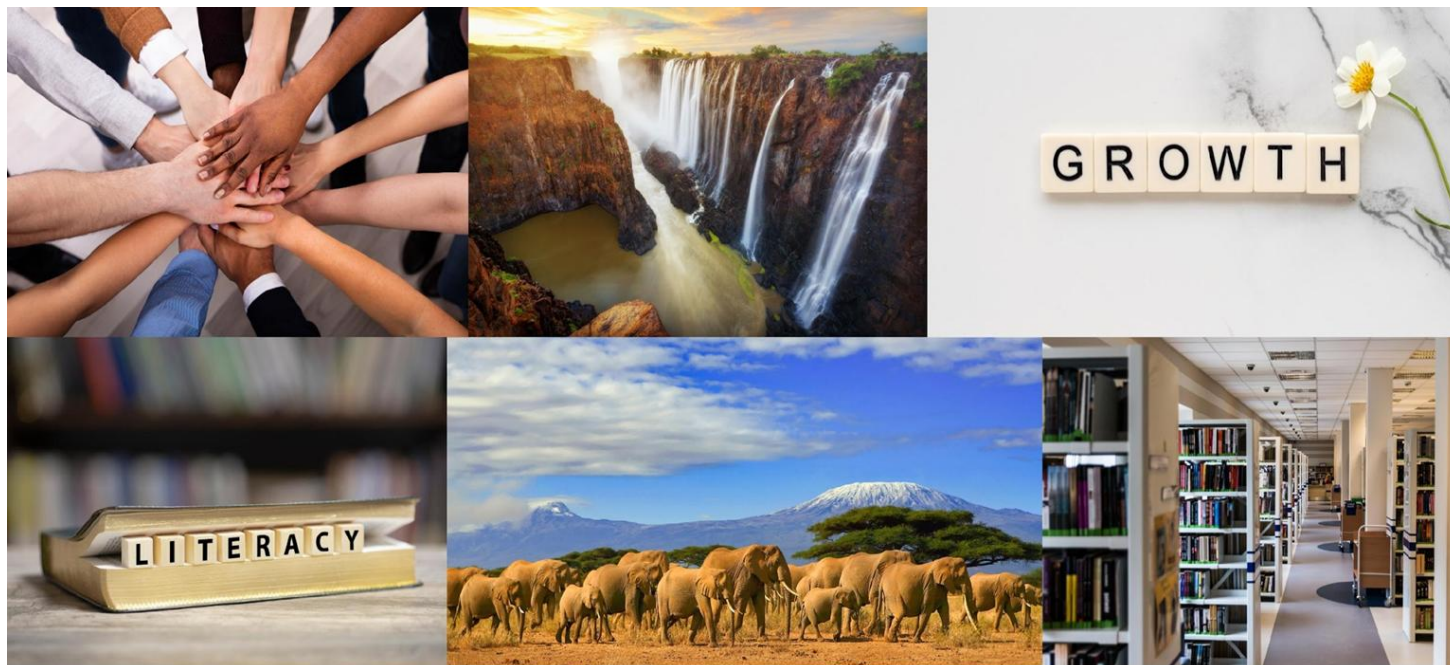
Using DigComp to Build Digital Literacy Capacity in LIS Education

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NIAGARA

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Introducing NIAGARA



Navigating the digital landscape: universities partnering for change (NIAGARA)

2023-2025 (January 2026)

Partners:

Jagiellonian University (POL)
Oslo Metropolitan University (NOR)
Sokoine University of Agriculture (TAN)
University of Barotseland (ZAM)
University of Dar es Salaam (TAN)
University of Inland Norway (NOR)
University of Zambia (ZAM)



Introducing NIAGARA: aims

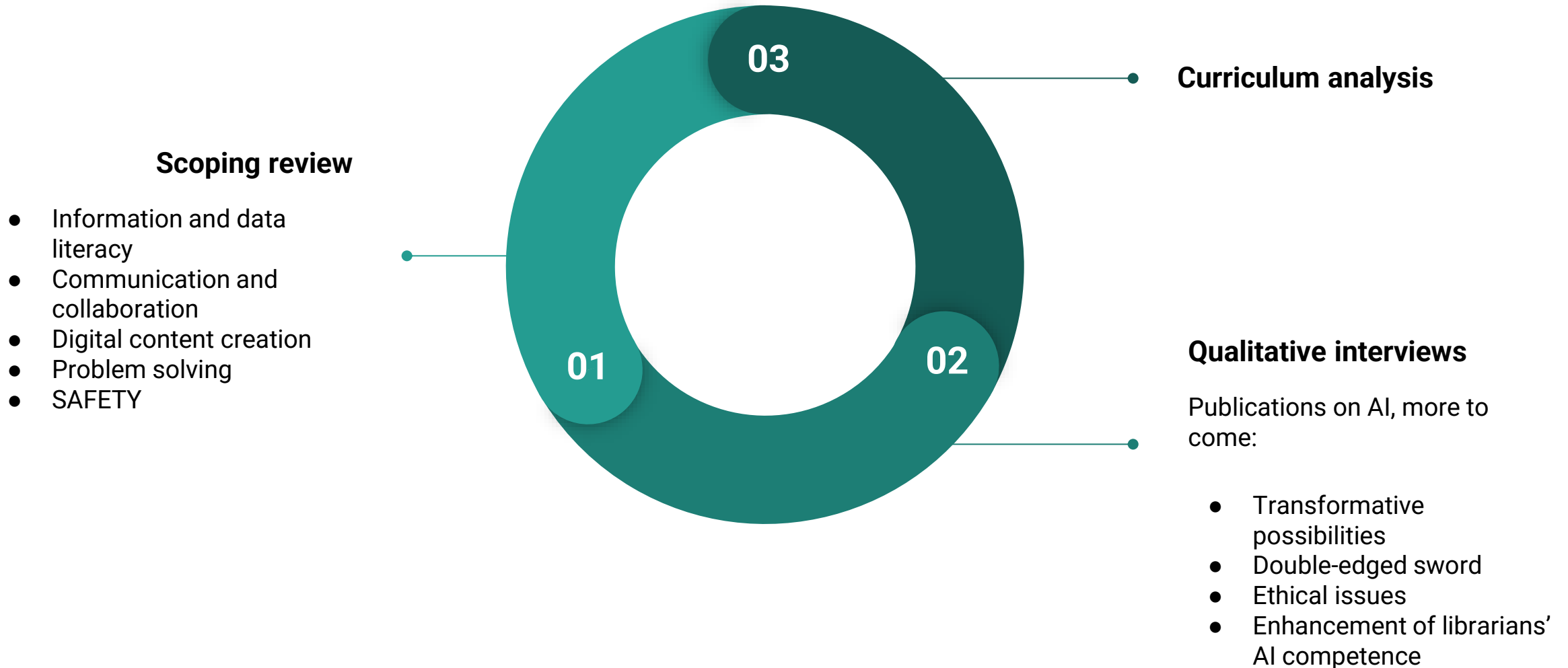


“to utilize the partnership between universities in partner countries to improve and expand information services by developing libraries’ ICT infrastructure and librarians’ digital competencies.”

<https://niagaragrants.com/>



Examining Digital competency needs



Selecting DigComp 2.2 for NIAGARA



Two Perspectives in NIAGARA's Use of DigComp:

- **Curriculum support for LIS students**

Using DigComp to understand and strengthen the digital competences expected of future information professionals.

- **Academic libraries' role in supporting users' digital competencies**

Applying the framework to examine how libraries help build the digital skills of their student and faculty communities.

Selecting DigComp 2.2 for NIAGARA

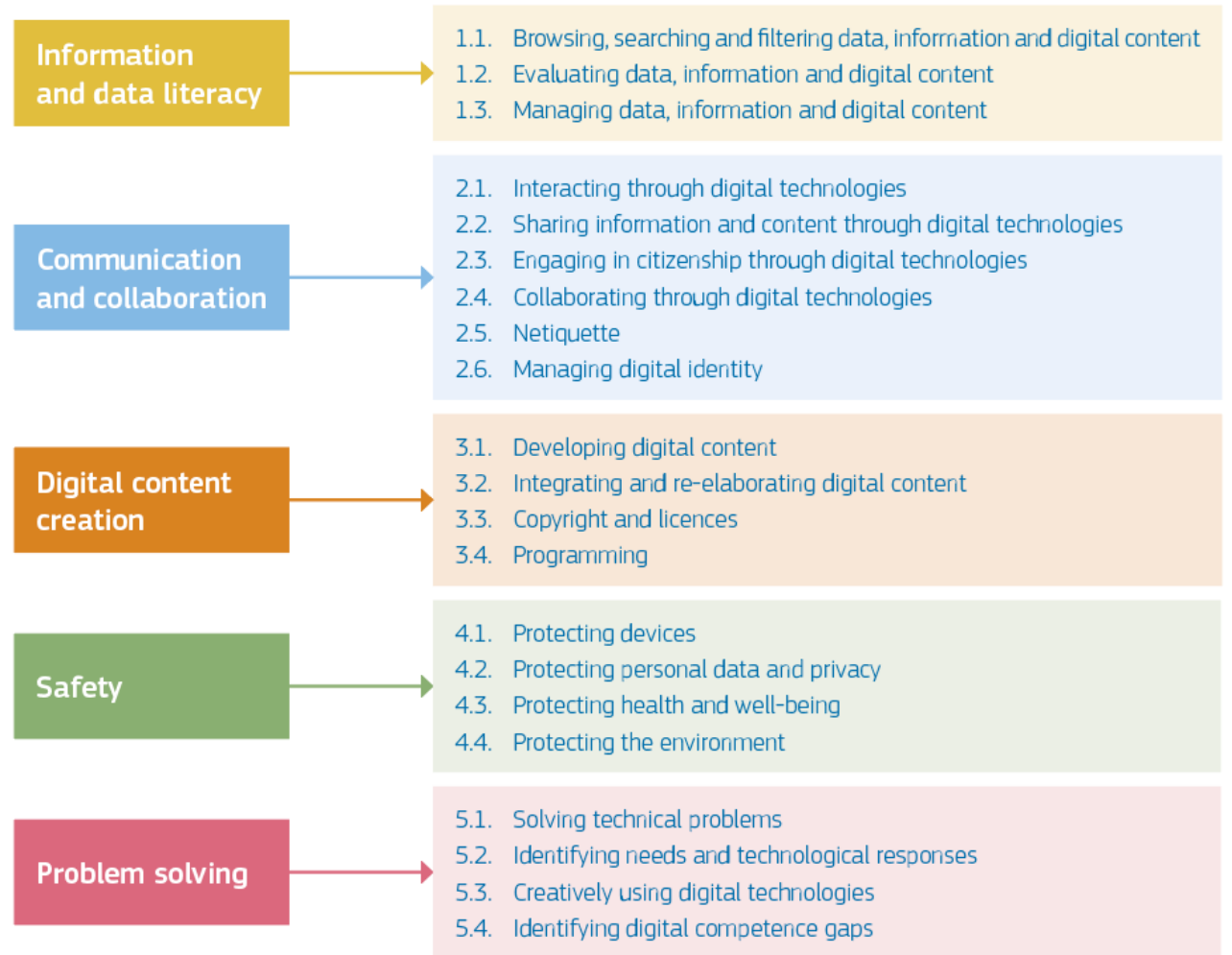


Reasons for Selecting to Use DigComp 2.2:

- Provide a shared conceptual framework and common vocabulary for discussing digital literacy across all partner institutions.
- Offer a structure that could bring coherence and consistency across project activities, such as:
 - Analysing LIS programmes, academic library courses, and digital literacy services (survey).
 - Digital literacy course development
- DigComp is internationally recognised and grounded in research, giving a solid and credible foundation, connecting NIAGARA's work to the wider EU/DigComp ecosystem and ongoing developments.

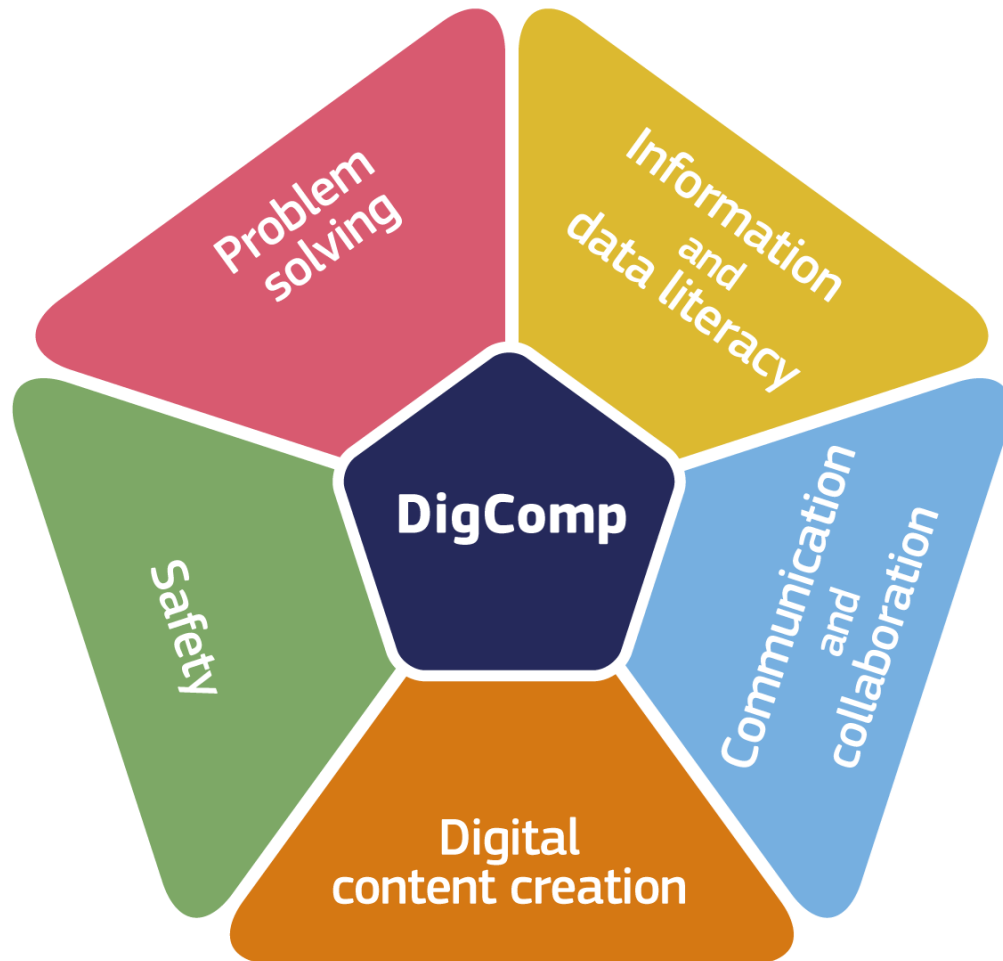
Using DigComp 2.2

- The five competence areas were ideal for comparing work across institutions, while the subcategories provided the detail to identify specific skills and gaps.
 - *Adjustments needed to make applicable to LIS programs and libraries in both the Global North and South.*





DigComp 2.2 - NIAGARA



- **Basic skills and concepts**
 - Basic ICT skills
 - Familiarity with conceptions of data, information, and knowledge
 - Knowledge on search strategies
 - Familiarity with general and academic search engines, online information systems and databases
 - Knowledge about search engines algorithms
 - Basic knowledge about safety, risks and threats
 - Knowledge on problem solving techniques and critical thinking skills
- **Information and data literacy**
 - Browsing, searching and filtering data, information and digital content
 - Evaluating data, information and digital content
 - Managing data, information and digital content
- **Communication and collaboration**
 - Interacting through digital technologies
 - Sharing through digital technologies
 - Engaging in citizenship through digital technologies
 - Collaborating through digital technologies
 - Netiquette
 - Managing digital identity
 - Promoting library use and library resources
- **Digital content creation**
 - Developing digital content
 - Integrating and re-elaborating digital content
 - Copyright and licenses
 - Programming
- **Problem solving**
 - Solving technical problems
 - Identifying needs and technological responses
 - Creatively using digital technologies
 - Identifying digital competence gaps

DigComp in Curriculum Analysis



- NIAGARA conducted a study to investigate levels of digital competence and skills for research data management among librarians in partnering universities.
- Findings from the study indicated that majority had either low or intermediate levels of digital competences and skills for research data management.
- These findings informed NIAGARA the importance of learning what was taught to librarians in their formal learning.

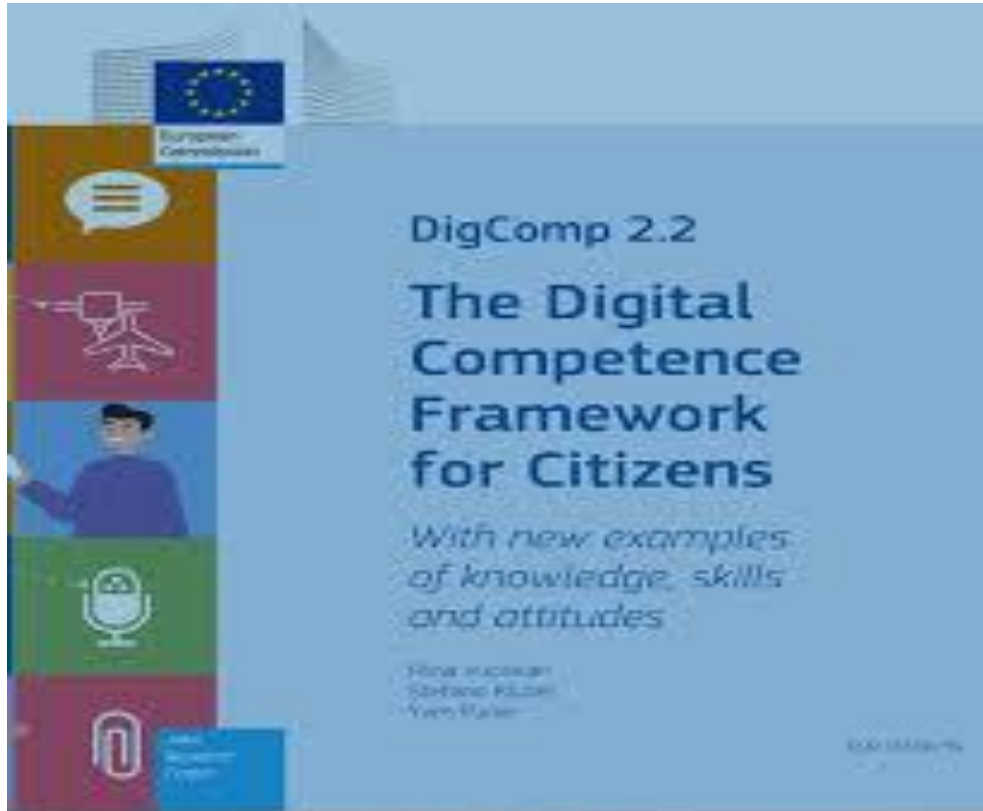
DigComp in Curriculum Analysis



- Thus, NIAGARA conducted a curriculum analysis for LIS programmes from partnering universities (SUA, UBL, UDSM and UNZA).
- The analysis aimed at understanding the of level of incorporation of digital competence courses in LIS curriculum. Specifically, the analysis was meant to:
 - Identify courses related to digital competencies included in each curriculum.
 - Investigate the extent to which each course related to digital competency in terms of inclusion and exclusion of important aspects of digital competency has been covered.
 - Determine how all necessary courses related to digital competencies have been excluded from each curriculum.
 - Determine how best to incorporate the excluded courses in the existing curriculum.



DigComp in Curriculum Analysis

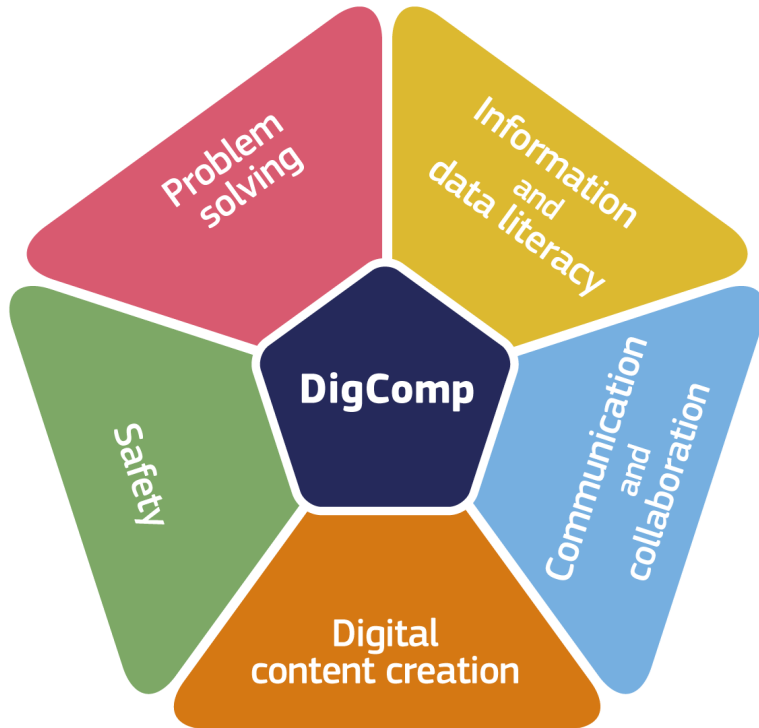


- The activity employed content analysis in examining the content contained in the LIS curriculum related to digital competency.
- This method involved experts from partnering universities to analyze a curriculum from another university to gain more inputs and reduce the biases.
- The activity used the European Commission Digital Competency Framework for Citizens 2.2 as the basis for the analysis.
- The unit of analysis for the activity were the 7 individual LIS curricula from 4 of the partner universities.
- For the sake of this activity, LIS curriculum leading to attaining a bachelor's and master's degree were involved.

DigComp in Curriculum Analysis



Findings from the curriculum analysis indicate the key gaps for each competence area*

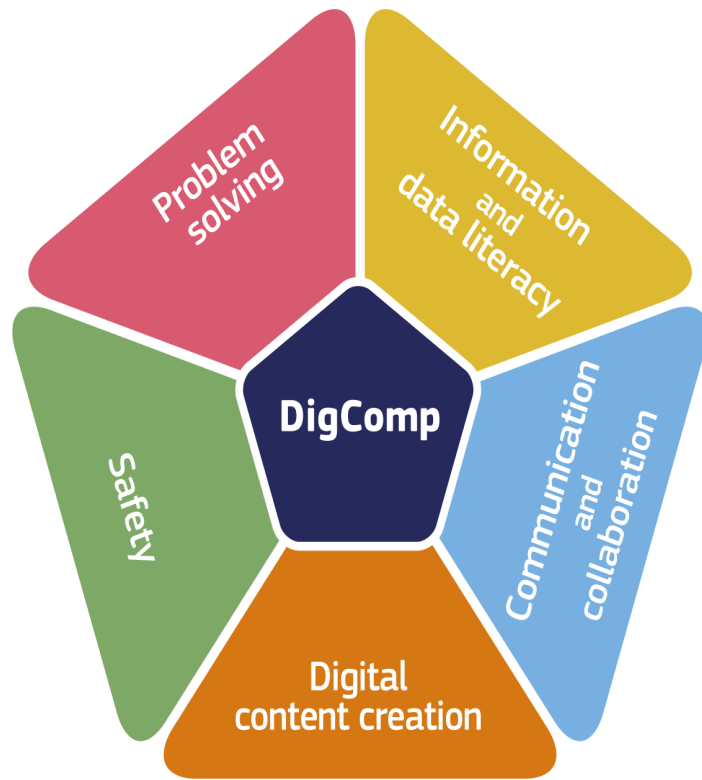


Competence area	Gaps
Information and data literacy	• Systematic approach to searching • Knowledge synthesis: the librarian's role • Basics of research data management
Communication and collaboration	• Netiquette • Digital identity management • Use of emerging communication technologies

DigComp in Curriculum Analysis



Findings from the curriculum analysis indicate that:

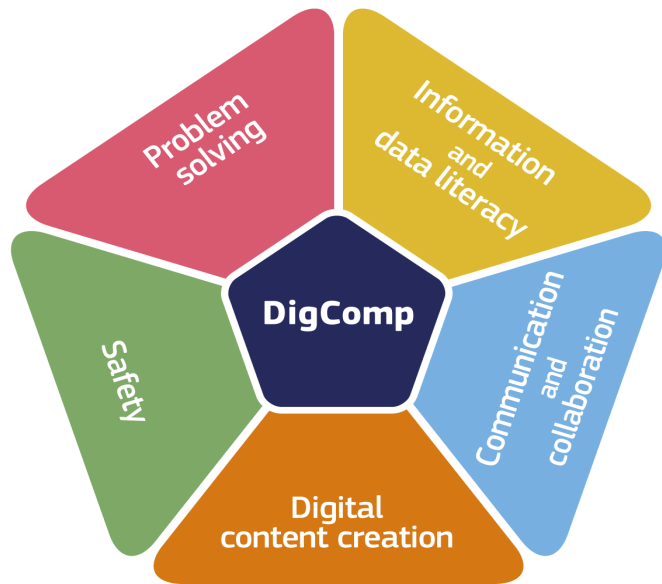


Digital content creation	• Usage of digital tools in content creation, • Editing and repackaging • Web programming • Digitization • digital publishing • Copyright and licenses for digital content
Safety	• Protection of digital content • Protection of personal data and privacy • Environmental impacts of digital technologies and their use

DigComp in Curriculum Analysis



Findings from the curriculum analysis indicate that:



Problem solving

- Identification and solving of technical problems occurring when operating digital devices or using digital environments.
- Selection of digital tools for solving a technical problem occurring in a digital environment or when using digital tools.

From Analysis to Action: Developing New Coursework



- Findings from the curriculum analysis were used as input for either the review of existing courses or development of new courses.

Course/topics suggested for each each university under “Information and data literacy” competence area

Courses/topics “Information and data literacy” by university				
SUA	UBL	UDSM	UJ	UNZA
● Add a topic o “big data management and data visualization” to “Research data management	● Enrich the “search strategies” component ● Develop a course on data management	● Data Management course at master level	● Use of data and information literacy are suggested. ● Data management course is required.	● Enrich the “search strategies” component ● Develop a course on data management

From Analysis to Action: Developing New Coursework



Course topics suggested under “Communication and Collaboration” digital competence area

Courses/topics under “Communication and Collaboration” by university				
SUA	UBL	UDSM	UJ	UNZA
• Topics on emerging technologies for communication and collaboration • Topics on netiquette and managing digital identity	• Topics to cover netiquette (laws, norms and standards in digital collaboration and communication) • Topics on digital identity management.	• Topics on netiquette (laws, norms and standards in digital collaboration and communication) • Topics on digital identity management.	• Topics on netiquette (laws, norms and standards in digital collaboration and communication) • Topics on digital identity management	• Topics on netiquette (laws, norms and standards in digital collaboration and communication). • Topics on digital identity management.

From Analysis to Action: Developing New Coursework



Course content/topics suggested under “Digital content creation” digital competence area

Courses/topics under “Digital content creation” by university				
SUA	UBL	UDSM	UJ	UNZA
• Topics that address aspects of integrating and re-elaborating digital content.	• Topics on the usage of digital tools in content creation, editing and repackaging .	• Topics that address aspects of integrating and re-elaborating digital content.	• Topics on digital tools in content creation, editing and repackaging, web and programming, • Topics on digitization, digital publishing, and copyright and licenses for digital content	• Topics on the usage of digital tools in content creation, editing and repackaging. • Topics on web programming, digitization, digital publishing, and copyright and licenses for digital content.

From Analysis to Action: Developing New Coursework



Course content/topics suggested under “Safety” digital competence area

Courses/topics under “Safety” by university				
SUA	UBL	UDSM	UJ	UNZA
● Protection of digital content ● risks and threats in digital environments. ● Protection of personal data and privacy ● Environmental impacts of digital technologies and their use.	● Protection of digital content ● risks and threats in digital environments. ● Protection of personal data and privacy ● Environmental impacts of digital technologies and their use.	● protection of digital content ● Risks and threats in digital environments. ● Protection of personal data and privacy ● Environmental impacts of digital technologies and their use.	● Protection of digital content, risks and threats in digital environments. ● Environmental impacts of digital technologies and their use.	● Protection of digital content ● Risks and threats in digital environments. ● Protection of personal data and privacy ● Environmental impacts of digital technologies and their use.

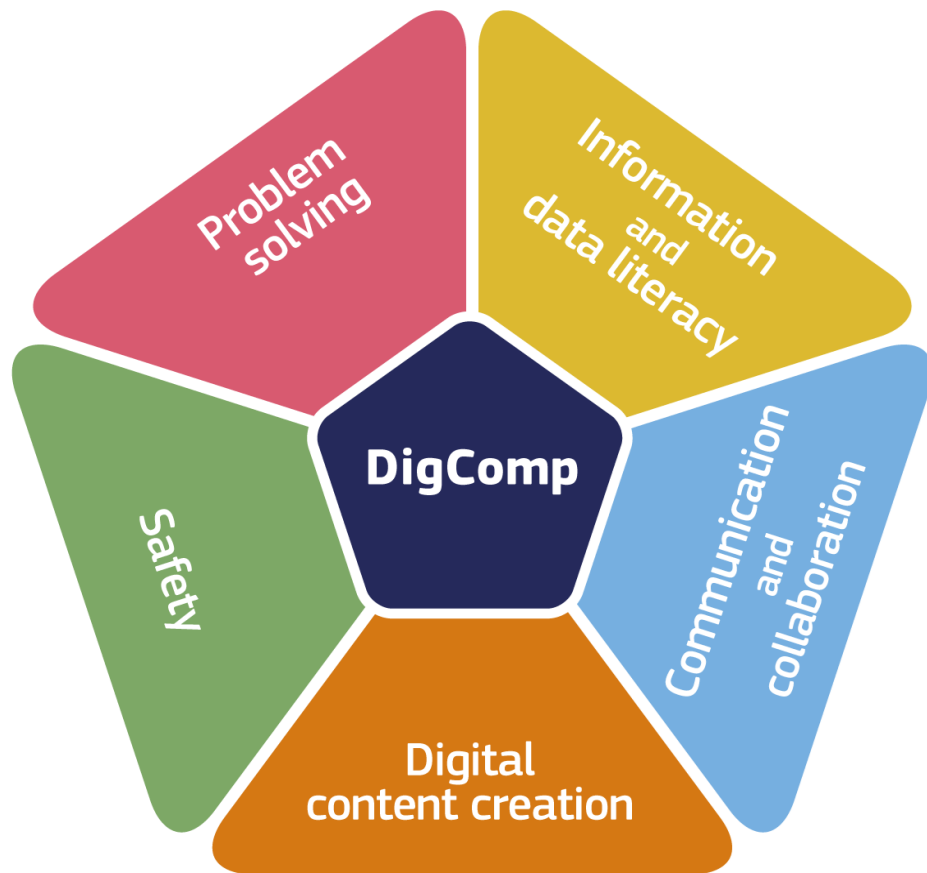
From Analysis to Action: Developing New Coursework



Course content/topics suggested under “Problem Solving” digital competence area

Courses/topics under Problem Solving by university				
SUA	UBL	UDSM	UJ	UNZA
● Solving of technical problems using digital devices ● Digital tools for solving a technical problem in a digital environment ● Digital tools to innovate processes in libraries.	● Solving of technical problems using digital devices ● Digital tools for solving a technical problem in a digital environment ● Digital tools to innovate processes in libraries.	● Solving of technical problems using digital devices ● Digital tools for solving a technical problem in a digital environment ● Digital tools to innovate processes in libraries.	● Digital tools to innovate processes in libraries.	● Solving of technical problems using digital devices ● Digital tools for solving a technical problem in a digital environment ● Digital tools to innovate processes in libraries.

From Analysis to Action: Developing New Coursework



- Moreover, findings from curriculum analysis led to the development of short courses meant to empower LIS students and in-service librarians in different digital competence areas described by the DigComp 2.2.

Outputs



- Digital Citizenship
- Digital Content Creation
- Emerging Digital Technologies
- Research Data Management
- Learning, Teaching, Research Support
- User-Oriented Design
- Systematic approach to searching
- Systematic searching–Part 2

Online seminar series

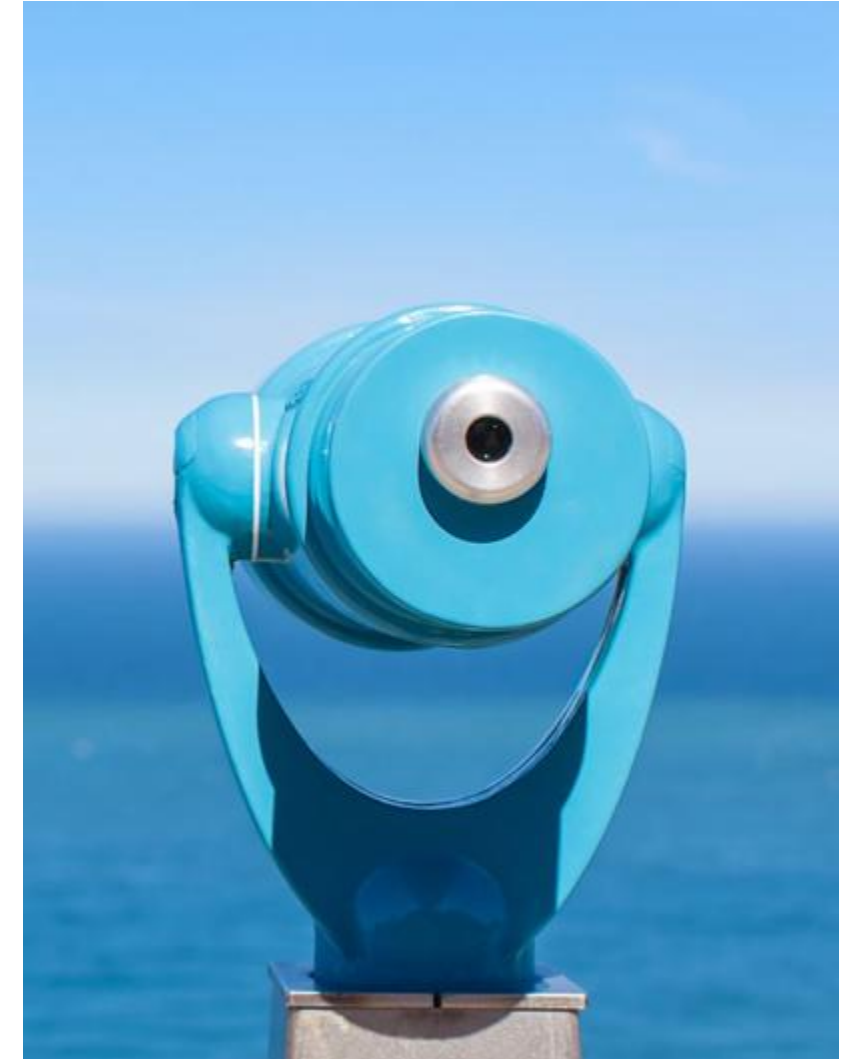
Inclusive library services

Course Title	Facilitator(s)	Description
Introduction to Ethical Hacking	Aron Kondoro	Ethical hacking, also known as penetration testing, is the authorized and structured practice of exploiting vulnerabilities in...
Technical Writing: Reports & Documentations	Hawas Hauke	Welcome to the Technical Writing: Reports & Documentations Training, a comprehensive program designed to enhance...
Basics of research data management	Tuesday Bwalya Mahmood Khosrowjerdi	The "Research Data Management" course is designed for librarians, library and information science (postgraduate) students, and...
Learning, teaching, research support	Sabina Cisek Marek Deja	The "Learning, Teaching, and Research Support" (LTR) course is designed for a diverse group of learners, including LIS students...
Emerging digital technologies	Elias Mwabungulu Elin Opheim	The course is designed to provide Library and Information Students and Inservice Librarians with knowledge on emerging...
User-oriented design	Elin Opheim Ronald Tarimo	The "User-oriented design" course is designed for librarians and LIS students to enhance their understanding and skills about...
Digital content creation	Andrew Malekani Debora Mbilinyi	In this course on Digital content creation you will learn more about Digital content planning, digital content creation strategies, how...
Systematic searching–Part 2	Kelafa Mwantimwa Elin Opheim	Systematic searching Part 2: Knowledge synthesis - the librarian's role is an advanced course targeting Library and...
Systematic approach to searching-Part 1	Namoonga Chiinda Elin Opheim	If you want to sharpen your searching skills, and learn more about the steps included in a systematic approach to searchin...
Digital citizenship	Idunn Bayum Jamie Johnston	This course is designed to provide in-service librarians and library and information science (LIS) students with the knowledge...

Looking Ahead: Future Directions



- Courses will be accessible 5 years
 - Micro teams from partner institutions
 - Integrating AI
- Collecting data on digital competence
 - Publications
- New applications to Erasmus+?
- DigComp-Lib frame



Thank you for your attention



Read more, be in touch:

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- Social media (Facebook, X, LinkedIn) **niagaragrants**
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