

Advice cross-institutional edubadges Information Literacy



Bron: <https://www.surf.nl/edubadges-digitale-certificaten-uitreiken-aan-studenten?dst=n5048>

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Introduction - Project background

Reason

What & why

Digital badges are certificates that show that a person has certain knowledge or skills.

In the field of Information Literacy, badges can be awarded.

For students, badges can be motivating and make them aware of their development, which enhances the learning effect.

In addition, students can use badges to demonstrate their skills to potential employers or educational institutions. Cross-institutional badges further facilitate transfer to other courses or institutions, making education more flexible.

It is efficient for institutions to participate in these types of badges, as they can join an existing system. In higher education, badges can be used alongside or instead of the formal system of study load in credits (such as ECTS). The project chose to use badges extracurricularly, specified with learning outcomes.

Previous history

In order to arrive at exchangeable badges for Information Literacy, VU and WUR, and to a lesser extent Uva/HvA and HR, have previously explored substantive cooperation. The subject was also taken up by the national SHB/UKB Working Group Information Literacy; members of the working group participated in SURF's pilot for the [edubadges platform](#)¹.

In addition, the Information Literacy Working Group has produced [an Information Literacy Taxonomy](#), which provides a structured description of the subject area. This common language helps to arrive at common learning outcomes with multiple institutions as a basis for cross-institutional badges.

Status of the case

September 2022 the project was launched, and September 2023 completed, with participants from:

- Breda University of Applied Sciences (BUas)
- Amsterdam University of Applied Sciences /University of Amsterdam (AUAS/UvA)
- Rotterdam University of Applied Sciences (Rotterdam UAS)
- Maastricht University (UM)
- Utrecht University (UU)
- Vrije Universiteit Amsterdam (VU)
- Wageningen University & Research (WUR)
- InHolland University of Applied Sciences

¹ A badge is an edubadge if it comes from SURF's edubadges platform.

1. Summary

In preparation for the elaboration of the project, literature research was carried out on the most commonly used, related terms and concepts of badges in general, of the context and (foreign) relevant examples of badges in general + Information Literacy badges.

Furthermore, the criteria for enabling international exchange between badges were examined and there was a brief exploration of the practice of awarding edubadges across institutions via the SURF platform.

Main conclusion: consensus is needed around learning outcomes before institution-wide badges can be developed.

A number of working sessions were held, starting with an overview of the learning objectives per participating institution in relation to the Taxonomy. Then, based on the corresponding learning objectives, an overview was made with must haves and nice to haves for each part of the Information Literacy Taxonomy.

This resulted in a framework of learning outcomes (learning outcomes matrix), which serves as the basis for cross-institutional Information Literacy edubadges. From this framework, sample badges have been designed for levels [1](#), [2](#) and [3](#). Institutions can use these for inspiration for their own badges, but not on behalf of Information Literacy. More info, [see appendix 4](#)

This is because good, cross-institutional aligned assessment is needed for a badge to be of good value. A follow-up project is needed to achieve good and feasible assessment together.

Preconditions

Theme	Content	Explanation
Level classification	Dreyfus model of skill acquisition 1. Novice 2. Advanced beginner 3. Competent	See appendix 2 for a visualisation of the framework with only the must haves See appendix 3 for the learning outcomes matrix
Formeel/informeel	Formal/informal	As Information Literacy is generally not a separate part of the curriculum and no formal assessment takes place, we chose to design extracurricular badges
Way of issuing	1 "parent badge" that individual institutions can copy and issue on behalf of the Information Literacy consortium. Click here for more info	The desire was to award cross-institutional Information Literacy badges on behalf of the consortium. As there are many obstacles in this, this is not possible via the SURF platform Het advies is daarom voorbeeldbadges aan te maken die instellingen die zijn aangesloten kunnen kopiëren voor gebruik binnen de instelling.
Assessment	Level 1: optional multiple choice - educational scoring rubric Level 2: assessment - educational scoring rubric Level 3: assessment - educational scoring rubric	Additional requirements: Level 1: assessment based on a rubric to be developed Level 2: assessment based on a rubric to be developed Level 3: assessment based on a rubric to be developed

For detailed explanation, see Working Group website, in the [Edubadges information Literacy Project drop-down window](#)

2. Main findings

- There is consensus on a [cross-institutional learning outcomes matrix \(framework\)](#). This framework is an important step is to equalize, raise and provide insight into the level of information literacy of students in Dutch higher education.
- This framework offers the opportunity to map what is being done within the curriculum by content specialists and outside it by Information Literacy specialists in terms of Information Literacy education and assessment and how this can be better aligned.
- Based on this project, it is not yet possible to award cross-institutional edubadges of Information Literacy. Follow-up activities are needed to achieve a uniform value of the badges and feedback from institutions on the proposed format and content of the badges.

3. Recommendation for interested institutions

Are you interested? Then follow the step-by-step plan below.

1. Start by comparing your own institution's learning objectives with the learning objectives from the learning objectives matrix (framework), see [Appendix 2](#).

1a Don't have a learning outcomes matrix for your own information literacy education yet? Then use the framework of learning outcomes developed by this project as a basis for a conversation with the subject teacher(s) about aligning the treatment and assessment of Information Literacy. You can use the talking sheet in [Appendix 3](#) for this purpose

Note: although information skills specialists usually provide the teaching, the application of the skills is usually assessed by the subject teachers. So in order to hand out badges, it is necessary to pay close attention to how and by whom the learning objectives are addressed and assessed. By the information skills specialist or by the subject matter teacher? And who then hands out the badge? - make agreements with the education department about this

2. Determine what levels you want and can offer
3. Check assessment - compare it to the example rubrics from Wageningen University & Research Library ([level 1](#) or [level 2](#)) and/or use [the national test questions database](#)
4. Check whether your learning materials (LibGuides, instructional materials, etc.) provide a sufficient basis for the desired learning outcomes.
5. Check the edubadges platform and infrastructure. For more information on platform participation, see <https://www.surf.nl/en/get-affiliated-with-edubadges>
For content, see also sample badges for levels [1](#), [2](#) and [3](#).

Consider:

- o Time investment of the student
- o Language: English or Dutch or both
- o Levels

6. Check link with education systems at your institution (e.g. Osiris)
7. Develop and check a process of assigning and retrieving badges
8. Link your process back to informationliteracy.nl@gmail.com

Participation helps align Information Literacy education nationally and, if the other preconditions are met, award cross-institutional badges.

Feedback on the content of the framework, proposed format and content of the edubadges, and experiences with the above steps will be requested through the professional community Information Literacy (= [the Working group](#)). You can also email your feedback to informationliteracy.nl@gmail.com

4. Recommendation needed follow-up activities

Issuing edubadges across institutions requires follow-up activities.

1. Follow-up project around assessment - joint development of rubrics to assess Information Literacy in education.
2. Transfer results project to Information Literacy Working Group: include proposal for management construct in follow-up project - this can only be done once the cross-institutional badges are final, including the rubrics to assess level

Ad 1.

To ensure the value of the badges, more alignment is needed in the assessment of Information Literacy education. Therefore, the recommendation is to initiate a follow-up project around assessment and review of Information Literacy education.

In this follow-up project, it is important to engage the outer ring of the working group through an inventory of the items below:

- To what extent can you use badges at your institution? (e.g. amount of class material per badge, need for partial badges?)
- To what extent is equivalent testing achievable?
- What commitment is needed - at the institution/from the working group?
- What do institutions need to be able to comply with the framework and use edubadges?

For level 1, it might be possible to use the national test [question database](#). If so, further development of this database is needed.

For levels 2 and 3 consensus will have to be reached on the rubrics to be used to assess the level of information literacy.

Appendix 1. Framework

Information Literacy

LEVEL 1 To obtain this badge, the student has shown the ability to:

- identify a need for information on a given topic
- identify characteristics of information sources on a given topic
- locate and access appropriate information sources for orientation with a given topic
- articulate the given topic clearly

Information Literacy

LEVEL 2 To obtain this badge, the student has shown the ability to:

- identify and document the information need on a given topic area
- identify and select appropriate information sources for orientation on a given topic area
- locate and access appropriate information sources for orientation on a given topic area
- formulate a research question for a literature search on a given topic area

Information Literacy

LEVEL 3 To obtain this badge, the student has shown the ability to:

- identify and document the information need on a chosen topic
- identify, select and substantiate appropriate information sources to orientate on a topic for a chosen topic.
- locate and access appropriate information sources for orientation on a chosen topic
- formulate a well-focused research question for a literature search on a chosen topic

1. Orientate and Specify

2. Plan and Search

3. Critically Assess

4. Organize and Process

5. Publish and Communicate

- locate and access different search engines and finding aids
- identify the main key concepts based on the research question or a given topic and determine the main search terms to prepare for a search
- perform basic searches using Boolean operators, field searching, phrase searching

- select sufficiently suitable search engines in a given subject area to achieve the (research) goal
- identify the main key concepts based on the research question and determine appropriate search terms for each key concept to prepare for a search
- perform a systematic search in various databases and platforms, with key concepts and search terms, using Boolean operators, field searching, phrase searching and wildcards, for a given topic area

- select and substantiate sufficiently suitable search engines on a chosen topic to achieve the (research) goal
- identify main key concepts based on the research question and determine sufficient, appropriate search terms for each key concept to prepare for a search
- perform a systematic search in various databases and platforms, with key concepts and search terms, using Boolean operators, field searching, phrase searching and wildcards, and if appropriate, **advanced techniques** such as **proximity operators or thesauri**,

- describe and apply criteria to assess search results on a given topic
- identify and describe criteria to assess selected sources for relevance and reliability

- critically assess the search results in relation to the original research question and revise the search if necessary
- describe and apply criteria to assess selected sources for relevance and reliability

- critically assess the search results to the original research question, revise the search if necessary and apply advanced approaches, such as determining precision and recall, to determine when to stop searching
- apply advanced criteria to assess selected sources for relevance and reliability

- apply basic techniques to store and organise information sources effectively
- explain methods for keeping track of the search process for later repetition and improvement
- cite and paraphrase within a text to avoid plagiarism
- describe the concepts of copyright and

- apply techniques to store and systematically organise and process information sources, using relevant reference management and citation software
- keep track of the search process for later repetition and improvement, such as by maintaining a search log or journal
- use the correct in-text citation and paraphrasing style to avoid plagiarism and compile a reference list
- avoid copyright infringement by correctly using (open) licensed resources
- explain what privacy (sensitive) information is and demonstrate awareness of the need for ethical processing

- apply advanced techniques to store and systematically organise and process information sources, using relevant reference management and citation software
- keep track of the search process for later repetition and improvement by saving searches and setting up alerts
- cite correctly using the relevant citation style for the field concerned or for intended publication, demonstrating the ability to switch between different citation styles if necessary
- avoid copyright infringement by correctly using (open) licensed resources

- describe the purposes of publishing in different information sources, such as academic journals, news articles, blog posts)
- describe different ways of communication, considering various mediums and channels

- describe the process of publishing in different information sources, understanding the specific requirements and procedures involved
- describe the concept and different aspects of open science
- communicate, share, and present an information product effectively in various formats, such as written documents, images, or oral presentations, suitable for the intended audience

- describe the process of publishing in discipline- appropriate information sources, understanding the scholarly publishing landscape
- apply open science principles and practices
- communicate, share, and present an information product effectively in suitable formats, such as written documents, images, or oral presentations, for one's peers and the general public (outreach)

Explanation:

- Digital badges are digital certificates that demonstrate that a person has certain knowledge or skills. Information Literacy is a skill for which badges can be awarded. SURF provides a platform to which all members have access edubadges.nl where you can manage these digital certificates.
- An important part of an edubadge are the learning outcomes. For cross-institutional edubadges, we inventoried learning outcomes from participating institutions and generated this framework of learning outcomes based on that inventory. Please note that only the must haves are included in this framework. For some items, nice to haves have also been added, see [Appendix 2](#)

Advantages cross-institutional edubadges:

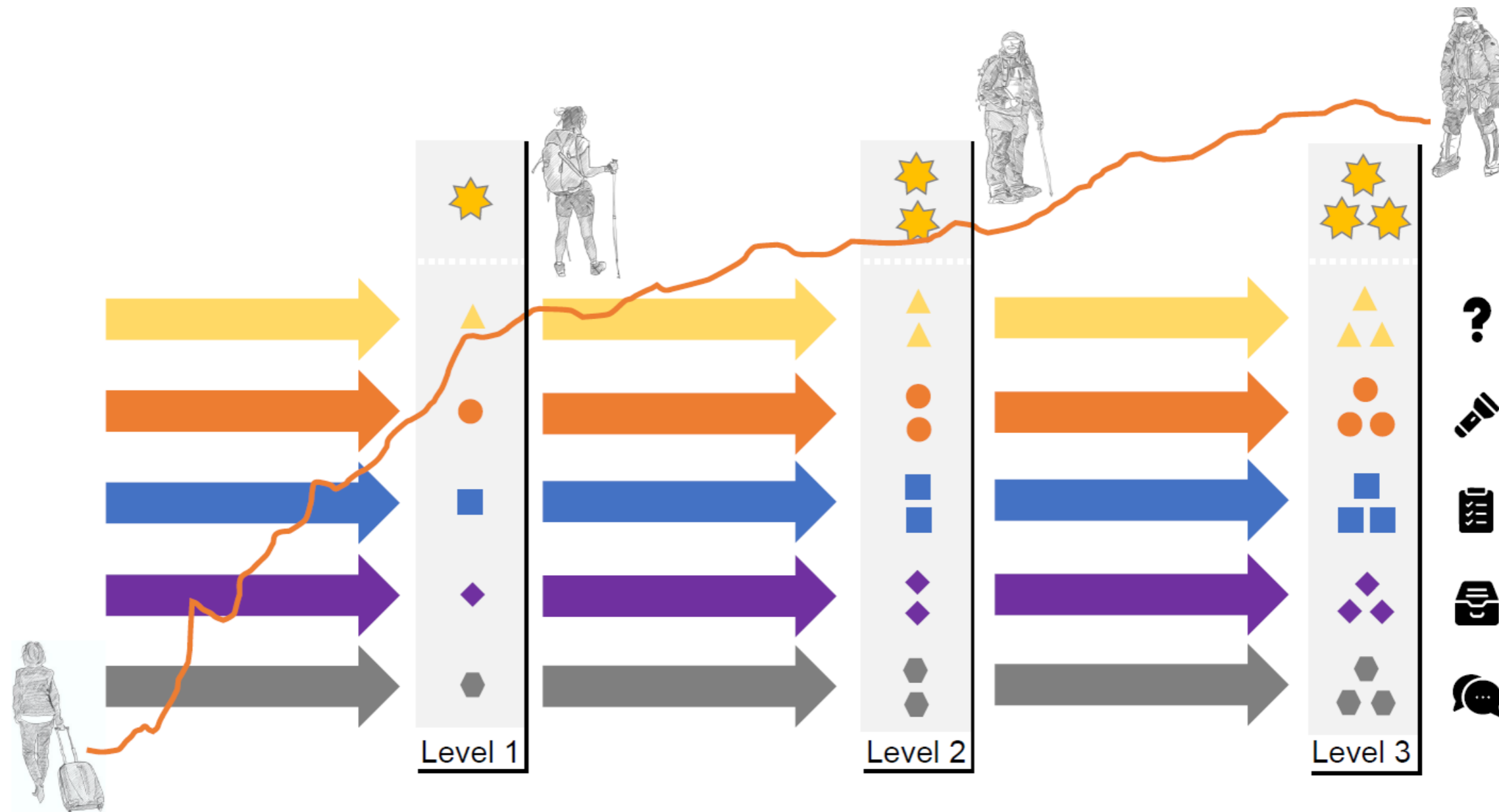
- Easier to demonstrate what skills students have mastered if they transfer to another institution
- New institutions do not have to come up with their own badge structure
- Link with [Taxonomy](#)

Appendix 2 Learning outcomes matrix (framework) - complete

Information Literacy Edubadges Framework (op basis van Miro https://miro.com/app/board/uXjVPrf1Bmg=/)			
	Learning objectives level 1 <i>To obtain this badge, the student has shown the ability to:</i> <i>Guideline: remember & understand - guided - given information question</i>	Learning objectives level 2 <i>To obtain this badge, the student has shown the ability to</i> <i>Guideline: apply & analyse - explicit and repeated practice - guided information question</i>	Learning objectives level 3 <i>To obtain this badge, the student has shown the ability to</i> <i>Guideline: create & evaluate - independently – personal information question</i>
1. Orientate and Specify	<p>MUST have:</p> <ul style="list-style-type: none"> identify a need for information on a given topic identify characteristics of information sources on a given topic locate and access appropriate information sources for orientation with a given topic articulate the given topic clearly <p>NICE to have:</p> <ul style="list-style-type: none"> identify several professional and social learning networks that are relevant to the topic describe aspects such as digital identity, digital footprint and privacy 	<p>MUST have:</p> <ul style="list-style-type: none"> identify and document the information need on a given topic area identify and select appropriate information sources for orientation on a given topic area locate and access appropriate information sources for orientation on a given topic area formulate a research question for a literature search on a given topic area <p>NICE to have:</p> <ul style="list-style-type: none"> select several professional and social learning networks and describe their relevance to a given topic area reflect on aspects such as digital identity, digital footprint and privacy 	<p>MUST have:</p> <ul style="list-style-type: none"> identify and document the information need on a chosen topic identify, select and substantiate appropriate information sources to orientate on a topic for a chosen topic. locate and access appropriate information sources for orientation on a chosen topic formulate a well-focused research question for a literature search on a chosen topic <p>NICE to have:</p> <ul style="list-style-type: none"> select and interact with several professional and social networks and describe their relevance to the discipline-specific task act consciously in aspects such as digital identity, digital footprint and privacy
2. Plan and Search	<p>MUST have:</p> <ul style="list-style-type: none"> locate and access different search engines and finding aids identify the main key concepts based on the research question or a given topic and determine the main search terms to prepare for a search perform basic searches using Boolean operators, field searching, phrase searching and wildcards 	<p>MUST have:</p> <ul style="list-style-type: none"> select sufficiently suitable search engines in a given subject area to achieve the (research) goal identify the main key concepts based on the research question and determine appropriate search terms for each key concept to prepare for a search perform a systematic search in various databases and platforms, with key concepts and search terms, using Boolean operators, field searching, phrase searching and wildcards, for a given topic area 	<p>MUST have:</p> <ul style="list-style-type: none"> select and substantiate sufficiently suitable search engines on a chosen topic to achieve the (research) goal identify main key concepts based on the research question and determine sufficient, appropriate search terms for each key concept to prepare for a search perform a systematic search in various databases and platforms, with key concepts and search terms, using Boolean operators, field searching, phrase searching and wildcards, and if appropriate, advanced techniques such as proximity operators or thesauri, for a chosen topic
3. Critically Assess	<p>MUST have:</p>	<p>MUST have:</p>	<p>MUST have:</p>

	<ul style="list-style-type: none"> describe and apply criteria to assess search results on a given topic identify and describe criteria to assess selected sources for relevance and reliability 	<ul style="list-style-type: none"> critically assess the search results in relation to the original research question and revise the search if necessary describe and apply criteria to assess selected sources for relevance and reliability 	<ul style="list-style-type: none"> critically assess the search results to the original research question, revise the search if necessary and apply advanced approaches, such as determining precision and recall, to determine when to stop searching apply advanced criteria to assess selected sources for relevance and reliability
4. Organise and Process	<p>MUST have:</p> <ul style="list-style-type: none"> apply basic techniques to store and organise information sources effectively explain methods for keeping track of the search process for later repetition and improvement cite and paraphrase within a text to avoid plagiarism describe the concepts of copyright and open licences (e.g., creative commons) <p>NICE to have:</p> <ul style="list-style-type: none"> synthesise information to a new type of information product relating to the research question on a given topic 	<p>MUST have:</p> <ul style="list-style-type: none"> apply techniques to store and systematically organise and process information sources, using relevant reference management and citation software keep track of the search process for later repetition and improvement, such as by maintaining a search log or journal use the correct in-text citation and paraphrasing style to avoid plagiarism and compile a reference list avoid copyright infringement by correctly using (open) licensed resources explain what privacy (sensitive) information is and demonstrate awareness of the need for ethical processing <p>NICE to have:</p> <ul style="list-style-type: none"> synthesise information/data into a new information product, relating the research question on a given topic area 	<p>MUST have:</p> <ul style="list-style-type: none"> apply advanced techniques to store and systematically organise and process information sources, using relevant reference management and citation software keep track of the search process for later repetition and improvement by saving searches and setting up alerts cite correctly using the relevant citation style for the field concerned or for intended publication, demonstrating the ability to switch between different citation styles if necessary avoid copyright infringement by correctly using (open) licensed resources process privacy (sensitive) information in an ethically conscious manner <p>NICE to have:</p> <ul style="list-style-type: none"> synthesise information/data into a new information product and a new theory, using processes and forms aligned with the information need on a chosen topic
5. Publish and Communicate	<p>Must have:</p> <ul style="list-style-type: none"> describe the purposes of publishing in different information sources (such as academic journals, news articles, blog posts) describe different ways of communication, considering various mediums and channels 	<p>Must have:</p> <ul style="list-style-type: none"> describe the process of publishing in different information sources, understanding the specific requirements and procedures involved describe the concept and different aspects of open science communicate, share, and present an information product effectively in various formats, such as written documents, images, or oral presentations, suitable for the intended audience 	<p>Must have:</p> <ul style="list-style-type: none"> describe the process of publishing in discipline-appropriate information sources, understanding the scholarly publishing landscape apply open science principles and practices communicate, share, and present an information product effectively in suitable formats, such as written documents, images, or oral presentations, for one's peers and the general public (outreach)

Appendix 3. Visual aid learning trajectory Information Literacy



Orientate and specify ?
Plan and search 🔍
Critically assess 📄
Organize and process 📁
Publish and communicate 🗨️

Visualisation learning trajectory Information Literacy, Edo-Jan Meijer, CC-BY-NC 4.0



Appendix 4. Example badges and conditions for the badges

Conditions for the badges

Literature review shows that it is important that the badge shows what the badge stands for. Based on this, we set some conditions for the badges.

Each institute creates in its own edubadges portal and design with the following conditions:

- The badges have the same name as described in the sample badges.
- The badges have the same description, criteria and learning outcomes as in the example badges. Dutch and English can be chosen.
- The badges visuals contain the following elements
 - Full title of the badge
 - Three stars, of which one is filled for level 1, two for level 2, three for level 3
 - The UKB/SHB information literacy logo is added as shown in the example – NOTE: Commissioning can only be carried out after agreement has been reached with the Working Group on verification.

Example badges are available here:

Level-name	Link
Novice	Edubadges 1
Advanced Beginner	Edubadges 2
Competent	Edubadges 3

Description of the badges

The Higher Education Information Literacy Level 1 badge, approved by the SHB UKB working group on Information Literacy in the Netherlands, signifies your expertise in information literacy at the higher education level.

This badge recognizes your skills in actively searching for information, discerning credible sources, creatively applying knowledge, and participating ethically in academic communities. It attests that you have successfully reached Guideline Level 1 (resp. 2 of 3) out of 3.

- Guideline 1: You can remember and understand information literacy concepts. You demonstrate the ability to find, evaluate, and process information in response to given information questions with guidance.
- Guideline 2: You apply and analyze your knowledge of information literacy concepts. You can find, evaluate, and process information in response to guided information questions semi-independently.
- Guideline 3: You create and evaluate information based on your knowledge of information literacy concepts. You are able to find, evaluate, process information for a personal information question independently.