Methodological Framework

WP D3.1

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DALI4US DATA LITERACY FOR UPPER PRIMARY SCHOOLS

Work Package 3:

Experimentation

Deliverable D3.1

Methodological framework

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ABSTRACT	The Dissemination and Sustainability Strategy frames the communication and dissemination activities to raise the visibility of the DALI4US project, to engage project stakeholders and to share the project results by defining target groups, communication approaches, promotional materials, communication and dissemination channels. It includes sustainability strategy to ensure sustainability, mainstreaming and multiplication of the project results.
KEYWORDS	Communication, Dissemination, Sustainability, Promotion

Dissemination level		
PU	**Public**	
PP	**Restricted to project partner (including the Commission)**	**X**
RE	**Restricted to a group defined by the consortium (including the Commission)**	
CO	**Confidential, only for members of the consortium (including the Commission)**	

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1. Introduction

1.1. Project Overview

DALI4US aims to advance data literacy in upper primary education. The project is predicated on the need for a structured educational approach to data literacy, addressing the skills gap among primary school teachers and aligning with current digital education goals. It aims to equip teachers with the necessary skills and knowledge. This project will develop a full-fledge training and classroom activity toolkit based on comprehensive needs analysis and stakeholder engagement.

DALI4US is grounded in the belief that data literacy should be as fundamental as reading and writing due to the pervasiveness of data in modern life. The project's approach involves defining clear educational objectives for data literacy that align with the current digital education goals set by educational authorities. This alignment ensures that the project's outcomes are relevant and capable of being integrated into existing educational standards and practices.

A central aim of the project is to empower teachers with the skills and knowledge necessary to effectively teach data literacy. This will be achieved through a detailed training program that includes both theoretical knowledge and practical application. The training will help teachers to not only understand data concepts themselves but also to deliver these concepts in an engaging and comprehensible manner to young students.

Based on a comprehensive needs analysis and ongoing engagement with stakeholders—including teachers, policy makers, and curriculum developers—DALI4US will develop a full-fledged toolkit for classroom activities. This toolkit will contain a variety of resources, such as learning scenarios, interactive digital tools, and hands-on activities, designed to be both informative and engaging for students. The materials will be tailored to fit into the existing curriculum seamlessly, providing teachers with ready-to-use resources that support the teaching of data literacy.

The development of the educational framework and toolkit will be iterative, incorporating feedback from a range of stakeholders to ensure the resources are effective and meet the real-world needs of teachers and students. This engagement will also help in refining the project's approaches and outputs, ensuring they remain aligned with educational trends and policy developments.

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The anticipated outcome of the DALI4US project is a significant uplift in the competency of primary educators in teaching data literacy, resulting in a generation of students who are better prepared to navigate and utilize data in their personal and professional lives. By addressing the skills gap at the primary level, the project lays a foundation for continuous learning and adaptation in a rapidly evolving digital world, aligning educational practices with the demands of the 21st century.

Through this comprehensive approach, DALI4US aims not only to address the current deficiencies in data literacy education but also to establish a sustainable model for its integration into primary education systems across Europe and beyond.

1.2. Background

The DALI4US project is set against a backdrop where digital transformation is reshaping every aspect of society, including education. In today's world, data is ubiquitous, flowing from innumerable sources and influencing decisions in everything from business and science to everyday personal choices. Despite this, there's a notable gap in primary education systems—data literacy is not systematically taught at early educational stages, leaving a significant void in foundational skills that are crucial for navigating the modern world.

Recognizing this deficiency, the DALI4US project aims to infuse primary education with robust data literacy components. This initiative stems from an understanding that the ability to understand, interpret, and make decisions based on data is not just a skill for future scientists or analysts, but a fundamental literacy that every student needs, like reading or writing. As digital data becomes more integral to our daily lives, the absence of basic data literacy education represents a critical gap in preparing students to be informed, capable citizens.

The project's background is built on extensive research and needs analysis among key stakeholders, including educators, policy makers, and experts in pedagogy and digital technology. These investigations highlight a widespread recognition of the importance of data literacy and a strong demand for effective tools and methods to teach it. Furthermore, DALI4US is designed to respond to the evolving educational landscape where there is a pressing need to modernize teaching tools and methodologies to include digital competencies as core components of primary education.

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By addressing these needs, DALI4US not only aims to enhance the data literacy skills of primary educators but also to create a scalable and sustainable model that can be adapted and implemented across different educational systems and cultural contexts. This represents a proactive step towards embedding data literacy into the fabric of early education, ensuring that the next generation is better equipped to engage with and contribute to a data-driven future.

1.3. Objectives

The main goal of the DALI4US is to empower primary school teachers with the skills, confidence, and resources needed to teach data literacy effectively. This involves crafting a holistic educational framework that not only encompasses teaching methodologies but also integrates the development of a digital platform, the OrangeEDU digital ecosystem. This platform is designed to be accessible and practical, providing interactive, engaging educational content that can be adapted to various educational settings.

Additionally, the project aims to develop cross-subject teaching materials that facilitate the integration of data literacy into different areas of the curriculum, making it a pervasive element of primary education. Professional development programs will be another cornerstone of the project, offering both teachers and school leaders comprehensive training in data literacy. This training will equip them with not only the technical skills required to interpret and utilize data but also the pedagogical methods that enhance teaching effectiveness.

Lastly, DALI4US seeks to influence educational policy by providing evidence-based recommendations for integrating data literacy into primary education curricula. These recommendations will be geared towards policymakers and educational authorities, aiming to catalyze broader educational reforms that recognize and incorporate the importance of data literacy from an early age. The ultimate objective is to create a scalable and transferable model that can be implemented across different regions and adapted to local educational needs and contexts.

Concretely, the project aims to:

- Develop a holistic educational framework: Establish a comprehensive approach to data literacy specifically tailored for primary education, based on extensive analysis of the educational landscape and stakeholder needs.

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- Create and implement the OrangeEDU Digital Ecosystem: Develop and deploy an adaptable, platform-independent digital ecosystem to support interactive and engaging data literacy education.
- Produce cross-subject teaching materials: Develop teaching resources that integrate data literacy into various subjects across the primary education curriculum.
- Conduct professional development programs: Provide extensive training programs for teachers and school leaders, enhancing their ability to teach and manage data literacy education effectively.
- Formulate evidence-based policy recommendations: Deliver policy recommendations aimed at integrating data literacy into national education curricula, influencing educational policy and practices on a broader scale.

The ultimate goal of the DALI4US project is to ensure that data literacy becomes an integral part of primary education, equipping young students with the skills necessary to navigate and succeed in a data-driven world. The project's outcomes are designed to be scalable and adaptable, allowing for implementation across diverse educational settings and cultural contexts. By fostering a generation of data-literate individuals, DALI4US contributes to a broader societal ability to handle information responsibly and make informed decisions.

2. Project design

2.1. Study design

The DALI4US project employs a design-based research (DBR) approach to systematically advance data literacy in upper primary education. This study design is particularly effective in educational settings as it allows for iterative development and testing of educational interventions. This methodology ensures that the project not only addresses theoretical needs but also responds to practical, on-the-ground requirements of teachers and students.

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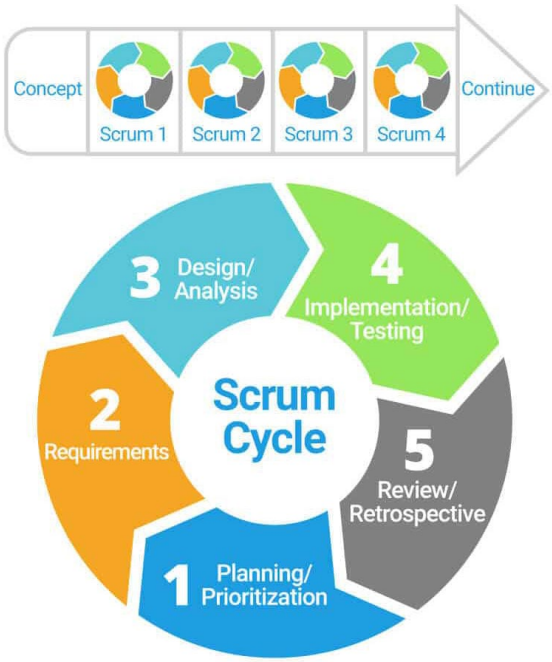
The project is designed to develop several key outputs, including the OrangeEDU Digital Ecosystem, a digital literacy framework, and comprehensive professional training programs, through a structured three-phase process (exploration, small-scale experimentation, and large-scale experimentation). At each stage of development, SCRUM cycles are implemented to ensure co-creation and optimal fit for use, focusing on three critical aspects: pedagogy, technology, and usability. This approach facilitates continuous refinement and alignment of the project outputs with the evolving needs of educators and students.



The components of the study design are thus centred around:

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- Iterative development: The core of the DBR approach is its cyclical process of design, implementation, analysis, and redesign. DALI4US begins with a preliminary design based on existing research and input from educational experts, teachers, and data scientists. This initial design is then implemented in a small-scale setting to gather data on its effectiveness and any challenges encountered.
- Collaboration with stakeholders: A distinctive feature of the project's study design is the ongoing collaboration with stakeholders throughout the project lifecycle. This includes educators who will ultimately use the toolkit, policy makers who influence educational standards, and academic experts in data literacy and pedagogy. Regular workshops and feedback sessions are planned to ensure that the project remains aligned with the needs and expectations of its users.
- SCRUM methodology: The DALI4US project utilizes the SCRUM framework to manage its iterative development process across all phases. This agile methodology is characterized by short, consistent sprints and regular reviews, allowing for rapid adjustments based on feedback and real-world testing results. Each sprint concludes with a review to evaluate progress and a retrospective to identify improvement opportunities, ensuring that the project remains responsive to the evolving needs of its users and effective in its outcomes.
- User testing: Following the initial development phase, the designed toolkit and teaching methods are tested in workshop and real classroom settings. This phase is crucial for understanding how concepts perform in practice. It involves detailed observation, data collection (through both quantitative methods like pre-and post-tests and qualitative feedback from teachers and students), and analysis.
- Data-driven refinement: Data collected from initial trials are used to refine the tools and approaches. This may involve adjustments to the digital tools for better user interface and interaction, modification of learning scenarios to better align with teacher workflows, or enhancement of training modules to address gaps in teacher understanding and application.
- Scalability and adaptation testing: Once refined, the project tests the scalability of the toolkit and training programs across a broader range of schools and educational contexts. This phase assesses the adaptability of the resources across different regions, cultural contexts, and varying levels of existing data literacy competencies among teachers.
- Evaluation and reporting: The final phase involves a comprehensive evaluation of the entire project. This includes assessing the impact of the data literacy toolkit on teacher practices and student outcomes, evaluating the effectiveness of the training programs, and documenting the lessons learned. The results are then compiled into reports and publications to disseminate the findings, recommendations, and developed resources to a wider audience.

Through this detailed and methodologically robust study design, the DALI4US project ensures that its outcomes are not only based on solid research foundations but are also tested and proven effective in enhancing data literacy education in primary schools. This approach not only

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improves the project's immediate outputs but also contributes to the broader educational research field by providing tested models and tools that can be adopted and adapted globally.

2.2. Participants

The DALI4US project is structured around a progression through exploration, small-scale experimentation, and large-scale implementation phases, involving a wide range of participants to ensure comprehensive coverage and depth of feedback at each stage. This structured participant involvement ensures that the DALI4US project is grounded in practical educational needs and benefits from a wide range of expert and user input, facilitating robust development and iterative refinement of the project outputs.

1. Exploration phase:

- Primary school teachers ("explorers"): A small group of 3-5 teachers per partner country collaborates closely in this initial phase. These teachers are pivotal in exploring the existing functionalities of the Orange Data Mining software and identifying the core needs and expectations for the new, web-based digital ecosystem, OrangeEDU.
- Researchers from the University of Ljubljana: Approximately three researchers join the teachers in the exploration phase. Their role involves providing expertise in educational methodologies and data analysis to shape the development of OrangeEDU according to educational standards and requirements.
- Developers from the EdTech company Revelo: Also involving about three developers, this group works closely with researchers and teachers. They focus on applying the insights gained from the exploration phase to build and refine the digital ecosystem using agile SCRUM methods.

2. Small-scale experimentation phase:

- Expanded group of teachers: Building upon the initial group of explorers, an additional 10-15 teachers from each partner country join the project. These teachers receive training from the explorers and the expert teams from Revelo and the University of Ljubljana before engaging in the iterative testing and refining of the beta version of OrangeEDU. This involves assessing the functionality and educational impact of the platform in real classroom settings. Feedback from these sessions is used to make iterative refinements to the digital ecosystem, enhancing its usability and educational effectiveness.
- Researchers from the University of Ljubljana and developers from the EdTech company Revelo: These participants continue to accompany the iterative process throughout this

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phase. They implement feedback and refine the digital ecosystem based on real-time insights gained from the expanded teacher group's experiences.

- Teacher trainers: Based on the iteration reports, learning scenarios and materials in development, teacher trainers begin to conceptualize and test a professional training program based on the learning scenarios developed and the feedback collected through iteration reports. Concurrently, national workshops are held to further train teachers and refine the learning framework. These workshops focus on integrating the digital tools into the curriculum, developing activity-based learning scenarios, and aligning them with national educational standards. The workshops serve as collaborative forums for teachers to share experiences, discuss challenges, and brainstorm solutions for better curriculum integration.

3. Large-scale implementation phase:

- Wider group of teachers: This phase sees the inclusion of 30-60 additional teachers per partner country. These participants extend the data and experience base significantly, engaging in the iterative improvement cycle of all project components—digital ecosystem, teaching materials, and professional training programs.
- Researchers from the University of Ljubljana and developers from the EdTech company Revelo: Continue to play a crucial role throughout this phase, accompanying the iterative process and implementing feedback. They refine the digital ecosystem and other project components based on real-time insights and feedback from the considerably expanded group of teachers. Their continuous involvement ensures that the developments remain responsive to user needs and educational goals.
- Teacher trainers: Utilize feedback and data from this phase to finalize the professional training program for primary school teachers. Based on the outcomes, they also start developing an awareness-raising program for school leaders, scheduled for implementation in the second half of the project's third year. This program aims to further the reach and impact of the project by engaging educational leaders in data literacy advocacy.
- Students: Approximately 2580-4800 primary school students participate in data literacy activities developed through the project, providing direct feedback on the educational impact of the initiatives.

The recruitment process for the DALI4US project is designed to attract educators with strong backgrounds in teaching and technology. This approach ensures that participants are well-prepared to contribute effectively to each phase of the project.

- Explorer teachers: For the initial exploration phase of the DALI4US project, teachers are strategically recruited through national teacher networks and teacher training institutes. This targeted recruitment strategy ensures that the selected participants are deeply embedded within the educational system and possess a robust background in teaching and educational technology. Their extensive expertise and connections within these

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networks not only fulfill the immediate needs of the project but also position them as key multipliers. Leveraging their deep involvement and commitment, these teachers actively help in attracting further voluntary participants for the subsequent phases, thereby expanding the project's reach and impact.

- Voluntary teachers for small-scale experimentation phase: As the project progresses to the small-scale and large-scale experimentation phases, additional teachers are recruited through a combination of direct outreach via existing educational networks and the use of incentives such as professional development credits offered by national teacher training institutes. This multi-channel recruitment strategy is designed to attract a diverse and motivated group of teachers who are keen to engage in this innovative project.
- Broadening participation in large-scale implementation: For this phase, the recruitment process is further scaled up to include a wider array of teachers across each partner country. Recruitment strategies are enhanced by leveraging the insights and testimonials from teachers involved in earlier phases, who act as multipliers to encourage their peers to join. This peer-driven approach helps to ensure that new recruits are well-informed and genuinely interested in contributing to the project's objectives.

2.3. Intervention

The intervention at the heart of the DALI4US project revolves around the development, implementation, and refinement of a comprehensive data literacy toolkit, aimed specifically at enhancing the educational practices within upper primary schools. The intervention is structured into distinct yet interconnected components:

- Development of a Digital Literacy Framework: The project begins with the creation of an evidence-based digital literacy framework tailored for primary education. This framework focuses on developing critical thinking skills and problem-solving strategies among students, demonstrating how data literacy intersects with the core curriculum and various subjects. The framework serves as the foundation for all subsequent developments and integrations within the project.
- Development of OrangeEDU Digital Ecosystem: A key element of the intervention is the creation of the OrangeEDU digital ecosystem. This web-based platform is designed to provide teachers and students with interactive tools and resources that facilitate the learning and teaching of data literacy. The ecosystem supports various data handling activities, simulations, and real-time data manipulation exercises that are critical for understanding data concepts in a practical context.
- Professional development programs: To equip teachers with the necessary skills and confidence to teach data literacy, the project includes comprehensive professional development programs. These programs consist of workshops, training sessions, and

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continuous online support, focusing on both the pedagogical approaches to teaching data literacy and the technical use of the OrangeEDU platform.

- Development of an awareness-raising program: An awareness-raising program targeted at school leaders and teachers is developed to promote the importance of data literacy. This program is designed to foster a broader understanding and adoption of data literacy principles within the educational community, ensuring that the impact of the project extends beyond the classrooms directly involved in the pilot.
- Policy recommendations: Finally, the project compiles a set of recommendations for policymakers, which are based on the evidence gathered throughout the design thinking process. These recommendations aim to inform future educational policy and practice, advocating for the integration of data literacy into the national curriculum.

Through this comprehensive intervention strategy, the DALI4US project not only aims to instill essential data literacy skills in primary education but also to create a scalable and sustainable model that could be adopted across various educational settings.

Each component of the intervention is interconnected, ensuring that the developments in digital tools and educational strategies are responsive to the needs of teachers and students and supported by solid research and policy frameworks.

Following the SCRUM methodology, the intervention involves continuous feedback loops with the participating teachers who initially pilot the program. Their experiences and insights drive the iterative refinement of the teaching materials and the digital platform, ensuring that the resources remain relevant and effective.

3. Data collection and analysis

3.1. Purposes

In the DALI4US project, data collection and analysis are structured to serve two critical and complementary purposes:

a) Iterative process / co-design of tool and materials:

- Continuous feedback for refinement: Throughout each cycle of the project, data collection is crucial for capturing real-time feedback from users—both teachers and students. This ongoing feedback is integral to the co-design process, allowing for the continuous refinement and adaptation of the educational tools and materials. In each phase, from the explorer version to the final implementation, user insights contribute

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directly to enhancing the functionality and educational effectiveness of the OrangeEDU Digital Ecosystem and associated learning materials.

- Co-design sessions: Regular co-design sessions involving educators, developers, and researchers utilize the data gathered to collaboratively refine the curriculum and digital tools. This iterative process ensures that the end products are not only based on theoretical research but are also grounded in practical educational needs and usability.

b) Evaluation of project:

- Baseline and outcome measures: Data collection at the beginning and end of each cycle (pre- and post-tests) provides baseline and outcome measures that are essential for evaluating the project's effectiveness. These measures assess improvements in data literacy competences among students and teachers, the integration of data literacy into the curriculum, and the overall impact of the training programs.
- Quantitative and qualitative analysis: Both quantitative and qualitative analyses play roles in evaluating the project. Quantitative data from tests and usage statistics offers objective evidence of the project's impact, while qualitative data from interviews, focus groups, and observations provides deeper insights into the experiences and perceptions of participants, helping to gauge the qualitative impact of the project on teaching and learning environments.

3.2. Instruments

The DALI4US project employs a mixed-methods approach that combines qualitative and quantitative research techniques within a design-based, iterative framework. This approach enables the project team to effectively address complex research questions about the integration of data literacy into primary education, assess the usability of educational technologies, and measure the impact of interventions on teaching and learning. The iterative nature of the approach allows for continuous refinement of the educational tools and materials based on ongoing data collection and analysis, ensuring that the project outcomes are both relevant and effective.

Data collected includes:

- Qualitative data: Includes detailed feedback from teachers and students, observations of classroom interactions, and user testing results. These data provide insights into how participants interact with the digital tools, their perceptions of the data literacy curriculum, and the practical challenges they face.
- Quantitative data: Comprises pre- and post-intervention surveys, usage statistics of digital tools, and standardized test results to measure changes in data literacy skills among students.

To collect these data types the following instruments are used:

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- Observations: Systematic observations in classrooms to see how teachers and students use the OrangeEDU tools in real-time, noting how data literacy is integrated into existing curricula.
- Interviews: Conducted with teachers to gather in-depth information about their experiences, challenges, and the pedagogical impacts of the project. These interviews consider the national context to better understand localized educational dynamics.
- Focus groups: Conducted particularly with groups of teachers and school leaders to explore in-depth responses to the curriculum and digital tools. Focus groups allow for dynamic discussion, enabling participants to build on each other's responses and provide comprehensive insights into the collective user experience and perceptions.
- User testing: Involves hands-on sessions where teachers and students use the digital tools, providing immediate feedback on usability and functionality.
- Empathy maps: Used to visualize user experiences and perspectives during the development process, helping to identify and understand user needs and emotional responses.
- Pre- and post-surveys: Administered to measure baseline and post-intervention competencies and attitudes towards data literacy.

3.3. Phases

This section outlines the structured methodological framework adopted in the DALI4US project, detailing the processes and approaches employed across three pivotal phases: exploration, small-scale experimentation and large-scale experimentation.

- Exploration phase:
  - Objective: The primary objective of the Explorer phase is to gather initial feedback on pedagogy, technology, and usability aspects of the OrangeEDU tool.
  - Instruments:
    - User testing: Conducting practical tests with teachers to assess the immediate applicability and functionality of the tool. Including direct workshop observations to see how teachers use the tool, creating empathy maps to understand the emotional and practical needs of users when interacting with the tool and conducting interviews with teachers to gain a comprehensive understanding of their experiences and the national educational contexts.
    - Functionality catalog of OrangeDatamining: Analyzing and evaluating the existing functionality catalog of the Orange Data Mining software, specifically regarding its pedagogical applicability in primary education.
    - Digital Literacy Framework: This framework serves as an additional basis for tool development and material creation, framing the content creation and adjustments of the tool to meet the needs of data-driven education.

- Small-scale experimentation:

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- Objective: The main objective of the Small-Scale Experimentation phase is to focus on the adapted OrangeEDU tool, complemented by the development and feedback on specific pedagogical application scenarios. This phase aims to test and refine the tool's integration into the curriculum through direct application in teaching and learning activities, ensuring that it meets the practical and pedagogical needs of educators and aligns with educational standards.
- Instruments:
  - User testing: Conducting practical tests with teachers and students to assess the immediate applicability and functionality of the tool. Including direct workshop and classroom observations to see how teachers and students use the tool in real learning situations, creating empathy maps to understand the emotional and practical needs of users when interacting with the tool and conducting interviews with teachers to gain a comprehensive understanding of their experiences and the national educational contexts.
  - Activity and scenario development: Developing and refining curriculum-related activities and learning scenarios during the workshops, ensuring they are effectively integrated with the tool's capabilities and align with national educational standards.
  - Feedback loops: Utilizing structured feedback sessions during workshops and in-class pilots to gather in-depth insights and reactions from teachers and students, which are critical for the iterative design process.

- Full-scale experimentation
  - Objective: The primary objective of the full-scale experimentation phase is to implement the refined OrangeEDU tool and the developed pedagogical scenarios on a larger scale. This phase focuses on evaluating the effectiveness and scalability of the tool and teaching materials across a broader educational setting. The goal is to ensure that the project outcomes are robust, impactful, and capable of enhancing data literacy education in diverse classroom environments.
  - Instruments:
    - Extended user testing: Expanding the user testing to a wider array of classrooms to comprehensively evaluate the tool's functionality and its integration into the curriculum at different schools.
    - Quantitative evaluation: Deploying pre- and post-intervention assessments on a larger scale to quantitatively measure the impact of the OrangeEDU tool and the associated teaching materials on student learning outcomes, specifically focusing on improvements in data literacy.
    - Focus groups: Conducting focus groups with school leaders and teachers across various regions to gather qualitative insights on the implementation process, the usability of the tool in different educational contexts, and the pedagogical effectiveness of the materials.
    - Ongoing feedback collection: Systematically collecting feedback during the implementation to inform continuous improvements and adjustments to the tool and materials.
    - Scalability and adaptation testing: Once refined, the project tests the scalability of the toolkit and training programs across a broader range of

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schools and educational contexts. This phase assesses the adaptability of the resources across different regions, cultural contexts, and varying levels of existing data literacy competencies among teachers.

3.4. National and general data sets

To ensure a robust evaluation framework for the DALI4US project, particularly in terms of comparing data across different countries, specific criteria and benchmarks need to be established within the data collection and analysis processes. Here is how these considerations are integrated:

- Comparability between countries:
  - Standardized age range for student participants: To address variations in the definition of upper primary education across countries, the project standardizes the target age range for student participants to 10-12 years old. This consistency ensures that the data collected reflects a comparable developmental and educational stage, which is crucial for analysing educational impacts across diverse educational systems.
  - Harmonized data collection instruments: The project employs standardized data collection instruments (such as surveys and assessments) that are culturally adapted yet maintain consistency in the type of data collected. This approach helps in ensuring that the findings are comparable and not biased by local educational practices or cultural nuances.
- Quantitative evaluation criteria:
  - Participant quota per country: For the quantitative aspects of the evaluation, the project aims to gather data from approximately 40 participants per country, achieving a minimum of 100 individual participants in total across the project. This sample size is chosen to ensure statistical validity and reliability of the results, allowing for meaningful analysis of trends and impacts at both the country and project-wide levels.
  - Ensuring adequate sample sizes: To meet these participant quotas, recruitment strategies are tailored to each country's specific educational context and capacities. Efforts are made to engage schools and teachers through national education networks and ministry contacts to ensure a wide and representative sample of the student population is achieved.

These strategic choices in data collection and analysis are designed to strengthen the project's evaluation capabilities, ensuring that results are not only robust and reliable but also meaningful across different national contexts. This structured approach facilitates a clearer understanding of the universal and unique impacts of the "DALI4US" project, providing valuable insights into the effectiveness of data literacy education initiatives globally.

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4. Quality assurance

The aspects of quality assurance are comprehensively reprised and detailed in the Quality Assurance Report, which provides an in-depth examination of the validation measures and ethical considerations implemented throughout the project.

5. Timetable

	Exploration				Small-scale experimentation				Full-scale experimentation			
	2024				2025				2026			
	Q	Q2	Q3	Q4	Q	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Slovenia												
Ireland												
Luxembourg												

Recruitment	
User testing	
Functionality catalogue analysis	
Digital Literacy Framework	
Activity and scenario development	
Feedback loops & adaptation	
Quantitative evaluation	
Scalability and adaptation testing	

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