

Responsible Educational Research in the Digital Age

Embedding ORRI, Privacy-by-Design and Responsible Digitalisation across the Educational Research Lifecycle

EMPATHER ORRI Toolkit — Core Guide



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About this publication

Responsible Educational Research in the Digital Age is the Core Guide of the EMPATHER ORRI Toolkit. It provides practical guidance for integrating Open and Responsible Research and Innovation (ORRI), Privacy-by-Design, responsible digitalisation, and ethical reflection throughout the educational research lifecycle. The Guide is intended for educational researchers, teachers, schools, educational organisations, and others involved in designing, conducting, supporting, or evaluating educational research. It should be used together with the practical resources of the EMPATHER ORRI Toolkit, including self-assessment checklists, data-mapping tools, Privacy-by-Design procedures, participant information and consent/assent templates, and monitoring resources.

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About EMPATHER project

EMPATHER — Embedding Privacy, Transparency and Trust in Educational Research supports the development of responsible approaches to digital educational research. The project seeks to embed ORRI principles into everyday organisational and research practice, with particular emphasis on privacy, ethics, transparency, stakeholder participation, and responsible digitalisation. The EMPATHER ORRI Toolkit was developed through a participatory process and includes practical resources designed to support responsible decision-making throughout the educational research lifecycle.

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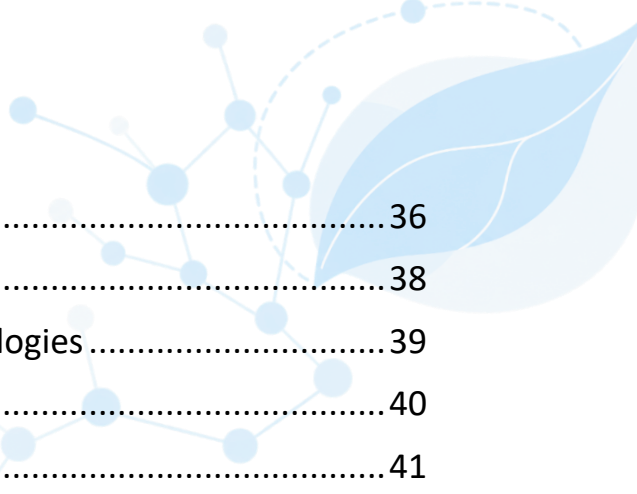
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1. Purpose of the Toolkit

1.1 Why this Toolkit was developed

Educational research is becoming increasingly digital. Researchers and educators now routinely use online questionnaires, digital learning platforms, mobile applications, learning analytics, artificial intelligence (AI) tools, video recordings, cloud-based collaboration platforms, and other digital technologies to better understand teaching and learning. These technologies offer significant opportunities to improve educational practice and generate valuable evidence for innovation. At the same time, they introduce new responsibilities for researchers and educational organisations.

Research involving learners, teachers, schools, and educational communities frequently includes the collection and processing of personal information. When research involves children and young people, these responsibilities become even greater. Researchers must ensure that participants understand the purpose of the research, that personal data are handled securely, and that participation is genuinely voluntary. Beyond meeting legal obligations, educational research should respect the dignity, rights, expectations, and trust of everyone involved.

Although regulations such as the General Data Protection Regulation (GDPR) establish an important legal framework for processing personal data, researchers often face practical questions that legislation alone cannot answer.



QUESTIONS FROM PRACTICE



How should informed consent be obtained from children?



What factors should be considered before selecting an online platform?



How can teachers avoid unintentionally influencing students to participate?



How should digital research tools be evaluated from both ethical and privacy perspectives?

The EMPATHER ORRI Toolkit was developed to help answer these questions. Rather than functioning as a legal manual, the toolkit provides practical guidance that supports researchers throughout the entire research lifecycle—from planning and designing a study to collecting, managing, sharing, and securely disposing of research data. It translates the principles of Open and Responsible Research and Innovation (ORRI), Privacy-by-Design, and responsible digitalisation into practical actions that can be applied in everyday educational research.

The EMPATHER ORRI Toolkit consists of a suite of complementary resources designed to support responsible educational research. At its core is this *EMPATHER Core Guide*, which introduces the key concepts, principles, and practical approaches presented throughout the toolkit. The guide is accompanied by a collection of practical resources—including self-assessment checklists, templates, standard operating procedures (SOPs), visual mapping tools, monitoring frameworks, and other implementation materials—that help researchers apply these principles in their own projects. Together, these resources provide an integrated framework for embedding ORRI, Privacy-by-Design, and responsible digitalisation throughout the educational research lifecycle.



The toolkit encourages researchers to move beyond viewing ethics and privacy as administrative requirements to be addressed only before data collection begins. Instead, it promotes a culture in which ethical reflection, transparency, stakeholder participation, and responsible data practices become integral components of high-quality educational research.

1.2 Who the Toolkit is for

The EMPATHER ORRI Toolkit has been developed for everyone involved in planning, conducting, supporting, or evaluating educational research.

Its primary audience includes educational researchers working in universities, research institutions, schools, and educational organisations. It is equally relevant for teachers who conduct classroom-based research or participate in research and innovation projects, postgraduate students undertaking educational research, school leaders supporting research activities within their institutions, and organisations responsible for coordinating or funding educational research initiatives.



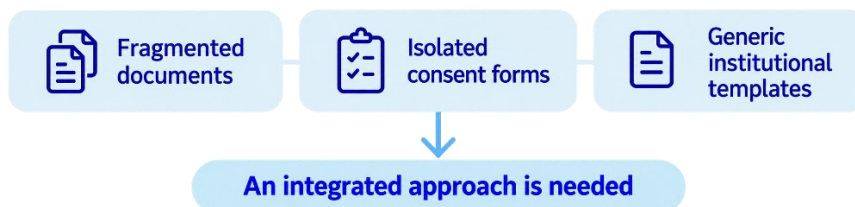
The toolkit is designed for users with different levels of experience. Researchers with extensive expertise can use it as a structured reference for integrating responsible digitalisation and Privacy-by-Design into their projects. Those with limited experience in research ethics or data protection can use it as a practical guide that explains what needs to be considered, when decisions should be made, and which supporting tools are available.

Although many examples focus on school-based educational research, the principles presented throughout the toolkit are equally applicable to research conducted in higher education, teacher education, lifelong learning, and other educational contexts.

1.3 What challenges it addresses

Educational researchers increasingly operate within complex digital environments where ethical, legal, and technological considerations intersect. Decisions about digital tools, cloud services, AI applications, learning analytics, video recording, and online collaboration platforms have implications for participants' privacy, research integrity, and public trust.

Many researchers are familiar with ethical approval procedures or data protection requirements but receive limited practical guidance on how these principles should be implemented throughout the research process. As a result, organisations often rely on fragmented documents, isolated consent forms, or generic institutional templates that do not adequately address the realities of educational research.



The EMPATHER ORRI Toolkit addresses this gap by providing an integrated framework that combines ethical guidance, Privacy-by-Design principles, practical procedures, ready-to-use tools, and good organisational practices. Rather than treating privacy, ethics, digital technologies, and stakeholder engagement as separate topics, the toolkit demonstrates how these dimensions are interconnected and should inform decisions throughout the research lifecycle.

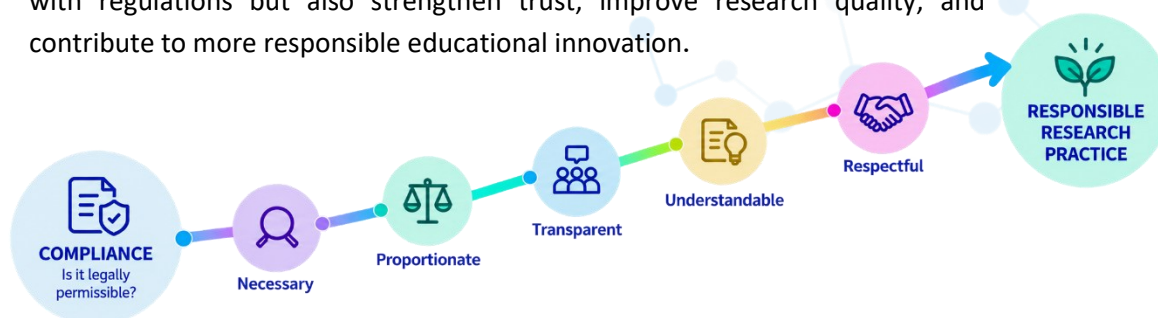
1.4 From compliance to responsible research practice

Compliance with legislation is essential, but it represents only the minimum standard expected of educational research. Responsible research goes further by encouraging researchers to consider the broader impact of their decisions on participants, educational communities, and society.

Responsible research requires continuous reflection throughout every stage of the research process. Researchers should ask not only whether an activity is legally permissible, but also whether it is necessary, proportionate, transparent, understandable, and respectful of participants' rights and expectations. In many situations, the ethically preferable decision extends beyond what legislation explicitly requires.

The EMPATHER ORRI Toolkit therefore adopts a proactive approach based on Open and Responsible Research and Innovation (ORRI). It encourages researchers to embed ethical reflection, stakeholder participation, transparency, accountability, and responsible

digitalisation into the design, implementation, and dissemination of educational research. In doing so, the toolkit supports the development of research practices that not only comply with regulations but also strengthen trust, improve research quality, and contribute to more responsible educational innovation.



2. Getting Started with the EMPATHER ORRI Toolkit

The EMPATHER ORRI Toolkit has been designed as an integrated implementation framework that supports researchers in planning, conducting, and evaluating educational research responsibly. Rather than functioning as a reference document to be read from beginning to end, the toolkit combines this EMPATHER Core Guide with a suite of practical resources—including templates, checklists, standard operating procedures (SOPs), and monitoring tools—to help researchers translate responsible research principles into everyday practice. Educational research is rarely a linear process. Research questions evolve, new digital tools may be introduced, unexpected ethical issues can arise, and decisions made at one stage often influence activities later in the project. For this reason, the toolkit should be viewed as a practical companion that supports continuous reflection rather than as a checklist to be completed once. At the heart of the toolkit lies the EMPATHER Responsible Research Workflow. The workflow provides a structured pathway that guides researchers from the earliest stages of project planning through implementation, monitoring, and project completion. Each stage of the workflow is supported by one or more accompanying EMPATHER Toolkit Resources, enabling researchers to translate the principles of Open and Responsible Research and Innovation (ORRI), Privacy-by-Design, and responsible digitalisation into concrete research practices.



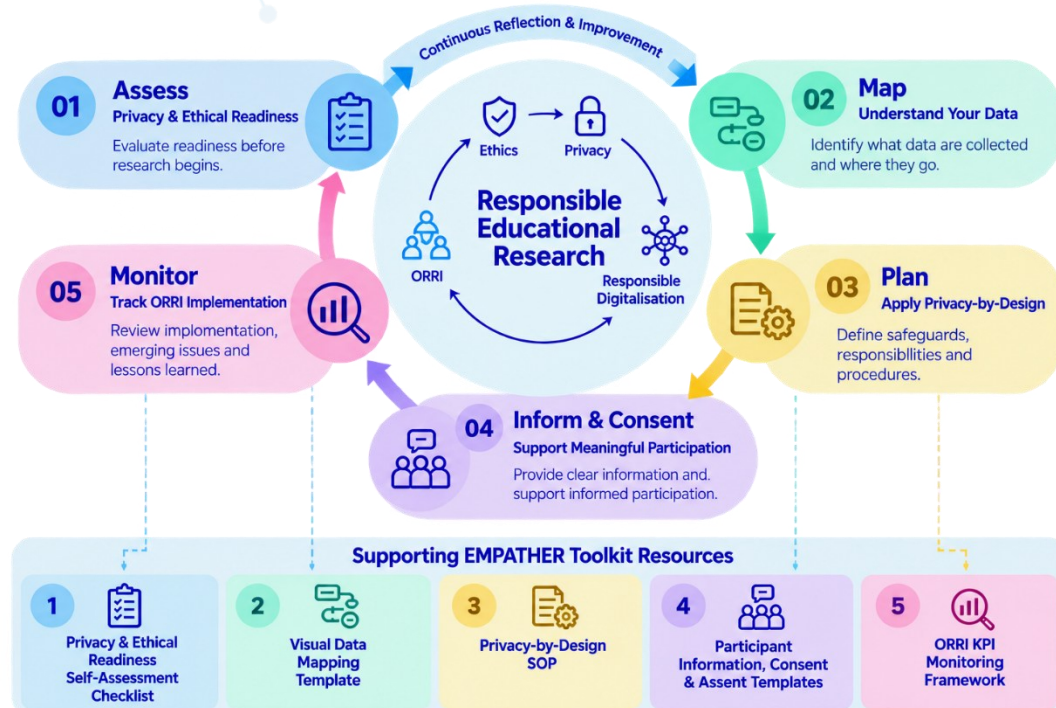
RESPONSIBLE RESEARCH IS AN ONGOING PROCESS

Although the workflow is presented as a sequence of five interconnected stages, researchers are encouraged to revisit previous stages whenever changes occur in the research design, data collection methods, participating organisations, or digital technologies used. Responsible educational research is an ongoing process of reflection, adaptation, and continuous improvement.

The following sections introduce each stage of the workflow and explain how the accompanying EMPATHER Toolkit Resources can be used throughout the research lifecycle. While the Core Guide explains the underlying concepts and principles, the accompanying resources provide practical support for implementing them in real educational research settings.

2.1 The EMPATHER Responsible Research Workflow

The EMPATHER Responsible Research Workflow offers a practical approach for integrating ethical reflection, data protection, stakeholder participation, and responsible digitalisation into educational research. Rather than treating privacy and ethics as isolated administrative tasks undertaken before data collection begins, the workflow embeds these considerations throughout the research lifecycle. The workflow consists of five interconnected stages.



The first step focuses on assessing organisational and project readiness. Before planning research activities, researchers evaluate whether appropriate procedures, expertise, resources, and governance arrangements are in place to conduct the study responsibly. The second step involves understanding the data that will be generated during the project. Researchers identify what information will be collected, from whom, for what purpose, where it will be stored, who will have access to it, and how long it will be retained. This process helps reveal potential privacy risks before data collection begins. The third step translates this understanding into practical planning by applying Privacy-by-Design principles. Researchers establish procedures for secure data management, define responsibilities within the research team, evaluate digital platforms, and implement safeguards that minimise risks throughout the project. The fourth step focuses on meaningful participant engagement. Rather than viewing consent as a signed document, the workflow encourages researchers to provide accessible information, support informed decision-making, respect children's evolving capacities, and maintain transparent communication with participants throughout the research process. Finally, the workflow concludes with continuous monitoring and reflection. Researchers review whether agreed procedures are being followed, identify emerging ethical or privacy issues, document lessons learned, and use evidence from the project to strengthen future research practices. Together, these five stages establish a continuous cycle of responsible educational research that promotes transparency, accountability, participation, and trust.

Step 1 — Assess: Privacy & Ethical Readiness

01

WORKFLOW STAGE 1 OF 5

ASSESS Privacy & Ethical Readiness



Every educational research project begins long before the first participant is recruited or the first piece of data is collected. Decisions made during the planning stage often determine whether a project will be able to protect participants' rights, comply with legal requirements, and respond appropriately to ethical challenges throughout its implementation. For this reason, the first step of the EMPATHER Responsible Research Workflow focuses on assessing privacy and ethical readiness.

Privacy and ethical readiness refer to the research team's preparedness to conduct a study responsibly. This includes evaluating whether the proposed research has clearly defined objectives, appropriate governance arrangements, sufficient expertise, and adequate procedures for protecting participants and managing personal data. It also involves identifying potential ethical issues, considering the characteristics of the participant population, and determining whether additional approvals or institutional procedures may be required before the research begins.



WHEN?

Early planning phase of the research project.

Revisit whenever significant changes occur in the study design, participating organisations, or digital technologies employed.



WHO?

Principal researcher together with members of the research team.

Where appropriate, institutional representatives responsible for ethics, data protection, or project management.



OUTCOME?

A clear understanding of the project's current level of preparedness.

A list of actions that should be completed before moving forward.

The assessment process should involve the principal researcher together with members of the research team and, where appropriate, institutional representatives responsible for ethics, data protection, or project management. Early discussion among different stakeholders often helps identify potential risks that may otherwise remain unnoticed until later stages of the project. The expected outcome of this step is a clear understanding of the project's current level of preparedness together with a list of actions that should be completed before moving forward.

USE WITH THIS STEP



Privacy & Ethical Readiness Self-Assessment Checklist

Use the checklist during early project planning to identify areas requiring attention before research activities begin.

TOOLKIT RESOURCE

1

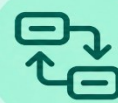


Step 2 — Map: Understand Your Data

02

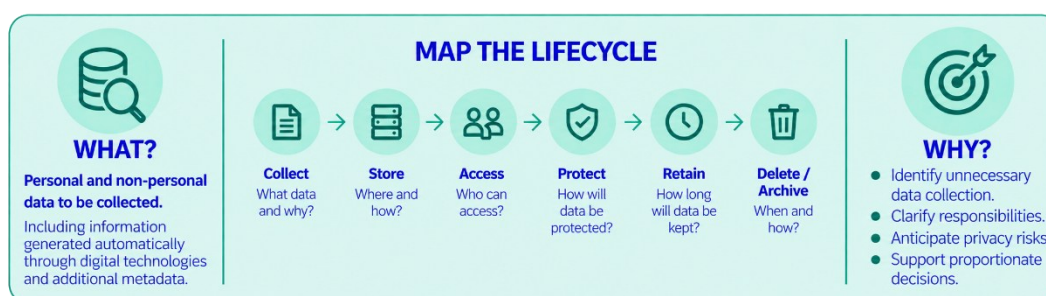
WORKFLOW STAGE 2 OF 5

MAP Understand Your Data



Responsible educational research requires researchers to understand not only the data they intentionally collect but also the information that may be generated automatically through the use of digital technologies. Data mapping provides a structured overview of the complete data lifecycle and forms the foundation for informed decision-making throughout the research project.

During this step, researchers identify what personal and non-personal data will be collected, who the participants are, why each type of information is necessary, where the data will be stored, who will have access to them, how they will be protected, and when they will be securely deleted or archived. Particular attention should be given to information generated through online platforms, learning management systems, mobile applications, artificial intelligence tools, cloud services, and other digital environments that may collect additional metadata beyond the researcher's immediate control.



Completing a data mapping exercise before data collection begins enables researchers to identify unnecessary data collection, clarify responsibilities, anticipate privacy risks, and design more proportionate research procedures. It also provides an important foundation for implementing Privacy-by-Design principles in the next stage of the workflow.

The expected outcome of this step is a comprehensive overview of the project's data ecosystem, supporting informed decisions about data management throughout the research lifecycle.

USE WITH THIS STEP



Visual Data Mapping Template

Map what data are collected, where they go, who can access them, and what happens to them throughout the research lifecycle.

TOOLKIT RESOURCE

2



Step 3 — Plan: Apply Privacy-by-Design

03

WORKFLOW STAGE 3 OF 5

PLAN

Apply Privacy-by-Design



Once researchers understand the data involved in their project, they are in a position to design procedures that protect participants' rights from the outset. Rather than adding privacy safeguards after research has already been planned, Privacy-by-Design encourages researchers to embed appropriate protections into every aspect of the research process.

At this stage, the research team establishes practical procedures for collecting, storing, processing, sharing, and retaining research data. Responsibilities are assigned within the research team, access permissions are defined, digital platforms are evaluated, and technical as well as organisational safeguards are selected according to the specific characteristics of the project.



PRIVACY-BY-DESIGN

Build appropriate protections into the research from the outset — not after the research has already been planned.

DESIGN THE SAFEGUARDS



Collect

What is really needed?



Protect

What safeguards are required?



Control Access

Who should have access?



Define Responsibilities

Who is responsible for what?



Manage Change

What happens if the research changes?

Planning should also consider how potential risks will be managed if research procedures change during implementation. Educational research frequently evolves as new insights emerge, making it important that privacy measures remain adaptable throughout the project. This planning stage transforms ethical intentions into practical organisational procedures that can be consistently implemented by everyone involved in the research.

The expected outcome is a documented Privacy-by-Design approach that supports responsible, secure, and transparent research implementation.

USE WITH THIS STEP



Privacy-by-Design SOP

Define safeguards, responsibilities and procedures for responsible data management throughout the research project.

TOOLKIT RESOURCE

3



Step 4 — Inform & Consent: Support Meaningful Participation

04

WORKFLOW STAGE 4 OF 5

INFORM & CONSENT

Support Meaningful Participation



Respect for research participants extends beyond obtaining a signed consent form.

Meaningful participation requires that individuals understand the purpose of the research, the nature of their involvement, how their information will be used, and the choices available to them throughout the project.

This step focuses on ensuring that communication with participants is transparent, accessible, and appropriate for the specific research context. Information should be presented in language that participants can understand, taking into account factors such as age, educational background, language proficiency, and accessibility requirements. When research involves children and young people, particular consideration should be given to supporting both parental consent and children's informed assent in ways that respect their evolving capacities and encourage genuine participation.



MEANINGFUL CONSENT IS MORE THAN A SIGNATURE

Participants need to understand the research, their involvement, how their information will be used, and the choices available to them.



Inform

Explain the research clearly.



Support Understanding

Use accessible, age-appropriate information.



Enable Choice

Support consent, assent and withdrawal.



Keep Communicating

Inform participants about changes and remind them of their rights.

Meaningful participation also requires ongoing communication throughout the project. Participants should be informed about any important changes to the research, reminded of their rights, and provided with opportunities to ask questions or withdraw if they wish. By viewing consent as a continuous process rather than a single administrative event, researchers strengthen transparency, trust, and respect for participant autonomy. The expected outcome is a well-informed participant community supported by appropriate documentation and communication throughout the research process.

USE WITH THIS STEP



Participant Information, Consent & Assent Templates

Support clear participant information, meaningful consent and assent, and ongoing communication throughout the research process.

TOOLKIT RESOURCE

4

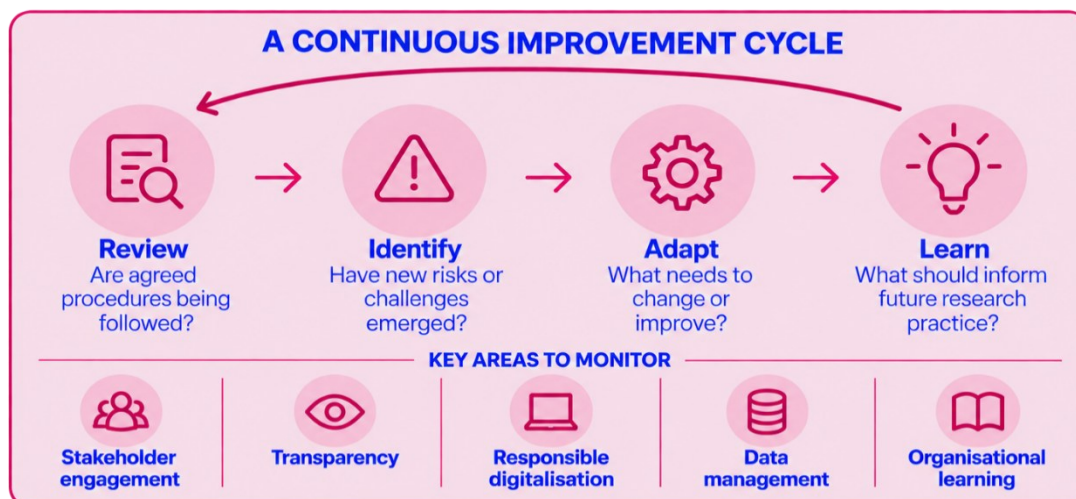


Step 5 — Monitor: Track ORRI Implementation

05

WORKFLOW STAGE 5 OF 5
MONITOR
Track ORRI Implementation

Responsible research does not end once data collection begins. Throughout the implementation of a project, researchers should regularly review whether agreed procedures continue to be followed, whether new risks have emerged, and whether additional measures are required to protect participants and strengthen research quality. Monitoring provides an opportunity to evaluate both the implementation of privacy and ethical procedures and the broader application of Open and Responsible Research and Innovation (ORRI) principles. This includes reviewing stakeholder engagement, transparency, responsible use of digital technologies, data management practices, and organisational learning throughout the project.



Regular reflection allows research teams to identify challenges early, document lessons learned, and adapt procedures where necessary. Monitoring should therefore be viewed as an ongoing process that supports continuous improvement rather than as a final evaluation activity conducted at the end of the project. The evidence gathered during monitoring also contributes to institutional learning by helping organisations refine future research practices and strengthen their overall culture of responsible research.

The expected outcome is a documented record of ORRI implementation, continuous improvement actions, and organisational learning.

USE WITH THIS STEP

ORRI KPI Monitoring Framework
Track ORRI implementation, document emerging issues and improvement actions, and capture lessons for future research practice.

TOOLKIT RESOURCE
5 →

When and how to use the accompanying tools

The EMPATHER Toolkit has been designed as an integrated implementation framework in which each supporting tool addresses a specific stage of the research lifecycle. Although each resource can be used independently, they are intended to complement one another and should be applied together whenever possible.

Researchers are encouraged to begin with the Privacy & Ethical Readiness Self-Assessment Checklist to evaluate whether their project is adequately prepared before research activities commence. Once readiness has been established, the Visual Data Mapping Template helps researchers understand the complete flow of information throughout the project. This understanding then informs the development of practical procedures through the Privacy-by-Design Standard Operating Procedure, ensuring that privacy and security considerations are embedded into the research design.

As the project progresses towards participant recruitment, the Participant Information, Consent and Assent Templates support transparent communication and meaningful participation. During implementation, the ORRI KPI Monitoring Framework enables research teams to evaluate whether responsible research practices continue to be applied consistently and to identify opportunities for improvement.

Importantly, the toolkit is not intended to be followed only once in a strictly linear sequence. Educational research is dynamic, and projects frequently evolve in response to new circumstances, technologies, or stakeholder needs. Researchers are therefore encouraged to revisit earlier steps whenever significant changes occur. Updating a data map after introducing a new digital platform, repeating the readiness assessment when expanding a study to additional schools, or revising participant information following methodological changes are examples of how the workflow supports continuous reflection throughout the research lifecycle.



Together, these resources provide researchers with a practical framework for embedding responsible digitalisation, ethical reflection, and Privacy-by-Design into everyday educational research, helping to transform responsible research principles into consistent organisational practice.

3. ORRI in Practice

Open and Responsible Research and Innovation (ORRI) is often presented as a set of principles that organisations are encouraged to adopt. While these principles provide an important foundation, researchers frequently ask a more practical question:



WHAT DOES ORRI ACTUALLY LOOK LIKE IN EVERYDAY RESEARCH PRACTICE?

For educational researchers, ORRI is not an additional administrative requirement or a separate stage of the research process. Rather, it is an approach to designing, conducting, and evaluating research that places societal relevance, ethical responsibility, stakeholder participation, and continuous reflection at the centre of scientific practice.

Educational research presents distinctive challenges that make ORRI particularly relevant. Studies frequently involve children and young people, take place in schools and classrooms, generate sensitive educational data, and increasingly rely on digital technologies and online platforms. Researchers often work in close collaboration with teachers, school leaders, families, and local communities, requiring careful consideration of relationships, responsibilities, and trust.

WHY ORRI MATTERS IN EDUCATIONAL RESEARCH



Children and young people



Schools and classrooms



Sensitive educational data



Digital technologies and online platforms



Multiple stakeholders

This chapter explores how the principles of Open and Responsible Research and Innovation can be translated into practical decisions throughout the educational research lifecycle. Rather than introducing new administrative procedures, ORRI encourages researchers to ask better questions, involve relevant stakeholders, anticipate potential impacts, and continuously reflect on the ethical and societal implications of their work.

The following sections present ORRI as a practical framework for responsible educational research, illustrating how its principles can guide everyday research decisions and contribute to more trustworthy, inclusive, and socially valuable research outcomes.

ORRI IN PRACTICE CONTRIBUTES TO



More trustworthy research



More inclusive research



More socially valuable outcomes

3.1 What ORRI means for educational research

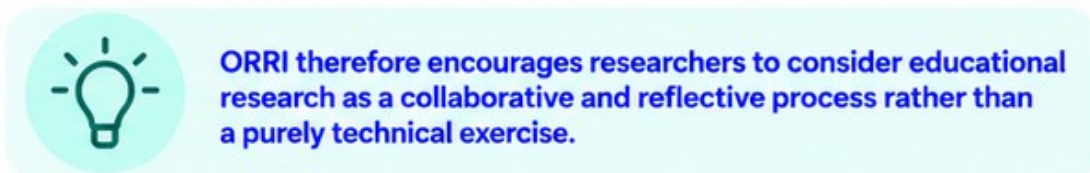
Open and Responsible Research and Innovation (ORRI) represents a way of thinking about research that extends beyond scientific excellence alone. While rigorous methodology remains fundamental, ORRI recognises that research should also respond to societal needs, involve relevant stakeholders, anticipate potential impacts, and be conducted in a manner that is transparent, inclusive, and ethically responsible. In this sense, ORRI shifts the focus from asking *"Can this research be conducted?"* to also asking *"How should this research be conducted responsibly?"*



The REINFORCING Guidelines describe ORRI as an approach that seeks to maximise the positive societal impacts of research and innovation, while minimising unintended negative consequences. They also recognise that one of the major challenges is translating broad ORRI concepts into practical actions that researchers can apply within their own organisations and projects.

Within educational research, this challenge becomes particularly significant. Educational research is rarely conducted in controlled laboratory environments. Instead, it takes place within complex educational ecosystems involving learners, teachers, school leaders, families, educational authorities, and local communities. Decisions made during research therefore have consequences that extend beyond the production of scientific knowledge. They may influence educational practice, affect relationships within schools, shape policy decisions, or impact the experiences of children and young people participating in the research.

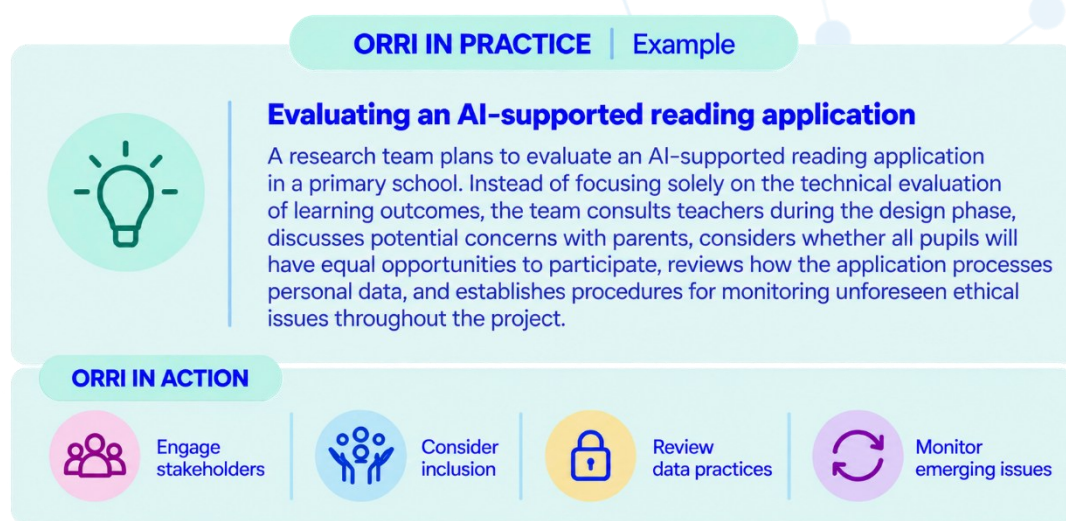
Increasing digitalisation further reinforces the importance of ORRI. Educational researchers now routinely employ online questionnaires, learning management systems, mobile applications, artificial intelligence tools, learning analytics, cloud services, video recordings, and other digital technologies to collect and analyse data. These technologies create valuable opportunities for educational innovation but also introduce new ethical, privacy, and governance considerations that extend beyond traditional research ethics.



ORRI therefore encourages researchers to consider educational research as a collaborative and reflective process rather than a purely technical exercise. Responsible educational research involves anticipating potential consequences before decisions are made, engaging with those affected by the research, communicating openly with participants, responding to emerging concerns throughout the project, and continuously evaluating whether research practices remain aligned with ethical and societal expectations.

Importantly, ORRI should not be understood as replacing existing ethical review procedures or legal obligations. Instead, it complements them by encouraging researchers to move

beyond compliance and consider how research can generate knowledge, while simultaneously strengthening trust, promoting inclusion, supporting educational communities, and contributing positively to society.



3.2 From ORRI principles to research practices

Open and Responsible Research and Innovation is often described through a set of principles such as participation, inclusion, transparency, anticipation, responsiveness, and accountability. These principles provide a valuable vision for how research should contribute to society. However, researchers are rarely faced with decisions that neatly correspond to a single ORRI principle. Instead, they make dozens of practical decisions throughout a project that collectively determine whether research is conducted responsibly. Educational researchers decide how participants will be recruited, which digital tools will be used, what information will be collected, how consent will be obtained, who will have access to research data, how findings will be communicated, and how unexpected ethical challenges will be addressed. Each of these decisions presents an opportunity to put responsible research into practice.

Rather than viewing ORRI as an additional framework separate from everyday research activities, the EMPATHER approach integrates responsible research principles into the decisions that researchers already make. The objective is not to increase administrative work, but to encourage researchers to ask more informed questions before making important methodological, organisational, and technological choices.

For example, selecting an online survey platform is not only a technical decision. It also involves considering where participant data will be stored, whether personal information will be transferred outside the European Union, what information is collected automatically by the platform, whether accessibility requirements are met, and whether participants understand how their information will be processed. Similarly, deciding to introduce an AI-powered educational application into a research study requires reflection not only on its educational effectiveness but also on issues such as transparency, bias, privacy, and the potential impact on learners.

The REINFORCING Guidelines emphasise that ORRI should become embedded within organisational structures and everyday research processes rather than remaining an abstract

set of aspirations. Responsible research therefore requires governance mechanisms, institutional learning, stakeholder engagement, and continuous reflection that become part of routine practice.

The EMPATHER Toolkit translates this philosophy into a practical implementation model. Instead of asking researchers to memorise ORRI concepts, it provides concrete tools that support responsible decision-making throughout the research lifecycle. The Privacy & Ethical Readiness Checklist encourages early reflection before research begins. Data Mapping helps researchers understand the information ecosystem they are creating. Privacy-by-Design transforms ethical intentions into practical procedures. Consent and participant information resources strengthen transparency and meaningful participation, while the KPI Monitoring Framework supports continuous organisational learning.

In this way, ORRI becomes visible not through policy statements, but through everyday research practice.

Translating ORRI into Educational Research Practice

The table below illustrates how broad ORRI principles can be translated into practical actions within educational research.

ORRI principle	What it means in educational research
 Participation	Involve teachers, learners, parents and other stakeholders in shaping the research where appropriate.
 Transparency	Clearly explain the purpose of the research, how data will be used, and how decisions are made.
 Inclusion	Ensure that research is accessible and responsive to diverse educational communities and learner needs.
 Responsiveness	Adapt research procedures when new ethical, educational or technological challenges emerge.
 Anticipation	Consider potential risks and unintended consequences before introducing methods or technologies.

 Accountability	Document decisions, justify methodological choices, and demonstrate responsible management of research activities.
 Ethical Reflection	Continuously evaluate whether research practices remain aligned with ethical principles throughout the project.

These principles should not be viewed as independent requirements. In practice, they reinforce one another. A transparent research process encourages trust, meaningful participation improves research quality, inclusion strengthens relevance, and continuous ethical reflection supports accountability. Together, they create a research culture that is both scientifically rigorous and socially responsible.

ORRI IN PRACTICE | Example



Selecting a Digital Platform

A research team intends to collect pupil reflections using an online platform. Instead of selecting the platform solely based on convenience or cost, the team compares several alternatives. They examine where participant data are stored, whether the platform complies with European data protection requirements, whether accessibility features are available for pupils with additional needs, and how parents and learners will be informed about the platform's data processing practices. The final decision reflects educational, ethical, and privacy considerations rather than technical functionality alone.

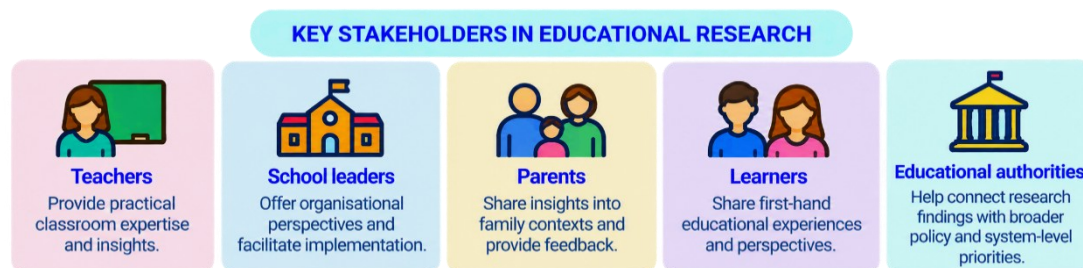
3.3 Participation and stakeholder engagement

Educational research is most valuable when it is conducted *with* educational communities rather than simply *about* them. While researchers often engage participants during data collection, responsible educational research encourages stakeholder involvement throughout the entire research lifecycle—from identifying research needs and designing studies to interpreting findings and reflecting on their implications for educational practice.

Participation within ORRI goes beyond consultation. It recognises that different stakeholders possess valuable forms of knowledge and experience that can strengthen research quality, improve relevance, and enhance the legitimacy of research outcomes. Teachers contribute practical classroom expertise, school leaders provide organisational perspectives, parents offer insights into family contexts, learners share first-hand educational experiences, and educational authorities help connect research findings with broader policy and system-level priorities.

The REINFORCING Guidelines highlight stakeholder engagement as a central characteristic of ORRI, emphasising that research and innovation benefit from the meaningful involvement of multiple actors and perspectives throughout the innovation process. Multi-stakeholder collaboration supports more inclusive, socially relevant, and trusted research outcomes.

Within educational research, stakeholder participation should always be proportionate to the aims and context of the project. Not every study requires co-design or extensive participatory approaches. However, researchers should actively consider where stakeholder perspectives can improve the quality, feasibility, or societal relevance of the research. In some cases, this may involve consulting teachers when designing classroom interventions. In others, it may include discussing participant information materials with parents or seeking feedback from students about research procedures that directly affect them.



Participation should also be understood as an ongoing dialogue rather than a single consultation event. Educational research projects evolve over time, and new questions, challenges, or opportunities may emerge. Maintaining communication with stakeholders allows researchers to respond to concerns, adapt research procedures where appropriate, and strengthen trust throughout the project.

The EMPATHER project itself illustrates this approach through the establishment of a **Privacy Review Board (PRB)**. The PRB brings together representatives from EDVOCACY, the Directorate of Primary Education of Cyclades (DIPE CYCLADON), teachers, parents, and students to provide structured feedback on the development of the EMPATHER Toolkit and to support continuous ethical reflection throughout the project. Rather than functioning solely as an oversight mechanism, the Board demonstrates how participatory governance can contribute to the co-creation of practical resources for responsible educational research.

Meaningful participation does not mean that every stakeholder makes every decision. Rather, it requires researchers to identify whose perspectives are important, determine appropriate opportunities for involvement, communicate openly about how contributions will be used, and demonstrate respect for the knowledge and experiences that different stakeholders bring to the research process.

ORRI IN PRACTICE | Example



Co-designing a Classroom Research Project

A university research team plans to investigate the educational impact of an augmented reality application in primary school science class. Before finalising the research design, they organise a workshop with participating teachers and school leaders to discuss the proposed classroom activities. Teachers recommend adjusting the intervention to better fit the school timetable and identify practical challenges related to device availability. Parents review the participant information sheets and suggest simplifying technical language to improve readability. These contributions do not change the scientific objectives of the study, but they significantly improve its feasibility, transparency, and acceptance within the participating schools.

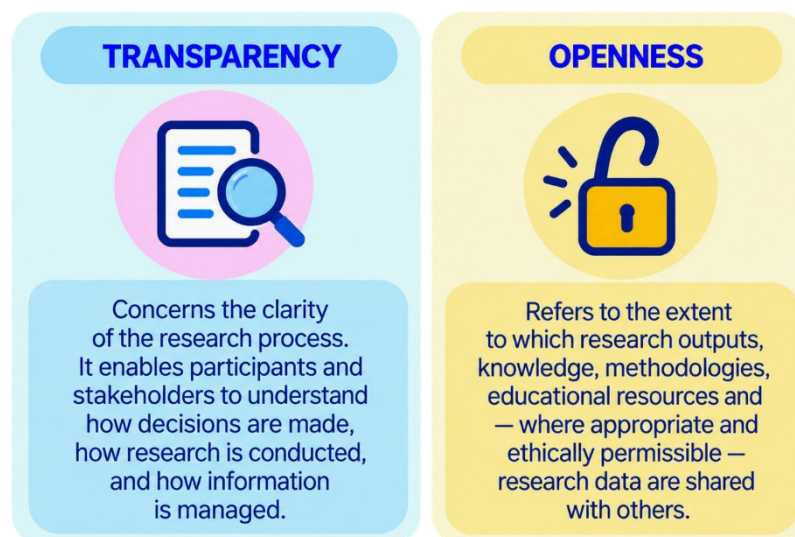
3.4 Transparency and openness

Transparency is one of the fundamental characteristics of responsible educational research. It enables participants, educational institutions, policymakers, and society to understand not only the outcomes of research but also how research is designed, conducted, and communicated. Transparency strengthens trust, improves research quality, and demonstrates respect for participants by making research processes understandable and accessible.

Within educational research, transparency begins long before data collection. Researchers should communicate clearly why a study is being conducted, what information will be collected, how data will be used, who will have access to it, and what rights participants have throughout the research process. This information should be presented in language that is appropriate for the intended audience, recognising that educational research often involves children, young people, parents, teachers, and school staff with varying levels of research experience.

Transparency also extends to research methodology. Responsible researchers openly describe how participants were recruited, why particular methods or digital tools were selected, how data were analysed, and what limitations should be considered when interpreting the findings. Being transparent does not require claiming that research is free from limitations. On the contrary, acknowledging uncertainty, methodological constraints, and alternative interpretations strengthens the credibility of research.

An important distinction should be made between **transparency** and **openness**. Although the two concepts are closely related, they are not identical.



The REINFORCING Guidelines identify openness, transparency, and mutual responsiveness as central elements of ORRI, encouraging organisations to promote open science, while ensuring that ethical responsibilities and participant rights remain protected.

For educational researchers, openness should always be balanced with privacy, confidentiality, and safeguarding obligations. Sharing research findings, educational materials, protocols, or anonymised datasets can contribute to scientific progress and improve educational practice. However, openness should never compromise the rights or privacy of research participants, particularly when studies involve children or vulnerable groups.

Responsible educational research therefore requires researchers to ask not only *"What can we share?"* but also *"What should we share, with whom, and under what conditions?"* Transparency and openness are not ends in themselves; they are mechanisms for strengthening public trust, improving research quality, and enabling responsible knowledge exchange.

Ultimately, transparency should be viewed as a continuous commitment rather than a single activity. Researchers who communicate openly, explain their decisions, and remain responsive to questions from participants and stakeholders help create a culture in which educational research is understood as a collaborative endeavour built on trust and mutual respect.

ORRI IN PRACTICE | Example



Communicating Beyond the Consent Form

A research team is evaluating the use of an AI-supported mathematics platform in two primary schools. Rather than limiting communication to the distribution of consent forms, the researchers organise an online information session for parents and teachers before the project begins. During the session, they explain the study's objectives, demonstrate how the digital platform works, describe what data will be collected, answer questions about privacy and security, and clarify how the findings will be shared with participating schools. Throughout the project, regular updates are provided through newsletters and school meetings. At the end of the study, a plain-language summary of the findings is prepared for pupils, parents, and teachers. By communicating openly throughout the research lifecycle, the team strengthens trust, encourages meaningful engagement, and demonstrates transparency in practice.

3.5 Inclusion and responsiveness

Educational research aims to generate knowledge that improves learning, teaching, and educational systems. To achieve this goal, research should reflect the diversity of the educational communities it seeks to understand and support. Responsible educational research therefore requires researchers to consider not only who participates in research, but also whose perspectives may be missing, whose needs may be overlooked, and how research can become more responsive to the realities of different educational contexts.

Inclusion is more than recruiting a diverse group of participants. It involves designing research that enables meaningful participation by individuals with different backgrounds, experiences, abilities, languages, cultures, and educational needs. Educational research should recognise that learners and educators experience education differently depending on their personal, social, cultural, and institutional contexts. Research that ignores this diversity risks producing findings that are less relevant, less equitable, and less applicable across educational settings.

The REINFORCING Guidelines place particular emphasis on broadening participation and ensuring that research and innovation actively consider the perspectives of groups that have traditionally been underrepresented or marginalised.

INCLUSION



Design research that enables meaningful participation by individuals with different backgrounds, experiences, abilities, languages, cultures and educational needs.

Inclusive research recognises that different communities bring valuable knowledge and experiences that strengthen both the quality and societal relevance of research.

Within educational research, inclusion begins during project design. Researchers should consider whether recruitment strategies unintentionally exclude certain groups, whether participant information is accessible to different audiences, whether digital tools create barriers for some learners, and whether research procedures can be adapted to accommodate diverse needs without compromising methodological quality.

Responsiveness complements inclusion by recognising that research projects are rarely static. New circumstances, participant feedback, technological developments, or unexpected

challenges may require researchers to reconsider earlier decisions. Rather than viewing research protocols as fixed documents, responsible educational research encourages continuous dialogue with participants and stakeholders to determine whether adaptations are necessary. Being responsive does not imply abandoning methodological rigour. Instead, it means recognising when flexibility can improve both the ethical quality and practical relevance of the research. Researchers may simplify participant information after receiving feedback, modify data collection procedures to reduce burden on schools, introduce additional accessibility measures, or adjust communication strategies to better support participants throughout the project.



Responsiveness also extends beyond individual projects. Responsible educational researchers should reflect on how their findings contribute to educational practice, policy, and future research. Listening to stakeholder feedback after a project concludes can provide valuable insights that improve subsequent studies and strengthen long-term relationships with educational communities.

Inclusive and responsive research ultimately recognises that educational innovation should be developed with people rather than merely for them. By embracing diversity, remaining open to dialogue, and adapting responsibly when circumstances change, researchers contribute to more equitable, trustworthy, and socially relevant educational research.

ORRI IN PRACTICE | Example



Adapting Research to Support Meaningful Participation

A research team is conducting interviews with pupils to explore their experiences using a digital learning application. During the first week of data collection, teachers explain that several pupils with additional learning needs find the interview questions too complex. Rather than continuing unchanged, the researchers consult teachers and revise the interview protocol using simpler language, visual prompts, and additional time for responses. Parents are informed about the changes, and the revised procedure is documented in the research records. By responding to participant needs while maintaining the study's objectives, the research team demonstrates how inclusion and responsiveness strengthen both ethical practice and research quality.

3.6 Accountability and ethical reflection

Responsible educational research is not defined by the absence of ethical challenges but by the willingness of researchers to recognise, examine, and respond to them throughout the research process. Accountability and ethical reflection provide the foundation for this continuous process of responsible decision-making.

Accountability means that researchers are prepared to explain and justify the decisions they make before, during, and after a research project. This extends beyond demonstrating compliance with institutional procedures or legal requirements. Responsible researchers should be able to explain why particular methods were selected, why specific digital technologies were adopted, how potential risks were assessed, how participants' rights were protected, and how unexpected challenges were managed. In other words, accountability is about demonstrating that research decisions are thoughtful, evidence-informed, proportionate, and aligned with the values of responsible educational research.



Educational research often involves complex situations for which there is no single correct answer. A teacher conducting classroom research may need to balance their dual role as educator and researcher. A research team introducing an AI-powered educational platform may need to weigh the educational benefits of learning analytics against concerns about privacy and data protection. Researchers working with vulnerable participants may need to adapt research procedures, while maintaining methodological integrity. In each of these situations, responsible decision-making depends not only on following established procedures but also on engaging in careful ethical reflection.

Ethical reflection is therefore not a one-off activity conducted during ethics approval. Instead, it is an ongoing process that accompanies the entire research lifecycle. Responsible researchers continuously ask themselves whether their decisions remain appropriate as the project evolves, whether new risks have emerged, whether participants continue to understand and support the research, and whether the research continues to serve its intended educational and societal purposes.

The REINFORCING Guidelines emphasise that ORRI should become embedded within organisational structures through continuous learning, adaptive governance, and institutional accountability. Rather than viewing responsible research as a static set of rules, organisations are encouraged to develop processes that enable reflection, adaptation, and continuous improvement.

This principle is particularly important within educational research, where projects frequently evolve in response to changing classroom conditions, participant feedback, technological developments, or emerging educational priorities. Researchers should therefore view

accountability not as an obligation imposed by external authorities but as a professional responsibility towards participants, colleagues, educational institutions, and society.

One practical way of supporting accountability is through systematic documentation. Recording important research decisions, documenting changes to research procedures, monitoring ethical issues as they arise, and reflecting on lessons learned all contribute to a transparent and trustworthy research process. Such documentation not only supports project management but also enables organisations to improve future research practices by learning from previous experience.

The EMPATHER Responsible Research Workflow has been designed to support this process of continuous reflection. Rather than treating privacy, ethics, participation, and responsible digitalisation as independent tasks, the workflow encourages researchers to revisit earlier decisions whenever projects change. New technologies may require an updated data mapping exercise. Additional participant groups may require revised consent procedures. Unexpected challenges may lead researchers to review privacy safeguards or strengthen stakeholder communication. Responsible educational research is therefore characterised by continuous learning rather than procedural completion.

Ultimately, accountability and ethical reflection reinforce a simple but important principle: responsible research is not achieved by completing forms or following checklists alone. It is achieved by developing a research culture in which critical thinking, openness to dialogue, professional integrity, and continuous improvement guide every stage of the research process.

ORRI IN PRACTICE

Example



Responding to an Unexpected Ethical Challenge

Halfway through a classroom research project evaluating an AI-supported learning platform, the research team discovers that a recent software update has introduced new analytics features that collect additional student interaction data. Although the platform continues to operate as expected, the researchers recognise that the nature of the data being processed has changed. Rather than continuing without review, the team revisits the EMPATHER Responsible Research Workflow. They update their Data Mapping Template, reassess privacy risks, consult the school's data protection representative, revise the participant information materials, and inform parents and teachers about the changes before continuing data collection. The research team also documents the decisions made and the reasons behind them. This example illustrates that accountability is not about avoiding unexpected situations but about responding to them transparently, responsibly, and in a manner that maintains participants' trust.

Chapter Summary

Open and Responsible Research and Innovation is not an additional stage of educational research but a way of conducting research responsibly throughout the entire project lifecycle. Participation, transparency, inclusion, responsiveness, accountability, and continuous ethical reflection are interconnected principles that influence everyday research decisions—from selecting digital tools and engaging participants to communicating findings and responding to emerging challenges.

The EMPATHER Responsible Research Workflow translates these principles into practical actions that educational researchers can integrate into their daily practice. Rather than viewing ORRI as a collection of abstract concepts, the workflow demonstrates how responsible research can become part of routine decision-making, organisational learning, and continuous improvement.

The next chapter builds on these foundations by introducing Privacy-by-Design Throughout the Research Lifecycle, showing how responsible research principles can be translated into practical procedures for planning, conducting, and managing educational research in increasingly digital environments.



NEXT:

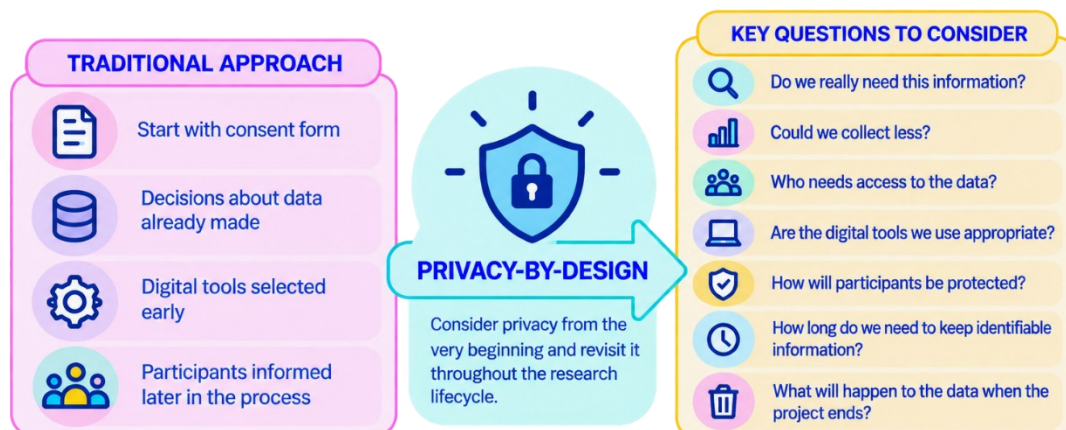
FROM ORRI TO PRIVACY-BY-DESIGN

Chapter 4 translates these responsible research principles into practical procedures for protecting privacy throughout the educational research lifecycle.



4. Embedding Privacy-by-Design Throughout the Educational Research Lifecycle

Privacy should not begin with the consent form. By the time researchers prepare participant information sheets or ask participants to provide consent, many important decisions have already been made: what data will be collected, which digital tools will be used, who will have access to information, and how the study will be organised. Privacy-by-Design encourages researchers to consider these questions from the very beginning and to revisit them throughout the research lifecycle. The aim is not to turn teachers or educational researchers into data-protection experts. It is to help them make better research decisions before problems arise.



These questions are especially important in educational research, where studies often involve children and young people, take place in schools, and increasingly rely on digital platforms, learning analytics, artificial intelligence, video, and other technologies that may process personal information.

Throughout this chapter, the EMPATHER Toolkit translates European data-protection and research-ethics principles into practical guidance for educational research. The focus is not on reproducing legislation, but on helping researchers understand what they should consider at each stage of a project and when specialist advice may be needed.

Privacy-by-Design is therefore best understood as a habit of responsible research: **think early, collect carefully, protect throughout, and review before you finish.**

4.1 Before the research begins



Before the first participant is recruited or the first questionnaire is created, researchers make a series of decisions that will shape the entire research project. These early choices influence not only the scientific quality of the study but also how well participants' rights, privacy, and trust are protected.

Privacy-by-Design begins at this stage. Rather than thinking about privacy after data have already been collected, researchers are encouraged to consider privacy, while they are still defining the research question, selecting methods, and planning the project.

The aim is not to identify every possible legal or ethical issue in advance. Instead, it is to establish a strong foundation for responsible educational research by asking a few essential questions before the study begins.



Every research project begins with a question. The same question should also guide decisions about personal data. Before deciding what information to collect, researchers should first ask:

What information is genuinely necessary to answer our research question?

Educational research often provides access to large amounts of information through schools, digital learning platforms, questionnaires, interviews, classroom observations, and educational applications. However, the availability of information does not mean that it should all be collected.

Collecting unnecessary personal data increases the complexity of the project, creates additional responsibilities for the research team, and may expose participants to unnecessary risks. Whenever possible, researchers should choose the least intrusive approach that still enables them to answer the research question effectively.





Understand Your Data Before You Collect It
Identify the types of information that the project will involve and whether all of it is necessary.



Once the purpose of the research is clear, researchers should identify the types of information that the project will involve. Educational research may include many different forms of personal information, such as questionnaire responses, interview recordings, classroom observations, photographs, video, assessment results, learning analytics, or information generated automatically by digital platforms. Some projects may also involve information that requires particular care, such as health or disability information, or research involving children and other potentially vulnerable participants. At this stage, researchers do not need to produce a detailed data management plan. Instead, they should develop a clear understanding of what information will be collected, why it is needed, and whether all of it is necessary. This initial reflection provides the basis for the more detailed Data Mapping exercise that follows in the next step of the EMPATHER Workflow.



Clarify Responsibilities Early
Agree who is responsible for managing participant information, who will have access to it, and when to seek advice.



Educational research is often collaborative. A project may involve universities, schools, educational authorities, NGOs, technology providers, or several research partners working together. Before data collection begins, everyone involved should have a shared understanding of who is responsible for managing participant information, who will have access to it, and where researchers can seek advice if privacy or ethical questions arise. Researchers are not expected to become experts in data protection legislation. However, they should know when specialist advice is needed, for example, when research involves particularly sensitive information, innovative digital technologies, or complex data-sharing arrangements. Establishing responsibilities at the beginning of the project helps prevent misunderstandings later and supports a more organised and transparent research process.



Think About Risks Before They Become Problems
Consider potential challenges before they occur and take reasonable steps to minimise them.



Every research project involves some level of uncertainty. Privacy-by-Design encourages researchers to consider potential challenges before they occur rather than trying to solve them after data have already been collected.

For example:

- Could participants accidentally be identified from the information collected?
- Could a digital platform collect more information than expected?
- Could children feel obliged to participate because their teacher is conducting the research?
- Could the research design unintentionally create unnecessary privacy risks?

Considering these questions during the planning stage often leads to small adjustments that significantly improve both participant protection and research quality.

The objective is not to eliminate every possible risk, but to anticipate foreseeable issues and take reasonable steps to minimise them.

PRIVACY-BY-DESIGN QUESTIONS



- ✓ What is the purpose of collecting personal data?
- ✓ Are we collecting only the information we really need?
- ✓ What types of personal information will be collected or generated?
- ✓ Does the study involve children or other potentially vulnerable participants?
- ✓ Who will be responsible for managing the data?
- ✓ Have we considered the main privacy and ethical risks?
- ✓ Do we need advice from our institution, ethics committee, or Data Protection Officer?

GOOD PRACTICE



Keep your planning simple.

Before designing questionnaires or selecting digital tools, write a one-page summary describing:

- the purpose of the study,
- who will participate,
- what information will be collected,
- why it is needed,
- who will have access to it.



This simple exercise often reveals unnecessary data collection and helps the research team identify potential privacy issues early.

COMMON MISTAKE



“Let’s collect it now—we might need it later.”

One of the most common mistakes in educational research is collecting additional personal information simply because it is available.

Good research starts by identifying the information that is necessary—not by collecting everything that could potentially be useful.

ORRI IN PRACTICE

Example



Planning an Educational Technology Study

A team of teachers plans to evaluate a new digital reading application in Year 5 classrooms. Initially, they intend to collect pupils' names, dates of birth, assessment results, detailed usage logs from the application, and photographs of classroom activities.

Before beginning the study, the team reviews each type of information against the research question. They realise that exact dates of birth are unnecessary and replace them with age groups. They decide that anonymous participant codes are sufficient instead of pupil names during data analysis. They also discover that the application automatically records additional technical information that is not required for the study and configure the platform to limit unnecessary data collection.

These changes require very little additional effort, yet they reduce privacy risks, simplify data management, and make it easier to explain the project to pupils, parents, and school leaders.

4.2 Designing the research

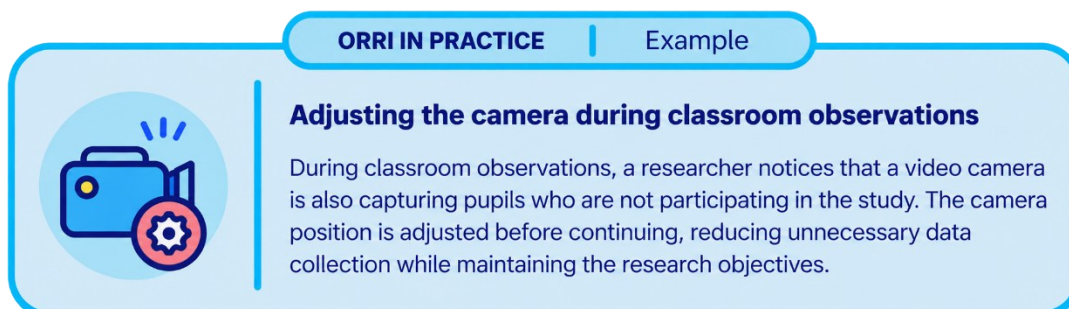
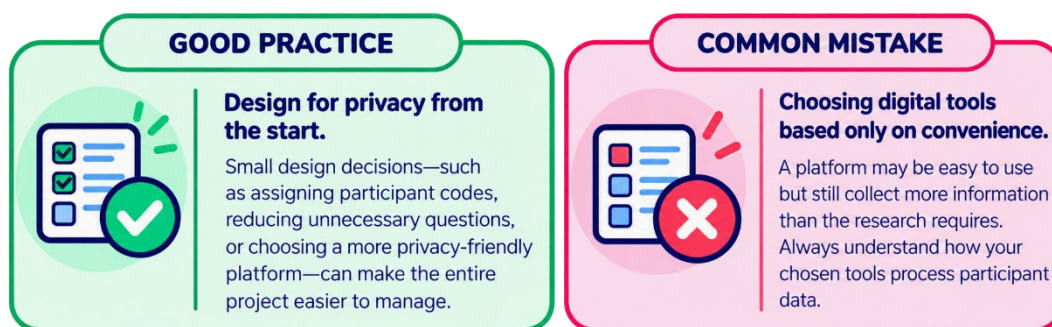
Once the purpose of the study has been clearly defined, the next step is to design the research in a way that protects participants, while supporting high-quality research. Good research design and good privacy practices go hand in hand. Decisions made at this stage will influence what information is collected, how participants experience the study, and how easily the research can be managed.

One of the most important principles is **data minimisation**. Researchers should collect only the information that is necessary to answer the research question. Before adding a question to a questionnaire, recording a classroom session, or requesting access to school records, it is worth asking whether that information is essential or simply convenient to have.

The design stage is also the right time to consider the digital tools that will be used throughout the project. Online survey platforms, learning management systems, mobile applications, AI-supported tools and cloud services can support educational research, but they may also collect information automatically or process data in ways that are not immediately visible. Researchers should therefore choose tools that are appropriate for the research purpose, understand what information they collect, and ensure that participants can be informed about their use in a clear and transparent way.



Where possible, researchers should also consider whether participants need to be directly identifiable throughout the project. Using participant codes instead of names during analysis, separating contact information from research data, or collecting information in aggregated form can significantly reduce privacy risks without affecting research quality. Finally, the research design should remain flexible. Educational research often evolves as projects progress, and researchers should be prepared to review their design if new technologies are introduced or the scope of the study changes.



4.3 Data collection and processing

Once the research begins, Privacy-by-Design becomes part of everyday research practice. Researchers should collect only the information that was planned, explain clearly to participants what is happening, and ensure that personal information is handled consistently throughout the project.

Whenever possible, information should be collected directly through the agreed research procedures rather than through informal conversations or additional records that were not originally planned. If new information becomes necessary, researchers should consider whether the research design and participant information need to be updated.

Digital technologies deserve particular attention during data collection. Online platforms, educational applications and AI-supported tools may generate additional information such as usage logs, timestamps or device identifiers. Researchers should understand what information is being processed and ensure that participants are appropriately informed.

Where practical, personal identifiers should be separated from research data as early as possible. This helps reduce the impact of accidental disclosure, while still allowing researchers to manage participant information when necessary.

Privacy is not only about technology. Researchers should also consider how interviews are conducted, where observations take place, who can overhear conversations, and how paper documents or portable devices are handled during fieldwork.



4.4 Data storage, access and sharing

Protecting research data continues after they have been collected. Researchers should ensure that information is stored securely, that access is limited to those who genuinely need it, and that data are shared responsibly throughout the project.

Good data management does not necessarily require complex technical solutions. In many educational research projects, clear organisational practices are equally important. Research files should be stored in secure locations, access should be restricted to authorised members of the research team, and personal information should not be shared through unsecured channels or stored on personal devices without appropriate safeguards.

Researchers should also be aware of where digital platforms and cloud services store information. When external services are used, it is important to understand their role within the research and to ensure that they are appropriate for handling participant data.

When collaborating with other organisations, researchers should share only the information that is necessary for the agreed purpose. Whenever possible, anonymised or pseudonymised data should be used instead of directly identifiable information.

Finally, openness in research should always be balanced with participant privacy. Sharing research findings, educational resources or anonymised datasets can contribute to educational improvement, but identifiable participant information should never be shared unless there is a clear legal and ethical basis for doing so.

Privacy-by-Design Questions

When managing research data, ask:


Is the information stored securely?


Who really needs access?


Are we sharing **only** what is necessary?


Can data be **anonymised or pseudonymised** before sharing?

GOOD PRACTICE


Give access based on need, not convenience.
Not every member of the research team needs access to identifiable participant information.

COMMON MISTAKE


Keeping all research files together with participant names.
Separating identifying information from research data is often a simple way to strengthen privacy.

ORRI IN PRACTICE | Example


A university and two schools collaborate on a research project. Instead of sharing complete participant records, the university receives only coded datasets, while the schools retain the participant identification list securely. This allows the analysis to proceed without unnecessarily exposing personal information.

4.5 Research completion, retention and deletion

Responsible data management continues even after data collection and analysis have been completed. Before closing a project, researchers should decide what information needs to be retained, what can be anonymised, and what should be securely deleted.

Not all research materials need to be kept indefinitely. Retaining identifiable information for longer than necessary increases responsibilities without necessarily adding value to the research. Before deleting any information, however, researchers should ensure that institutional requirements, funding obligations and applicable legal or ethical requirements have been considered.

Where appropriate, anonymising research data allows valuable research findings to be preserved, while reducing privacy risks. Researchers should also ensure that participant contact lists, temporary working files and duplicate copies are reviewed as part of project closure.

The end of a research project is also an opportunity for reflection. Reviewing what worked well, what challenges were encountered and what could be improved helps strengthen future research practice and supports a culture of continuous learning.

Privacy-by-Design Questions

Before closing your project, ask:



What information **still needs to be retained**?



Can identifiable information now be **anonymised**?



What should be **securely deleted**?



Have we **documented** how the project was closed?

GOOD PRACTICE



Plan project closure before the project ends.
Retention and deletion decisions are easier when they have been considered from the beginning.

COMMON MISTAKE



Keeping research files "just in case."
Research data should be retained only for as long as there is a clear and justifiable reason to do so.

ORRI IN PRACTICE



After completing a classroom research project, the research team **anonymises** the dataset used for future analysis and securely deletes the participant contact list that is no longer needed. They also document the retention period agreed by their institution and prepare a short summary of lessons learned.

Chapter Summary

Privacy-by-Design is not a separate activity that takes place after a research project has been designed. It is a way of thinking that accompanies every stage of the educational research lifecycle—from defining the research question to securely managing data after the project has ended.

Throughout this chapter, we have seen that responsible data protection is achieved through a series of thoughtful decisions rather than complex legal procedures. By collecting only the information that is necessary, selecting appropriate digital tools, protecting participant data throughout the project, and planning responsibly for data retention and deletion, researchers can strengthen both participant trust and research quality.

Privacy-by-Design therefore supports more than compliance. It helps educational researchers create studies that are better organised, more transparent, and more respectful of the individuals and communities who make educational research possible.



NEXT:
**5. RESPONSIBLE SELECTION AND USE
OF DIGITAL TECHNOLOGIES**

Explore how to choose and use digital tools in a responsible, secure and ethical way in educational research with minors.



5. Responsible Selection and Use of Digital Technologies

Digital technologies have become an integral part of educational research. Online survey platforms, learning management systems, collaborative cloud services, video conferencing platforms, artificial intelligence applications, learning analytics, mobile devices, and digital assessment tools offer researchers new opportunities to collect data, collaborate with participants, and analyse research findings.

However, selecting a digital tool should never be based solely on convenience, popularity, or cost. Every technology processes information differently, and the decisions researchers make when choosing a tool may directly influence participant privacy, data security, transparency, and trust.

Responsible educational research therefore requires researchers to evaluate digital technologies before adopting them. The aim is not to find the "perfect" platform, but to choose solutions that are appropriate for the research, protect participants, and allow researchers to remain transparent about how personal information is handled.

Whenever possible, educational researchers should also consider whether institutionally supported, self-hosted, or European-based solutions can achieve the same research objectives, while providing greater control over participant data. Open-source platforms such as **LimeSurvey** (for surveys) or **Nextcloud** (for secure storage and collaboration) illustrate this approach, although many other suitable solutions exist depending on institutional policies and project requirements.

The following sections provide a practical framework for selecting and using digital technologies responsibly throughout the research process.

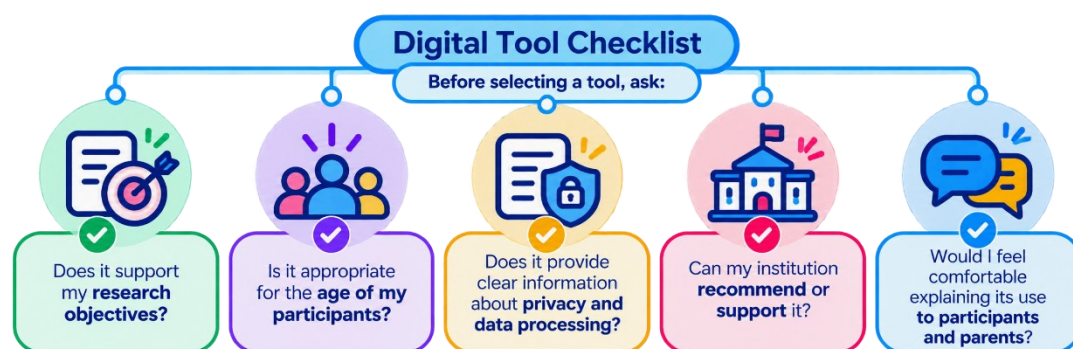
5.1 Choosing digital tools responsibly

Choosing a digital tool should begin with the needs of the research—not with the technology itself.

Before adopting any platform or application, researchers should consider whether the tool genuinely supports the research objectives and whether its use is proportionate to the information being collected. More features do not necessarily lead to better research. In many cases, simpler technologies reduce complexity, improve transparency, and minimise privacy risks.

Researchers should also consider where the technology comes from and how it processes participant information. Whenever feasible, preference should be given to solutions that provide transparent privacy information, support GDPR compliance, allow researchers or institutions greater control over data, and clearly explain how personal information is processed. Institutionally supported services, self-hosted platforms, or European-based providers may offer additional advantages, particularly when working with schools or children.

The most appropriate digital tool is not necessarily the newest or most popular one—it is the one that best supports responsible educational research.



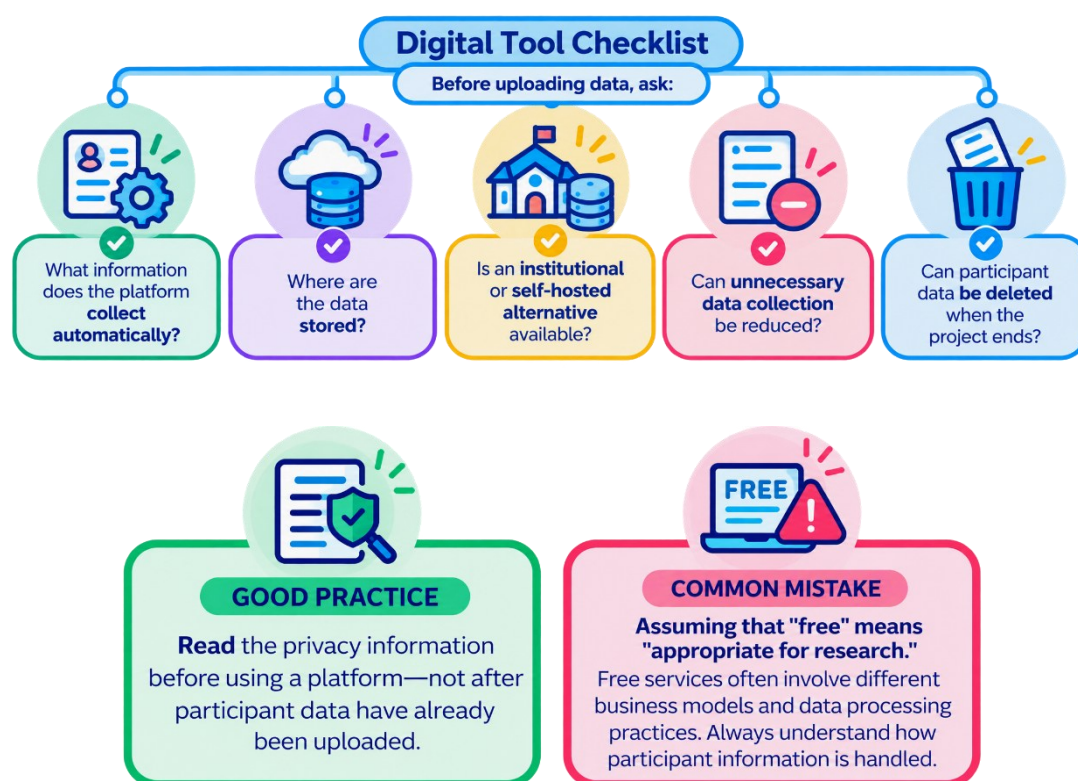
5.2 Understanding What Happens to Your Data

Many digital tools collect more information than researchers realise. Besides the information entered by participants, platforms may automatically record login details, timestamps, device information, browser settings, usage statistics, or technical logs.

Researchers do not need to become technology specialists, but they should understand what information is processed by the tools they use and whether that processing is necessary for their research.

The same applies to cloud services and external providers. Before uploading participant information, researchers should understand where data are stored, whether external companies process the information, and whether institutional alternatives are available.

Whenever possible, identifiable participant information should be minimised, and researchers should avoid uploading unnecessary personal data to external services.



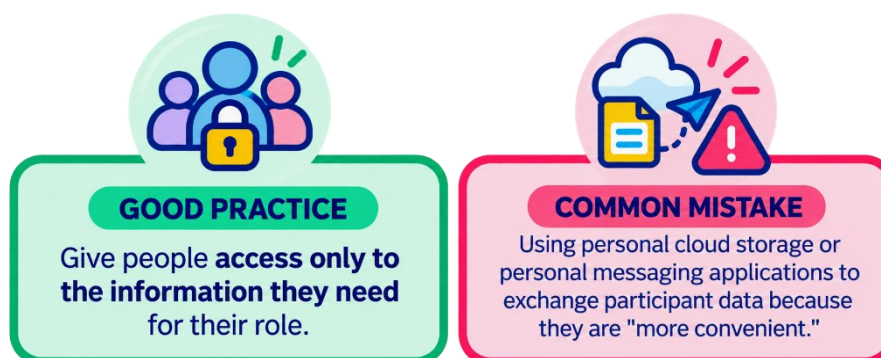
5.3 Managing Access and Digital Security

Responsible use of digital technologies also means ensuring that participant information is accessible only to those who genuinely need it.

Simple organisational practices often provide effective protection. Strong passwords, two-factor authentication where available, role-based permissions, secure file sharing, and avoiding shared user accounts all contribute to protecting research data.

Researchers should also review access regularly. As projects progress, students graduate, collaborators change roles, and external partners complete their tasks. Removing unnecessary access is just as important as granting it.

Digital security is not solely a technical issue—it is part of responsible research practice.



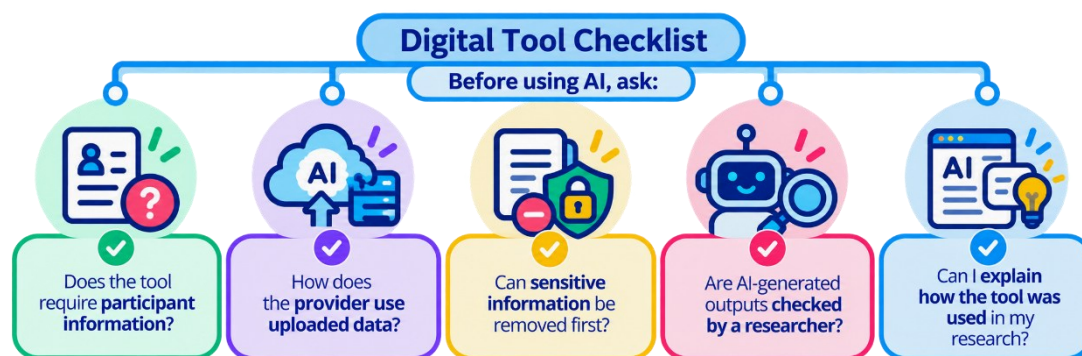
5.4 AI-Enabled Tools and Emerging Technologies

Artificial intelligence is becoming increasingly common in educational research. AI-powered transcription services, text analysis tools, learning analytics, educational chatbots, and generative AI systems can save time and support data analysis. At the same time, they require careful consideration before participant information is uploaded.

Researchers should understand how AI tools process information, whether uploaded data may be retained or used to improve future models, and whether the tool provides sufficient transparency about its operation.

Whenever possible, sensitive or identifiable participant information should not be uploaded to AI services unless researchers have established that such processing is appropriate, complies with institutional requirements, and participants have been informed where necessary.

AI should support—not replace—professional judgement. Researchers remain responsible for interpreting results, identifying errors, and ensuring that research conclusions are evidence-based.



5.5 Before You Adopt a Digital Tool

Every digital technology used in educational research should contribute to better research, while protecting participants and supporting transparency.

Rather than asking only "**Can this tool perform the task?**", responsible researchers should also ask whether the technology is appropriate for their participants, their institution, and the ethical responsibilities of the project.



Responsible Digital Technology Checklist

Before You Adopt a Digital Tool



Research

- ☐ Does this tool genuinely support my **research objectives**?
- ☐ Is it **appropriate** for my participants?
- ☐ Could a **simpler solution** achieve the same outcome?



Privacy

- ☐ Do I understand what **information** the tool collects?
- ☐ Is **unnecessary data collection** limited?
- ☐ Can participant information be **removed or deleted**?



Security

- ☐ Are data **stored securely**?
- ☐ Can **access** be **controlled**?
- ☐ Does my institution **recommend or support** this solution?



Transparency

- ☐ Can I clearly **explain** the tool to participants?
- ☐ Do I understand how the **provider processes data**?



Artificial Intelligence

- ☐ Am I uploading **identifiable participant information**?
- ☐ Will a **human always review** AI-generated outputs?
- ☐ Can I **justify using this technology** in my research?



If several answers are "No" or "I don't know", **pause** before adopting the tool and **seek further information or institutional advice**.

Chapter Summary

Digital technologies can greatly enhance educational research, but every digital tool represents a research decision. The platforms and services researchers choose influence not only how data are collected and analysed, but also how participants experience the research and how their information is protected.

Responsible researchers therefore look beyond functionality. They select technologies that are appropriate for their research objectives, transparent in their operation, proportionate to the information being collected, and supportive of participant privacy and trust. By making informed choices and regularly reflecting on the technologies they use, researchers strengthen both the quality and the integrity of their work.

Technology alone, however, cannot guarantee ethical research. Even when appropriate tools and strong privacy safeguards are in place, educational research ultimately depends on how researchers interact with participants, particularly when working with children and young people. The next chapter explores the ethical responsibilities that guide these interactions and support respectful, inclusive, and trustworthy educational research.



NEXT:
6. CONDUCTING ETHICAL EDUCATIONAL RESEARCH

Explore the ethical responsibilities that guide interactions with participants, particularly children and young people, and support respectful, inclusive and trustworthy research.



6. Conducting Ethical Educational Research

Educational research is built on relationships. Researchers work with learners, teachers, school leaders, families, and communities to better understand educational practice and contribute to its improvement. Unlike many other research settings, educational research often takes place within environments where trust, existing relationships, and unequal power dynamics already exist.

Conducting research ethically therefore involves much more than obtaining approval from an ethics committee or asking participants to sign a consent form. It requires researchers to demonstrate respect, fairness, honesty, and care throughout the research process, recognising that participants are partners in the creation of knowledge rather than simply sources of data.

Ethical educational research is also a continuous process of reflection. New situations emerge, technologies evolve, and unexpected challenges arise during almost every project. Responsible researchers therefore revisit their decisions, listen to participants, and remain prepared to adapt their practices whenever this better protects participants or strengthens the integrity of the research.

This chapter explores the ethical responsibilities that accompany educational research, with particular attention to studies involving children and young people, school environments, digital technologies, and diverse educational communities.

6.1 Educational Research with Children and Young People

Children and young people are among the most frequent participants in educational research. Their experiences, perspectives, and voices are essential for improving educational practice and developing research that responds to the realities of learning and teaching. At the same time, children require additional ethical consideration because of their evolving capacities, their dependence on adults, and the educational settings in which research often takes place.

Responsible educational research recognises children not simply as subjects of research, but as individuals with rights, dignity, and valuable perspectives.

Wherever appropriate, children should be given opportunities to understand the purpose of the research, express their views, ask questions, and participate meaningfully in decisions that affect their involvement.

Researchers should also recognise that children participate in research within relationships that already involve authority. Teachers, school leaders, and researchers may all be perceived as figures of influence, making it particularly important to ensure that participation is genuinely voluntary and that children understand they may decline participation or stop participating without negative consequences.

Research involving children also requires researchers to consider whether methods are age-appropriate. Information sheets, interview questions, questionnaires, and digital platforms should all be understandable, accessible, and suitable for the developmental stage of the participants.

Ultimately, ethical educational research seeks to protect children, while also respecting their ability to contribute meaningfully to educational knowledge.



Ethical Reflection

A researcher is interviewing ten-year-old pupils about their experiences using a new educational application. Halfway through one interview, a pupil becomes quiet and appears uncomfortable answering a particular question. What should the researcher do?

Continuing simply because parental consent has been obtained is unlikely to respect the child's wishes. A more ethical response is to pause, check whether the pupil wishes to continue, remind them that participation is voluntary, and adapt or stop the interview if necessary.



Good Practice

Design research with children in mind, not simply for children. Use language, activities, and digital tools that are appropriate for their age and level of understanding.



Common Mistake

Assuming that parental consent automatically means a child wishes to participate.



Reflective Questions

- ? Could a child explain what this research is about?
- ? Are the research activities appropriate for the participants' age?
- ? Have children been given genuine opportunities to ask questions?
- ? Could participation become uncomfortable or tiring?
- ? How will I recognise when a child wishes to stop participating?

6.2 Informed Consent and Children's Assent

Obtaining informed consent is one of the most familiar ethical requirements in research, yet it is often misunderstood as a single document or signature collected before data collection begins. In reality, informed consent is an ongoing process of communication that helps participants understand the purpose of the research, what participation involves, how information will be used, and the choices available to them throughout the study.

When research involves children and young people, this process usually includes two complementary elements: the consent of a parent or legal guardian, where required, and the child's own assent. While consent provides legal authorisation for participation, assent reflects the child's willingness to take part. Both are important for ethical educational research.

Children should receive information that is appropriate to their age, language, and level of understanding. Researchers should explain the study in ways that children can meaningfully engage with, encourage questions, and check that participants understand what they are agreeing to. Importantly, assent should not be viewed as a one-time event. Researchers should remain attentive throughout the project and recognise that a child's willingness to participate may change over time.

Informed consent also involves transparency. Participants and families should understand what data will be collected, how digital technologies will be used, whether recordings will be made, how privacy will be protected, and who can be contacted if questions arise.

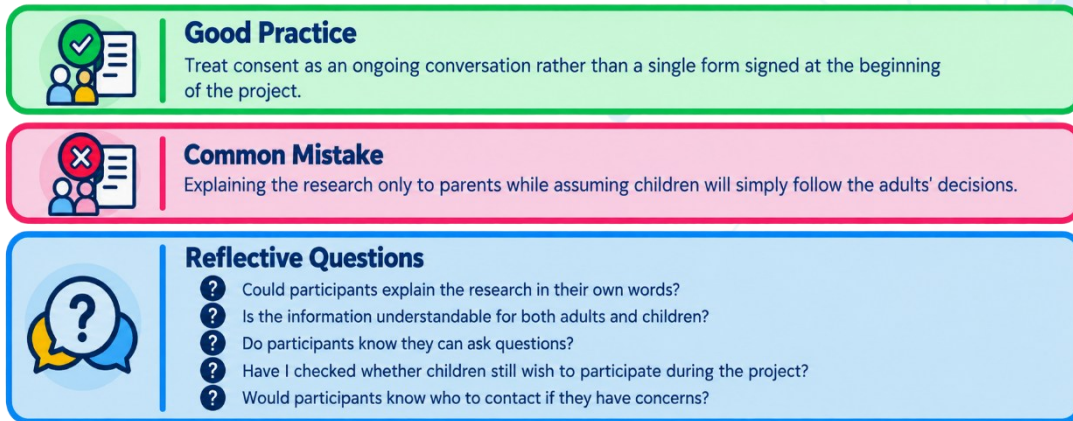
Obtaining consent is therefore not simply about meeting a procedural requirement. It is about creating the conditions for informed, voluntary, and respectful participation.



Ethical Reflection

Before beginning classroom observations, the researcher notices that one pupil repeatedly avoids the camera despite having parental consent to participate.

Although the consent forms have been signed, the pupil's behaviour may indicate reluctance to be recorded. The researcher pauses the observation, speaks with the pupil in an age-appropriate manner, and ensures that the child still wishes to participate before continuing.

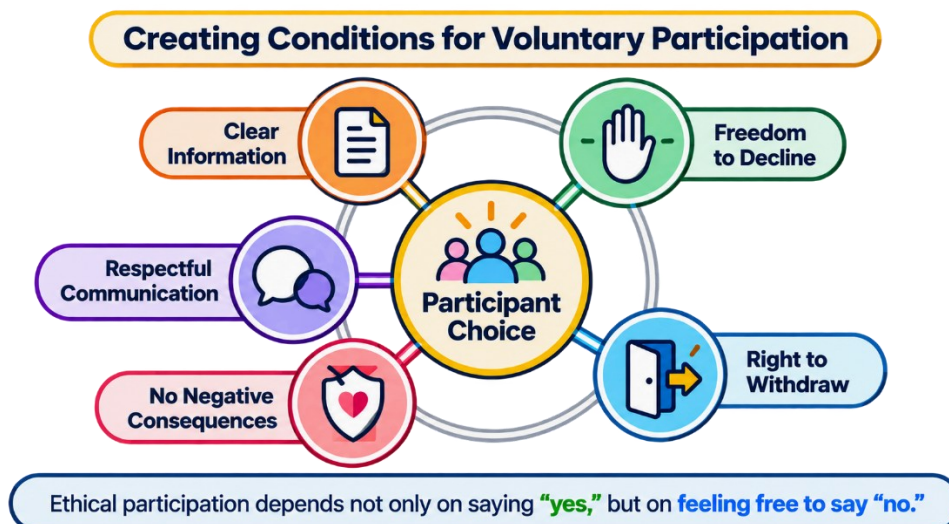


6.3 Voluntary Participation and the Right to Withdraw

Participation in educational research should always be voluntary. Individuals should decide freely whether they wish to take part and should never feel that participation is expected because of their relationship with a teacher, researcher, school leader, or institution.

This principle applies throughout the research process. Agreeing to participate at the beginning of a study does not mean that participants have committed themselves to completing every activity or remaining involved until the end. Participants should be free to decline specific questions, skip activities, or withdraw from the research without fear of negative consequences.

In educational settings, ensuring voluntary participation may require particular attention. Pupils, students, teachers, or parents may feel pressure to participate simply because the invitation comes from someone they know or because the research takes place within their school. Researchers should therefore communicate clearly that choosing not to participate—or deciding to withdraw later—will not affect educational opportunities, assessment, professional relationships, or access to services.



Researchers should also explain what withdrawal means in practice. Whenever possible, participants should understand whether information already collected can be removed from the study and whether any limitations exist, for example when findings have already been

anonymised or included in published analyses. Being transparent about these issues helps participants make informed decisions throughout the project.

Respecting the right to withdraw is not a sign of unsuccessful research. On the contrary, it demonstrates respect for participants and strengthens trust in both the research process and the researchers themselves.



Ethical Reflection

A teacher is conducting classroom research as part of a postgraduate programme. One pupil quietly tells the teacher that they no longer wish to complete the weekly research diary but is worried that refusing might affect the teacher's opinion of them.

The teacher thanks the pupil for sharing their concern, reassures them that participation is entirely voluntary, and explains that choosing not to continue will have no impact on classroom relationships or learning. The pupil's decision is respected without further discussion in front of classmates.



Good Practice

Remind participants that they may choose not to answer individual questions or withdraw from the study at any stage without negative consequences.



Common Mistake

Assuming that once consent has been obtained, participation automatically continues until the end of the project.



Reflective Questions

- ? Would participants genuinely feel comfortable saying "no"?
- ? Have I explained the right to withdraw in language participants understand?
- ? Could participants decline individual activities without feeling uncomfortable?
- ? If someone withdrew today, would I know how to respond respectfully?

6.4 Power relationships and avoiding coercion

Educational research often takes place within relationships where differences in authority already exist. Teachers work with pupils, school leaders supervise teachers, university lecturers teach students, and researchers collaborate with schools that may depend on institutional approval. These existing relationships can unintentionally influence participants' decisions about whether to take part in research.

Responsible researchers recognise these power dynamics and take active steps to minimise their influence. Ethical participation is not determined only by whether participants agree to take part, but also by whether they feel genuinely free to make that decision.

For example, a pupil may participate because they believe their teacher expects them to do so. A student teacher may feel unable to refuse a request from a university supervisor. A teacher may agree to participate because the school leadership supports the project. In each of these situations, participation may appear voluntary, while subtle pressures influence individual decisions.

Researchers should therefore create opportunities for participants to make independent choices. Invitations should avoid language that implies obligation, participation should never be linked to academic achievement or professional evaluation, and alternative activities should be available whenever participation is declined.

Researchers should also reflect on their own roles. Individuals who simultaneously act as teacher and researcher, mentor and evaluator, or school leader and principal investigator

should remain aware that these overlapping responsibilities may influence participant behaviour. In some cases, involving another member of the research team in recruitment or data collection may help reduce unintended pressure.

Recognising power relationships does not weaken educational research—it strengthens it by creating conditions in which participation is based on trust rather than obligation.



Ethical Reflection

A school principal invites all teachers to participate in a research project evaluating a new professional development programme. Although participation is described as voluntary, several teachers privately express concern that declining may be viewed negatively during future performance discussions.

To reduce this perceived pressure, recruitment is transferred to an independent researcher, participation is managed confidentially, and the principal is not informed about which teachers choose to participate.



Good Practice

Whenever possible, separate educational responsibilities from research decisions, particularly when recruiting participants or collecting data.



Common Mistake

Believing that because participation is described as "voluntary," participants automatically feel free to decline.



Reflective Questions

- ? Could my role influence participants' decisions?
- ? Might participants feel uncomfortable refusing my invitation?
- ? Have I unintentionally linked participation to educational or professional expectations?
- ? Could another researcher help reduce potential pressure?
- ? If I were in the participant's position, would I feel genuinely free to decline?

6.5 Safeguarding and participant wellbeing

Educational research should contribute positively to knowledge without causing unnecessary harm to participants. Although most educational studies involve minimal risk, researchers have a responsibility to consider how participation may affect the wellbeing, comfort, and dignity of those involved.

Protecting Participants Throughout Educational Research



Good educational research protects both people and the information they share.

Safeguarding participant wellbeing begins with thoughtful research design. Activities should be appropriate for the age, experiences, and needs of participants, and researchers should avoid placing individuals in situations that may cause unnecessary embarrassment, anxiety, or distress. Even seemingly routine activities, such as interviews, questionnaires, or classroom observations, may lead participants to discuss sensitive experiences or reveal information they had not intended to share.

Researchers should therefore remain attentive throughout the research process. Changes in behaviour, signs of discomfort, or requests to stop participating should always be taken seriously. In many cases, a short pause, an opportunity to ask questions, or the option to skip particular activities may be sufficient to support participants' wellbeing.

Educational researchers should also understand the limits of their role. While researchers should respond appropriately when concerns arise, they are not expected to act as counsellors, psychologists, or social workers. Where research raises concerns about a participant's safety or wellbeing, researchers should follow their institution's safeguarding procedures and seek advice from the appropriate professionals.

Creating a safe research environment means respecting participants, listening carefully, and being prepared to adapt research activities whenever this better protects those involved.



Ethical Reflection

During an interview about school experiences, a pupil begins describing repeated bullying and becomes visibly upset. The information was not anticipated in the research design. Rather than continuing with the interview, the researcher pauses the conversation, checks how the pupil wishes to proceed, and follows the school's safeguarding procedures after consulting the appropriate staff member. Protecting the participant takes priority over completing the interview.



Good Practice

Plan in advance how you will respond if participants become distressed or disclose information that raises concerns about their wellbeing.



Common Mistake

Continuing with an interview or observation because "the research protocol says we should."
Research procedures should never take priority over participant wellbeing.



Reflective Questions

- ? Could this activity make participants uncomfortable?
- ? How would I recognise signs of distress?
- ? Do participants know they can pause or stop at any time?
- ? Do I know my institution's safeguarding procedures?
- ? If an unexpected disclosure occurred today, would I know what to do?

6.6 Working with Sensitive Educational and Personal Data

Educational research sometimes involves information that requires particular care because inappropriate access, disclosure, or interpretation could negatively affect participants.

Sensitive information may include learning difficulties, disability, health information, behavioural observations, wellbeing, family circumstances, assessment results, or personal experiences shared during interviews. Even when such information is essential to the research, researchers should collect only what is necessary and handle it with particular care.

Researchers should also remember that educational information can become sensitive because of its context. For example, an individual pupil's assessment results, disciplinary records, or classroom behaviour may have important educational value, while also requiring careful protection to preserve privacy and trust.

When working with sensitive information, researchers should ensure that participants understand why the information is needed, who will have access to it, and how it will be protected. Whenever possible, identifying information should be separated from research data, and research findings should be reported in ways that minimise the possibility of identifying individuals or schools.

Respectful handling of sensitive information extends beyond data protection. Researchers should also consider how findings are communicated. Reports and publications should avoid language that could stigmatise participants, reinforce stereotypes, or present individuals or communities in ways that may cause unintended harm.

Ultimately, responsible researchers recognise that sensitive information deserves not only stronger protection, but also greater care in interpretation and communication.



Ethical Reflection

A research project identifies lower literacy outcomes in a small rural school. Although the results are statistically accurate, publishing the school's name could unintentionally stigmatise pupils, teachers, and the wider community.

The research team decides to report the findings anonymously and focuses on the educational implications rather than comparisons between schools.



Good Practice

Ask not only "Can we report this?" but also "How can we report this responsibly?"



Common Mistake

Assuming that removing participants' names automatically makes information non-sensitive. Small schools, unique educational settings, or combinations of characteristics may still make participants identifiable.



Reflective Questions

- ? Why is this information necessary?
- ? Could participants or schools still be identified indirectly?
- ? Have I explained clearly how this information will be protected?
- ? Could the way I present the findings unintentionally stigmatise individuals or communities?
- ? Am I treating participants with the same respect in my reporting as I did during data collection?

6.7 Conducting Research in School Settings

Schools are unique research environments. They are places of learning, care, and daily interaction, where teaching and learning should always remain the primary priority. Researchers therefore have a responsibility to ensure that research activities fit naturally within school life and cause as little disruption as possible.

Successful educational research is built on collaboration. Researchers should work closely with school leaders, teachers, and, where appropriate, parents and learners to agree on practical arrangements, communicate clearly about the purpose of the research, and remain flexible when school priorities change. Activities such as examinations, school events, or unexpected operational demands may require researchers to adapt their plans.

Researchers should also recognise that schools are communities built on trust. Respecting school routines, protecting confidentiality, and communicating openly help strengthen this

trust and encourage meaningful participation. Wherever possible, research findings should be shared with participating schools in ways that support reflection and educational improvement rather than simply fulfilling academic reporting requirements.

Finally, educational research should seek to leave a positive legacy. Even small studies can contribute to professional learning, stimulate discussion, or support evidence-informed practice. When schools choose to participate in research, they should feel that their contribution is recognised and valued.



Ethical Reflection

A researcher schedules classroom observations during the final weeks before national examinations. Teachers explain that the additional activity may increase pressure on pupils and disrupt revision.

Rather than insisting on the original timetable, the researcher postpones the observations and agrees on a schedule that better fits the school's priorities. Although the project timeline changes slightly, the research relationship is strengthened through flexibility and mutual respect.



Good Practice

Plan research **with** schools, not simply **in** schools. Involving schools in practical decisions helps create a more positive and collaborative research experience.



Common Mistake

Viewing schools simply as research sites rather than educational communities with their own priorities, routines, and responsibilities.



Reflective Questions

- ❓ Does the research fit naturally within the schools' daily activities?
- ❓ Have I discussed the practical arrangements with the school?
- ❓ Could the research unintentionally disrupt teaching or learning?
- ❓ How will participating schools benefit from taking part?
- ❓ Have I planned how research findings will be shared with the school community?

6.8 Inclusion, Accessibility and Vulnerable Participants

Educational research should aim to include diverse perspectives, while ensuring that participation is fair, respectful, and accessible to everyone involved. Inclusive research recognises that participants differ in age, language, culture, ability, learning needs, and personal circumstances, and that these differences should be considered throughout the research process.

Researchers should therefore design studies that minimise unnecessary barriers to participation. Information materials should be written in clear and accessible language, research activities should be adapted where appropriate, and digital tools should be usable by participants with different abilities and levels of digital confidence.

Particular care is needed when research involves participants who may be considered vulnerable because of their age, disability, migration background, socio-economic circumstances, or other factors that could increase the likelihood of disadvantage or exclusion. Vulnerability, however, should not automatically exclude individuals from research. Instead, researchers should consider what additional support or adaptations are needed to enable meaningful and respectful participation.

Inclusive educational research also values diverse perspectives. Participants should be recognised not only for the challenges they may experience but also for the knowledge, experiences, and insights they bring to the research.

By designing research that is accessible and inclusive from the outset, researchers improve both the ethical quality of their work and the relevance of the knowledge they generate.



Ethical Reflection

A research team plans to administer an online questionnaire to pupils. During preparation, they realise that some participants have limited digital skills and one pupil uses assistive technology.

The researchers provide additional support, ensure that the questionnaire is compatible with accessibility tools, and offer alternative ways of participating where appropriate. These adaptations enable all pupils to contribute without changing the purpose of the research.



Good Practice

Build accessibility into the research design from the beginning rather than **making** adjustments only after barriers emerge.



Common Mistake

Assuming that treating everyone exactly the same always leads to fair participation. Sometimes equitable participation requires adapting methods to meet different needs.



Reflective Questions

- ❓ Could any participant face barriers to taking part?
- ❓ Are my information materials easy to understand?
- ❓ Are the digital tools accessible to all participants?
- ❓ Have I considered language, disability, cultural diversity, or other factors that may influence participation?
- ❓ What adjustments could make participation more inclusive without affecting the research objectives?

6.9 Ethical Decision-Making and Researcher Responsibilities

Ethical educational research cannot anticipate every situation that researchers may encounter. New technologies emerge, unexpected events occur, participants respond in different ways, and research projects often evolve as they progress. Responsible research therefore depends not only on following procedures but also on exercising professional judgement.

Ethical decision-making begins by recognising that many research situations involve balancing different responsibilities. Researchers may need to consider participants' wellbeing alongside research objectives, protect confidentiality, while responding to safeguarding concerns, or adapt research procedures when unexpected challenges arise. In these situations, there may not always be a single correct answer. What matters is that decisions are thoughtful, transparent, proportionate, and guided by the principles of respect, integrity, and responsibility.

Researchers should not feel that ethical decisions must always be made alone. Discussing challenging situations with colleagues, supervisors, ethics committees, Data Protection Officers, or school leaders can provide valuable perspectives and help identify appropriate courses of action. Seeking advice should be viewed as good research practice rather than a sign of uncertainty.

The Ethical Decision Cycle



Responsible educational research is a process of continuous ethical reflection.

Finally, ethical educational research is a process of continuous learning. Every project provides opportunities to reflect on what worked well, what could be improved, and how future research can become more inclusive, trustworthy, and responsive to participants' needs. Ultimately, responsible educational researchers are not defined by never encountering ethical challenges, but by how they respond when those challenges arise.



Ethical Reflection

During a classroom observation, a researcher notices that the planned methodology is making several pupils uncomfortable. Continuing would allow the project to remain on schedule, while adapting the approach would require additional time and approval from the research team.

The researcher decides to pause the observations, discusses the situation with colleagues, and modifies the methodology before continuing. Although this delays the project slightly, the revised approach better respects participants and improves the quality of the research.



Good Practice

Ethical decisions rarely need to be made in isolation. When in doubt, pause, reflect, and seek advice.



Common Mistake

Viewing ethics as a checklist completed before data collection rather than as a responsibility that continues throughout the research lifecycle.



Reflective Questions

- ❓ Would I be comfortable explaining this decision to participants?
- ❓ Does this decision respect both the rights and wellbeing of those involved?
- ❓ Have I considered alternative approaches?
- ❓ Should I seek advice before proceeding?
- ❓ What can I learn from this situation to improve future research?

Chapter 6 Summary

Conducting ethical educational research involves far more than following procedures or complying with regulations. It requires researchers to make thoughtful decisions that respect the rights, dignity, wellbeing, and perspectives of all participants throughout the research process. By recognising power relationships, supporting meaningful participation, protecting sensitive information, creating inclusive research environments, and reflecting carefully when ethical challenges arise, researchers strengthen both the quality of their work and the trust of the educational communities with whom they collaborate.

No guide can anticipate every situation that researchers may encounter. Ethical educational research therefore depends not only on knowledge, but also on professional judgement, openness to reflection, and willingness to seek advice when needed. The principles explored throughout this chapter—and indeed throughout the EMPATHER Core Guide—are intended to support researchers in making informed, responsible, and context-sensitive decisions rather than simply following a set of rules.

The final chapter brings together these principles in a practical EMPATHER Responsible Research Checklist. Designed as a quick-reference companion, it provides a concise set of questions and actions that researchers can use before, during, and after their projects to support responsible educational research in everyday practice.

7. EMPATHER Responsible Research Checklist

The EMPATHER Responsible Research Checklist brings together the key principles presented throughout this guide into a practical tool that can be used before, during, and after an educational research project. Rather than replacing institutional procedures, ethics review, or data protection requirements, the checklist is intended to support reflection, planning, and responsible decision-making throughout the research lifecycle.

Researchers are not expected to answer "yes" to every question immediately. Instead, the checklist helps identify issues that may require further consideration, discussion, or support before moving to the next stage of the project.

The checklist may be used when planning new research, reviewing ongoing studies, preparing ethics applications, or conducting final project reviews. It can also support collaborative discussions within research teams and serve as a practical reminder of the principles of ORRI, Privacy-by-Design, and responsible digitalisation.

Stage 1 — Before You Begin

Research Purpose

- ☐ Is the purpose of the research clearly defined?
- ☐ Is the study likely to contribute to educational knowledge or practice?
- ☐ Have I considered how the research reflects the principles of ORRI?

Participants

- ☐ Have I identified who will participate?
- ☐ Have I considered whether children or other vulnerable participants require additional protections?
- ☐ Have I considered diversity, accessibility, and inclusion?

Privacy & Ethics

- ☐ Have I identified the personal data needed?
- ☐ Am I collecting only information that is necessary?
- ☐ Have I considered potential privacy and ethical risks?
- ☐ Do I know whether ethics approval or institutional advice is required?

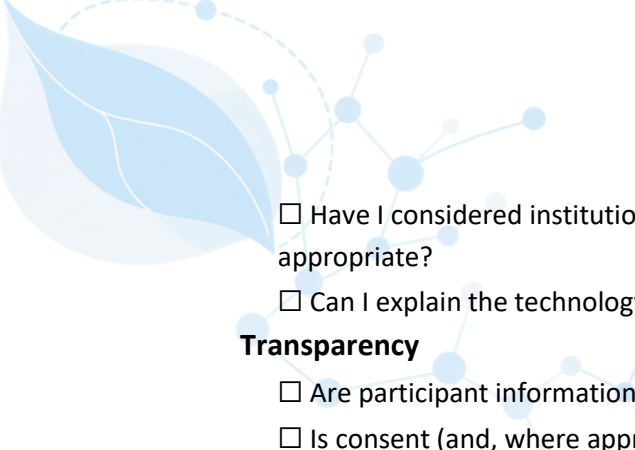
Stage 2 — Designing the Research

Research Design

- ☐ Does the methodology minimise unnecessary risks?
- ☐ Are data collection methods appropriate for the participants?
- ☐ Have I planned how identifiable information will be protected?

Digital Technologies

- ☐ Have I evaluated the digital tools I intend to use?
- ☐ Do I understand what information they collect?

- 
- ☐ Have I considered institutionally supported or European-based alternatives where appropriate?
 - ☐ Can I explain the technology clearly to participants?

Transparency

- ☐ Are participant information materials clear and understandable?
- ☐ Is consent (and, where appropriate, children's assent) planned appropriately?

Stage 3 — During the Research

Respecting Participants

- ☐ Do participants continue to participate voluntarily?
- ☐ Do participants know they may withdraw at any time?
- ☐ Am I attentive to signs of discomfort or distress?

Managing Data

- ☐ Am I collecting only the information I originally planned?
- ☐ Are research data stored securely?
- ☐ Is access limited to authorised members of the research team?

Ethical Reflection

- ☐ Have any unexpected ethical issues emerged?
- ☐ Do I need to adapt the research procedures?
- ☐ Should I seek advice before continuing?

Stage 4 — Completing the Research

Data Management

- ☐ Have I anonymised or pseudonymised data where appropriate?
- ☐ Have I reviewed what information should be retained?
- ☐ Have unnecessary files been securely deleted?

Reporting Findings

- ☐ Are findings reported respectfully?
- ☐ Could individuals or schools be identified unintentionally?
- ☐ Are conclusions supported by the evidence?

Giving Back

- ☐ Have I considered how participating schools or communities will benefit from the research findings?

Stage 5 — Reflect and Improve

Professional Reflection

- ☐ What worked well?
- ☐ What ethical challenges emerged?
- ☐ What would I do differently next time?
- ☐ Have I documented lessons learned?
- ☐ Can these experiences improve future research?

Final Reflection

Before concluding your project, ask yourself:

- Would I be comfortable explaining every important research decision to participants, parents, colleagues, and an ethics committee?
- Have I treated participants with respect throughout the entire research process?
- Have I protected their information as carefully as I would expect someone to protect my own?
- Does this research contribute positively to educational practice?
- Would I conduct this research in the same way again?

If you can answer these questions with confidence, your project is likely to reflect the principles of responsible educational research promoted throughout the EMPATHER Toolkit.





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Glossary

Accountability: The responsibility of researchers to explain, justify, and document the decisions they make throughout a research project. Accountability means demonstrating that research has been planned, conducted, and reported responsibly, ethically, and transparently.

AI-enabled Tool: Any digital application that uses artificial intelligence to support tasks such as data analysis, content generation, assessment, prediction, or decision support. Researchers should understand how these tools process information, what data they collect, and whether their use is appropriate for the research context.

Anonymisation: The process of removing or permanently transforming personal information so that individuals can no longer be identified, directly or indirectly. Once data are truly anonymised, they are no longer considered personal data under the GDPR.

See also: Pseudonymisation.

Assent: A child's affirmative agreement to participate in research. Assent complements parental or guardian consent and reflects the child's own willingness to take part. Researchers should seek assent in ways that are appropriate to the child's age and level of understanding.

Children: For the purposes of this toolkit, children are individuals below the age at which they are legally recognised as adults under the applicable national legislation. Research involving children requires additional ethical consideration and appropriate safeguards.

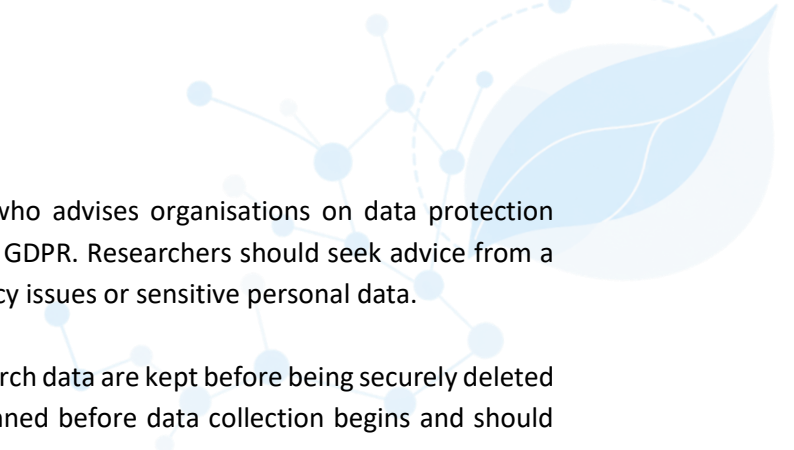
Cloud Service: An online service used to store, process, or share digital information over the internet. Researchers should understand where research data are stored, who provides the service, and whether appropriate privacy and security safeguards are in place.

Consent: A voluntary, informed, specific, and freely given agreement to participate in research after receiving clear and understandable information about the study. Consent should be viewed as an ongoing process rather than a single signed document.

Data Controller: The organisation or individual that determines why and how personal data are processed. In educational research, this is often the university, research institution, school, or project coordinator.

Data Minimisation: The principle of collecting only the personal information that is genuinely necessary to answer the research question. Collecting additional information "just in case" should be avoided.

Data Processing: Any operation performed on personal data, including collecting, recording, storing, organising, analysing, sharing, or deleting information.



Data Protection Officer (DPO): A specialist who advises organisations on data protection obligations and supports compliance with the GDPR. Researchers should seek advice from a DPO whenever projects involve complex privacy issues or sensitive personal data.

Data Retention: The period during which research data are kept before being securely deleted or archived. Retention periods should be planned before data collection begins and should reflect legal, ethical, and research requirements.

Data Sharing: Making research data available to other researchers, organisations, or the public under appropriate conditions. Data sharing should always respect participant privacy, confidentiality, and applicable legal obligations.

Digital Footprint: Information generated through the use of digital technologies, including activity logs, metadata, device information, and online interactions. Researchers should consider that digital tools may generate additional information beyond the data intentionally collected.

Digital Tool: Any software application, online platform, cloud service, or digital technology used to support educational research, including survey platforms, learning management systems, AI applications, communication tools, and data analysis software.

Educational Research: Systematic investigation designed to improve understanding of teaching, learning, educational systems, or educational practice through the collection and analysis of evidence.

Ethics Committee: An independent body that reviews research proposals to ensure that participants' rights, wellbeing, and dignity are appropriately protected before research begins.

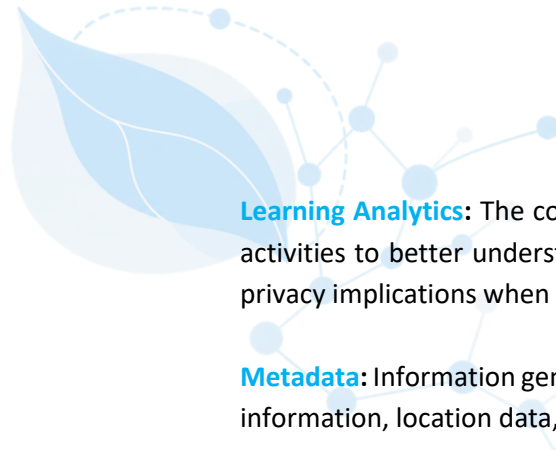
Ethical Reflection: The continuous process of considering how research decisions may affect participants, schools, communities, and society, and adapting research practices whenever appropriate.

GDPR: The General Data Protection Regulation (Regulation (EU) 2016/679), which establishes the legal framework for processing personal data within the European Union.

Inclusion: Designing research so that individuals from diverse backgrounds and with different needs can participate meaningfully and without unnecessary barriers.

Informed Consent: Consent given after participants have received sufficient information about the purpose of the research, what participation involves, how data will be used, potential risks, and their rights as participants.

Integrity: Conducting research honestly, responsibly, and consistently, while maintaining high standards of scientific and ethical practice.



Learning Analytics: The collection and analysis of data about learners and their educational activities to better understand and improve learning. Researchers should carefully consider privacy implications when using learning analytics.

Metadata: Information generated automatically about other data, such as timestamps, device information, location data, or system logs. Metadata may itself constitute personal data.

Open Science: An approach that promotes transparency, collaboration, and the responsible sharing of research methods, publications, educational resources, and—where appropriate—research data.

ORRI (Open and Responsible Research and Innovation): An approach that encourages research to be transparent, inclusive, participatory, ethically responsible, and responsive to societal needs throughout the research lifecycle.

Participant: Any individual who voluntarily takes part in a research project by contributing information, experiences, opinions, or other forms of data.

Personal Data: Any information relating to an identified or identifiable individual, including names, photographs, email addresses, voice recordings, online identifiers, or combinations of information that could reveal someone's identity.

Privacy-by-Design: A proactive approach that integrates privacy considerations into the planning, design, implementation, and completion of research rather than addressing them only after data collection has begun.

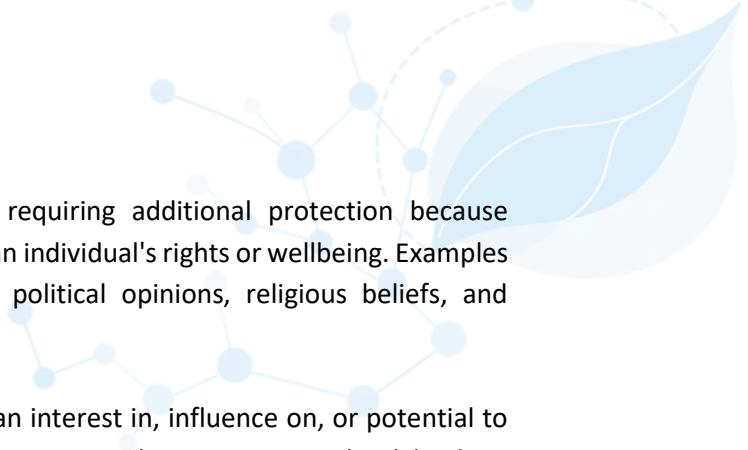
Pseudonymisation: Replacing identifying information with codes or pseudonyms so that participants cannot be directly identified without additional information stored separately. Unlike anonymisation, pseudonymised data remain personal data.

Research Lifecycle: The sequence of activities involved in a research project, from planning and design through data collection, analysis, reporting, storage, and final deletion or archiving of research data.

Responsible Digitalisation: The selection, implementation, and use of digital technologies in ways that protect participants' rights, promote transparency, minimise risks, and support trustworthy educational research.

Risk Assessment: A structured process used to identify potential ethical, privacy, security, or organisational risks before and during a research project.

Safeguarding: Measures taken to protect participants—particularly children and vulnerable individuals—from harm, abuse, exploitation, or unnecessary distress during research.



Sensitive Personal Data: Personal information requiring additional protection because inappropriate disclosure could significantly affect an individual's rights or wellbeing. Examples include health information, disability, ethnicity, political opinions, religious beliefs, and biometric data.

Stakeholder: Any individual or organisation with an interest in, influence on, or potential to be affected by a research project, including learners, teachers, parents, school leaders, policymakers, researchers, and community organisations.

Transparency: Communicating openly and clearly about how research is designed, conducted, managed, and reported so that participants and stakeholders understand the research process.

Vulnerable Participants: Individuals who may require additional protection because of age, disability, dependency, social circumstances, language barriers, or other factors that could increase the risk of disadvantage during research.

Wellbeing: The physical, emotional, psychological, and social welfare of research participants. Protecting participant wellbeing is a continuous responsibility throughout the research process.



Responsible Educational Research in the Digital Age

The EMPATHER ORRI Toolkit brings together the key principles of Open and Responsible Research and Innovation (ORRI), Privacy-by-Design, and responsible digitalisation, providing practical guidance for every stage of the educational research lifecycle.

This guide supports researchers, educators, and institutions in making ethical, inclusive, and socially responsible decisions when conducting research with digital technologies.

Through clear explanations, practical tools, and the EMPATHER Responsible Research Checklist, it empowers the research community to reflect, plan, and act responsibly — for high-quality, trustworthy, and impactful educational research.



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