

Technology Design for Justice – A Role-Play

Duration

15–20 minutes

Learning Objectives

By the end of the activity, students will be able to:

- understand the ethical dimension of developing and using technology;
- evaluate technical solutions from the perspective of affected users and communities;
- reflect on user-centered design, digital inclusion, and fairness;
- develop awareness of accessibility and human rights in technological decision-making;
- propose a solution that is both practical and rights-based.

Materials

- role-play cards with design scenarios and stakeholder roles
- pens
- flipchart, whiteboard, or large paper for collecting ideas
- optional: short reflection worksheet

Lesson Procedure

1. Introduction / Warm-up (3 minutes)

Start by connecting to the previous lesson:

“We have seen that technology can support human rights. But what happens when technology is not accessible or fair for everyone? Who is responsible for making technology just?”

Ask a few opening questions:

- Can technology ever be neutral?
- Who benefits from a technical design, and who might be excluded?
- Why do fairness and access matter in digital life?

Briefly highlight that design decisions always have **social consequences** and connect this to:

- **human rights**
- **digital inclusion**
- **SDG 10: Reduced Inequalities**
- **SDG 16: Peace, Justice and Strong Institutions**

2. Group Work – Technology Design for Justice (10–12 minutes)

Divide the class into **small groups of 3–4 students**.

Each group receives:

- one scenario card;
- one set of roles.

Roles in each group

- **Affected user / target group representative**
for example: a person with disabilities, someone without reliable internet access, an elderly person, or a member of a marginalized group
- **Developer / designer**
suggests technical solutions
- **Ethics officer / policymaker**
checks whether the solutions are fair and respect rights
- **Optional: investor / manager**
focuses on costs, efficiency, or implementation limits

Task

Explain the task:

“Act out the situation. The affected user explains the problem or their needs. The developer proposes technical solutions. The ethics or policy representative evaluates

these ideas from the perspective of human rights and fairness. Together, find a solution that is realistic, inclusive, and ethically responsible.”

Students should think about:

- Who might be excluded by the technology?
- What changes are needed to make the design more accessible?
- What trade-offs might appear between efficiency, cost, and fairness?
- Which human rights or SDGs are involved?

Suggested scenarios

Scenario 1 – Smart City App

A city wants to introduce a new smart-city system for transport and public services. A group represents older adults who do not have access to smartphones.

Possible roles: older resident, app developer/city planner, data protection or ethics representative.

Scenario 2 – Learning Software

A technology company develops learning software for schools in developing regions. A group represents students with unstable internet access and only basic devices.

Possible roles: rural student, software developer, education expert.

Scenario 3 – AI Job Application Platform

A start-up creates an AI-based hiring platform. A group represents applicants from socioeconomically disadvantaged backgrounds who fear algorithmic discrimination.

Possible roles: applicant, AI developer, equality officer.

Students get about **7–8 minutes** for preparation and role-play.

3. Plenary and Reflection (3–5 minutes)

Bring the class back together.

Each group briefly presents:

- their scenario,
- the different positions in the discussion,
- the final solution,
- the main challenge or conflict.

Guide reflection with questions such as:

- Which technical compromises were necessary to protect everyone's rights?
- Where were the biggest ethical challenges in the design process?
- How can engineers and designers make sure their products respect human rights?
- What does sustainability mean in the context of technology and justice?
- Is a technology successful if it works technically but excludes some people?

Conclusion

Close with a short takeaway:

Good technology is not only efficient or innovative. It also needs to be accessible, fair, and designed with people's rights in mind.

Templates and Cards

Scenario Card Template

Technology Design for Justice – Scenario Card

Scenario title:

Context:

What technology is being designed or introduced?

Main problem:

Who might be excluded or disadvantaged?

Related SDG(s):

Human rights / fairness issue:

Task for the group:

Find a technology design solution that is realistic, inclusive, and fair.

Role Card Template

Role Card

Your role:

Your perspective:

What matters most to you in this situation?

Your main concern:

What do you want from the solution?

One argument you will bring into the discussion:

Group Planning Sheet

Group Planning Sheet

Scenario: _____

Roles in our group:

- Affected user: _____
- Developer / designer: _____
- Ethics / policy representative: _____
- Optional investor / manager: _____

What is the biggest conflict in this scenario?

What technical solution is being proposed?

How is the solution made more inclusive?

What compromises are necessary?

Final group solution: