EdTechReflector 2.0. An instrument for the pedagogical reflection of using digital educational media

This checklist helps you reflect on the use of an educational technology (edtech) tool from a pedagogical perspective. Answer the following questions and, for each question, tick the answer option that applies.

At the end, count how many times you have selected each colour (1 tick = 1 point). Answer options marked with two colours count as one point for each colour.

How is the learning content prepared and presented from a didactic and methodological perspective?

1. The edtech tool mainly provides or enables tasks in the following areas:

   - ☐ Reproduction (strong focus on repetition)
   - ☐ Application (focus on applying knowledge or skills within a repetitive framework)
   - ☐ Transfer (strong focus on applying knowledge or skills to something new)

2. The edtech tool primarily provides or enables the following approaches to learning (task types):

   - ☐ Receptive (understanding and making sense of content)
   - ☐ Analytical (examining, comparing and evaluating content)
   - ☐ Creative (independently designing and developing solutions)
   - ☐ Hands-on (actively experimenting and taking practical action)

3. The edtech tool primarily provides or enables the following approaches to learning (social settings):

Individual

Collaborative/cooperative

4. In addition to textual formats, the edtech tool also uses other forms of presentation, such as images, audio, video or animation.

Yes

No

5. Teachers can add their own tasks.

No

Using templates from the edtech tool

Free task design

How do students learn with the edtech tool?

6. The learning process is primarily linear (i.e. students follow a predefined structure).

Yes

No

7. The learning process is primarily modular (i.e. students choose the order and/or manner in which they complete tasks).

Yes

No

8. The learning process is minimally constrained by the edtech tool. Teachers and/or learners can adapt the edtech tool to a wide range of working types and social formats.

Yes

No

9. The learning process is primarily accompanied by tips or guidance that

are displayed automatically or controlled by the system

relate to the specific task

are more general and encourage reflection on different solution strategies

10. The learning process is organised around motivational components that primarily

are geared towards competition and/or self-optimisation

are based on the subject matter and/or highlight broader contexts, such as cross-curricular connections

strengthen creativity and self-efficacy

How does the edtech tool provide feedback to students and show them how they are performing?

11. The feedback displayed relates to the content of the task or the topic area.

Feedback is provided automatically (correct/incorrect)

Feedback explains the correct solution or provides topic-related hints

12. Feedback consists only or mainly of correct/incorrect messages, scores, or formats such as red/green colour coding, percentages, bar charts or pie charts.

Yes

No

13. Students' learning performance is presented in comparison with that of other students (e.g. through high scores or class rankings).

Yes

No

14. Students can compare their own learning performance over time.

Yes

No

15. Parents can check students' learning performance (e.g. via parent portals or parent accounts).

Yes

No

How is my students' learning progress presented to me as a teacher?

16. The edtech tool mainly provides overviews (such as dashboards), structured by, e.g., traffic-light colours.

Yes

No

17. The evaluations show comparisons between individual students, for example in the form of a ranking.

Yes

No

18. The edtech tool provides detailed evaluations, for example broken down by the individual tasks completed.

Yes

No

19. The edtech tool offers the option of adapting evaluations (in terms of criteria or presentation format) or creating custom evaluations.

Yes

No

20. The edtech tool does not provide any information about student progress.

Yes

No

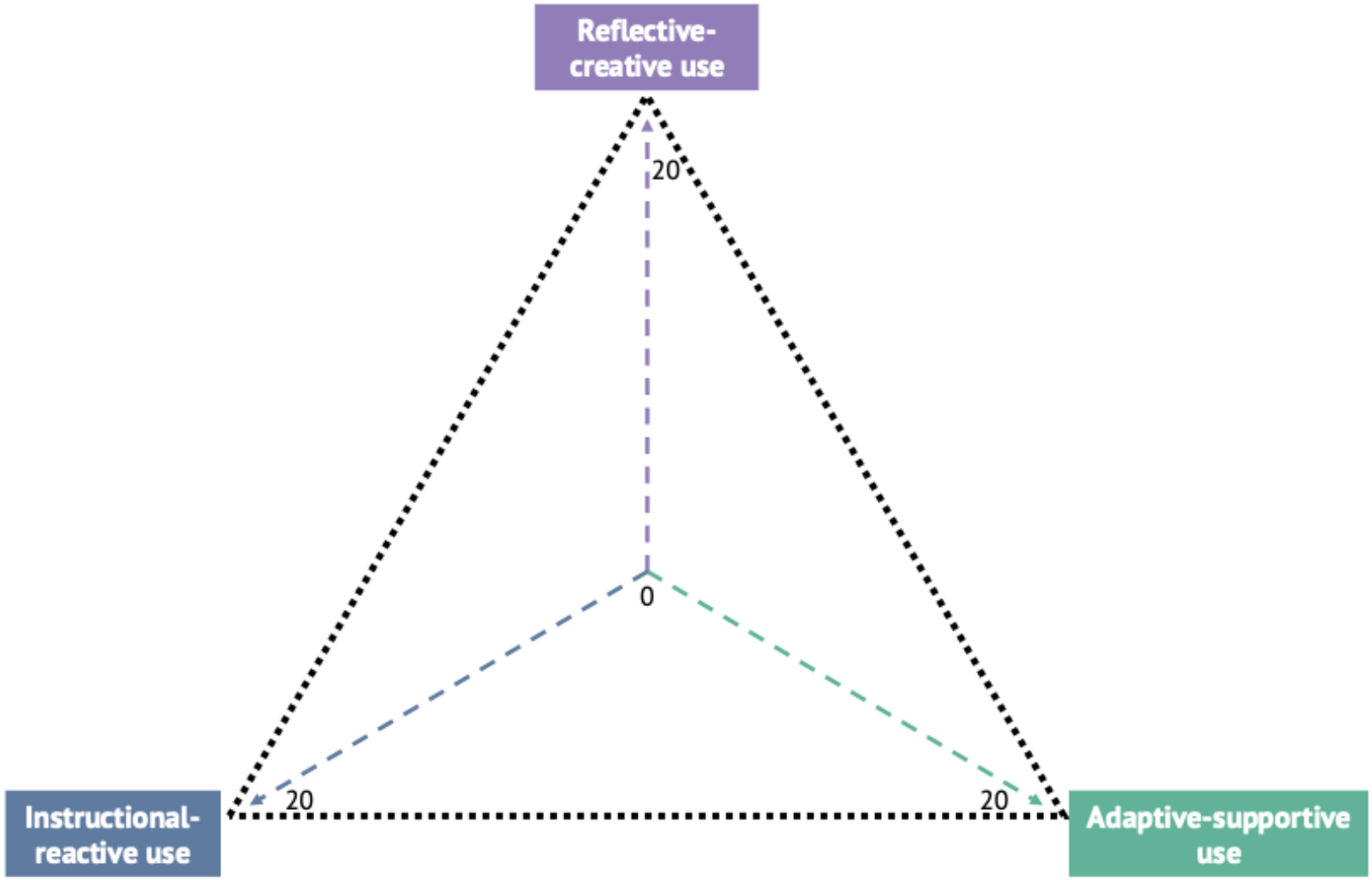
Interpretation Guide (Short Version)

You can use this overview to interpret the results of your analysis and identify which pedagogical orientation your tool supports. The more points you have assigned to a category, the more strongly the edtech tool supports the pedagogical implications associated with that category.

Type	Points	Presentation of learning content	Guiding the learning process	Feedback to learners	Evaluation for teachers	Pedagogical implication
Instructional-reactive	/20	standardised, reproductive, predefined	linear, closed	repetitive, tightly guided	standardised (scores, correct/incorrect, rankings)	The tool promotes knowledge acquisition through practice and control; it is suitable for automation, repetition and clearly defined competence objectives
Adaptive-supportive	/20	application-oriented, partly open, modular	modular, adaptive	analytical, individual	explanatory, topic-related, supportive	The tool supports individualised learning paths and provides pedagogical added value through differentiation
Reflective-creative	/20	creative, collaborative, exploratory, adaptable	open, participatory	creative, hands-on, cooperative	dialogic, reflective, customisable	The tool gives learners opportunities for creative freedom, encourages reflection and critical thinking, and strengthens pedagogical autonomy

Tool Compass

Plot your score on the corresponding line in the Tool Compass and connect the markers. This allows you to see which pedagogical orientation your tool supports and to what extent.



Types (Long Version)

Type	Instructional-reactive tools	Adaptive-supportive tools	Reflective-creative tools
Features according to the EdTechReflector	• Tasks focus on **reproduction** and **application** within clearly defined frameworks. • The learning process is organised in a **linear** way – the system determines the pathway. • Feedback is usually **standardised**, for example through correct/incorrect messages, scores or rankings. • Learning progress is visualised in **dashboards or rankings**.	• Tasks provide **application- or analysis-based formats** and occasionally also require transfer. • The learning process is **modular or partly open**: students can choose different pathways through the tasks. • Feedback provides **explanations relating to the content** and is sometimes diagnostic. • Learning progress **is evaluated in a differentiated way**, for example by topic or task.	• Tasks are **transfer-oriented, creative and hands-on**. • The learning process is organised in an **open or participatory way**. • Feedback is **dialogic, reflective or peer-based**. • Teachers can **adapt evaluations and task structures themselves**.
Pedagogical implication	These tools are particularly suitable for practice, repetition and diagnostic activities. They promote structure, regularity and self-discipline, but also carry the risk of reducing learning processes to the reproduction of knowledge and individual details. Teachers should therefore consider **how these tools can be embedded in open and reflective teaching** – for example, through follow-up discussions or by applying the content to students' own contexts.	Adaptive edtech tools support **individualised learning**, but they also model highly specific learning logics, which are often algorithmically governed. Teachers should understand **how the tool makes decisions** and critically reflect on **the conception of learning** embedded within it. The pedagogical added value lies less in the way the learning process is guided than in the **interpretation and contextualisation** of the results.	Such tools offer a high degree of pedagogical freedom, but they also require **didactic clarity** and **self-regulation skills** on the part of learners. They are particularly suitable for project-based learning, cross-curricular topics and reflective phases. One challenge may be to structure this openness productively and make learning processes visible.

Reflection prompts	• To what extent is your teaching pre-structured by the tool? • Where can you create space for students to go beyond the tasks? • Does the tool actually support understanding – or mainly repetition? • How can feedback mechanisms, such as scores and rankings, be framed pedagogically?	• How does the tool "decide" which tasks or support learners receive? • Does the system actually support individual learning processes or only predefined pathways? • How can feedback information be interpreted and used from a pedagogical perspective? • Which complementary methods can be used to reflect learners more deeply rather than merely responding to their learning outcomes?	• What opportunities for independent decision-making does the tool provide, and how can you make purposeful use of them? • How can reflection and creative production be embedded in teaching? • To what extent does the tool challenge or promote critical thinking about learning processes themselves? • Which forms of documentation or exchange could enhance learning outcomes?

Test your edtech tool also online with the interactive **EdTechReflector 2.0**:

☞ https://unblackthebox.org/en/materials-information/ubtb-open-educational-resources/the-edtechreflector-2-0/online-version-edtechreflector-2-0/

The EdTechReflector is available under an open licence (CC BY-SA 4.0). You may use, adapt and republish its content, provided that modified versions are also made freely available and that the authors are credited: Iza Czarnojan, Sigrid Hartong, Sieglinde Jornitz, Felicitas Macgilchrist, Christoph Richter, Ina Sander and Nadja Schürmann (2026). *EdTechReflector 2.0. An instrument for the pedagogical reflection of using digital educational media*. *Available at: https://unblackthebox.org/en/materials-information/ubtb-open-educational-resources/the-edtechreflector-2-0/.*