

### What?

Teaching methods include the method of interaction between teacher(s) and student(s), or between students themselves, with the purpose of achieving certain objectives. This happens on the basis of specific subject matter, using media and possibly occurs with integrated testing; taking into account the needs and preferences of the diversity of students in higher education. <sup>1</sup>

### Why and for whom? <sup>1, 6, 7</sup>

Didactic methods encourage learning activities that contribute to achieving the set learning objectives. One of the most important tasks within education is the designing and developing of a learning environment that activates students to achieve certain objectives. The use of a variety of consciously chosen methods supports all students in achieving the objectives.

### Tips & Tricks <sup>1, 2, 3, 4, 5, 6, 7</sup>

#### Points of attention concerning didactic methods

- Synchronization** | Always ask yourself the following questions: what are the learning objectives (e.g. critical thinking), which learning activities do I want to use (e.g. critical processing), which didactic methods are appropriate (e.g. discussion), how is this best organized (e.g. in groups) and which media and technologies can be used to do this? (e.g. Padlet).
- Didactic principles** | Take didactic principles into account (check out Sheet 2: didactic principles).

- **Activating methods** | Implement activating didactic methods. This will result in more attention, involvement, learning outcomes, motivation and deeper processing among students. Teachers can thus better assess to what extent the subject matter has been understood.
- **Student characteristics** | Take into account the characteristics (e.g. education level, prior knowledge) and the size of the student group, and the context factors (e.g. time, space, material) when choosing the didactic method.
- **Class management** | Think of class management when choosing the method of the organization and grouping of students. Do students work individually, in group or in class?
- **Post-discussion** | Always implement a follow-up discussion when using didactic teaching methods (tip: voting or sharing answers via apps can lower the threshold to speak up).

### Points of attention concerning the use of ICT and media

- **Media** | Ensure that all necessary media are present, both for the teacher (e.g. computer, recorder, projector) and for the student (e.g. worksheets, materials, software).
- **Didactic principles** | Take didactic principles into account (also check out Sheet 2: didactic principles).
- **Professionalization** | Professionalize teachers and staff according to the TPACK model: combine subject-specific (what), pedagogical (how) and technological knowledge (use of media) to make meaningful use of IT and to have a positive effect on learning performance.
- **Preconditions** | Pay attention to the preconditions according to the four-in-balance model: (1) a clear vision, (2) expertise of the parties involved, (3) good infrastructure (e.g. Wi-Fi and laptops) and (4) the necessary content and applications (e.g. apps and software).

## Some examples of didactic (activating) teaching methods

There are many didactic methods. Each didactic method is accompanied by a certain learning behaviour of the student (for example: listening, researching, discussing, explaining, etc.). Table 1 contains some examples of didactic (activating) teaching methods. Keep in mind that this list is not exhaustive or prescriptive and that it is important to always take the specific context into account. <sup>1, 2, 4, 5, 6</sup>

Student thinks along	Student participates		
	Individual participation	Group participation	Actions outside of course
<ul style="list-style-type: none"> <li><input type="checkbox"/> Concept map</li> <li><input type="checkbox"/> Demonstrate</li> <li><input type="checkbox"/> Identify the thinking process</li> <li><input type="checkbox"/> Teach</li> <li><input type="checkbox"/> Guest speakers</li> <li><input type="checkbox"/> Rhetorical questions</li> <li><input type="checkbox"/> Examples</li> <li><input type="checkbox"/> ...</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Classroom assessment techniques</li> <li><input type="checkbox"/> Concept map</li> <li><input type="checkbox"/> Experiment</li> <li><input type="checkbox"/> One-minute-paper</li> <li><input type="checkbox"/> Assignments and tasks</li> <li><input type="checkbox"/> Portfolio</li> <li><input type="checkbox"/> Provoke reflection</li> <li><input type="checkbox"/> Voting</li> <li><input type="checkbox"/> Asking questions</li> <li><input type="checkbox"/> ...</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Case studies</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Experiment</li> <li><input type="checkbox"/> Team work</li> <li><input type="checkbox"/> Interdisciplinary projects</li> <li><input type="checkbox"/> Jigsaw</li> <li><input type="checkbox"/> Assignments and tasks</li> <li><input type="checkbox"/> Peer Assisted Learning (PAL)</li> <li><input type="checkbox"/> Peer instruction</li> <li><input type="checkbox"/> Project-based education</li> <li><input type="checkbox"/> Role play / simulations</li> <li><input type="checkbox"/> Student presentations</li> <li><input type="checkbox"/> Think-pair-share</li> <li><input type="checkbox"/> Zoom sessions</li> <li><input type="checkbox"/> ...</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Company visits and excursions</li> <li><input type="checkbox"/> Flipped classroom</li> <li><input type="checkbox"/> Preparation</li> <li><input type="checkbox"/> ...</li> </ul>

Table 1: Overview of possible didactic (activating) teaching methods

Apps and software can support didactic methods or learning objectives. The 'Onderwijstools.be' website offers an extensive collection of possible tools, divided into a few handy categories. <sup>5</sup> Below you can find a selection from the range:

#### Tools for interaction

- **Slide** | ask live questions and create polls.
- **Kahoot!** | quiz, discussion, ...
- **Bitly** | makes long website URLs readable if you have to retype them quickly.
- **Padlet** | an online chalk board.
- **Mentimeter** | vote via laptop, tablet or smartphone without external voting boxes.
- **Socrative** | different question types, quiz, etc.
- **FreeMind** | mind maps.

#### Tools to enhance instruction

- **Quizlet** | actively process information with exercises, flashcards, etc.
- **EDPuzzle** | guidance when making an interactive video.
- **Piktochart** | make an infographic easily.
- **PowToon** | animated presentations / videos.
- **Weebly** | create websites easily.

#### Tools for assessment purposes

- **Mentimeter** | use laptops, smartphones or tablets as ballot boxes.
- **Tricider** | brainstorming tool to give opinions and assessments.
- **Flubaroo** | quickly evaluate multiple-choice and fill-in-the-blanc tests via Google Forms.

### Tools for content purposes

- ❑ **PDFCandy** | convert PDF to Word or vice versa, edit PDF files, etc.
- ❑ **H5P** | creation of a large variety of didactic assignments.
- ❑ **Amara Editor** | subtitle videos.
- ❑ **Screencast-o-matic** | recording of screencasts (= what is happening on the screen).

### Tools for collaboration purposes

- ❑ **Airtable** | easy creation of databases.
- ❑ **Appear.in** | free software without log-in for video conversations for up to 8 people.
- ❑ **Twitter** | e.g. collecting ideas and responses via a hashtag.

### Tools for guidance purposes

- ❑ **Learning path** | extra exercises, processing assignments, theory, etc. (also check out Sheet 15: learning paths).
- ❑ **Appear.in** | free software without log-in for video conversations for up to 8 people.
- ❑ **Weebly** | create websites easily.
- ❑ **Powtoon** | animated presentations / videos.

### Tools concerning virtual reality

- ❑ **SketchFab** | look at 3D models without software.
- ❑ **Google Expeditions** | go on an expedition without leaving the classroom.
- ❑ **Youtube 360** | 360 degree videos.

Important: also provide instructions and guidance regarding the installation and use of certain tools and / or apps.

## Know more?

- The website [www.onderwijstools.be](http://www.onderwijstools.be) collects a large number of educational tools, divided into useful categories (e.g. instruction, interaction, collaboration, etc.) (Dutch).
- Learn more about [the why of TPACK: integration of ICT in education](#) (Dutch).
- Learn more about [TPACK within teacher design teams](#) (Dutch).

## In practice

“We are very busy with the blended story. For example, a teacher has students in class and offers the blended course. If a student does not like the blended process, the teacher can work one-on-one with that student. Students do reach a much higher level.”

“We said that a PowerPoint cannot be the only learning material. You must also provide a course. There are also alternatives to PowerPoint; Sway for example. Or Padlet. It also keeps students active: deviate from the PowerPoint and try something new.”

## References

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- <sup>4</sup> Arteveldehogeschool. (z.d.). Studielicht). Geraadpleegd op 29/01/2019 via <https://www.arteveldehogeschool.be/studielicht/meerkeuzeExamen>
- <sup>5</sup> Arteveldehogeschool (z.d.). Onderwijstools. Geraadpleegd op 29/01/2019 via <http://www.onderwijstools.be/>
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- <sup>7</sup> Schellens, T. (2015-2016). Onderwijstechnologie [Cursus]. Universiteit Gent: Pedagogische Wetenschappen/