P4ELECS
Platform for Electrification Skills & Competences

Quicksheet

About asking questions

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About

Questions are a crucial part of developing understanding.
Ideally, they push students´ learning beyond acquiring knowledge towards understanding (Ritchart, e.a., 2011, p. 13).
For the Building Blocks (BB), questions that build understanding are key to engaging users with the content.

Questions can lead to identifying complexity, making users think about key issues or difficult elements in a theory, relating concepts and ideas, applying a concept in a concrete example. It makes thinking and, hence, learning visible (and is part of assessment of learning).

Teachers who integrate questions in their teaching and learning materials guide, direct, and push forward the understanding of a theory and concepts and ensure that important ideas and anchor concepts are not missed (Ritchart, e.a., 2011, p. 33).

Step-by-step creation guide

- **Reflect upon the goal of the question**: focusing, remembering, applying, thinking about next steps, evaluating or any other goal. In the tips we give a list of different questions for different types of thinking to inspire you.
- **Formulate an introduction** of the question: describe the context, the framework of the question, make sure the learner knows what the question is about.
- **Formulate** the question or series of simple questions.
- **Check if your question is a good question**. Criteria:
  - Questions are open ended in order for answers to require thinking (avoid suggestive questions): when it is a yes/no question, students will engage less and answer more intuïtivly in the direction of the implicit suggestion in your closed questions.
    - No: Is X a good example of Y?
    - Yes: Why is X a good example of Y?
  - The direction of the question is clear (precise): the learner could connect your question to ideas that you do not think of which compromises the efficacy, therefor orient the learner to the area you want them to think about.
  - Questions are adapted to the level of understanding of the learner: If they are too complicated, they will not engage with question which is a missed opportunity for the learning process.
  - Concepts and words of the question are clear for the learner: Be aware that students might have a different understanding about a concept or words. Avoid assuming they know.
  - A question is singular: A question that contains two or three questions could confuse or make the learner do more efforts than needed and this could risk engagement and therefore compromise building understanding with the question.

- Questions are simple. They contain only the necessary information.
- Questions are short.
- Questions go preferably beyond reproduction.
- Check your questions and improve if the criteria are not met. Example of improvement of a question :
  - (-) Inferior question: "Was the Industrial Revolution good for society?" 🙁 Yes/no and very broad to think about for the learner.
  - (+) Improved question: "In what ways did the Industrial Revolution affect different social classes?", “For whom did the Industrial Revolution rather have a positive impact on daily life?”

Tips

In this table, you can find examples of questions (and some assignments) based on the taxonomy of Bloom*, a framework for categorizing educational goals. It might inspire you for questions and exercises in your Building Block. Bloom's Taxonomy helps educators create questions that progressively deepen student understanding, moving from basic recall to higher-order thinking.

Taxonomy Bloom: educational goal category	Examples of questions
Remembering	What is…? How does this…? How would you describe …? Describe the effects/features/forces of…?
Understanding	How do you explain/interpret…? How (else) could you explain…? What are the causes/consequences/effects of…? What differences/similarities exist between…? Compare … with (model/framework/perspective/…) … for different features of / similarities and differences between… What are the most important…? Describe how … works.
Applying	How can … be solved? Give an example of… What facts would you indicate to show…? How would you use… in the following situation…? What factors would change when/if…? How is… an example of..? How would you (not) use… in this situation? How would you categorize? Why could … have happened when… (or not)?
Analyzing	What makes you say that? In what way is… the same/different as…? What was the changing factor in…? How is … related to …? What would you conclude from…? What issues/problems will you encounter when…? What is the function of…? What evidence could you find for…?

Evaluating	How important/effective is… in the context of…? What conditions are important for…? How would you assess the effects of…? What is the most important function of…? What are the limits of…? What would you advise concerning…? What arguments pro/contra could you give for…? What decision would you take … and what makes you decide that? Why would… be better/worse/more effective/… than…?
Creating	Write a proposal to… How could you change…? How would you design …(taking into account….)? How would you redesign… to make it more sustainable? What ideas could you add to…?

* More information about the Taxonomy of Bloom can be found in the quicksheet about this taxonomy.

Literature

Ritchhart, R., Church, M., Morrison, K. (2011). Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for all learners. San Franciso: Jossey-Bass.

Rombaut, E., Molein, I., & Van Severen, T. (2020). De herziene taxonomie van Bloom in de klas. Pelckmans.