A student's level of cognitive engagement

	Passive (receiveing information)	Active (manipulating the material)	Constructive (generating additional externalized outputs beyond the original material)	Interactive (dialoguing and generating in collaboration)
What can be achieved?	Minimal understanding: Leads to isolated knowledge that can be recalled in similar contexts	Shallow understanding: New knowledge activates prior knowledge and assimilates to it. Knowlege can be applied in new, but in somewhat similar contexts	Deep understanding: Leads to enriched knowledge that can be applied in novel contexts	Deepest understanding: Co-creation can lead to new knowledge and perspectives that none of the group members knew before
Examples in online teaching	Listening without doing anything else but oriented toward instruction	Repeating or rehearsing: Copying solution steps; taking verbatim notes; answering questions regarding the topic	Reflecting out loud; Drawing concept maps; Forming questions related to the topic	Defending and arguing a position in dyads or small groups; Discussing similarities & differences
Examples of active learning methods that can be used to encourage student engagement		One-Minute Paper: ask a question of what was just taught and ask students to write down their answers [1, 2] Surveys related to topic [2, 3] Think-Pair-Share: students answer a question alone, then with another student and finally with the whole group [1, 2] Jigsaw: each student learns an assigned aspect of the topic and then teaches it to the rest of the small group [1, 2]	The Muddiest Point: students reflect what was tricky in what what was just taught [2] Concept maps: students visualize connections between concepts by drawing [2, 4] Learning diary: students regularly reflect on what they have learned [5]	Project-based learning: a group works on a project that leads to an end product [6, 7] Inquiry learning: a group defines and/or solves a problem by forming questions related to it [8, 9] Think-Pair-Share: as in active but with open questions [1, 2] Collaborative concept maps
Examples of digital tools that can be used	Teams, Zoom	Text processing programmes, shared online files or platforms (Sharepoint, Flinga, Padlet), survey tools (Kahoot, Zoom Poll, Teams Forms), Breakout rooms (Zoom, Teams), Moodle exam tools and self-study exercises	Text processing programmes, shared online files or platforms, survey tools, chats (Zoom, Teams, Moodle), online concept maps	Breakout rooms, shared online files or platforms, student decided interaction tools

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References: https://www.tuni.fi/tlc/?p=3962