EXAMPLES SHARED TO PRACTICE REFLECTION

-Taking the evaluators viewpoint. We want to achieve this with our students. Take the viewpoint of the professional and look at your own work.

-Students write up their own learning goals at the beginning. Setting the scene for the rest of the course. Little bit of self-assessment, but also as tool for reflection.

-Starting a course with: Why are you here? What do you want to learn? Think-pair-share can be used to put this in practice.

-Underlining the gab in knowledge/ skills

-Educating students to learn! Creating habits that help them learn: equip students with questions (scaffolding) that help them get started.

-Using Prompts (online)... you cannot do anything until you answer the prompt. People hated it - but it worked. It helped people to think 'in the moment'.
Prompts are used to take learners back to this moment. >> Taking them back is as necessary in online as it is in offline education.

-Example: An alarm everyday at 14 o clock > to think about how you feel and what you had for lunch. Stimulated the whole way of reflecting downstream >> the alarm was the spark that started it all > lunch, healthy behavior, proper balance.

RELATING TOPICS

-There is a connection between reflection and building a mental model. Reflection is often on the cognitive level.
You learn a skill... you think of the skill - and built the mental model. > What is the performance that would be the best one... enables you to reflect on where you are at in this model

-Reference to Productive Failure ; Manu Kapur @ TU Delft Education Day) -> inconsistencies make cognitive dissonance: perception is I know this, but I cannot do the task. Then, there is a gap. It triggers your interest and you start learning about this gap >> Reflection comes in here.

-Peer assessment: When student give qualitative feedback to eachother (without grading) >> Evaluation on each others work... is not about how do I get the best grade, but more focused on How can I do better?

-Self Regulatory Skills -> really important for study success.

-Engagement versus Reflection. Where does one start en becomes the other (and vice versa)

Reflection amplifiers in online courses: a classification framework
Verpoorten, D., Westera, W., & Specht, M. (2011).

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Reflection amplifiers in online courses: a classification framework | Verpoorten, D., Westera, W., & Specht, M. (2011).

Reflection amplifiers are intervention techniques that aim at provoking reflective practices in learning, in order to enhance the quality and effectiveness of learning and promote meta-cognition.
There are a lot of different techniques, revealing a great variety of reflection amplifiers in today's educational practice. The paper provides a theoretical classification framework structured along two relevant attributes of reflection amplifiers: (a) the type of interaction which enacts the reflection amplifiers, and (b) the educational objective of the reflective activities.
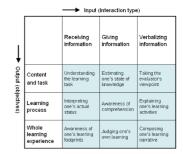

	Input (interaction type)		
Output (objectives)	Receiving information	Giving information	Verbalizing information
Content and task	Understanding the learning task	Estimating one's state of knowledge	Taking the evaluator's viewpoint
Learning process	Interpreting one's actual status	Awareness of comprehension	Explaining one's learning activities
Whole learning experience	Awareness of one's learning footprints	Judging one's own learning	Composing one's learning narrative

Figure 2. The separate cells in the classification framework and their purposes.

	Input (interaction type)		
Output (objectives)	Receiving information	Giving information	Verbalising information
Content and task	•Transparent pedagogical rationale (1) •Objectives matrix of a task (2) •Room for choice (3) •Annotation sharing mechanisms (4) •Graphical presentation of content (5)	•Enhanced multiple choice questions (13) •Ease-of-learning/self-efficacy judgments (14) •Indicators of understanding (15) •Formative assessment (16)	•Where and why is it wrong? (23) •Students set the best (24) •Writing on the reading (25) •Practice of evocation (26) •Questions generation (27)
Learning process	•Structure for regulative support (6) •Growing mastery visualization (7) •Mirroring of personal tracked data (8) •Meta-cognition modelling (9) •Help seeking behaviour guide (10) •Compare with yardstick (11)	•Interruption monitoring (17) •On-demand assessment (18) •Choosing the difficulty of questions (19) •Confidence-Based Learning (20) •Profiling questionnaires (21)	•Self-explanations (28) •Justify your choice (29) •Eliciting intentions before beginning a task (30)
Whole learning experience	•Records of marks/remarks (12)	•Judgment of learning (22)	•Comment on "learning footprints" (31) •Permanent reflecting tools (32) •Explicit reflective activities (33) •Comments on Comments (34) •Test debriefing (35)

Figure 3. Mapping of reviewed reflection amplifiers onto the proposed classification framework. Figures in brackets refer to their description in the Appendix.

Questions Raised in relation to the article:

-The axes are quite general and do not depend on online learning or regular learning. To what extend is this research (classification) tailored to online; (how) can we translate it to a more general on campus context? >>The basic ideas (engaging and activating learners) of the paper (grid) can be applied to both online and offline learning. Context: this research has been done for the Open University where online learning is part of its foundation.

>*Reflecting towards what? In social situations I am interacting with all others, lots of stimuli come in, you keep reflecting on everything that is coming in. In online contexts, you cannot reflect like you would do face2face - because the stimuli come in so differently.*

-The list of activities do not all include reflection. Passive versus active? Right side is requiring more mental effort, left side are more receiving input. It feels like not all items mentioned apply to reflection. It seems they are just good education principle practices. How can we specifically prepare our students for reflective moments?

-Is there a sequence in the model? Do you need to go from one level to another? Do the levels build on each other? Or can they be looked at separately? -> It depends on the learning goal/ process or content. And the columns make the difference in the level of engagement.

IDEAS TO GO FORWARD

Active students do reflect, but more 'consuming' students are less used to reflect and engage in meta cognitive learning.
>> Can we do some scaffolding to help students with this?

A grid for an in class reflection prompt can be nice to look into

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