#### **OUOTES & THOUGHTS**

- -Without reflection no learning
- -Reflection is not only rational
- -It is about making focused choices
- -Be aware of one's development
- -What you know determines what you see
- -Reflection can start from emotion
- -Understanding your connection to the world
- -Reflection should be(come) a habit
- -Reflection prepares for growth/ development.
  - People are not fixed
- -Subjective versus objective
- -Reflection<-> Vulnarable
- -Reflection should be part of educational practices -> integrated not seperated
- -What if emotions run high
- -How does how you are, shape what you know about the world
- -We must not play it personally, but we need to play
- -Does it spark your joy? Kondo
- -As a lecturer you want to apply reflection consciously
- -Guide students in the why...

## REFERENCES SHARED IN THE JOURNAL CLUB

- -(Leer studenten) studeren met succes Excel.Thomasmore.be
- -Which Professional skills do student learn in engineering team based projects (Roland Tormey (SEFI)
- -<u>How does your personality bias your epistemology (David</u> Takacs)

Integrating reflection into engineering education

ASEE Annual Conference & Expo
Turns, Sattler, Yasumara, BorgfordTh Parnell, Atman

# Reflection is an Intentional & Dialectical thinking process with the following key elements:

- 1) features of an experience (experience= an engagement with the world)
- Lenses (=knowlegde used to interpret the features)
  - Assign meaning (understanding by using lens to interpreted features)
     Guide future action (steps taken as result of
  - Guide future action (steps taken as result meaning)

....> future experience

100 DAYS OF REFLECTION Journal Club 21-09-'21

#### **METHODS & APPROACHES**

- -360 Feedback
- -STARR Reflecting
- -Personal Development Plan
- -Personal Plan of Action
- -Ikiga
- -Portfolio (3 point view, no good/wrong)
- -Good role model behavior
- -Studycards (example thomasmore.be)
- -Asking questions
  - What do you think are the learning goals
  - What is your part in the solution
  - What brings the solution to the world
- -Growth Mindset
- -Bildung
- -Academic learning
- -Self regulated learning

## WHY?

- Changing role of universities
- Industry is more and more expecting the university to 'deliver' allround engineers.
- -Life long Learning
- -Students are changing
- -Ethical dilemma's (profit versus ...)

#### WHAT DOES IT BRING

- -Better understanding of who you are
- -Better product and services
- -More Focus in Learning
- -Understanding your connection to the world
- -Different perspectives can help student
- understand
- -Looking from a distance at what you are doing gives an extra perspective



## WHAT MAKES AN ENGINEER A REFLECTIVE ENGINEER?

# WHAT QUESTIONS SHOULD WE (ENGINEERS) ASK OURSELVES?

... We now wonder why some questions were not adressed earlier...