Workshop Reflective Practice; Reflection and Learning

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Abstract

Industry master students work part-time in an engineering company. The Reflective Practice workshops are set-up to stimulate reflection about theory and practice. The workshop *Reflection and Learning* is the first workshop, where the questions are: What is reflection, How to reflect, and How can reflection help the learning process.

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logo
TBD

Colophon

Merete Faanes from Buskerud University College created the educational flow *Reflective Practice*. Reflective Practice is a thread throughout the entire master Systems Engineering to stimulate students to relate *Education* and *Practice*.

These workshops are the result of the cooperation of Merete Faanes and Gerrit Muller

Pre-assignment

Question 1:

How do you learn at school? Can you briefly describe the steps?

Use examples from SEFS (SDOE625) Fundamentals in Systems Engineering or your most recent bachelor course.

Question 2:

How do you (expect to) learn at work? Can you briefly describe the steps?

Use examples from your first weeks in the company or past work.

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Agenda

t   Welcome, introduction to Reflective Practice and Reflection

t+0:10 block 1: Reflection as Concept

t+1:20 block 2: How to Reflect?

t+2:30 block 3: Learning

t+3:40 plenary discussion

t+3:50 pre-assignment next workshop, close

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Block 1: Reflection as Concept

Answer the following questions, and give an example for every question:

+ What is reflection?

+ When do you reflect?

+ What is the topic or the scope of reflection?

> (what do you reflect on)

> use specific examples from work or school

Results on flipover

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Block 2: How to Reflect

Answer the following questions, and give an example for every question:

+ What questions will help you to gain insight in the object of reflection?

+ What form or medium do you expect to use?

media examples: white board, paper, PC, sound, video, website

form examples: read, write, think, discuss, draw, thinking loud

> use specific examples from work or school

Results on flipover

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What is Competence?

Attitude (perseverance, faith, critical, constructive, etc.)

train

Ability (know when to use what skill and knowledge)

apply/use often, experience
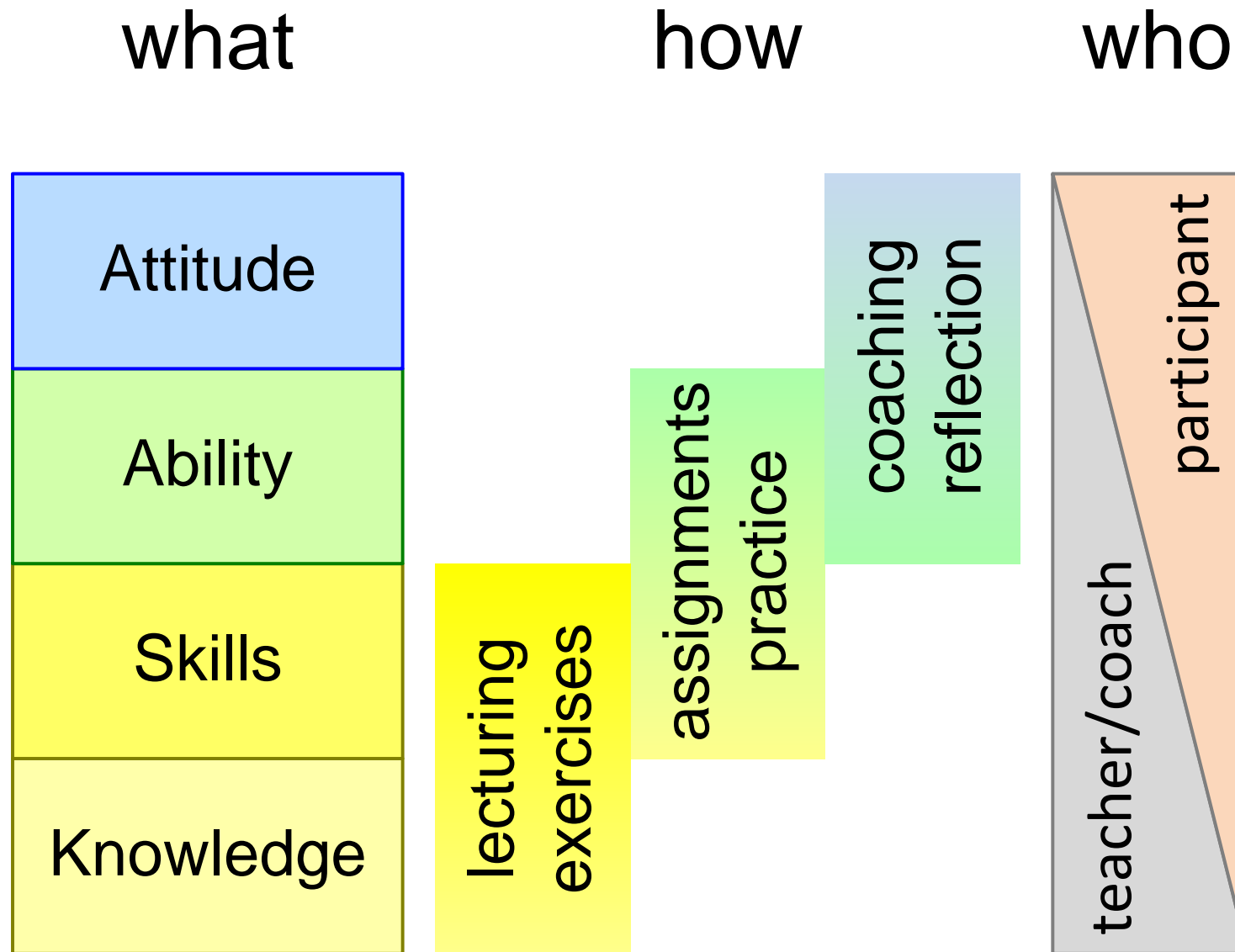
Skills (calculate missing angle, calculate hypothenusa)

exercise

Knowledge (triangle has 3 corners, sum of angles is 180 degrees, Pythagoras $c^2 = a^2 + b^2$)
learn

Competence = Knowledge + Skills + Ability + Attitude

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Competence Program Partitioning

what   how   who

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Block 3: Learning

Answer the following questions, and give an example for every question:

+ How do you learn at work?

+ How do you learn at school?

+ What are the steps in learning?

> use specific examples from work or school

Results on flipover

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Post-assignment Reflection and Learning

Write a one-page reflection report, discussing:

- subject or goal of the workshop

- description of your experiences; what did you observe?

- analysis; can you explain what happened?

- lessons learned

- actions as follow-up; what are you going to do with this?

avoid broad generic statements

illustrate with specific examples

Pre-assignment Next Workshop

Describe your job at your company:

    Describe your own work tasks

    What is your contribution?

Discuss this description with your company supervisor

Update the job description based on the supervisor feedback

Add one paragraph with observations or lessons learned from the discussion with your company supervisor

cc your company supervisor when submitting the pre-assignment

References

- Schon, D.A., The Reflective Practitioner: How Professionals Think in Action, Ashgate Publishing Limited, 1984

- Kolb, D.A, Experiential learning: Experience as the Source of Learning and Development, Englewood Cliffs, NJ: Prentice-Hall, 1984.

- Chris Argyris, Theories of action, double-loop learning and organizational learning, http://infed.org/mobi/chris-argyris-theories-of-action-double-loop-learning-and-organizational-learning/ or http://www.zeno-organisatieontwikkeling.nl/wp-content/uploads/2013/12/argyris.-theories-of-action-double-loop-learning-and-organizational-learning-bewerkt.pdf

- Theories of Learning in Educational Psychology, http://www.lifecircles-inc.com/Learningtheories/constructivism/argyris.html

- Liane Anderson, Argyris and Schön's theory on congruence and learning, 1997, http://www.aral.com.au/resources/argyris.html

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Replacing assignment; only after permission of the teacher

- do the pre-assignment and submit this to the teacher (as all other students)

- go through the workshop questions yourself

- discuss the questions and your answers with a local colleague

- write a (max) 2-page document with your answers including examples and rationale behind the answers

- send this 2-page document by mail to another student and ask for comments

- update the 2 page document

- do the post-assignment, include what the feedback of the other student changed in your thinking

- send 2 page document and post-assignment to the teacher

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