University of Applied Sciences and Arts
Northwestern Switzerland

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New Approaches Teaching Agile Principles and Values in an Undergraduate Setting

Sonja Hof, Baloise Insurance, Basel
Martin Kropp, FHNW, Windisch
Marla Landolt, FHNW, Windisch

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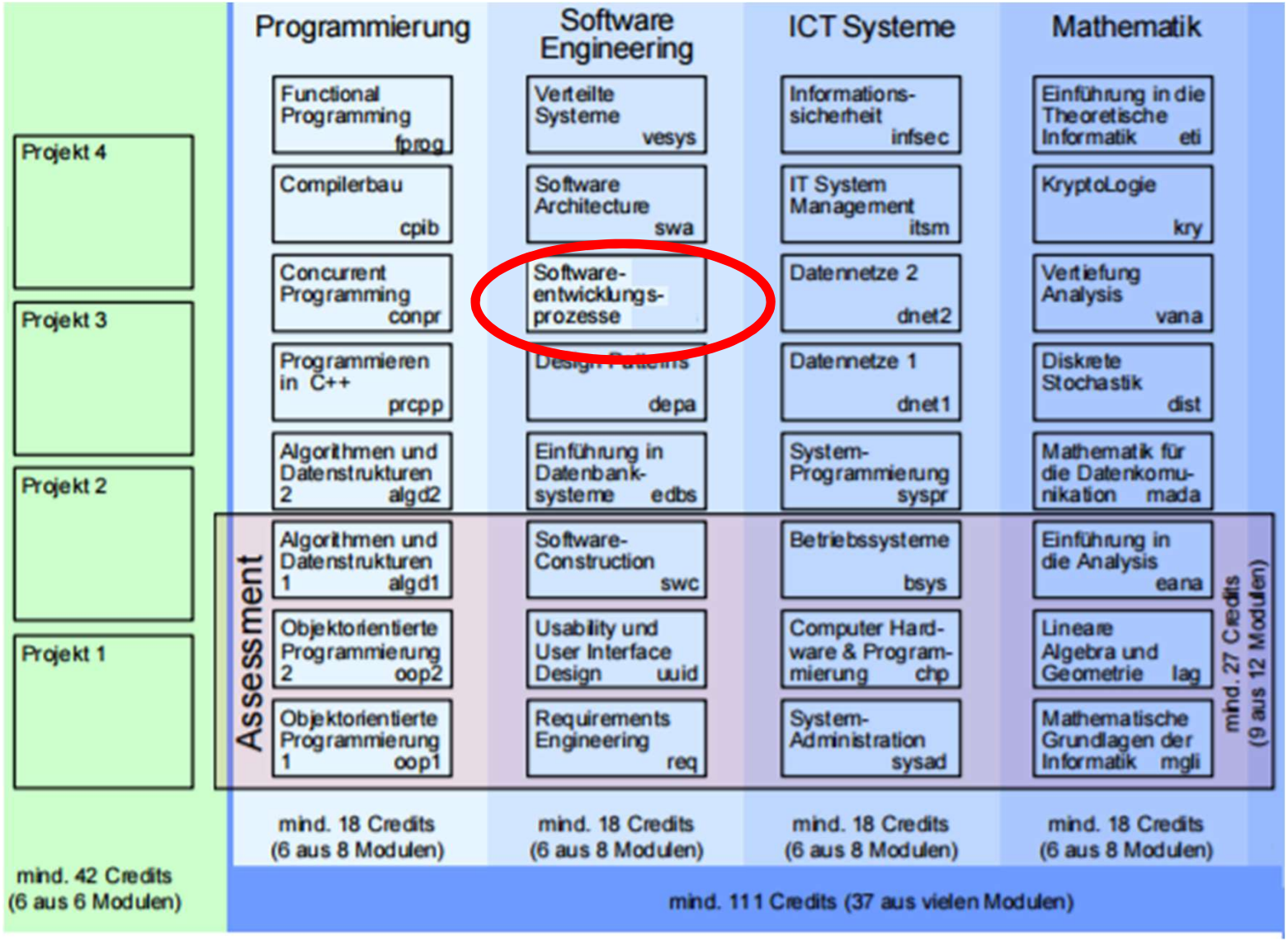
FEUP, B217

Our task


Programmierung
Software Engineering
ICT Systeme
Mathematik
Projekt 4
Projekt 3
Projekt 2
Projekt 1
Functional Programming fprog
Compilerbau cpib
Concurrent Programming conpr
Programmieren in C++ prcpp
Algorithmen und Datenstrukturen 2 algd2
Algorithmen und Datenstrukturen 1 algd1
Objektorientierte Programmierung 2 oop2
Objektorientierte Programmierung 1 oop1
Verteilte Systeme vesys
Software Architecture swa
Software-entwicklungs-prozesse
depa
Einführung in Datenbank-systeme edbs
Software-Construction swc
Usability und User Interface Design uuid
Requirements Engineering req
Informations-sicherheit infsec
IT System Management itsm
Datennetze 2 dnet2
Datennetze 1 dnet1
System-Programmierung syspr
Betriebssysteme bsys
Computer Hard-ware & Program-mierung chp
System-Administration sysad
Einführung in die Theoretische Informatik eti
KryptoLogie kry
Vertiefung Analysis vana
Diskrete Stochastik dist
Mathematik für die Datenkomu-nikation mada
Einführung in die Analysis eana
Lineare Algebra und Geometrie lag
Mathematische Grundlagen der Informatik mgli
Assessment
mind. 27 Credits (9 aus 12 Modulen)
mind. 18 Credits (6 aus 8 Modulen)
mind. 18 Credits (6 aus 8 Modulen)
mind. 18 Credits (6 aus 8 Modulen)
mind. 18 Credits (6 aus 8 Modulen)
mind. 42 Credits (6 aus 6 Modulen)
mind. 111 Credits (37 aus vielen Modulen)

Lego Scrum City vs. How we did it

Software Engineering Process Module Release Plan

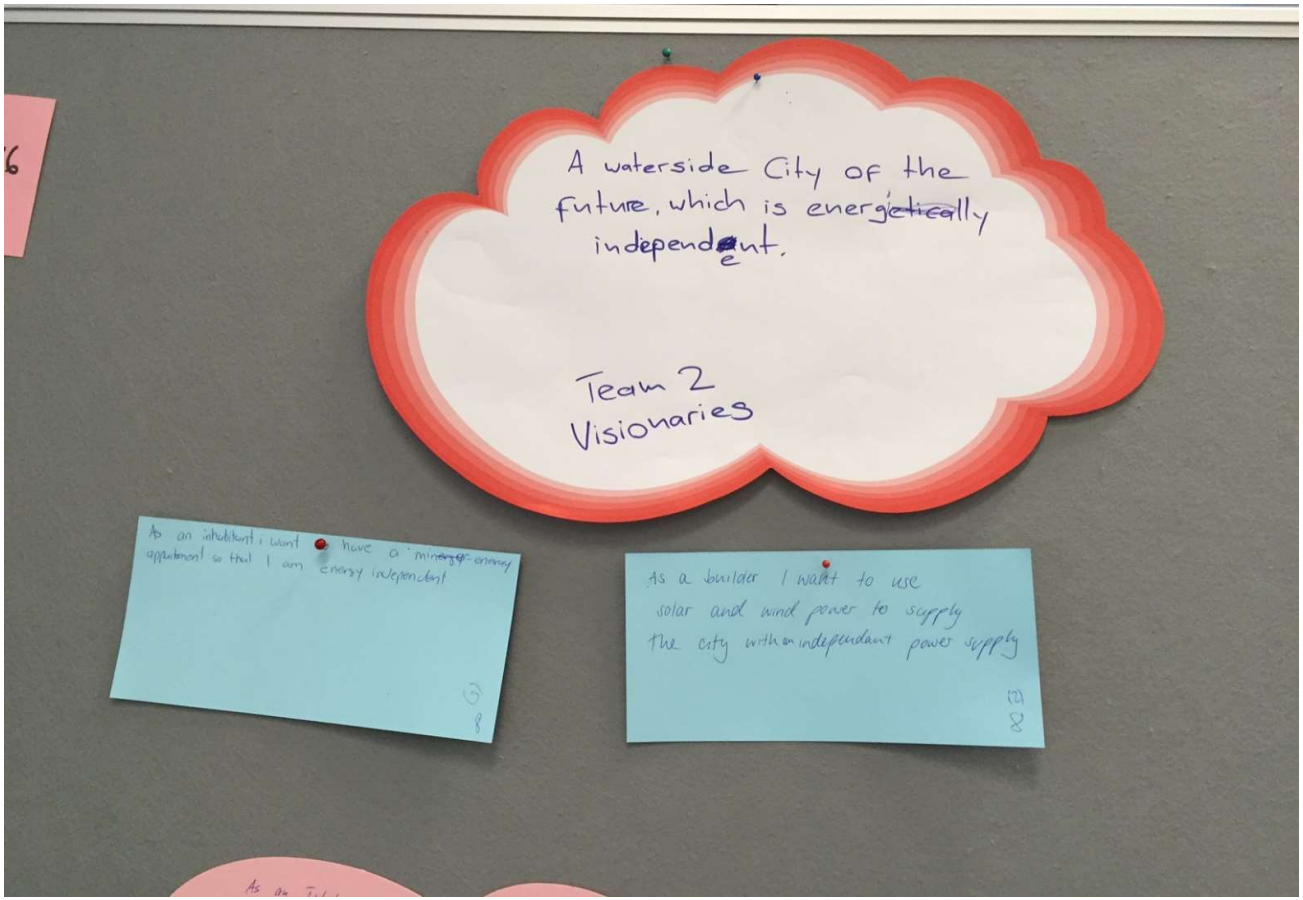
CW[2]	Topic	Scrum Game
1	Agile Manifesto & Scrum Intro	Team building and Product vision
2	Agile Requirements Management	User Stories, Product Backlog
3	Estimation and Planning	Estimate User Stories, plan first Sprint
4	-	Build the city in Sprints
5	Debriefing	-

Weekly Structure – Three hour lesson block

- Brief Warm-Up
- Theory (20 – 30 minutes)
- Hands-on via game (90 minutes)
- Online Quiz and Feedback Survey (15 minutes)

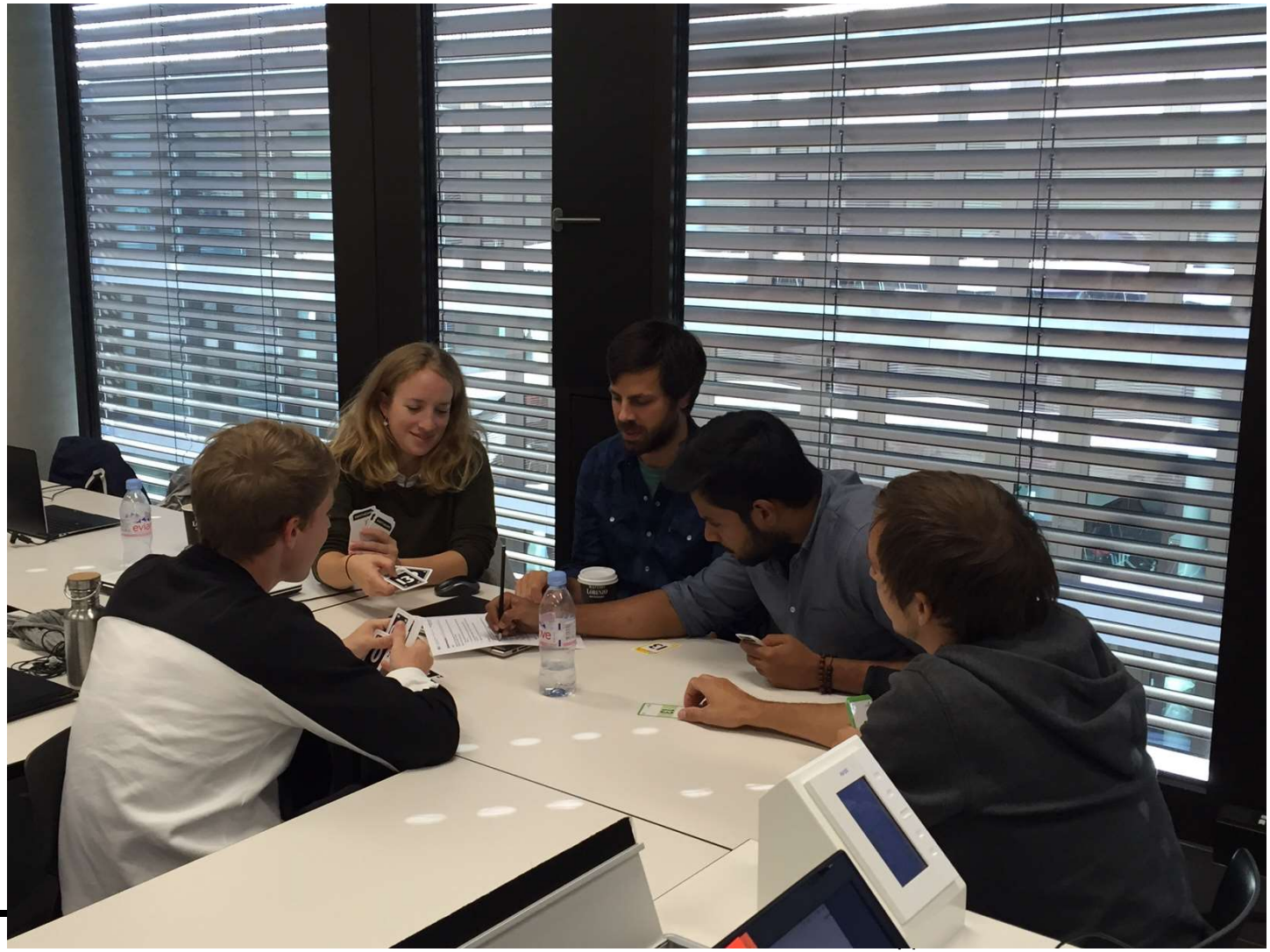
Week 1 - Team Building

Week 1 - Product Vision



Week 2 - Writing User Stories

Week 3 - Estimation and Planning



Week 4 - Finally Sprinting!

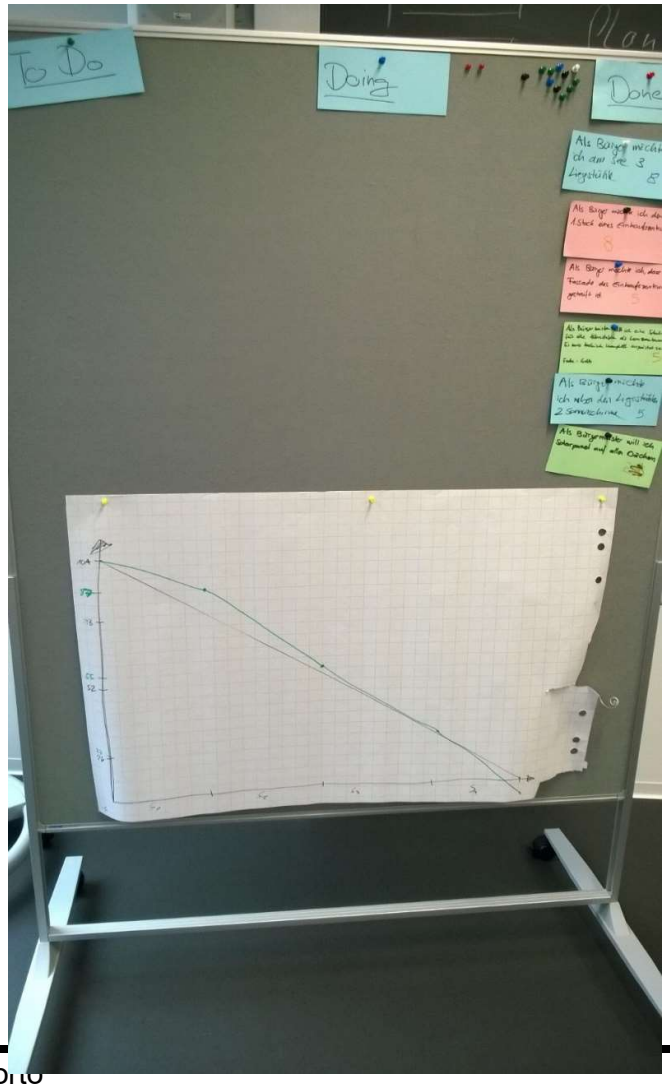
Timebox

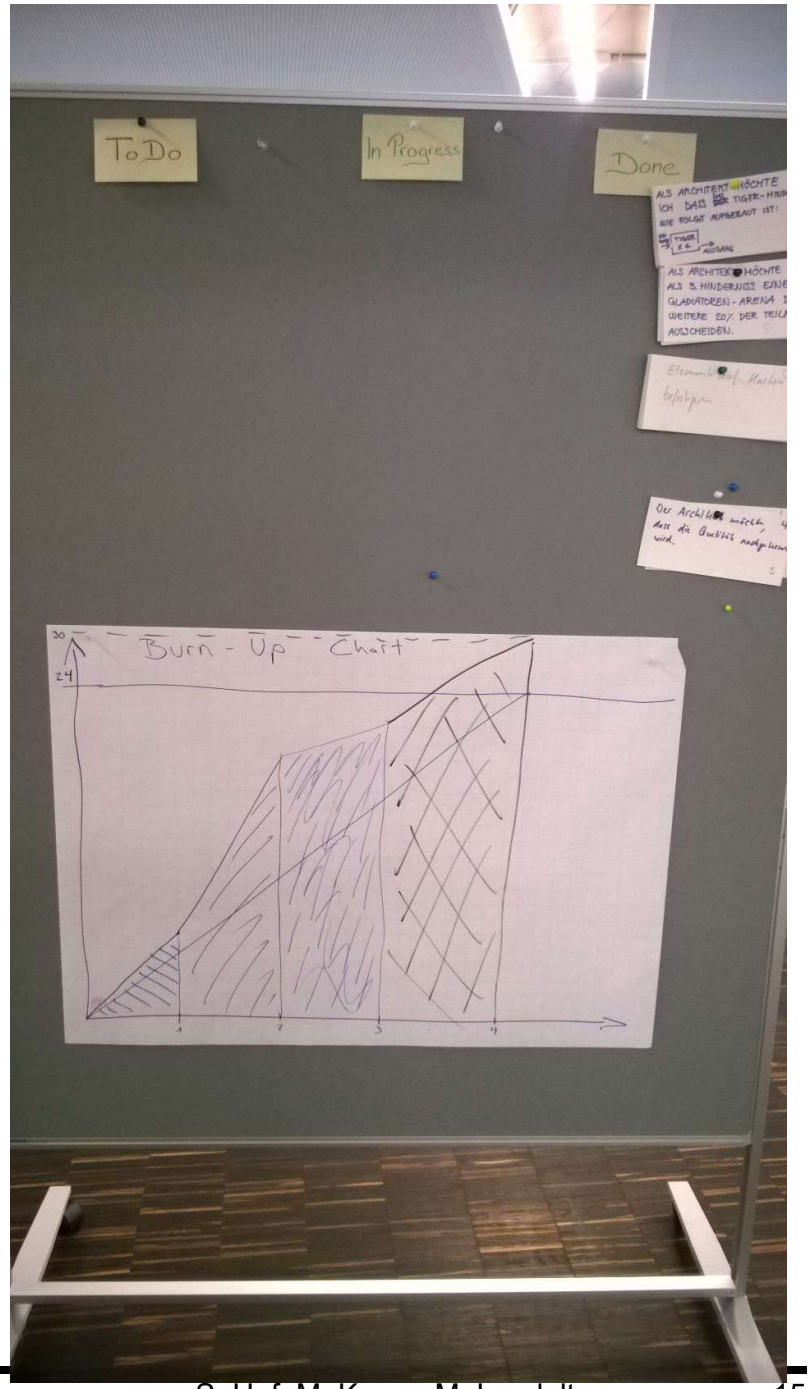
Sprinting

ToDo
In Progress
Done
RETRO

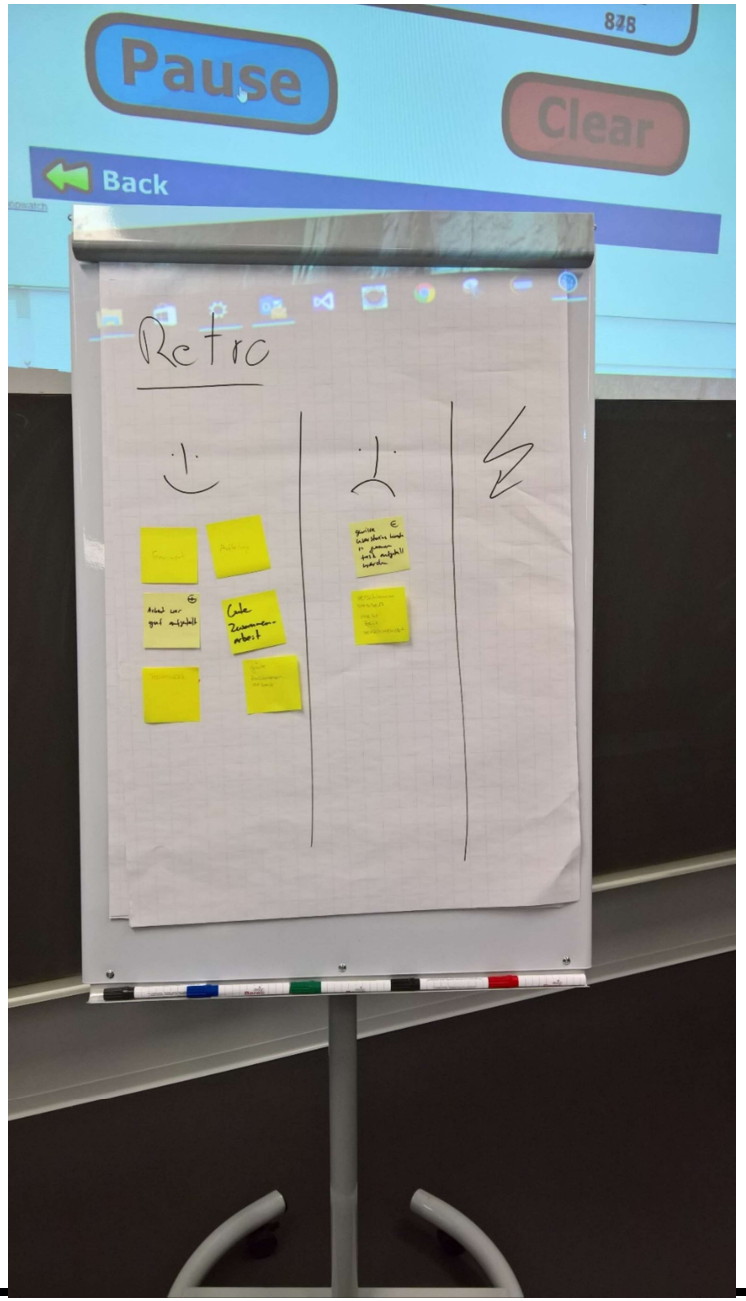
Demo and Review

Metrics - Burndown / Burnup Chart

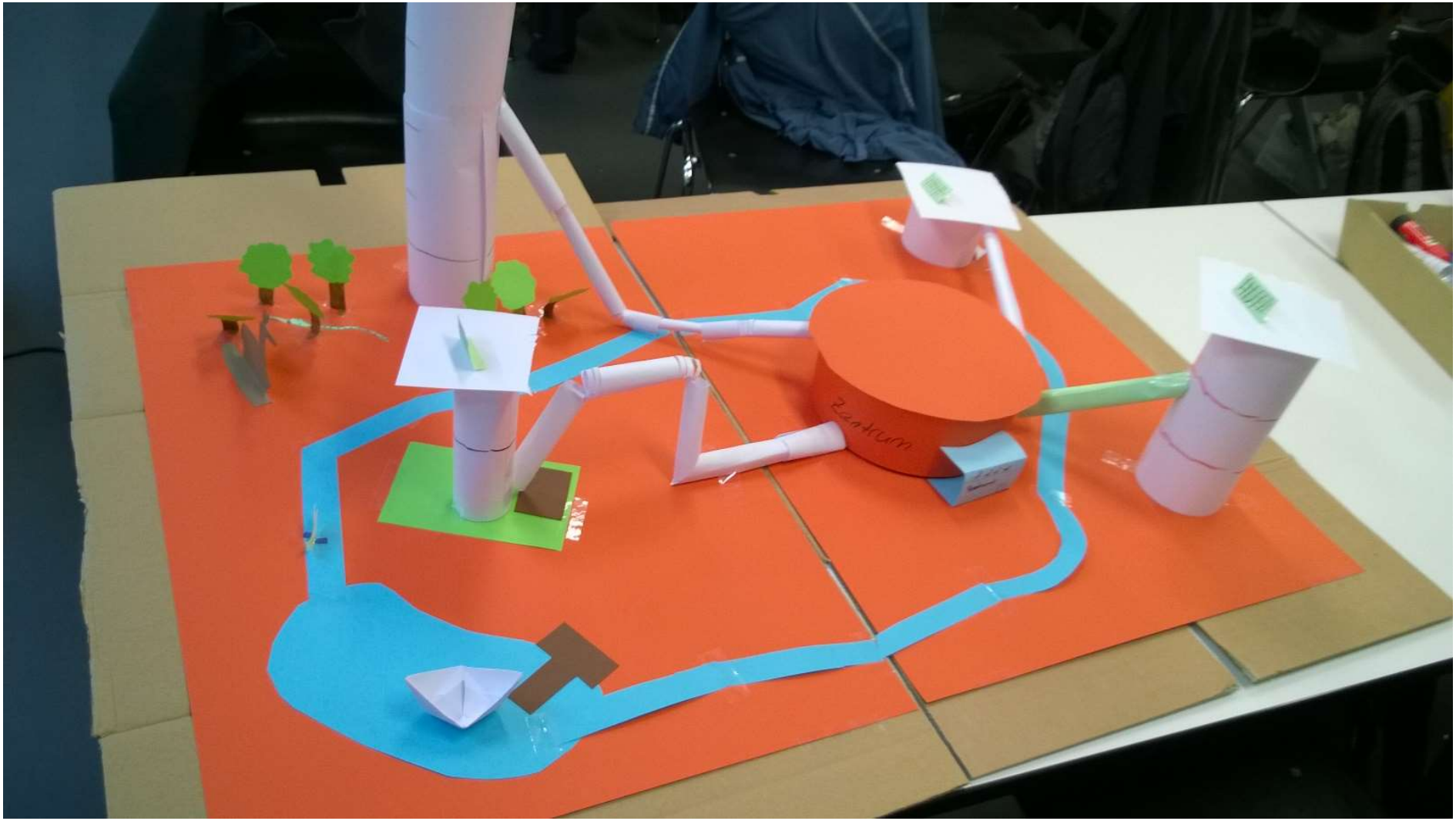




Retrospective



The Product - Future City

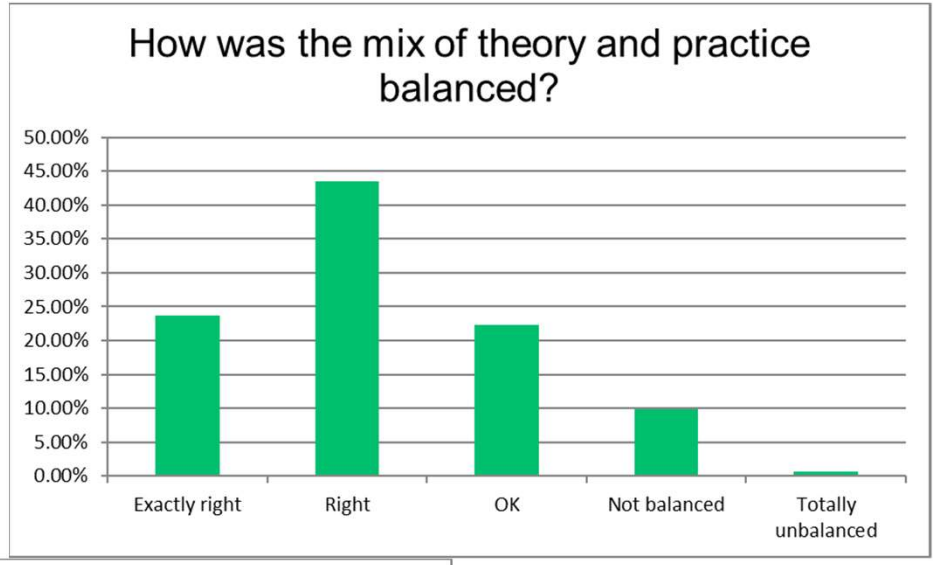


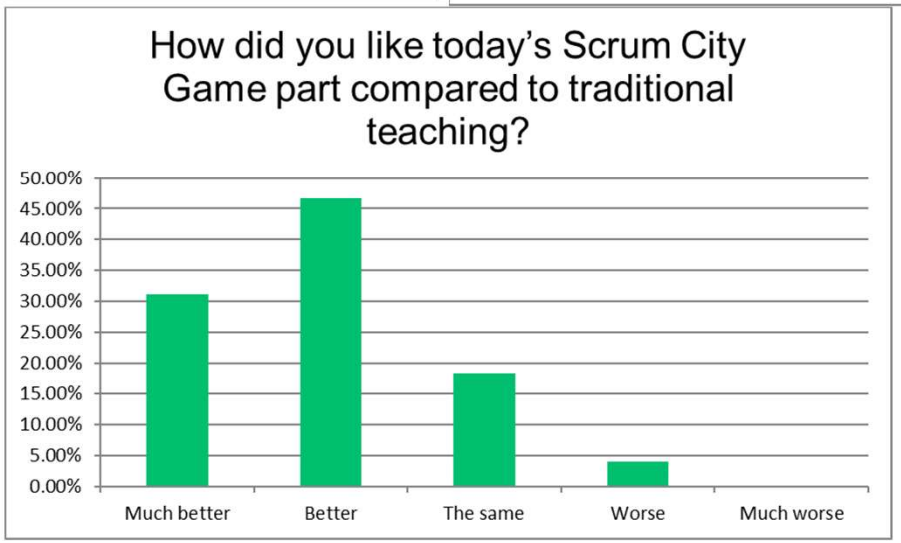
The Green City

Weekly Lesson Survey - Tool: Socrative

(1) How much did you like today's lesson?
(2) How balanced was the mix of theory and practice?
(3) How did you like today's Scrum City Game part compared to traditional teaching?
(4) What are your three most important learnings from the Scrum City Game for today?
(5) What did you like most of today's Scrum City game part?
(6) What could be improved of today's Scrum City game part?

Some Statistics





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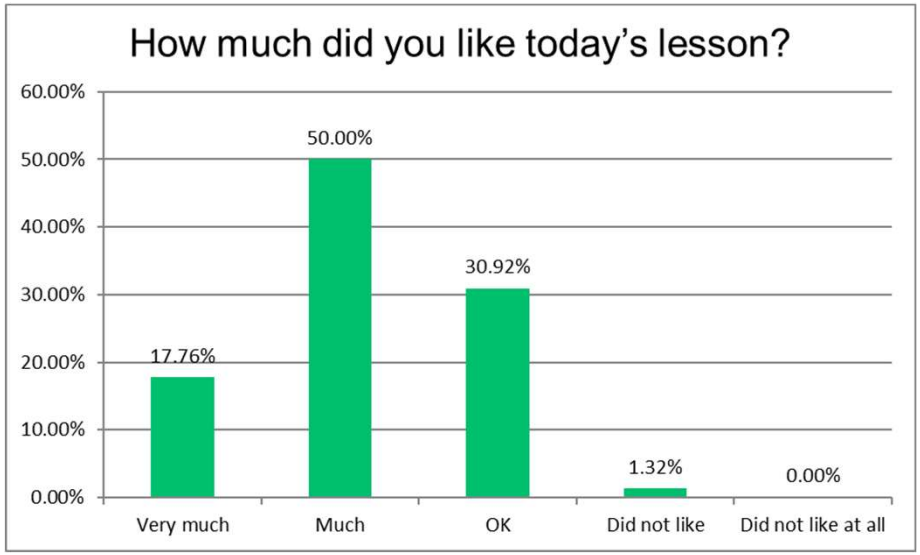
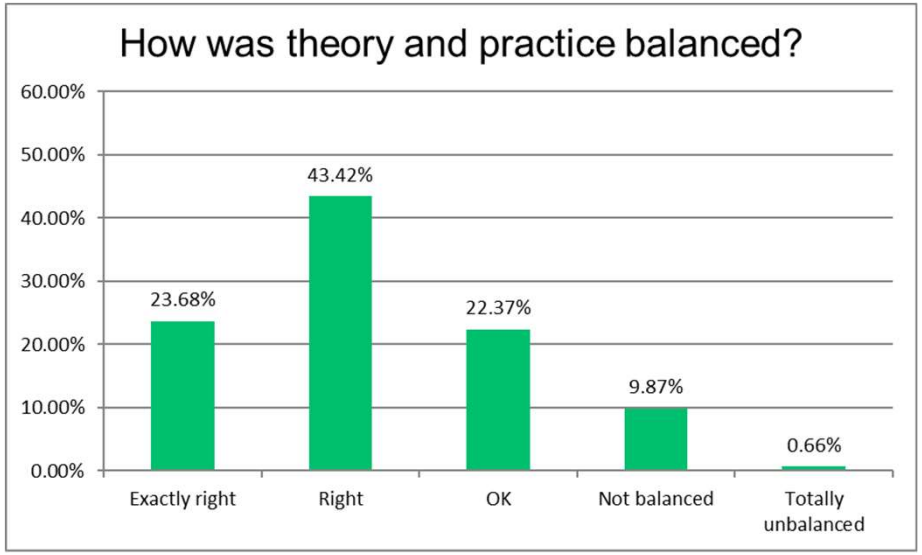
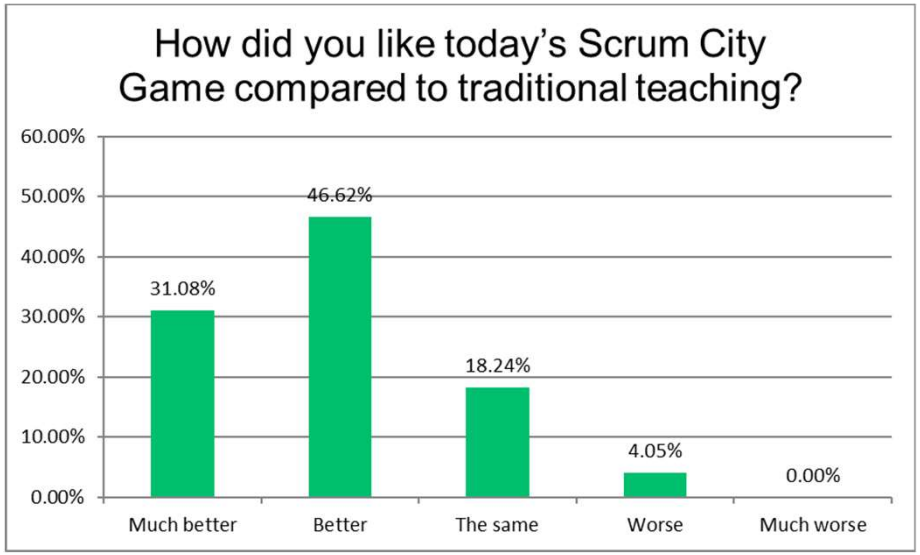
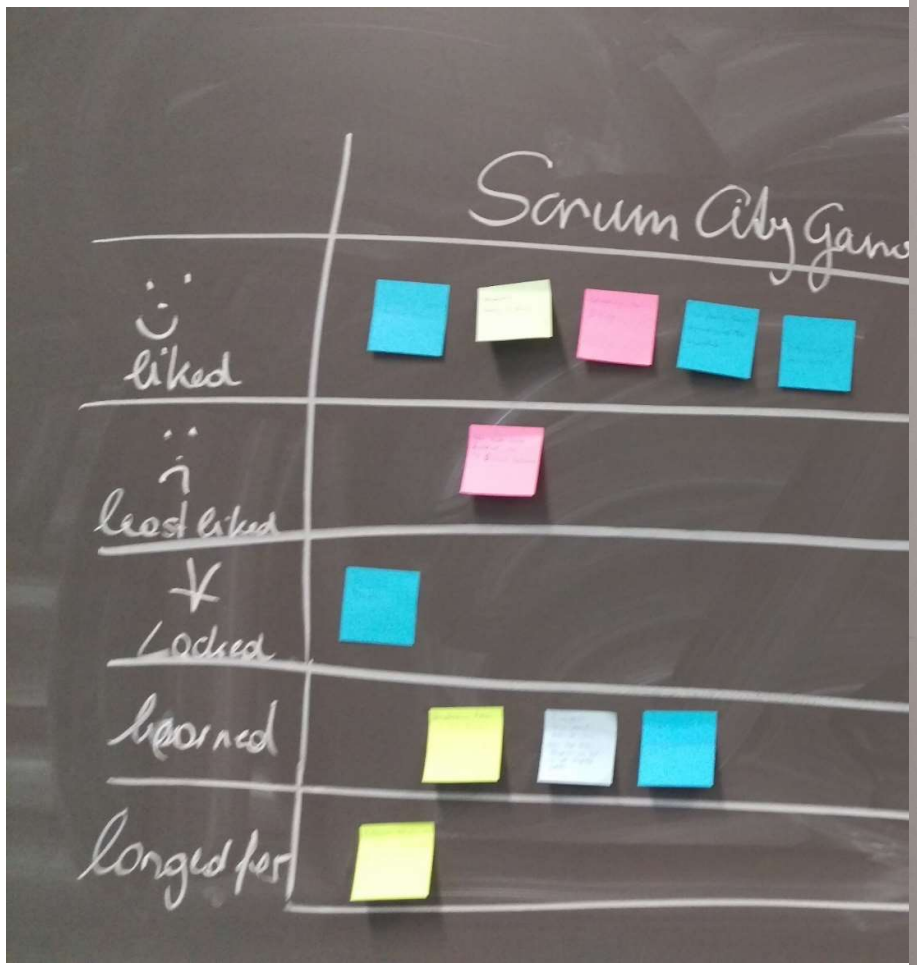
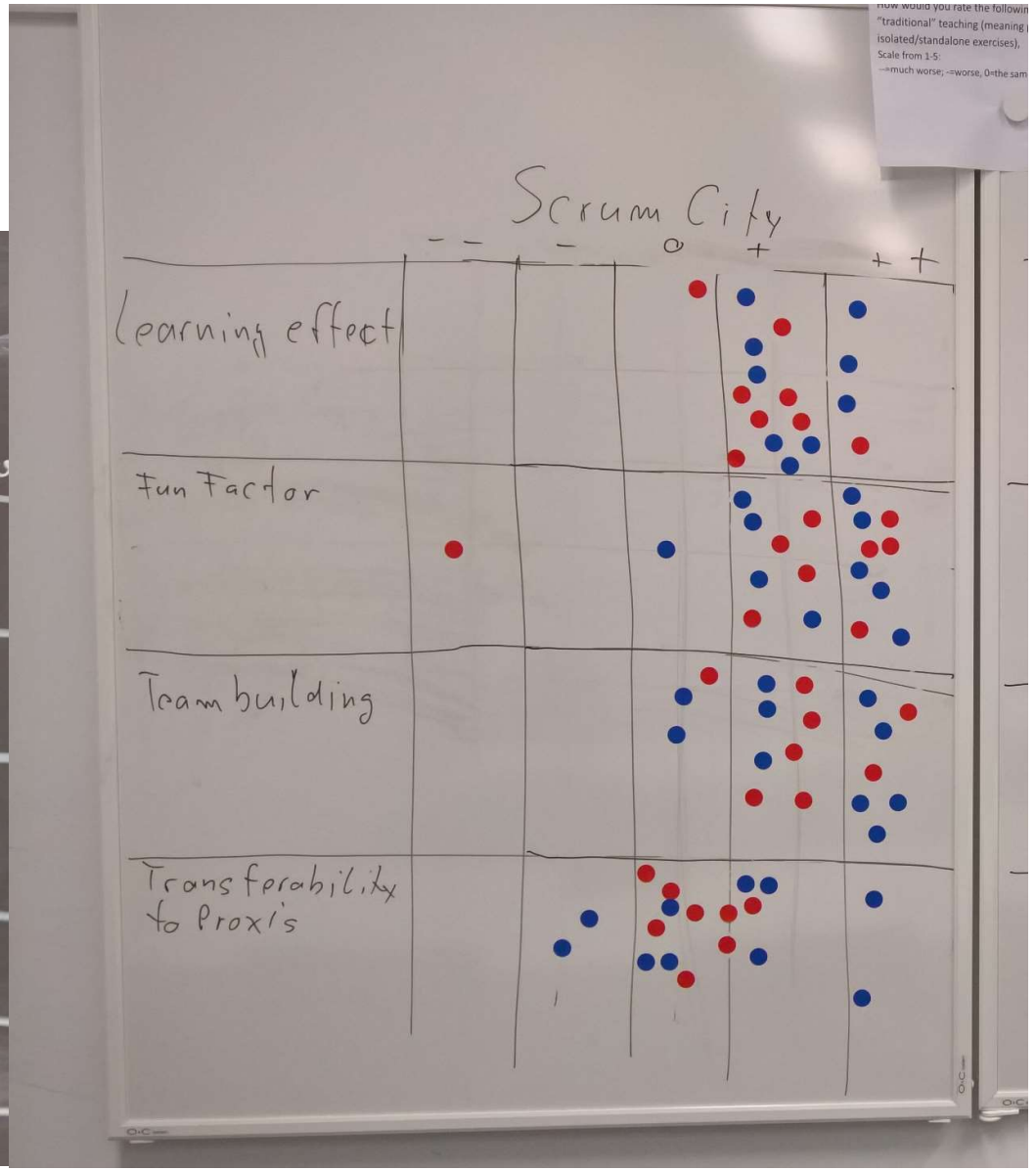




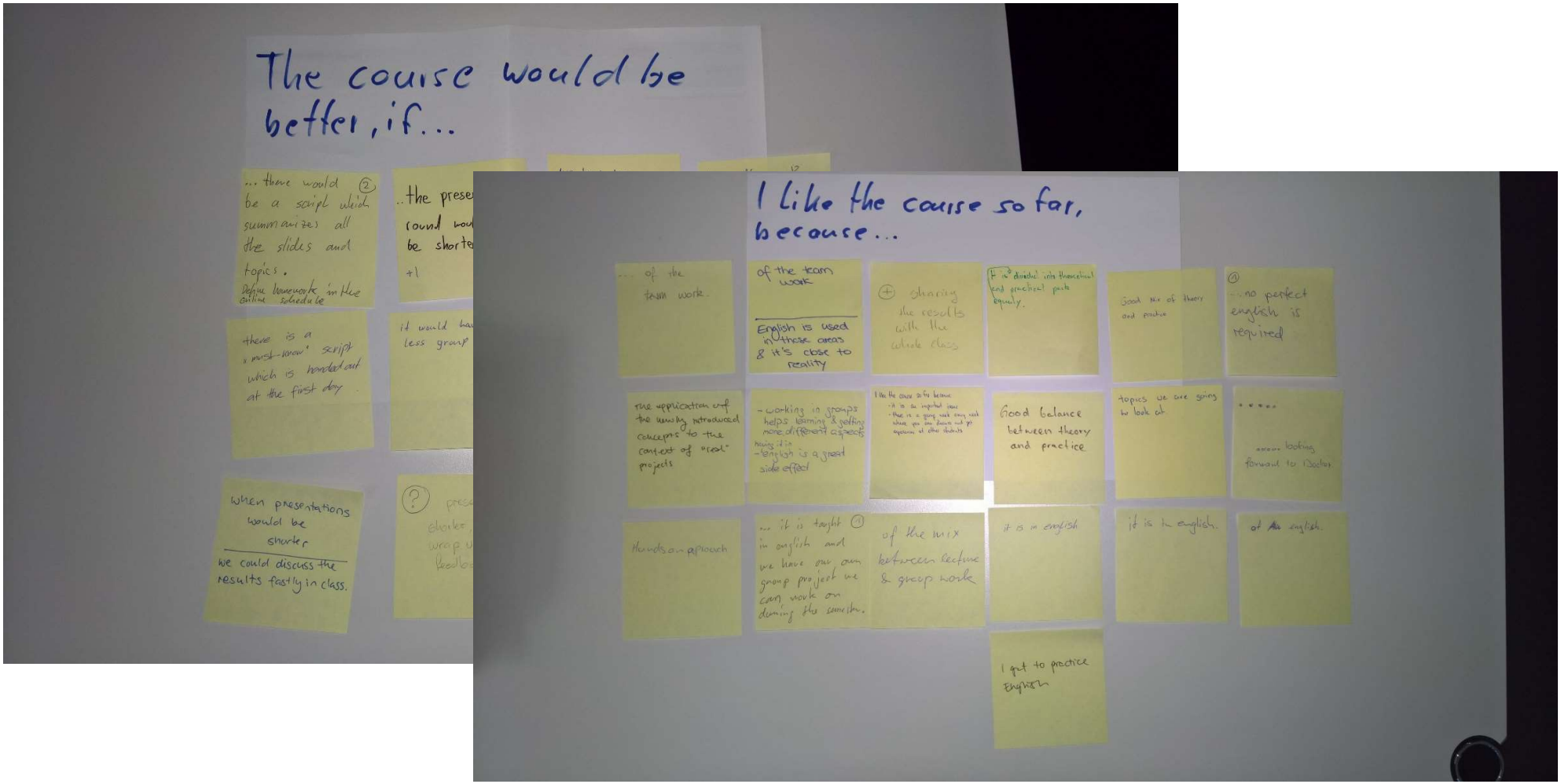


Game 4L-Retrospective





Course 2017 Debriefing



Feedback / Comments

Liked:

- Practicing theoretical concepts
- Fun
- Teamwork
- Gaming approach
- Experiencing, living the process
- Being active

Least Liked

- Too little time to review answers to homework questions
- Relation of time over the course of simulation not real world
- Too little time spent on team metrics
- In addition to theory, bring examples from practice (industry)
- Teams too big
- Coordination could be improved

Our Lessons learned

- Give enough time for practical part
- Keep theory part short, but useful
- Team size 5-6 seems optimal
- Team building – self organization tips
- Using construction paper, scissors, etc. was a good choice
- Not ideal skipping slides; better to offer complete set vs. classroom slide set?
- Reserve weekly time slot for the online feedback survey
- Ensure that all team's Scrum Boards are secure for the six weeks time
- From simulation to hands-on in mandatory participation in project track

Impediment Backlog

- Finding: Take time to better explain Scrum roles PO, SM
- How can we improve the tight schedule?

Semester Grading

- Mandatory attestations (delivered artifacts):
  - Product Backlog
  - Constructed City

  - Comments: Self-organisation of the teams was employed

- Final Exam

Porto

Contact

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Sonja.Hof@Baloise.ch *(Baloise Insurance Ltd)*
Martin.Kropp@fhnw.ch *(University of Applied Sciences Northwestern Switzerland)*
Marla.Landolt@fhnw.ch *(University of Applied Sciences Northwestern Switzerland)*

https://www.fhnw.ch/en/