



# Dr. Erik Jentges

13:00h – 17:00h

# Agenda

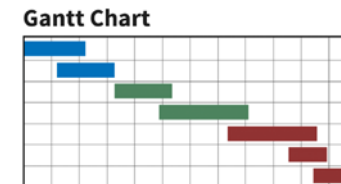
Start	Topic	Goal
13.00	Welcome	Welcome and Checking-in - Who is here - Expectations
13.15	Input	A 5min Introduction to Peer Assessment + Q&A
13.35	Group Work	Exercise #1: Project Management on Learning Design
13.55	Plenary	Presentation of Group Work: Steps & Phases
14.00	15'	Coffee-Break
14.15	Input	The Conversational Framework
14.30	Work in Pairs	Exercise #2: Discussing 6 Learning Types
14.40	Collaborate	Matching Learning Types to Peer Assessment Exercises
14.55	Writing Feedback	Login to Peergrade
15.15	15'	Coffee-Break
15.30	Receiving Feedback	Working in Peergrade & Sharing Experiences
16.00	Peergrade	Understanding Peergrade from an instructor's view
16.15	Input	Feedback Rubrics
16.20	Rubric Creation	Creating your own Peergrade Assignment (solo or in pairs)
16.45 17.00	Wrap-up Goodbye	Discussing learnings and course evaluation, handing out certificates

# Exercise #1: Project Management on Learning Design

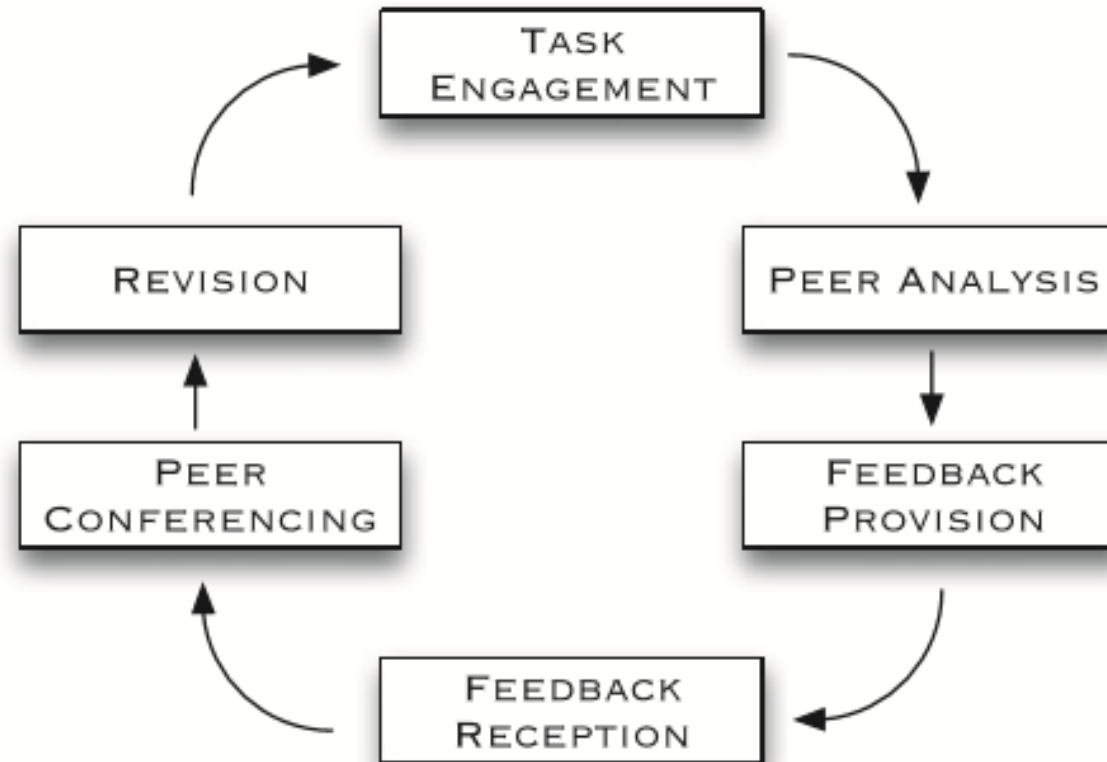
- Imagine you are currently teaching a course on Evolution with 40 students. You want to know if they understood theory x, so you let them write a 5 page essay until 9 April 2018. Unfortunately, you have to go to a conference on the next day, which means you don't have time to assess everything closely. So you design an online peer assessment exercise (PAE).

Task: Project Management on the Learning Design for the PAE

- Get together with your group (red / green dots).
- Discuss which different steps and phases of the peer assessment exercise are relevant.
- Set milestones and deadlines.
- Use one flipchart for drawing a GANTT chart to illustrate the exercise. →
- Add 3-5 suggestions for grading criteria of the assignment
- Time: 20'



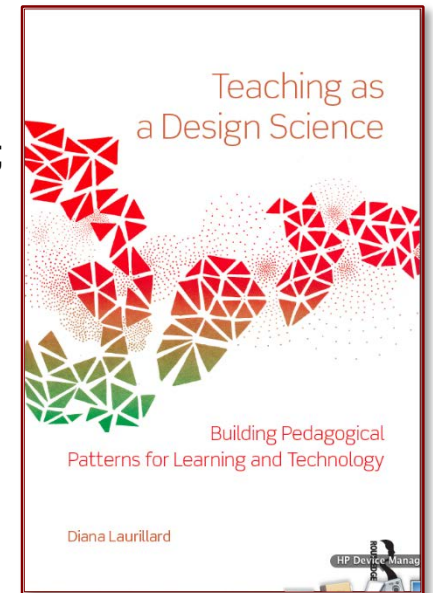
# The Cycle of Peer Assessment Exercises



Reinholz, Daniel (2016) The assessment cycle: a model for learning through peer assessment, *Assessment & Evaluation in Higher Education*, 41:2, 301-315, DOI: 10.1080/02602938.2015.1008982

# The Conversational Framework

- is both a learning theory and a practical framework for designing educational environments
- outlines 6 different types of learning:
  - 1 'learning through acquisition', where the teacher is communicating concepts and ideas;
  - 2 'learning through inquiry (investigation)', where the learner explores or interrogates the teachers' concepts;
  - 3 'learning through practice', where the learner puts their concepts into practice to achieve a task goal, and then responds to feedback;
  - 4 'learning through discussion', where the social construction of ideas helps them develop their concepts;
  - 5 'learning through collaboration', where discussing and sharing practice helps them develop both concepts and practice with each other;
  - 6 and 'learning through production', where they reflect on and represent what they have learned to communicate it to the teacher.
- Ideally we design learning sessions that use all these types of learning. There is no special ordering. All learning cycles should continually iterate as much as possible to promote learning, and a session can start anywhere.



Routledge  
<http://www.routledge.com/9780415803878/>



# The Conversational Framework: 6 Learning Types

## Learning type: Collaboration

Learning through collaboration embraces mainly discussion, practice, and production. Building on investigations and acquisition it is about taking part in the process of knowledge building itself



## Learning type: Practice

Learning through practice enables the learner to adapt their actions to the task goal, and use the feedback to improve their next action. Feedback may come from self-reflection, from peers, from the teacher, or from the activity itself, if it shows them how to improve the result of their action in relation to the goal



## Learning type: Discussion

Learning through discussion requires the learner to articulate their ideas and questions, and to challenge and respond to the ideas and questions from the teacher, and/or from their peers



## Learning type: Production

Learning through production is the way the teacher motivates the learner to consolidate what they have learned by articulating their current conceptual understanding and how they used it in practice



## Learning type: Acquisition

Learning through acquisition is what learners are doing when they are listening to a lecture or podcast, reading from books or websites, and watching demos or videos



## Learning type: Investigation

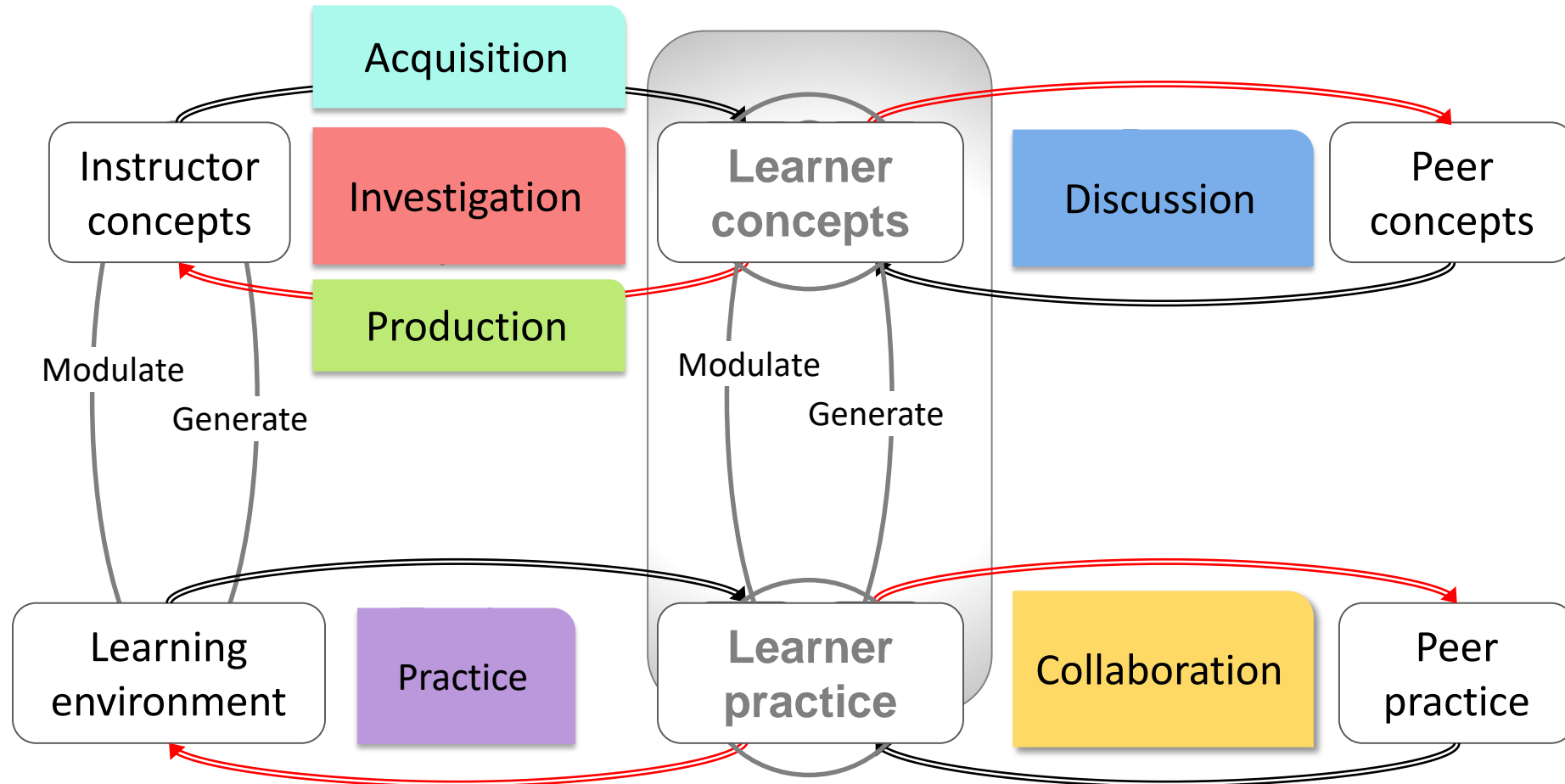
Learning through investigation guides the learner to explore, compare and critique the texts, documents and resources that reflect the concepts and ideas being taught



## Exercise #2: Discussing 6 Learning Types

- Partner up (groups of 2 ppl).
- Brainstorm together about possible student activities that focus on the particular learning type that you have been handed out.
- Think about analog and digital activities.
- Write down at least 5 different learning activities
- Each post-it: one activity.
- Put it on the pinboard.
- Time: 5'

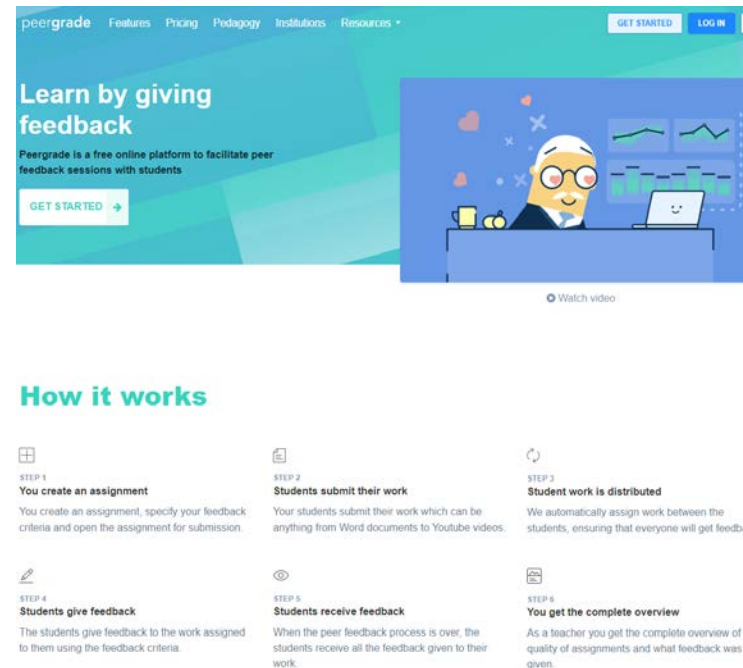
# The Conversational Framework



Instructors can design learning sessions that use all these types of learning (*Teaching as a Design Science*, Laurillard, 2012)



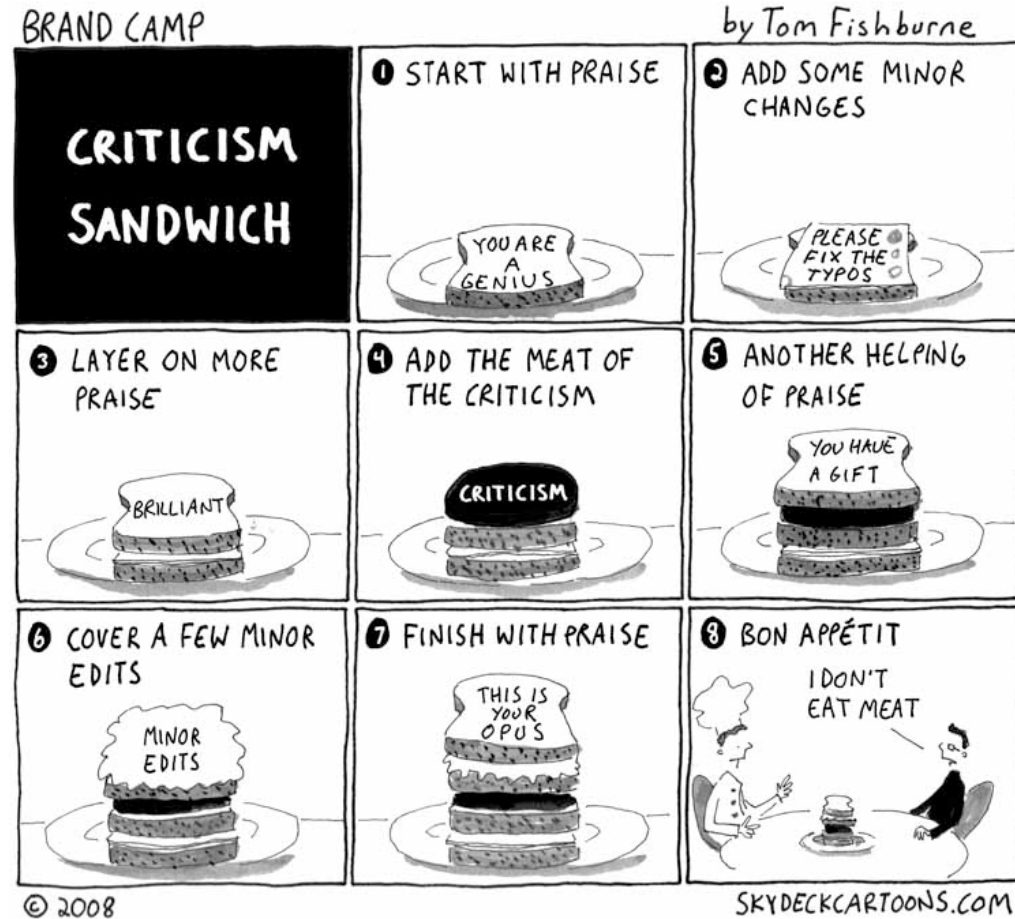
# Writing Feedback: Login to Peergrade



The screenshot shows the Peergrade website homepage. At the top, there is a navigation bar with links for 'peergrade', 'Features', 'Pricing', 'Pedagogy', 'Institutions', and 'Resources'. On the right side of the navigation bar are buttons for 'GET STARTED', 'LOG IN', and a flag icon. The main content area has a large heading 'Learn by giving feedback' and a subheading 'Peergrade is a free online platform to facilitate peer feedback sessions with students'. Below this is a 'GET STARTED' button with a right arrow. To the right of the text is an illustration of a person with glasses and a white cap sitting at a desk with a laptop, with various icons floating around. Below the illustration is a 'Watch video' link. The section below is titled 'How it works' and contains six steps in a 2x3 grid:

- STEP 1: You create an assignment**  
You create an assignment, specify your feedback criteria and open the assignment for submission.
- STEP 2: Students submit their work**  
Your students submit their work which can be anything from Word documents to Youtube videos.
- STEP 3: Student work is distributed**  
We automatically assign work between the students, ensuring that everyone will get feedback.
- STEP 4: Students give feedback**  
The students give feedback to the work assigned to them using the feedback criteria.
- STEP 5: Students receive feedback**  
When the peer feedback process is over, the students receive all the feedback given to their work.
- STEP 6: You get the complete overview**  
As a teacher you get the complete overview of the quality of assignments and what feedback was given.

# Receiving Feedback

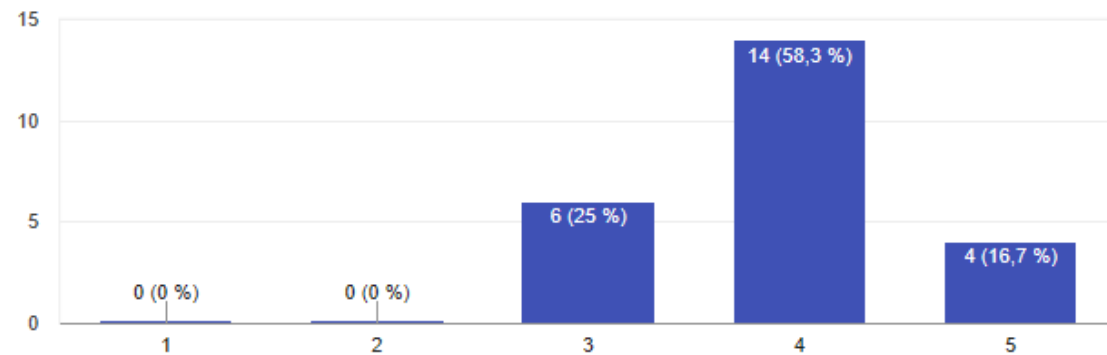


# Some Survey Results from Courses with Peer Assessment

- Lessons Learned
  - Train students to Give Feedback and Write Reviews
  - Address "false beliefs" that only the instructor has the "authority" to give quality feedback
  - Cultivate a peer review culture amongst students
  - Emancipation from student role to co-coaching role
  - Deeper-learning through extended feedback circles (more than assignment + feedback; now: assignment, +reading other assignment and giving feedback + receiving more feedback + giving assessment of quality of feedback)
- The questions were designed in a feedback loop together with Siara Isaac from EPFL/CAPE to ensure comparability with her PeerGrade trial with a doctoral course (with about 10 participants).

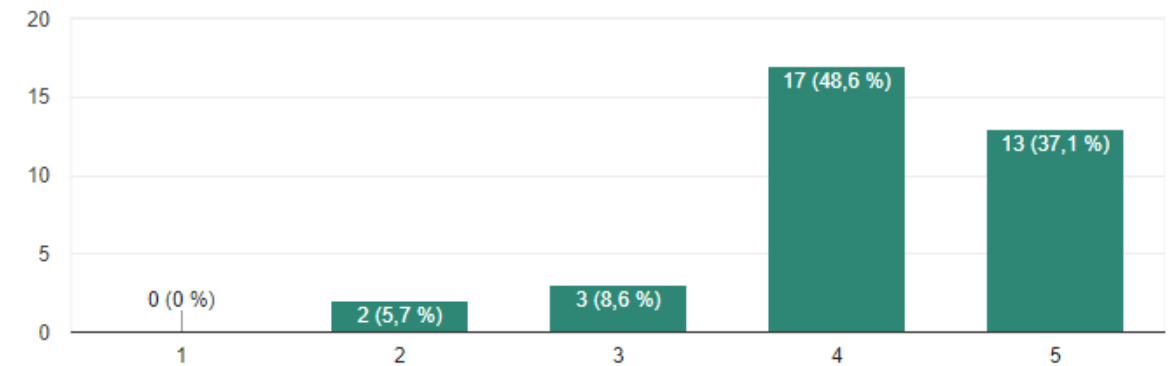
1. Seeing several examples of my peers' work was valuable for my own learning.

24 Antworten



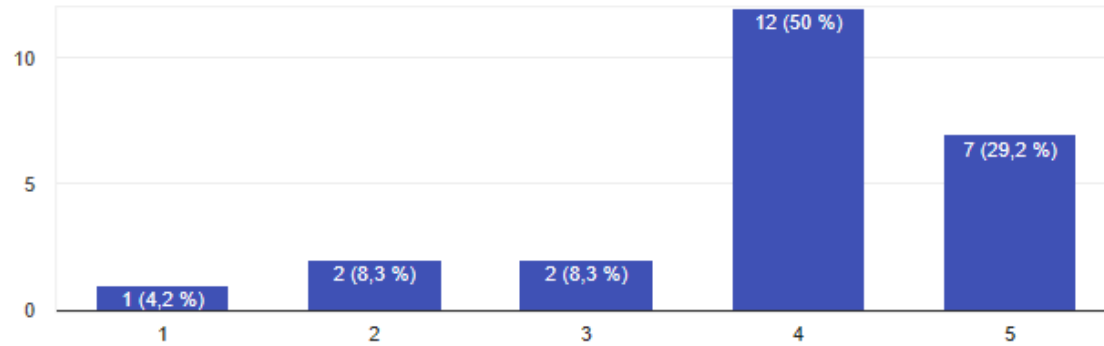
Seeing several 6SA examples of my peers' work was valuable for my own learning.

35 Antworten



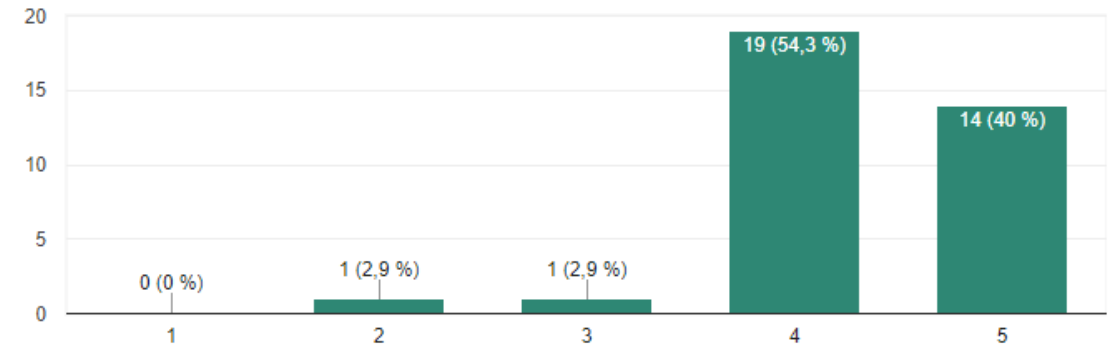
2. Applying the assessment criteria to several examples of my peers' work allowed me to better understand the assessment criteria.

24 Antworten



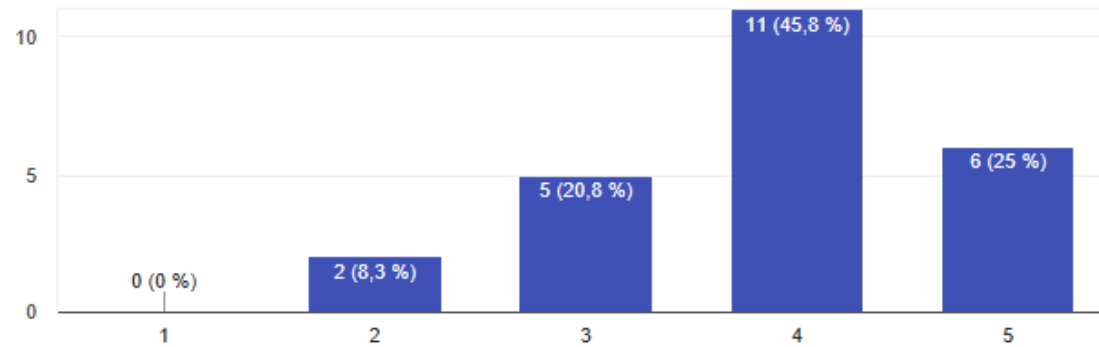
Applying the 6SA assessment criteria to several examples of my peers' work allowed me to better understand the assessment criteria.

35 Antworten



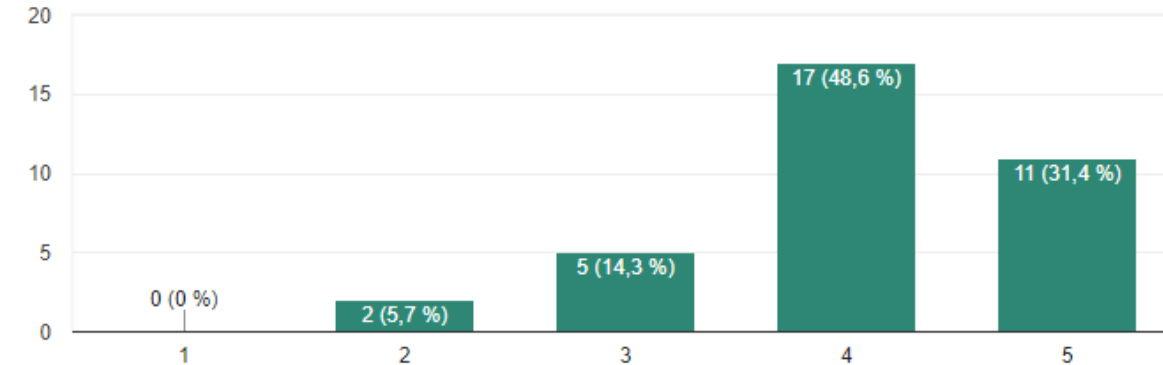
3. After providing feedback to my peers on their assignments/projects/presentations, I am capable of producing better work myself in the future.

24 Antworten



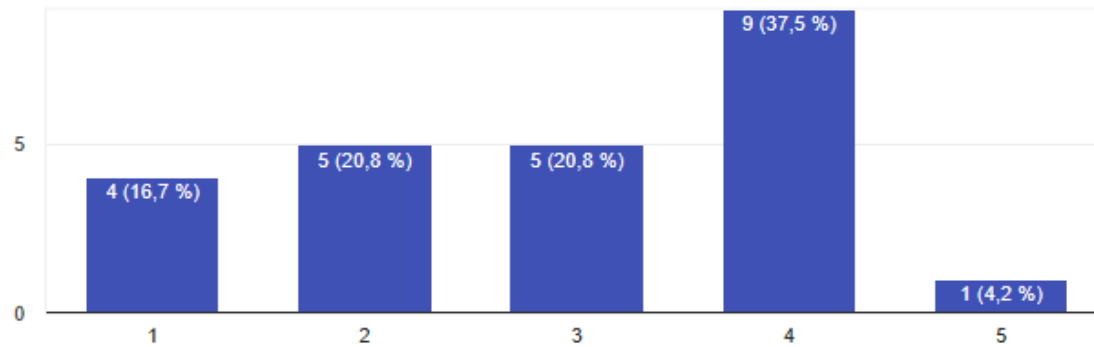
After providing feedback to my peers on their 6SA, I am capable of producing better work myself in the future.

35 Antworten



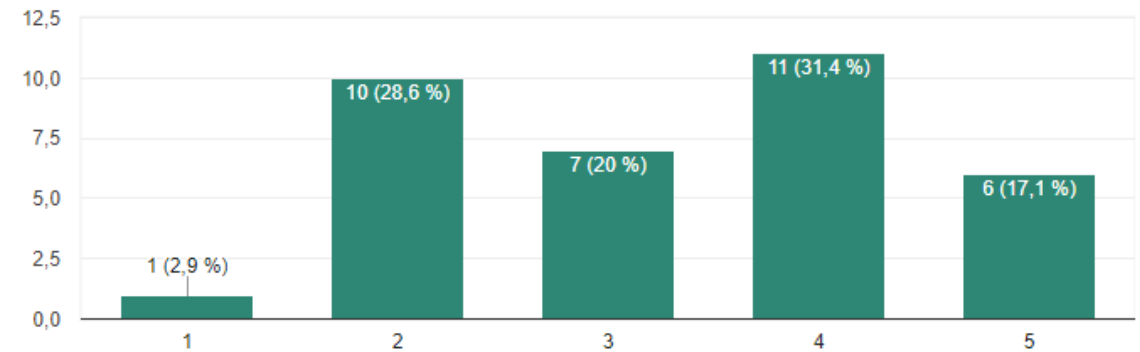
4. The value/usefulness of the feedback that I received matches my investment in providing feedback to my peers.

24 Antworten



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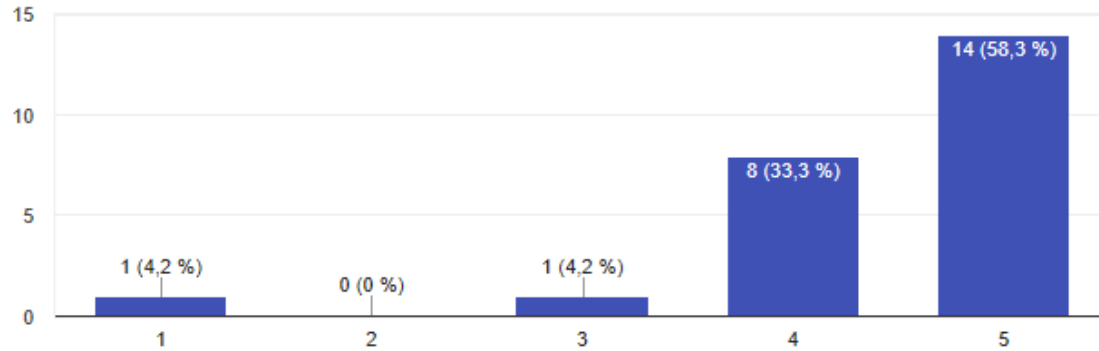
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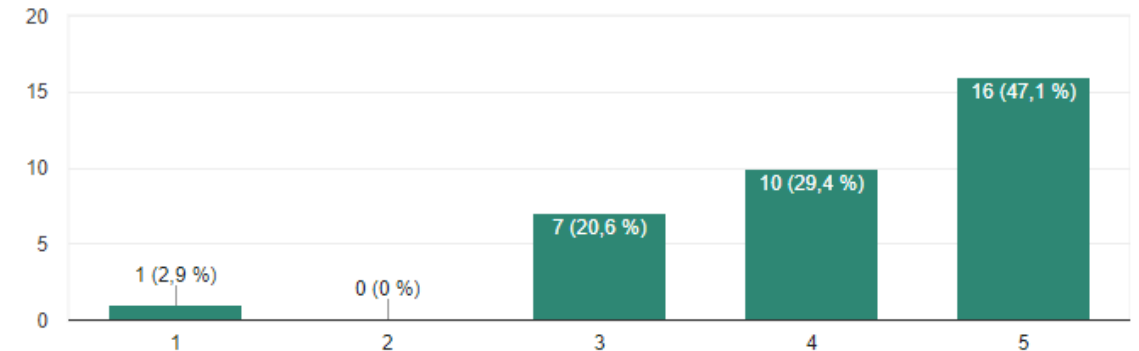
If found the PeerGrade solution easy to use at all times.

24 Antworten



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34 Antworten

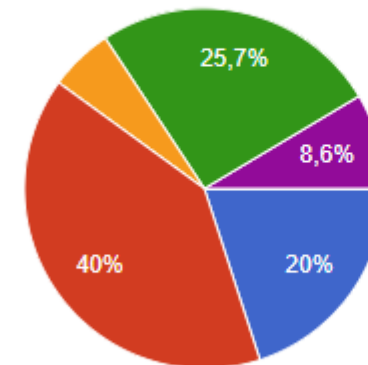


# Students learn in different phases of the peer assessment cycle



I personally learned most in this phase:

35 Antworten



- Reading the Case and the 6SA writing assignment
- Writing a 6SA
- Reading the 6SAs that I needed to review
- Writing constructive reviews for my peers
- Reading the reviews that I received on my own 6SA
- Reading the Reflection on the eskri...

## Student Voices (selected)

- I think it's highly valuable for this class as well as for other classes at ETH
- It is a very time costly exercise, since I wanted to give a constructive feedback to everyone. Maybe next could be less peer reviews, or just for one 6SA, so that there's more will to write a good peer review.
- I think this is a great tool to work with, you get feedback to your work from peers and you see how other people write it and have to think about what was good or not so good. Very good idea, from my point of view!
- As a MAS student, I found in most of the cases the feedback not clear/useful. I understand that younger students are still developing these skills. However, I would suggest to add one "top - peer review" from a teaching assistant to improve the quality of the feedback and learning.
- The feedback I received seemed to be very inconsistent and I note that I did respond quite emotionally to feedback that I perceived to be unfair; this was a lesson in itself.
- Receiving honest feedback is never easy, especially when other people's effort in giving feedback does not match your own. Writing reviews on other students' 6SAs was very useful. However, it would be good to try and increase the quality of reviews received. I am not sure what feedback loop would somehow manage/incentivize all students to put effort when grading others.
- The peer assessment method works really well mostly because we tend to overlook flaws in our own argumentation

# Input Feedback Rubrics

## Understanding Design Feedback

INTERNATIONAL



CALIFORNIAN



GERMAN

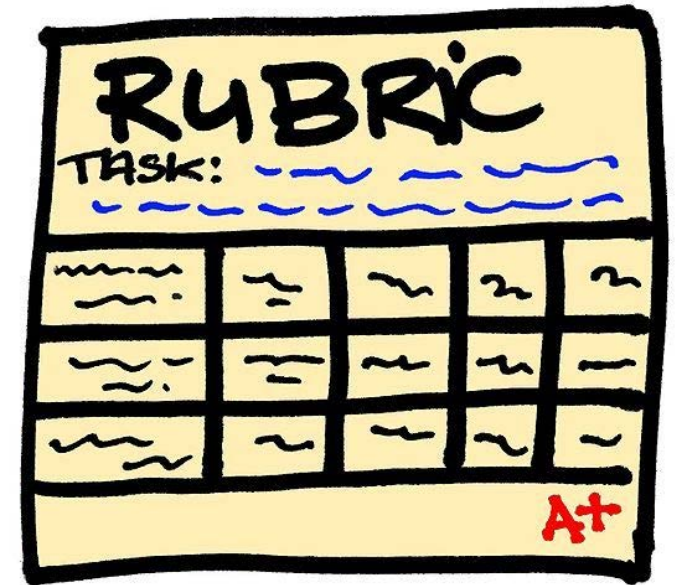


BRITISH



## What is a rubric?

- A rubric is an assessment tool that helps you articulate your expectations for student work, defining what will be assessed as well as describing the criteria for how it will be evaluated. By clearly expressing what excellence looks like, a rubric helps students understand what they need to work on.
- It takes time to create a quality rubric



# Rubrics help to evaluate performance.

- Rubrics address the learning goals of an assignment
- Rubrics address key criteria that are relevant to an assignment's quality.
- Rubrics can clearly distinguish different levels of performance
- Rubrics help students understand where they are in the development of their work
- Rubrics help save time for grading

	Levels of performance (scale)			
	4	3	2	1
Rubric design				
Criterion 1	(Yes, and more!)	(Yes!)	(Yes, but..)	(No)
Criterion 2	Performance descriptors			
Criterion 3				
⋮				

[ ] = [ ] = [ ]

# Rubric Performance Levels

- Sophisticated, Competent, Not Yet Competent
- Exemplary, Proficient, Marginal, Unacceptable
- Advanced, Intermediate High, Intermediate Low, Novice
- Exceeds Expectations, Meets Expectations, Below Expectations
- Accomplished, Average, Developing, Beginning

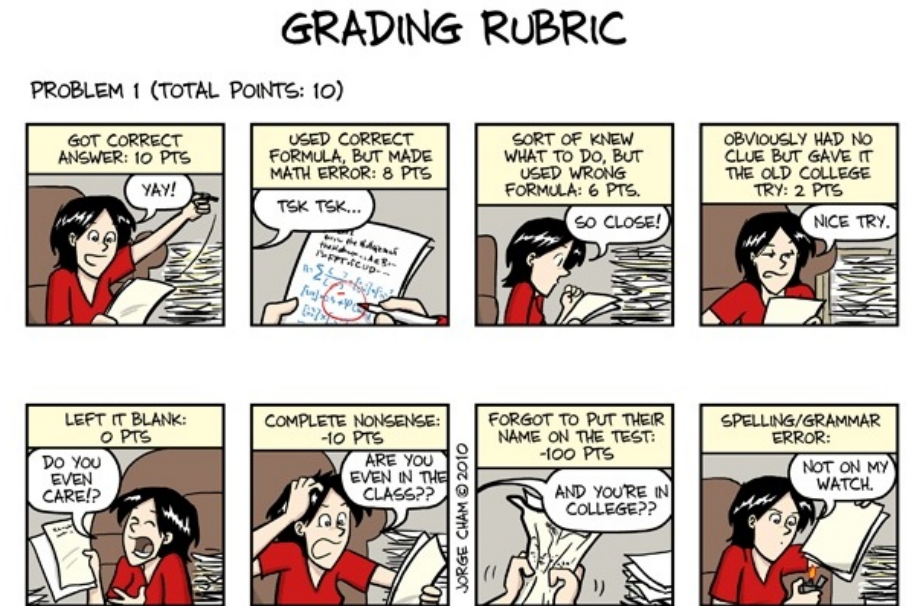
Assignment component	Level of performance		
	Advanced	Intermediate	Beginning
Understanding	10 9	8 7 6 5 4	3 2 1
	The solution is complete and accurate. It demonstrates full understanding of the mathematical components.	The solution is partially complete. Some understanding of the mathematical components is present.	No solution is found for the problem. The related mathematical components are not represented.
Reasoning and strategies	5	4 3 2	1 0
	The strategies and reasoning are sophisticated and efficient. The solution is correct and verified.	The strategies and reasoning are sound. Procedures lead to a correct answer.	There is no evidence of mathematical strategies or reasoning.
Communication	5	4 3 2	1 0
	Solutions are clearly explained in steps. Mathematical symbols are used as a means of communicating reasoning and solutions.	Solutions are clearly explained. Mathematical symbols are used correctly.	Solutions are not explained. Mathematical symbols are misused.
Comments: Total score: ____			

Source: Aaron S. Richmond, Guy A. Boysen, Regan A R Gurung (2016):  
An Evidence-based Guide to College and University Teaching. Routledge, p. 122



# Rubrics are a communication tool

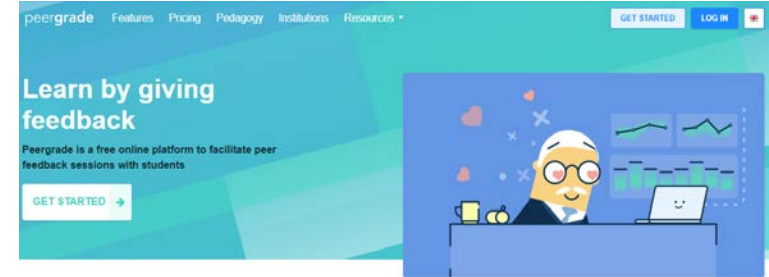
- Create transparency about the assessment criteria
- Go over the rubric in class
- Share the rubric with your students
- Consider letting students suggest rubric criteria
- Allow students to self-assess their work
- Rubrics are valuable when there are grading disagreements
- No rubric is perfect – but a good rubric makes grading reliable



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# Peergrade Rubric Options

- Text
- Scale
- Yes/No



## How it works



### STEP 1

#### You create an assignment

You create an assignment, specify your feedback criteria and open the assignment for submission.



### STEP 2

#### Students submit their work

Your students submit their work which can be anything from Word documents to Youtube videos.



### STEP 3

#### Student work is distributed

We automatically assign work between the students, ensuring that everyone will get feedback.



### STEP 4

#### Students give feedback

The students give feedback to the work assigned to them using the feedback criteria.



### STEP 5

#### Students receive feedback

When the peer feedback process is over, the students receive all the feedback given to their work.



### STEP 6

#### You get the complete overview

As a teacher you get the complete overview of the quality of assignments and what feedback was given.

# Principles for Effective Feedback

- **Relevant**
  - Writing feedback encourages students to clearly communicate their thoughts on the relevant assessment criteria. E.g. “Does the submitted work relate to the task? Explain why.” or “Summarize the author’s key message in your own words.”
- **Kind**
  - Giving feedback is learning how to be kind and fair while critiquing, e.g. “What is the best part about the hand-in?”
- **Justified**
  - When students need to justify their feedback, they will be encouraged to think through the process rather than making quick decisions, e.g. “Explain your score using language from the rubric. You should have a definite reason, based on the rubric, for the 1-4 score you give. Explain why you assigned that score.”
- **Specific**
  - Quite often students write feedback that is not specific enough. Some examples are “good report”, “great job” etc. Use text responses to invite them to be more specific, e.g. “Find 2 things that can be improved, and explain how.”
- **Constructive**
  - Feedback should include concrete examples to advise the receiver on how they can improve their work. E.g. “Choose something you like about the essay and explain why you like it. How could the student build on this to make it even better next time?”

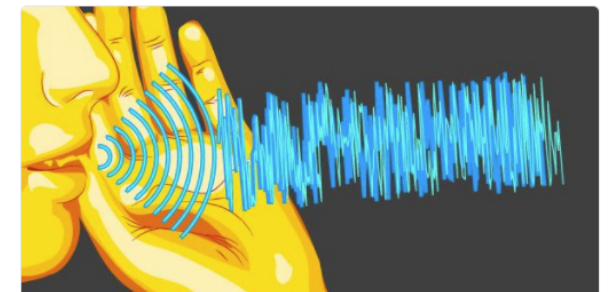
# Grading PAEs: Consider weighting of Submission vs Feedback



- Create incentives for students to give feedback by making it part of the grade
- Explain why giving feedback is important:
  - Soft Skill Development
    - Reading carefully
    - Analyzing critically
    - Assessing diligently
    - Communicating clearly



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# Feedback Score

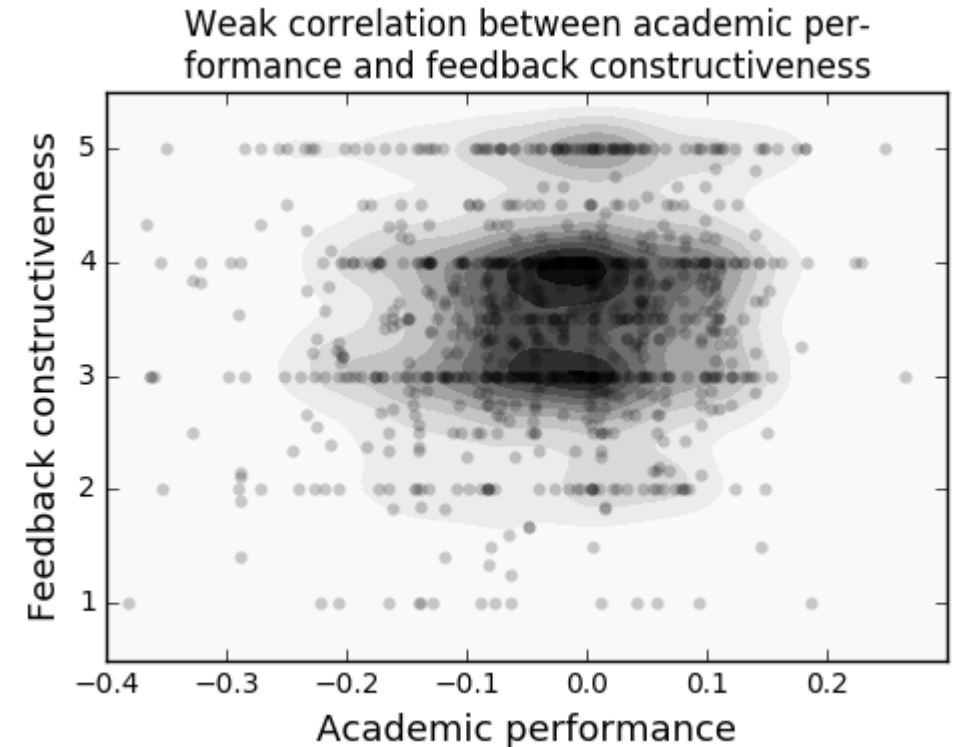
## Can bad students give good feedback?

- Source: Peergrade (medium blog post, [link](#))
- By reviewing data from more than 10.000 students across 500 courses, we looked at the correlation between the quality of feedback a student provides (as evaluated by the receiving peer) and how well they performed on their own assignments.
- When we look at the data, we see that there is a very weak correlation ( $r = 0.11$ ,  $p\text{-value} = 0.0007$ ) between how good students are at giving feedback, and how good their own work in the course is. Surprisingly, students who perform significantly worse than their peers in the assignments, are usually able to provide great feedback to others.

## The 5 components of the feedback score

1. The **constructive score** (This score measures how constructive a student is when giving feedback.)
2. The **hand-in evaluation accuracy score** (This score measures how accurate a student is when evaluating a hand-in.)
3. The **feedback evaluation accuracy score** (This score measures how accurate a student is when evaluating the constructiveness of the feedback they have received.)
4. The **feedback completeness score** (This score measures if a student has given the feedback they were supposed to.)
5. The **feedback evaluation completeness score** (This score measures if a student has evaluated the constructiveness of the feedback they have received.)

Details: [link](#)



The horizontal axis shows each student's academic performance which is the average of their score relative to other students for each assignment. The vertical axis shows the average feedback score of feedback they gave to their peers.

# Rubric Libraries

- Peergrade: <https://www.peergrade.io/rubric-library>
- American Association of Colleges and Universities Valid Assessment of Learning in Undergraduate Education (VALUE) Rubric Project: [www.aacu.org/value/rubrics](http://www.aacu.org/value/rubrics)
- Rubistar: <http://rubistar.4teachers.org/index.php>
- Rubric-Maker: <http://www.rubric-maker.com/>
- iRubric: rubric studio: <https://www.rcampus.com/>



## Wrap-up and Goodbye

- What's your key learning today?
- What is still unclear?
- Pick up a TAN Code for the official course evaluation, access survey via QCR w/ camera on your phone:

