

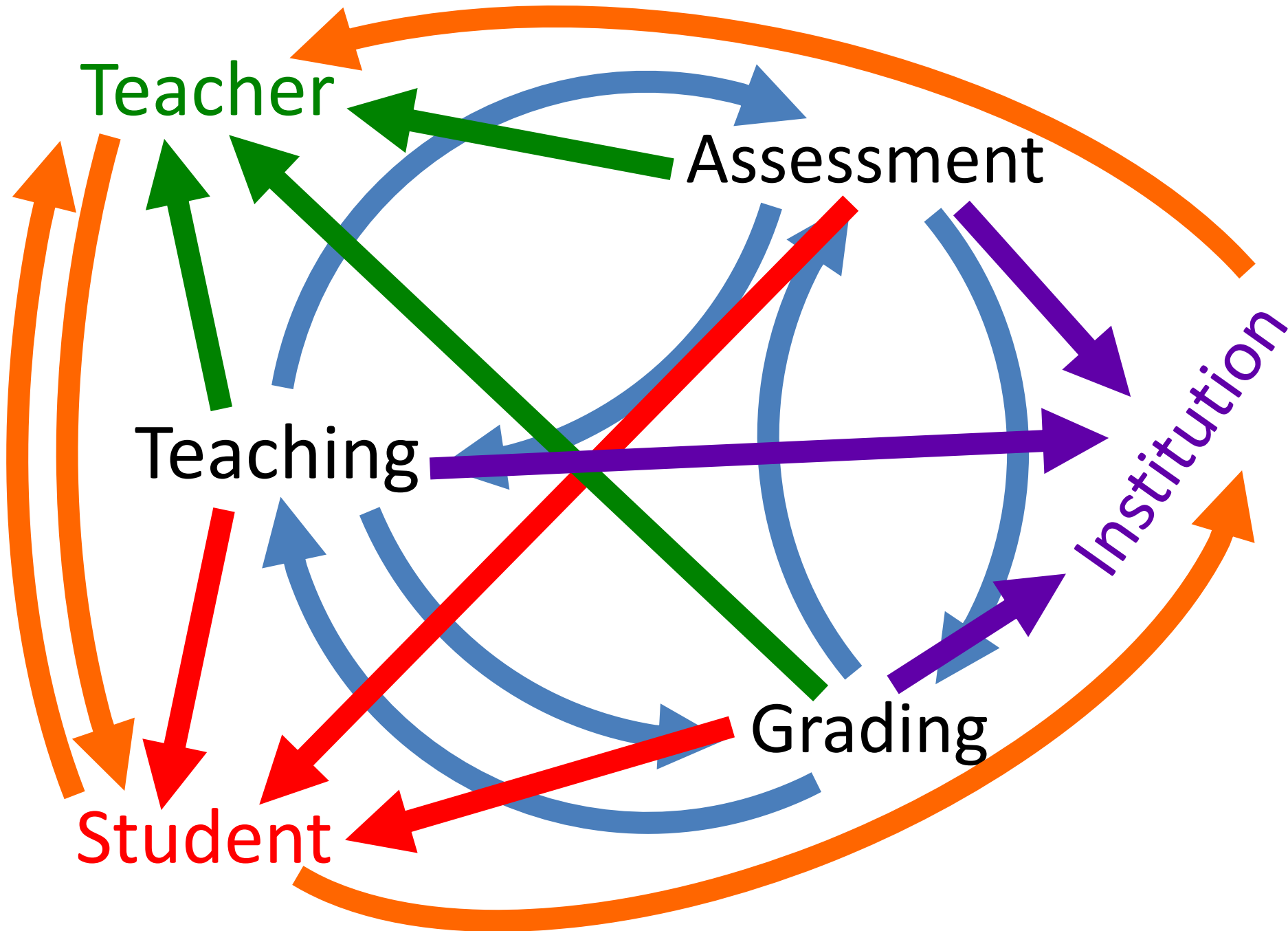
Formative assessment – can grading help us get there?

Christian Jørgensen



Helen Bråten





First big change: A new role

Politicians' masterplan: A highly educated population is the key to the future!

Before:

Universities led a
life of their own



Now:

Expected to become
engine for economic
growth and innovation





Susan

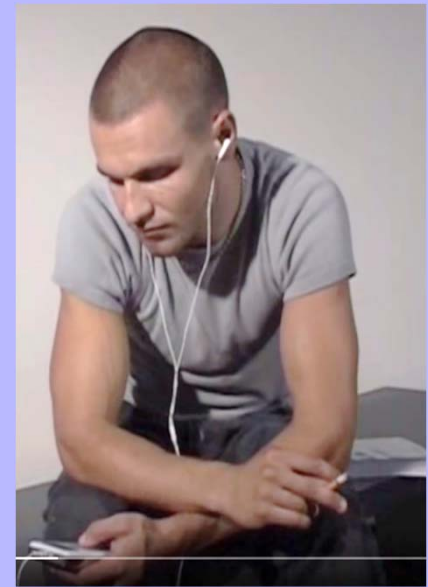
Inner motivation:

thinks, structures, makes links.

Deep learning is spontaneous:

learning cannot be prevented.

Dominated up until the 1980s.



Robert

External motivation:

diploma, grades, work, pay check.

Surface learning is most natural:

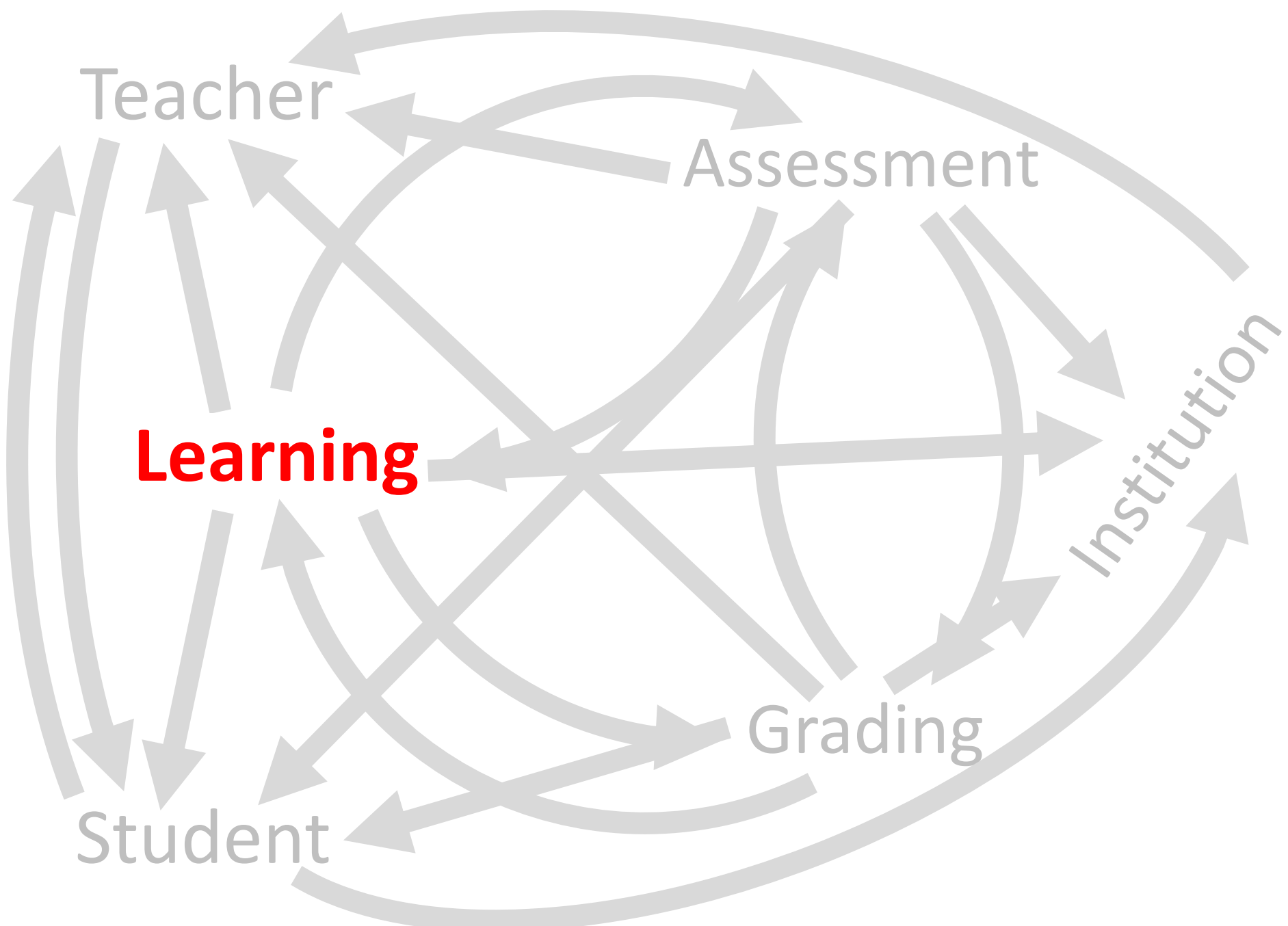
adapts learning to target exams.

Dominates among current students.

Biggs: A common mistake is to think of these as a **good** and a **bad** student. The knowledge society requires that **both** succeed in higher education.

Pedagogical aim:

Teaching and assessment must make Robert *behave as Susan*.



Teacher

Assessment

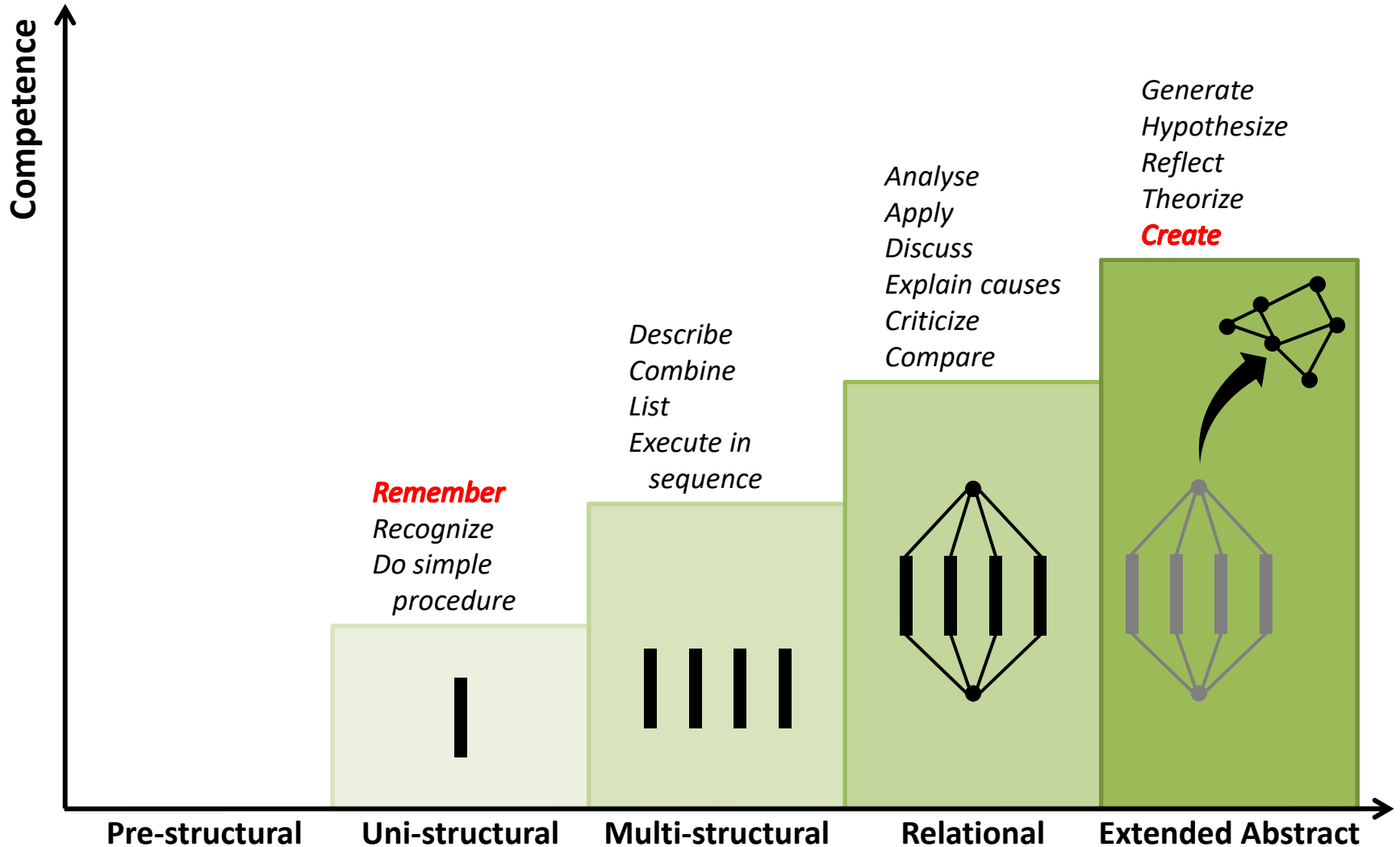
Learning

Institution

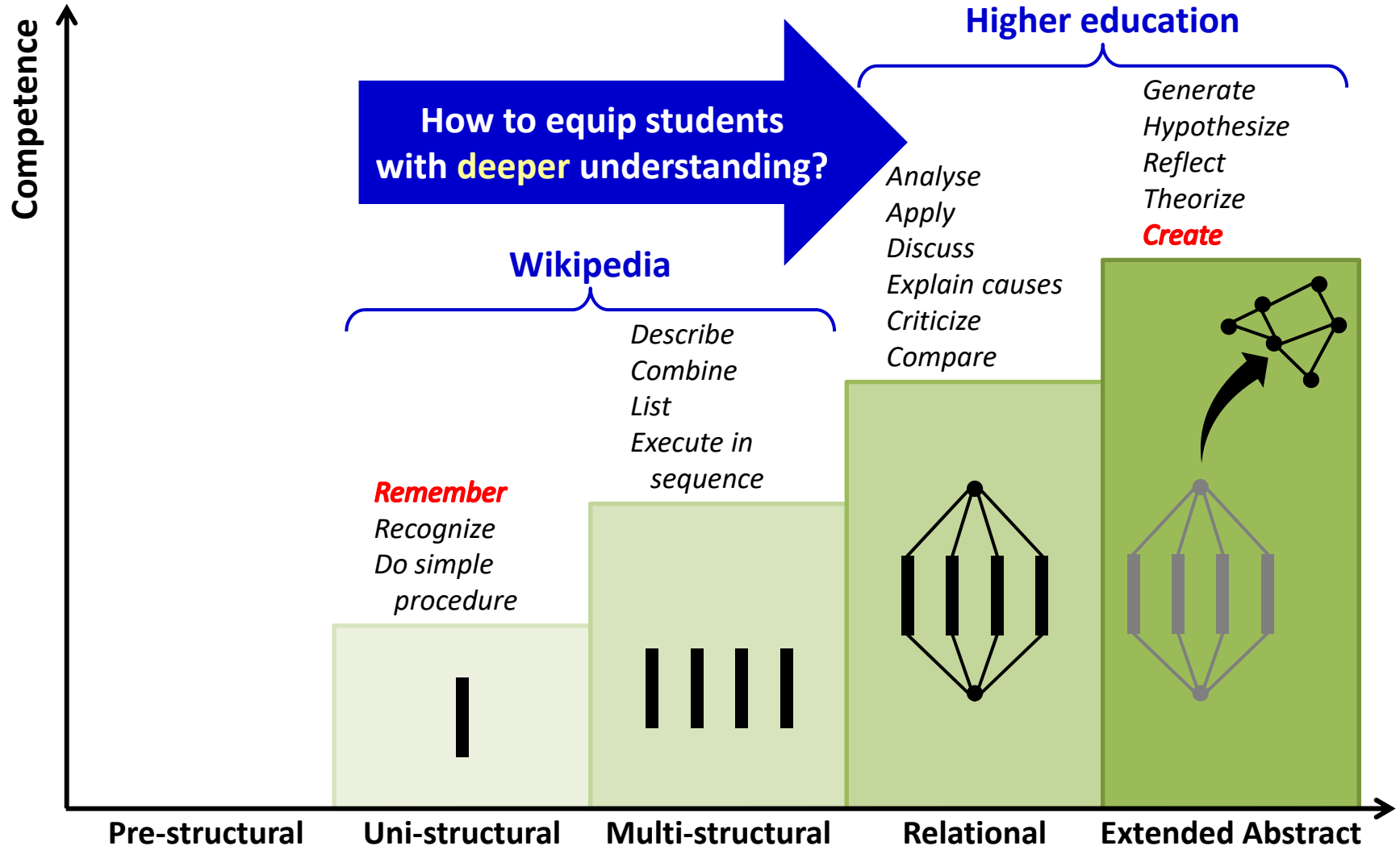
Grading

Student

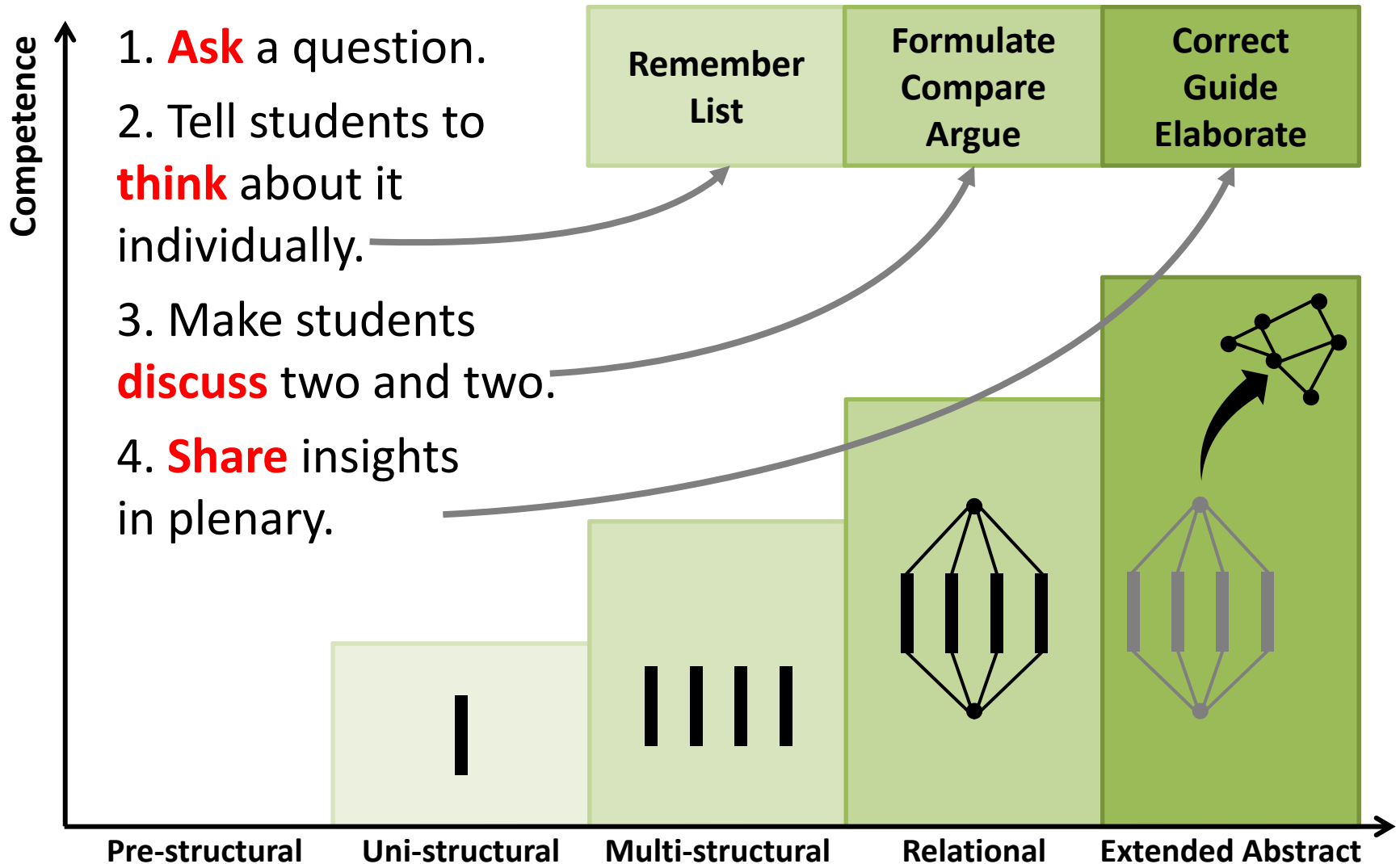
Biggs (and Bloom): cognitive taxonomies



Second big change: **Information** overflow

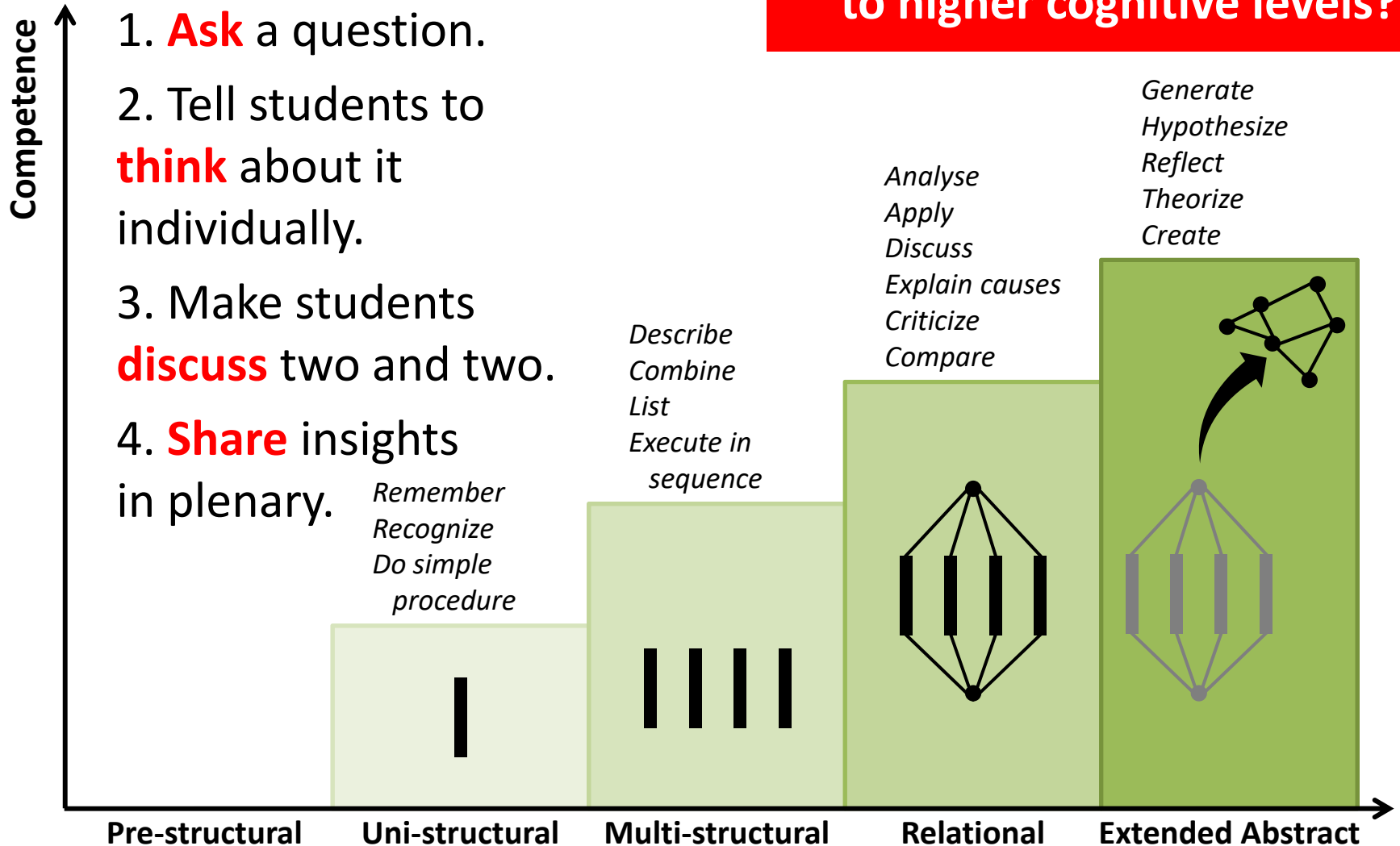


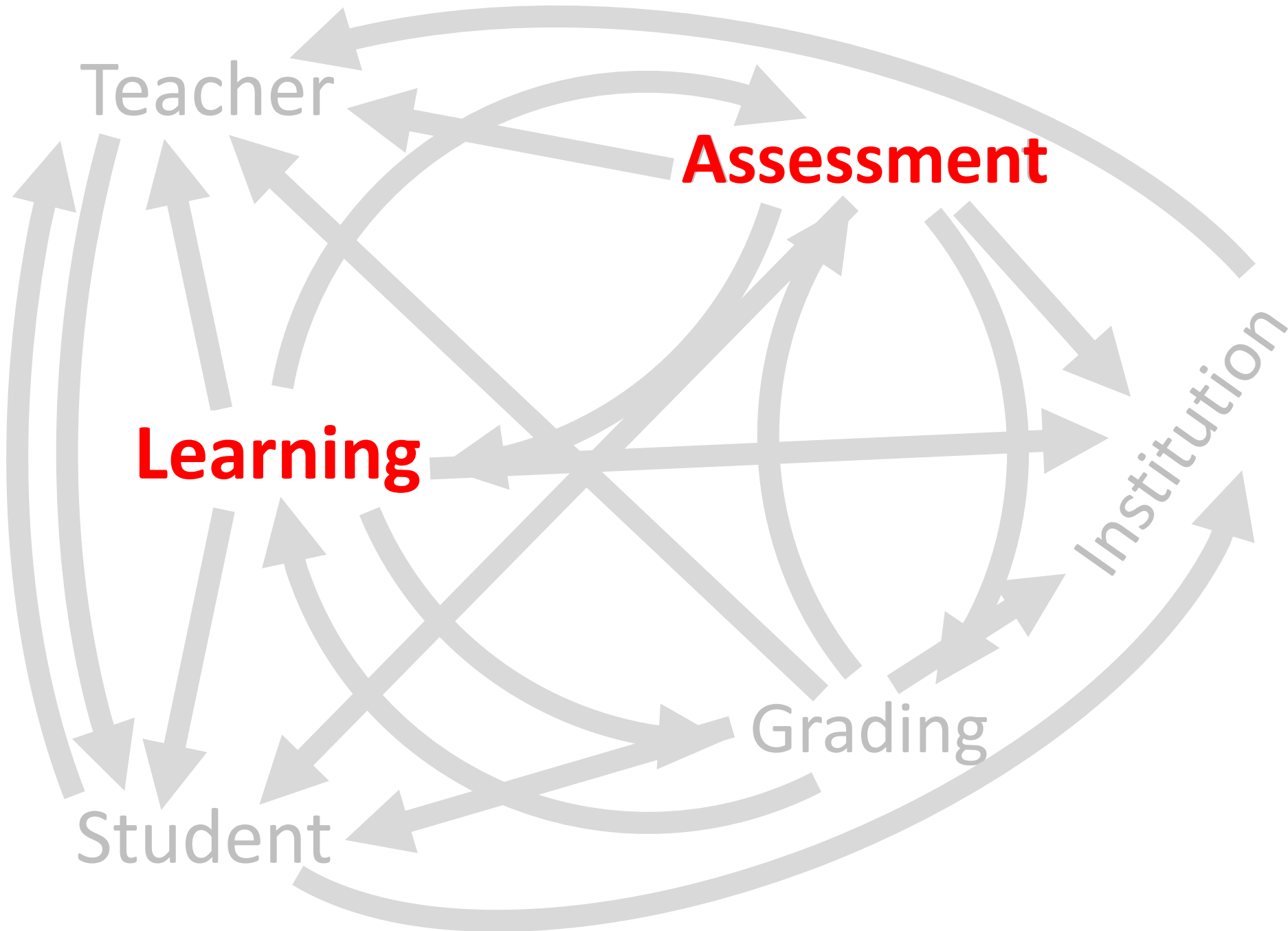
Think, pair, share



Think, pair, share

What other techniques can leverage class-room teaching to higher cognitive levels?





Teacher

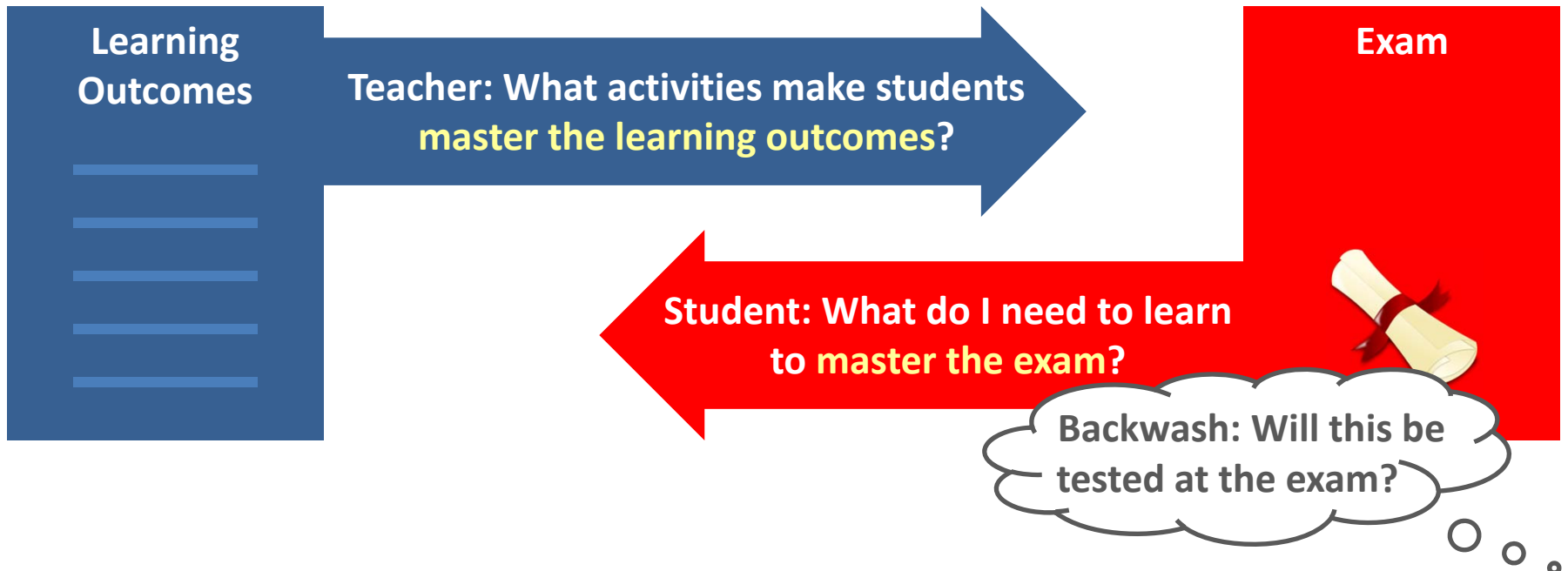
Assessment

Learning

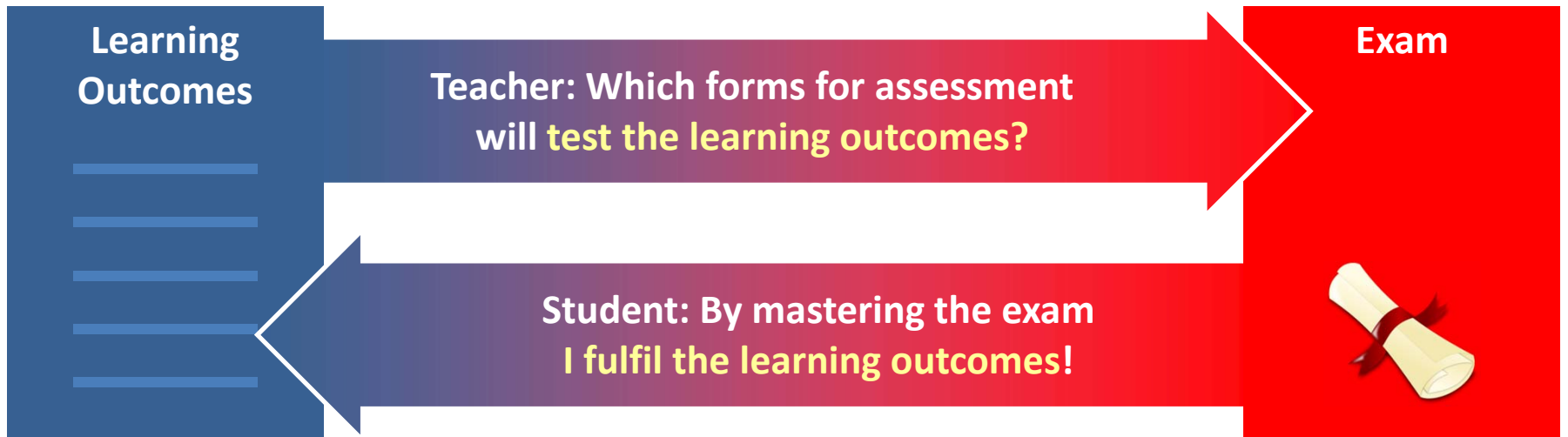
Institution

Grading

Student



Biggs' Method: Constructive Alignment



TEACHING

Learning Outcomes

What other skills are required?

What must students be able to do to master the exam?

...

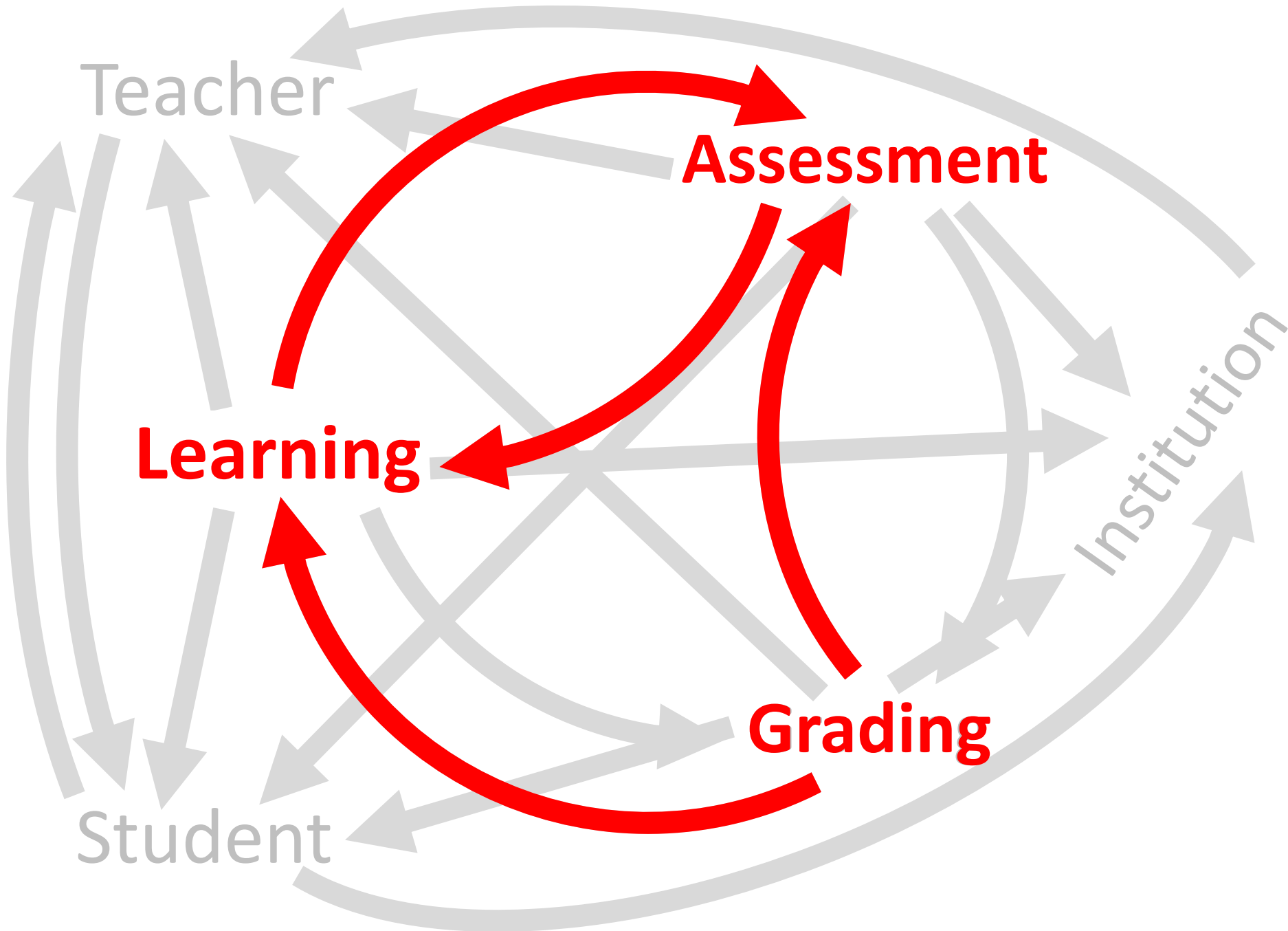
Can it be tested?
Feedback.

Can it be tested?
Feedback.

Exam
Culminating project:
What students should be able to do when they have completed the course.

ASSESSMENT

Assessment is formative



Teacher

Assessment

Learning

Institution

Grading

Student

Reasons for grades

Motivation for students to do their best

...but grades often **fail** to provide inner motivation for deep learning.

Feedback to students about their performance

...but the grade itself is **meagre** feedback.

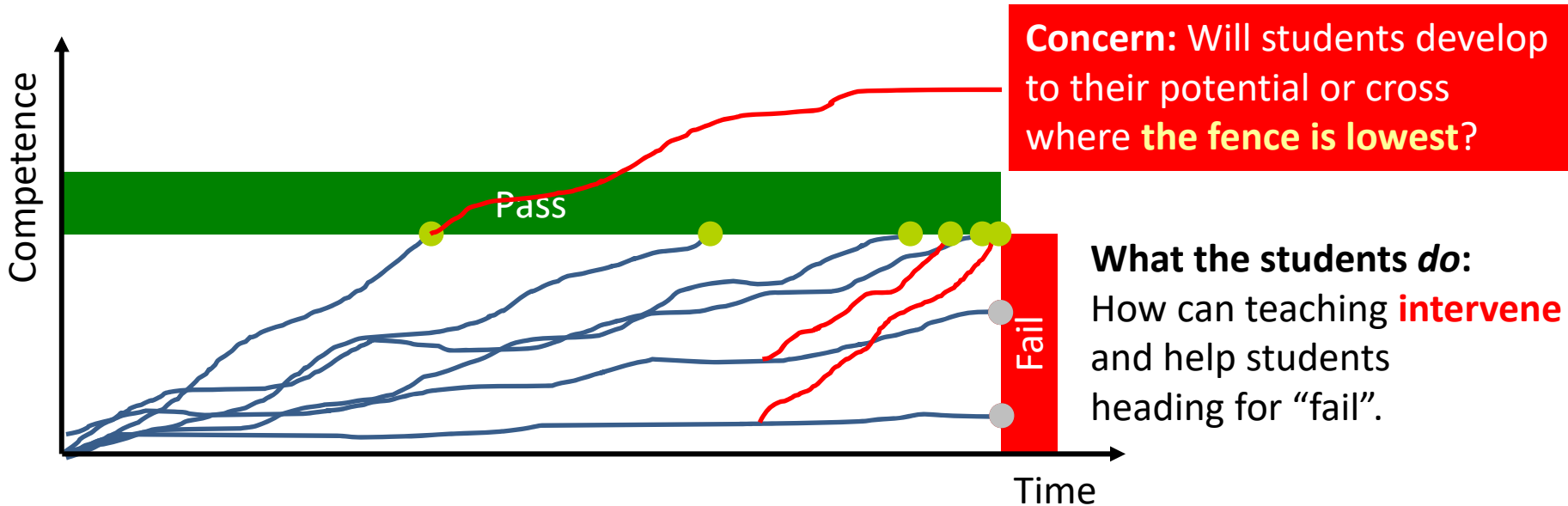
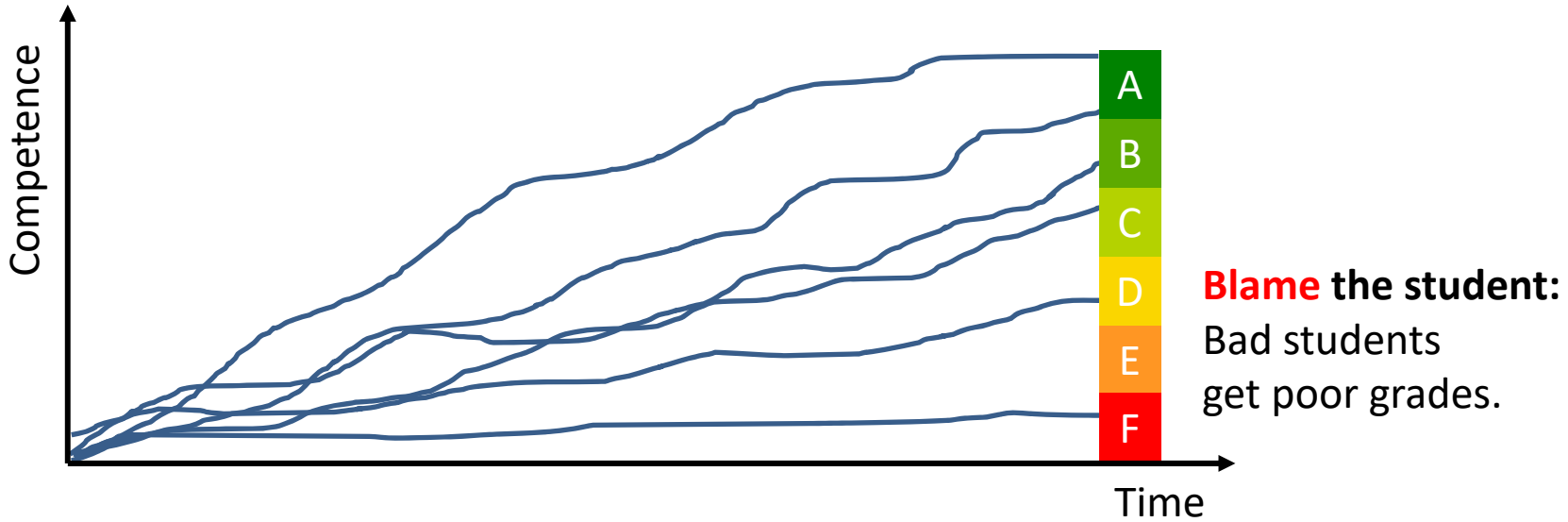
Sorting of applicants for further education or employment

...but is it worth the **investment** of time and resources?

(Internal quality control...)

(...which could be done more cost-effective.)

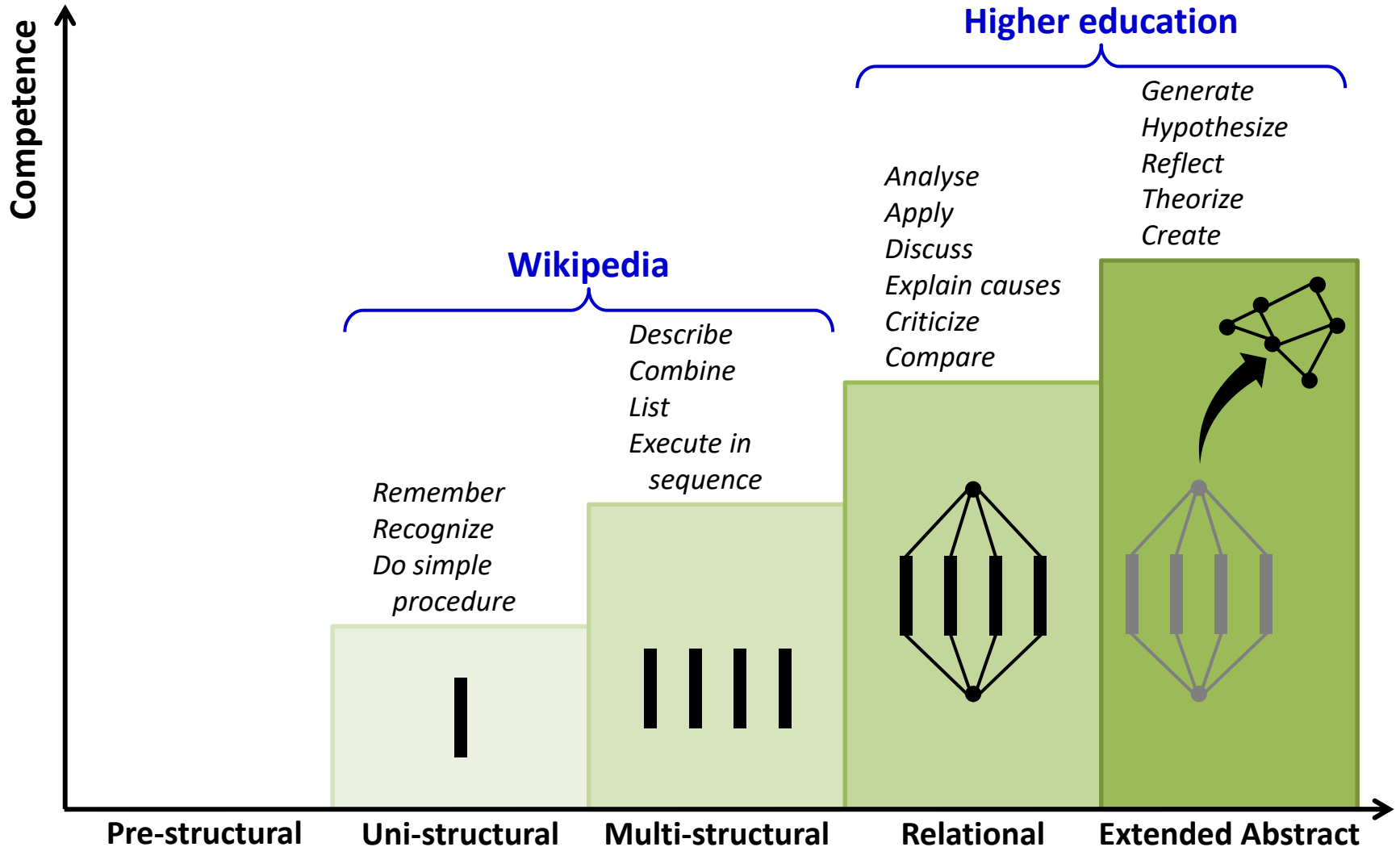
Two grading scales allowed in Norway



For these different cognitive levels:

How well can we **recognize** a good performance?

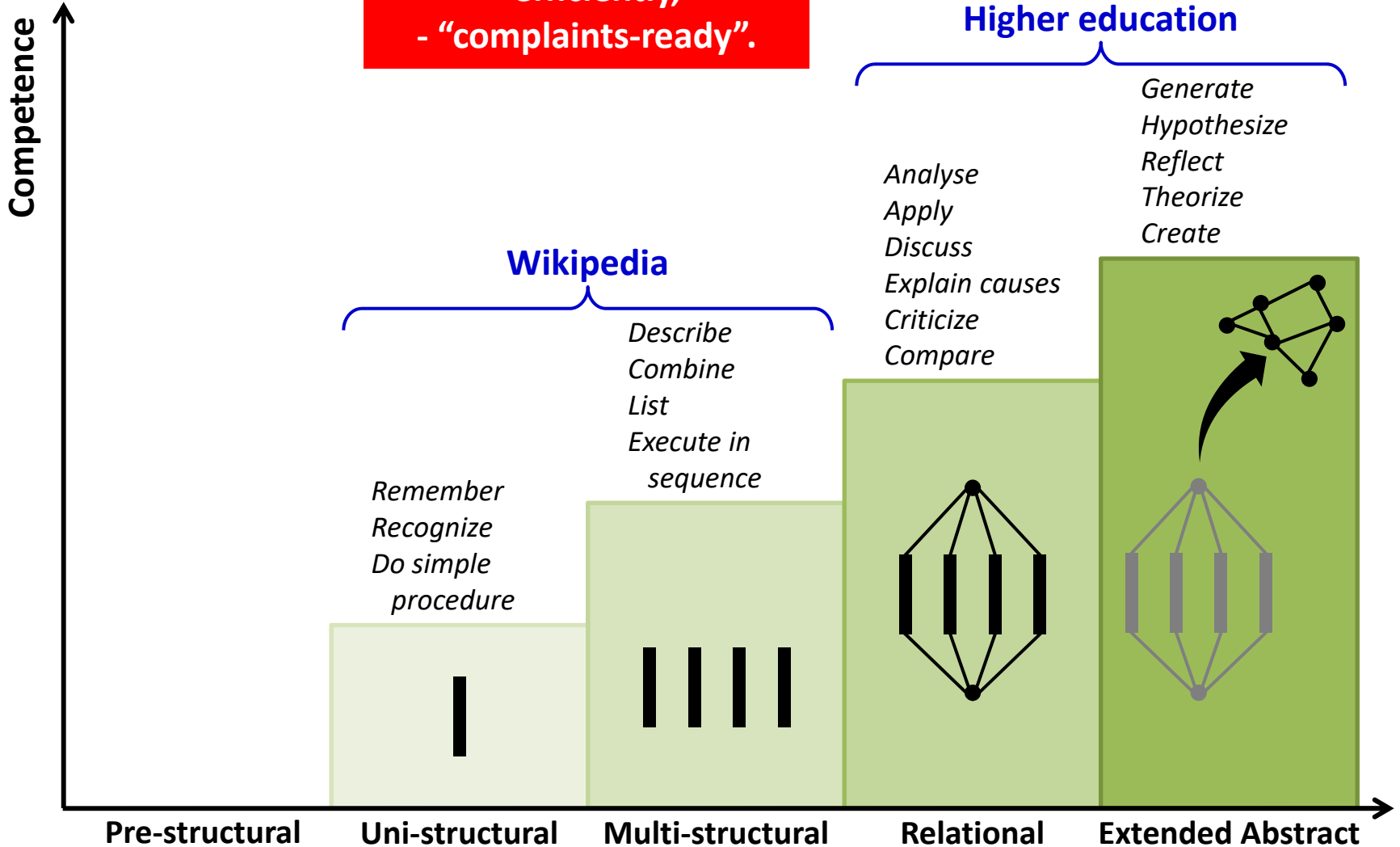
How reliably can we **quantify** performance (=grade)?



It is **easy** to test low cognitive levels:

- reliably,
- with high resolution,
- efficiently,
- “complaints-ready”.

For higher cognitive skills, testing is more **difficult** and vulnerable to **expert opinion**.

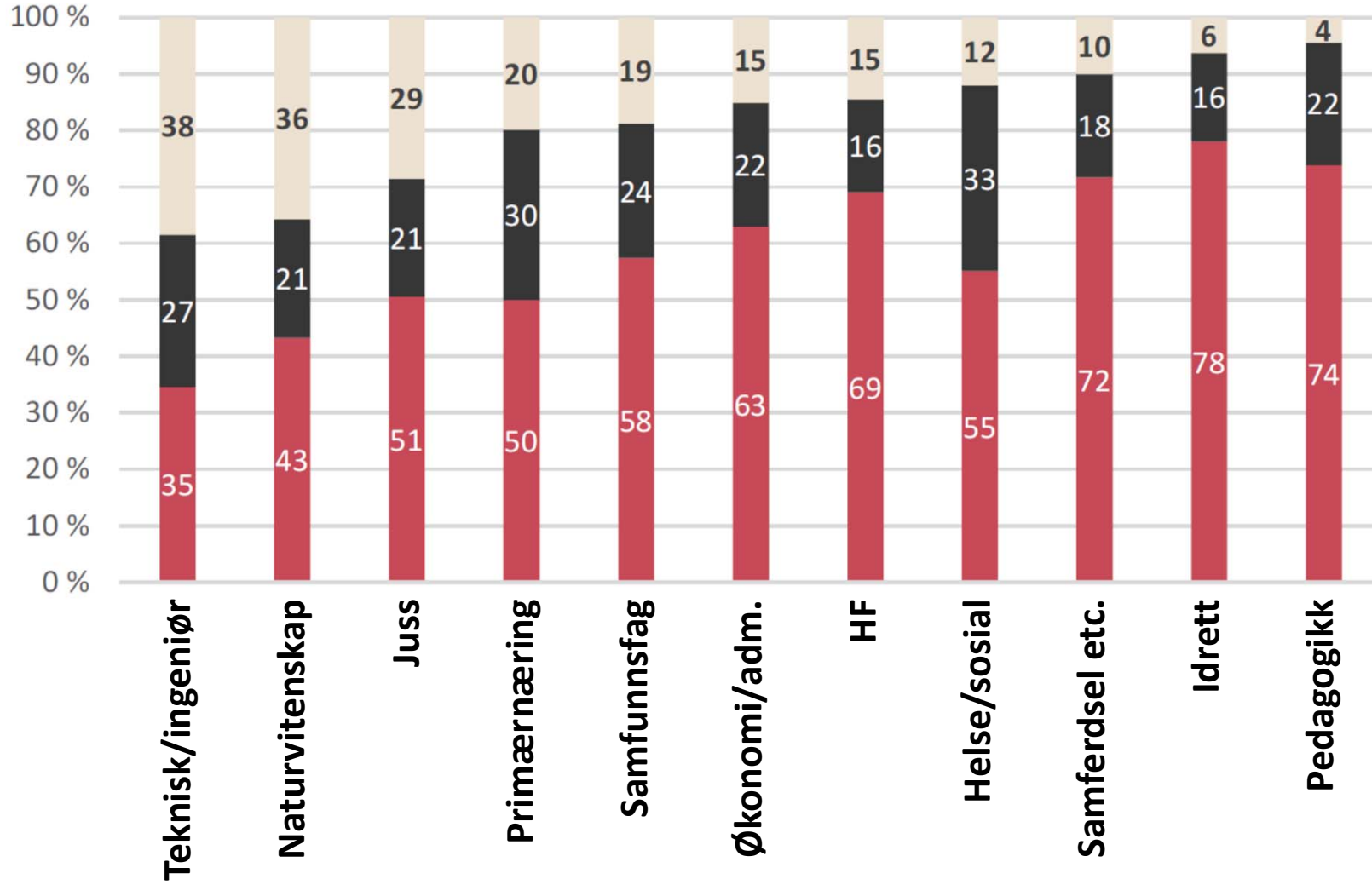


Grades as distraction

Who?	What?	Consequence
Student	Backwash from exam	Surface learning
Student	Grade planning	Prevents interdisciplinarity
Teacher	Optimize repeatability, minimize complaints	Aim low in Bloom's taxonomy
Institution	Grade many courses, intensively, and reassess when complaints	Counterproductive resource allocation
Employers	Rank candidates based on grades	Downplay skills of reported importance

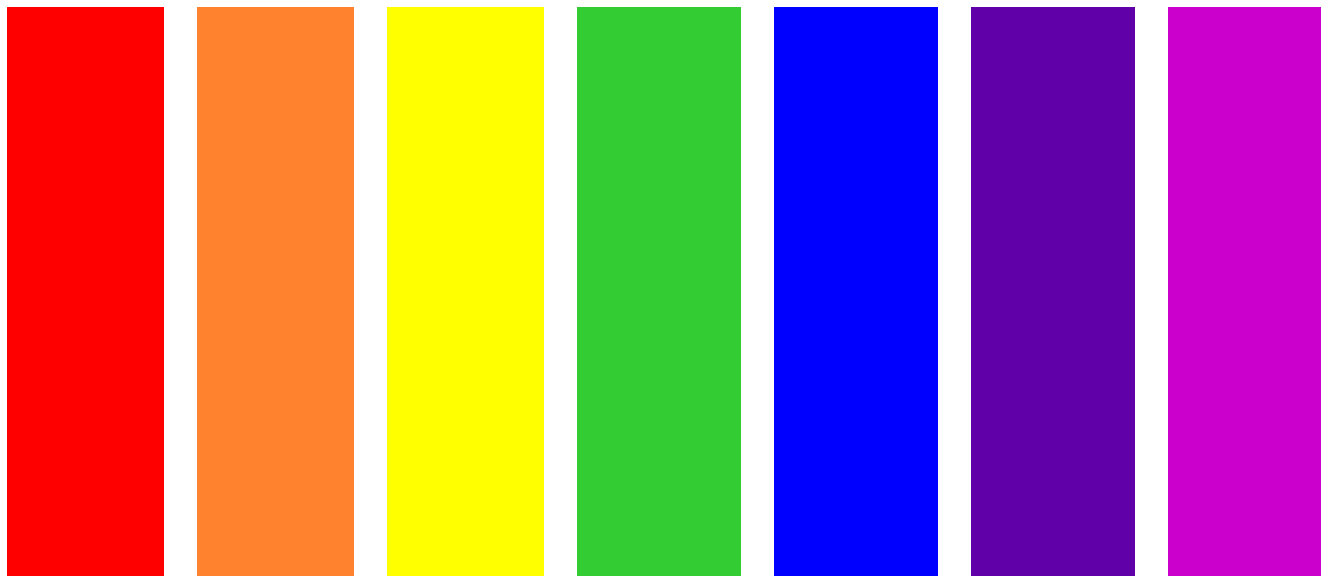
Adaptability, entrepreneurship (OECD 2018)
Management, creativity, transdisciplinarity (TNS Gallup 2015)

Fagkunnskaper:	Gode	Svakere	Middels gode
Kommunikasjons- og samarbeidsevner:	Svakere	Gode	Middels gode



Medical education in the US

Pass/fail did not decrease participation or performance.
A capstone project/assessment provides motivation.



Pass/fail on disciplinary courses.

Positive effects on well-being, stress, and anxiety.

Medical education in **Norway**

1996

2016

Letter
grades
throughout

Oslo, Trondheim, Tromsø:

- **problem-based learning**,
- only **pass/fail** throughout,
- integration of clinical and pre-clinical studies.

Evaluations - positive effects on:

- deep learning,
- integration across disciplines,
- collaboration.

Oslo reintroduces
letter grades.

Arguments:

- Most medical education in Europe is letter-graded.
- Half the doctors in Norway have diploma from abroad with letter grades.
- Some **employers** made their own exams.

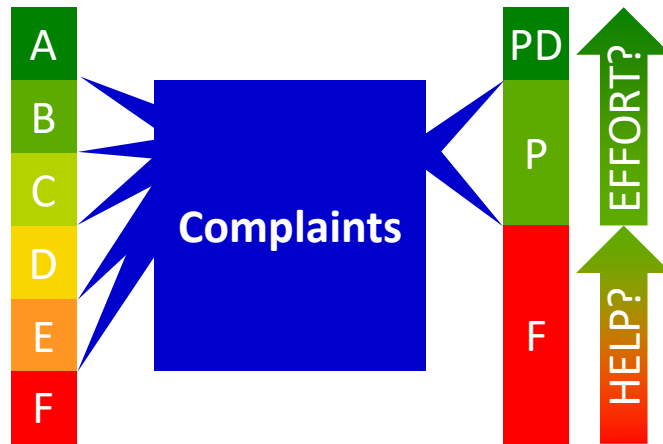
**Literature suggests pass/fail grading has numerous advantages.
Main obstacle: Many teachers fear students would climb over
where the fence is lowest, and therefore prefer letter grades.**

A photograph of a rustic wooden suspension bridge crossing a river. The bridge is made of weathered wooden planks and is supported by thick steel cables. The water is a vibrant turquoise color. The surrounding landscape is rocky and sparsely vegetated. A semi-transparent white box with black text is overlaid on the top of the image, and another smaller semi-transparent white box with black text is overlaid on the bridge's wooden structure.

**Pass with
distinction?**

A new grading scale?

Pass with distinction, pass with honours, väl godkänd, bestått med glans, laud...



Fewer and easier **complaints**?

Aim:

Courses where students *do* stuff, that trains higher cognitive levels, supervised by an instructor, training skills desired by employers, growing through curiosity and sharing, within a community of peers.

Focus: **Formative assessment.**

Pass/fail benefits:

- less **backwash** and anxiety,
- more collaboration and curiosity.

Incentive for extra effort

- expected by **teachers** and good students.

Coarse scale:

- demands fewer resources,
- grade can be set from a distance - instructor may **supervise peer grading.**