How teaching and assessment can support active learning

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Constructive alignment

= a theoretical model of how to support deep, constructive learning

= a practical tool for teachers to design teaching

Constructive refers to the idea that students *construct meaning* through relevant learning activities → *Deep approach to learning*

Alignment refers to a learning environment where teaching and learning activities, and assessment tasks, are *aligned* to the intended learning outcomes.

(Biggs, 2003)

Effective teaching requires that we eliminate those aspects of teaching that encourage surface approach to learning and that we set stage properly so that students can more readily use deep approach to learning.

Biggs & Tang, 2009, p.31

Background

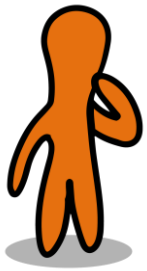
- The principles of constructive alignment have long been promoted as a powerful way to enhance the quality of teaching and learning (Biggs, 1996; Biggs and Tang, 2011).
- The basic premise of constructive alignment is a student-centred approach to teaching in which the emphasis is on *what the student does* and the ways to improve students' active engagement and deep approach to learning (e.g. Biggs and Tang, 2011; Prosser and Trigwell, 2014).
- Surprisingly, there is little empirical evidence how different elements of the constructive alignment actually influence the students' actions and approaches to learning especially from the students' point of view.

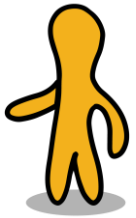
Students' intended learning outcomes are aligned with teaching and assessment

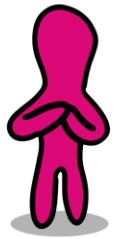
- Intended learning outcomes
- Defining core competences and content

- Teaching methods
- Content and materials

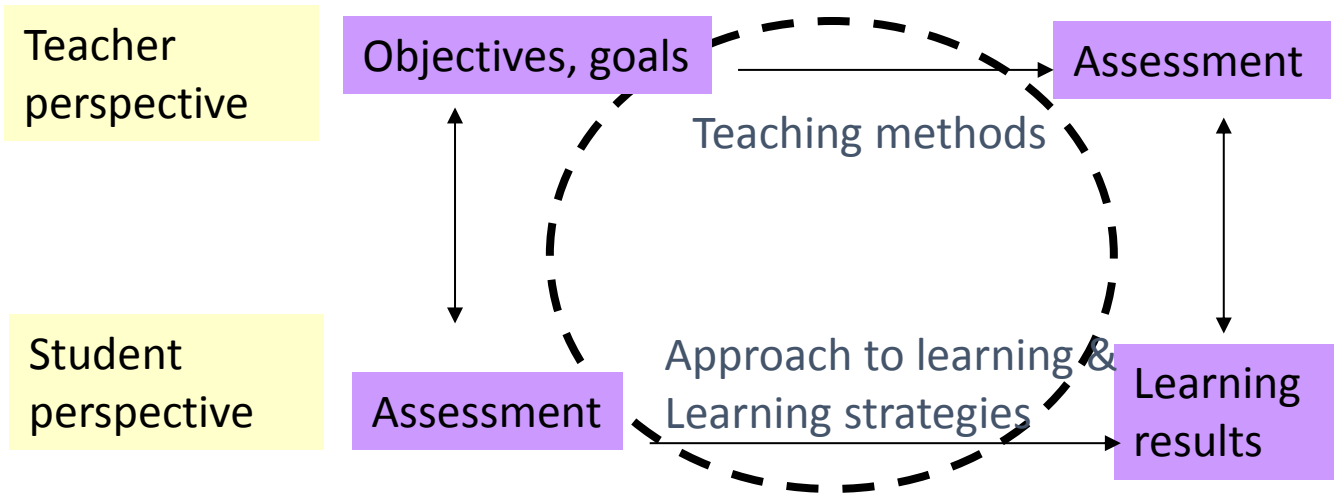
- Assessment of learning
- Feedback







Constructive alignment – Assessment guides students' learning



(Biggs 2003, 141)

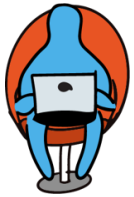
Approaches to learning

Deep, reflective approach

- Intention to maximise understanding
- Relating and analysing infromation; reflective approach
- Based on interest in the subject matter

Surface, unreflective approach

- Intention to cope with the course requirements
- Routine fact memorisation; unreflective studying
- Related to an experience of high workload



Organised studying

- Intention to succeed well
- Careful planning and organising
- Time and effort management

e.g. Marton & Säljö, 1976; Entwistle, 1998:; Lindblom-Ylänne, Parpala & Postareff, 2019

The relationship between elements of constructive alignment (objectives, teaching and learning activities, assessment) and student learning was explored by interviewing students

Student perspectives on how different elements of constructive alignment support active learning

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THE AIM OF THE STUDY WAS TO EXPLORE...

How students describe their experiences of different elements of constructive alignment?

How these are related with the approach to learning they adopt in a specific course.

37 students from three different courses participated

They were interviewed regarding their perceptions of the course and their approaches to learning.

The data were analysed using qualitative content analysis.

PARTICIPANTS: 37 students from three courses

COURSE 1 Biochemistry (19 interviewed students)

- 5 credits, 7 weeks, 100 students
- Lecturing (teachers' presentations, occasional short discussions) + practial sessions
- Written exam (assessed on a scale 0-5)

…become familiar with….

COURSE 2 Theology (8 interviewed students)

- 5 credits, bachelor-level, 6 weeks, 25 students
- Flipped learning (preparatory reading assignments)
- Drama exam : the students prepared a play about a central theme of the course in small groups.

…is able to evaluate, is able to collect and *analyse information..*

COURSE 3 Theology (10 interviewed students)

- 5credits, 6 weeks, 60 students
- Lectures including some discussions, essay groups
- Written exam

…is able to interpret compare and *specify…*

RESULTS

- The results show that different elements of constructive alignment had a clear role in guiding student learning and studying.

- *The teaching and assessment related factors appeared to play an especially big role.*

- On the other hand, the intended learning outcomes did not seem to influence; students were not aware about the objectives

RESULTS

- The results show that different elements of constructive alignment had a clear role in guiding student learning and studying.
- *The teaching and assessment related factors appeared to play an especially big role.*
- On the other hand, the intended learning outcomes did not seem to influence; students were not aware about the objectives

COURSE 1: Lecturing with practical sessions and written exam

Intended learning outcomes

Not shared with the students; the students did not remember the objectives

Teaching and learning activities

- Little engaging activities
- Studying was driven by the activities that were obligatory to pass the course
- Many students appreciated the quality of teaching, praised the teacher's enthusiasm

Assessment

- Expectations of assessment guided what the student does

Most students adopted unreflective approach, some also deep approach

Course 1 with lectures and final exam

Many students adopted unreflective approach to learning

Now in this Biomolecule course it happened so that I didn't really do any of them [activities) because they were not obligatory....

(Course 1, St 5 Unreflective)

Well, when you study that kind of trivia in order to remember it still in the exam, the last few days before the exam are the most important
(Course 1, S 11 Unreflective)

COURSE 2: Flipped classroom with drama exam

Intended learning outcomes

- The students did not talk about the objectives but what they achieved

Teaching and learning activities

- Required students' active involvement throughout the course
- The importance of peer group discussions was emphasised as supporting their learning

Assessment

- Expectations of assessment guided students actions
- Mutual agreements, small group as sessment
- High quality course materials

Deep approach to learning


Course 2 with flipped learning

Most of the students adopted the deep approach to learning

Personally, this suits me really well and I learn really well with this technique. First I acquainted myself with the subject a little bit and then it was handled together. And also it was handled in a group, so you heard so many different points of view and how different people had interpreted the same text so differently and so you went really deeply into the topic --- …

(Course 2, 2 Deep)

COURSE 3: Lecturing, group work and written exam

Intended learning outcomes

The students did not mention (were not aware?) the given objectives in interviews

Teaching and learning activities

- Little engaging activities
- Studying was driven by the activities that were obligatory to pass the course
- Lack of challenges; negative effect on learning, little effort into studying
- Lack of high quality course materials
- Many students appreciated the quality of teaching, praised the teachers' enthusiasm

Assessment

Lack of transparency of assessment

Most students adopted unreflective approach

Interview example from course 3 with lecturing and written exam

Most of the students adopted unreflective approach to learning:

They had told us that there is no reason to worry about it that it's like if you have been in the classes you will pass it for sure. . . So I took it really casually and just read through (the materials).

A small group of students are guided by their own aims

Students didn’t always emphasise factors related to course aims, teaching or assessment.

- That was especially true for students adopting the deep approach to learning in the lecture course 1 with final exam.
- Students’ own aims and willingness to put effort into studying seemed to be especially valuable in the learning environment in which the teaching method itself did not guide or require learning activities a lot.

Conclusions: Teaching and assessment has a great influence on students' learning

Learning objectives didn’t seem to influence students’ learning much

Teaching and assessment guides learning especially for students who would otherwise adopt a surface approach to learning

Student learning and engagement can be supported with the appropriate level of challenges (vice versa, lack of challenges is detrimental to learning)

Constructively aligned teaching

including activating teaching and assessment methods,

can especially support students who would adopt an unreflective approach to learning if they are not actively supported and encouraged to take an active role.

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