

Constructive alignment

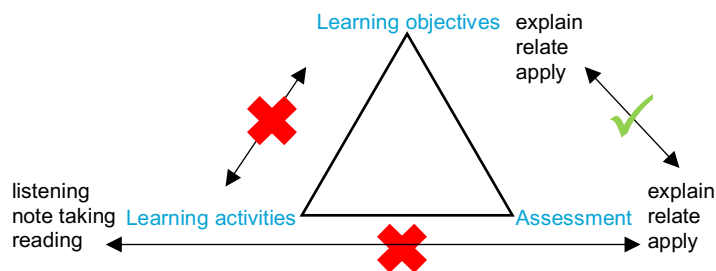
Learning models

Educational psychology distinguishes learning in two broad models: the objectivist perspective and constructivism (Jonassen, 1991). Objectivists state that information exists as an individual entity (object) that is unrelated to the 'knower', whereas the constructivist paradigm stresses the individual construction of knowledge based on individual learning processes and the unique, personal experiences of the learner (Duffy & Jonassen, 2013). Constructivist theories have been adopted as the leading paradigm in most learning frameworks (e.g. Biggs, 1996). This perspective states that the effectiveness of teaching (i.e. attaining learning objectives) is based on choosing the appropriate teaching and learning activities which correspond with the selected cognitive levels (i.e. Bloom's taxonomy).

Alignment

Constructive alignment is at the heart of solid course design (Biggs, 1996; Cohen, 1987). The constructive alignment principle views the student as the centre of the learning process and considers learning to be efficient when the learning activities (i.e. what the student *does*) and the assessment are in line with the learning objectives. The first step in designing a well-aligned course is to formulate clear learning objectives (LO). Second, the system requires the identification and design of learning activities that elicit the same type of cognitive abilities from the student. Finally, the same process applies for the selection of appropriate assessment tasks that mirror the learning objectives.

is that the teacher cannot tell whether the learning objectives are met. In practice, this could manifest itself in a multiple-choice mid-term exam about a learning objective that asks a student to *create*.



In case of a misalignment (as depicted above) between the learning activities and the assessment, the learning activities don't provide the students with an opportunity to practise their learning objectives realistically and on the same cognitive level, which in turn results in an unfair assessment and a minimal learning effect. In practice, this could mean that most teaching and learning activities are designed as either a lecture or a tutorial resulting in misaligned courses.

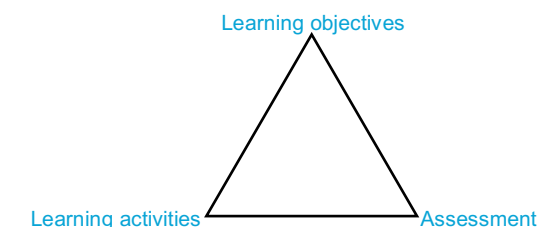
Correct alignment

In order to safeguard the learning effectiveness, four major steps in a specific order should be taken: 1) the learning objectives should be clearly defined 2) choosing learning activities that will lead to those LOs 3) Assessing students' actual learning outcomes to see how well they match what was intended 4) arriving at a final grade.

Constructive alignment table

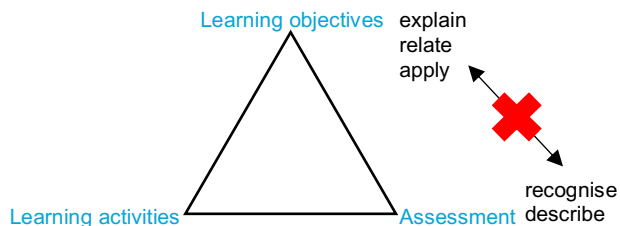
All these principles are represented in a so-called constructive alignment table, which provides a good overview of the educational design.

LO	Bloom level	Teaching & Learning activities	Formative assessment	Summative assessment
Student is able to design a constructive alignment table	Create	1) Student reads one-pager on constructive alignment principles 2) Student relates LO's to LA's 3) Student fills out partially designed CA table 4) Student designs a table	Feedback on partially and fully designed table Direct online feedback on LO-LA exercise	Student is presented with a fictional educational case and is asked to design a constructive alignment table accordingly



Issues related to misalignment

Sometimes, due to various reasons, a mismatch between the three different legs occurs (see example below).



When such a misalignment occurs, it frequently leads to two problems. Students tend to focus on the assessments and their outcome, and from their perspective, the learning objectives will not provide them with any clarity as to how they will be evaluated. A problem for the teacher that ensues from misalignment

References

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher education*, 32(3), 347-364.
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