

# Teaching & Learning @ SU

Welcome to this interactive electronic resource which aims to equip lecturers for and guide them through the process of designing opportunities for optimal student learning.



# Teaching & Learning @ SU

- Teaching and learning at SU are guided by the Strategy for Teaching and Learning 2014 – 2018 which articulates an ongoing commitment to good teaching (as a prerequisite for improving student learning).
- With regard to teaching and learning the strategy describes the following responsibilities:
  1. the responsibility to learn and to take advantage of opportunities rests with the student; student organisations have a role to play in supporting and encouraging students, as well as in providing mentoring and leadership;
  2. the responsibility to design and implement optimal opportunities for learning to take place rests with teaching academics;
  3. the responsibility to provide and maintain adequate facilities for teaching and learning rests with organisational units in charge of the University's physical and virtual infrastructure;
  4. the responsibility to provide professional advice and practical help to enhance teaching rests with central support units and support staff in faculties;
  5. the responsibility to provide strategic direction for the teaching function rests with the university management.
- This resource is linked to points 2 and 4 above.



# The DeLTA process

- This resource is called Designing Learning, Teaching and Assessment (DeLTA) process.
- Delta is also the mathematical symbol for change and is represented by  $\Delta$ .
- The purpose of the resource can thus be summarised as a guide towards achieving change in T&L@SU.



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The resource is interactive and the sitemap on the left can be used to navigate around.

Various icons (examples shown on the right of the screen) provide direct access to specific resources.

You can also request to be enrolled in a future workshop or ask a question by clicking on the icons below.

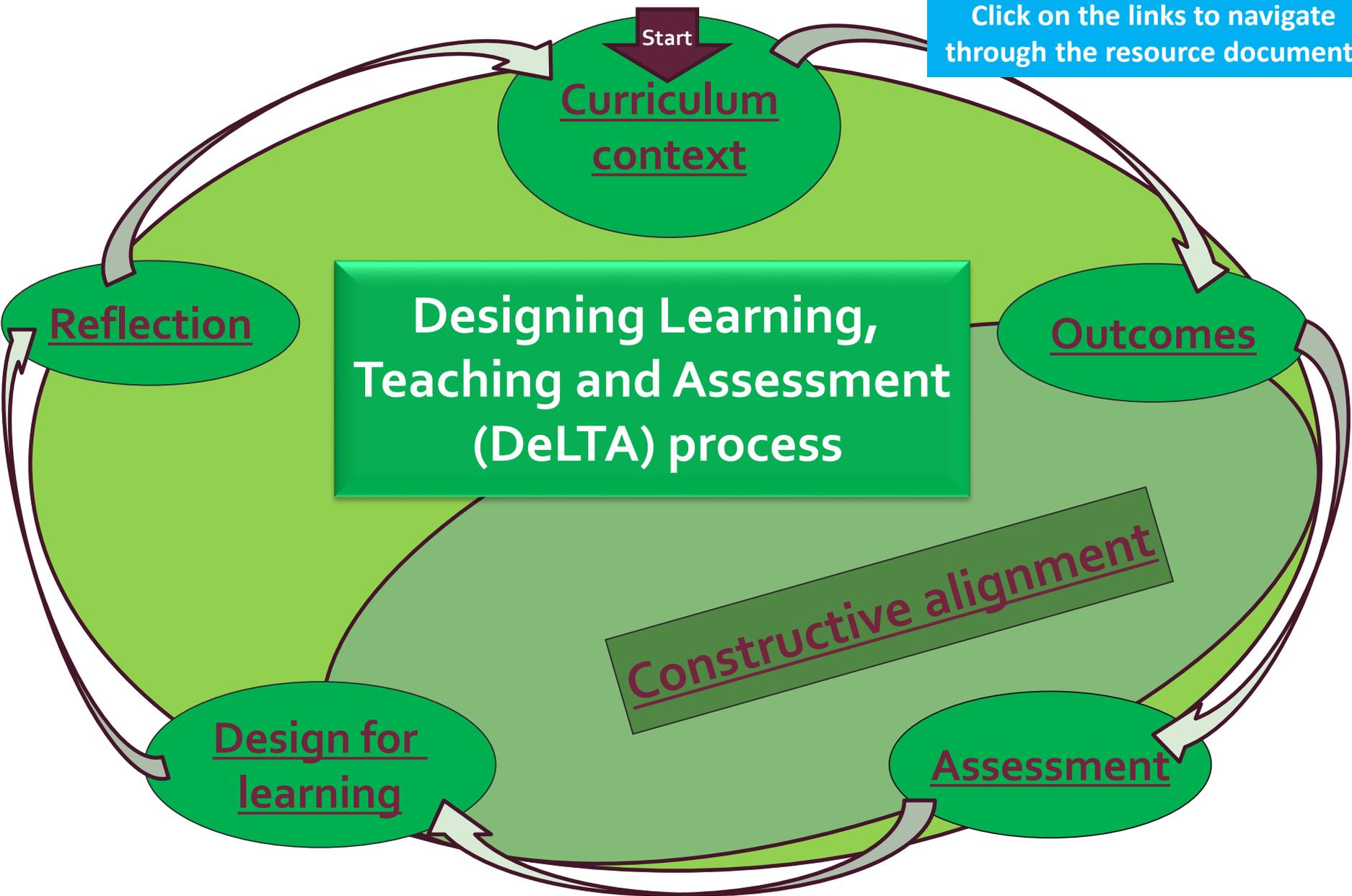
Web Resources



ASK A QUESTION



Click on the links to navigate through the resource document.



# Curriculum Context

SU Approach

Notional hours

Lecture halls

The first phase of the DeLTA process is called 'Curriculum Context'. This phase examines the current context within which T&L will take place. It can also be called the situational or needs analysis. The macro, meso and micro level aspects that play a role in the design of learning opportunities are examined in this phase.

As shortly discussed before, SU has a specific approach towards T&L which is described in the Strategy for Teaching and Learning 2014-2018.

When thinking about curriculum design the aspect of notional hours as linked to the credit of a module also becomes important.

The learning spaces or lecture halls available for facilitation of student learning also influence the design of these opportunities.

# Curriculum context

## Notional hours

The South African Qualifications Authority (SAQA) uses a credit system based on the idea that one credit = 10 notional (assumed) hours of learning.

'Notional hours of learning' refers to the learning time that it would take an average student to meet the outcomes defined in a learning programme. It includes concepts such as:

- contact time (face-to-face);
- time spent in structured learning opportunities;
- individual learning (self-study, time for completing assignments and research, etc.);
- time spent in assessment processes.

Credits are a measure of the notional hours or learning time that it would take the average learner to meet the prescribed outcomes.

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## Curriculum context

## SU Approach

### Learning centred

### E-supported (blended)

### Plagiarism

The approach of SU in terms of teaching and learning is defined in the Strategy for teaching and learning 2014-2018.

It is intended to give direction in achieving the aims set for SU to remain one of the leading research intensive universities in South Africa.

POLICIES

Curriculum  
context

SU Approach

Learning centred

## SU Strategy for Teaching and Learning 2014-2018

This document sets out a Strategy for Teaching and Learning for Stellenbosch University with a view to operationalising the vision of the University as it has been set out in other policy documents.

POLICIES

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# Curriculum context

## SU Approach

### E-supported (blended)

The Centre for Learning Technologies strives to inspire the meaningful and innovative use of technology for learning at Stellenbosch University.

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# Curriculum context

## SU Approach

### Plagiarism

#### SU Policy

#### Turn it in



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An important part of T&L @ SU is to enable staff and students to promote academic integrity and eliminate plagiarism. The University therefore has to ensure that the necessary mechanisms are in place in this regard to deal with such cases in a consistent and fair manner.

It is thus essential that the University has a policy in place to intercept these aspects and create a framework within which it is possible to function.

Turnitin is a tool that can be implemented to create learning opportunities and give feedback in this regard.

# Curriculum context

## Lecture halls

Stellenbosch University has almost 250 lecture halls of various sizes and equipped with a variety of equipment.

About 133 of these halls can be booked if lecturers plan specific teaching and learning activities.

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# SU Venues



# EQUIPMENT



total seats: 1609

34: 3 each in Physics/OHG



none of the above in venue

1 (Math/Indistr Psych)



all of the above in venue

15 (Engineering)  
5 (RekStat)



most common combination

# Reflection

**Student feedback**

**Peer Observation**

**Self-evaluation  
(reflection)**

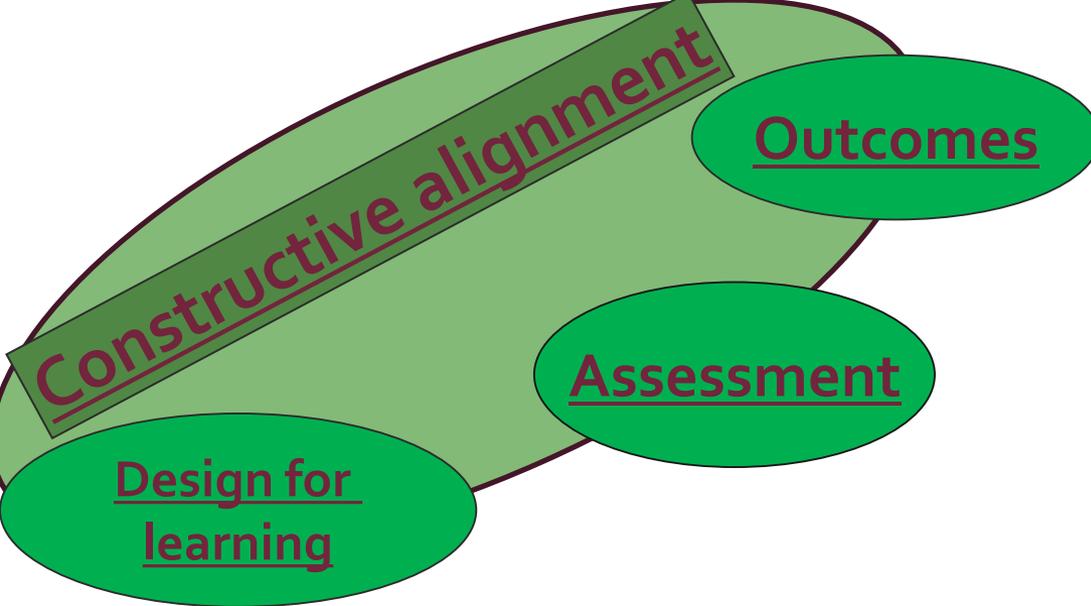
**Moderation &  
external examination**

**External evaluation  
of programme**

The reflection phase of the DeLTA cycle provides lecturers with the opportunity to establish whether the module achieved what it set out to achieve. This reflection can be done by gathering data and/or getting feedback from peer observations, student feedback, professional bodies, employers and the community.

This information can then be used as part of the situational analysis for the next round.

As lecturer you can also evaluate your teaching performance. The same resources as above can render evidence which can then be used when putting together a teaching portfolio.



“In constructive alignment, we start with the outcomes we intend students to learn, and align teaching and assessment to those outcomes. The outcome statements contain a learning activity, a verb, that students need to perform to best achieve the outcome, such as “*apply* expectancy-value theory of motivation”, or “*explain* the concept of ... “. That verb says what the relevant learning activities are that the students need to undertake in order to attain the intended learning outcome. Learning is constructed by what activities the students carry out; learning is about what they do, not about what we teachers do. Likewise, assessment is about how well they achieve the intended outcomes, not about how well they report back to us what we have told them. ”

<http://www.johnbiggs.com.au/academic/constructive-alignment/>

**Additional resources:**

*Teaching Teaching & Understanding Understanding* an award-winning DVD from the University of Aarhus, Denmark, written and directed by Claus Brabrand. To view the 19 minute short film or to order the DVD, click on the icon.

Web Resources



**Higher Education Academy document:**

Web Resources



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# Outcomes

## Formulating outcomes

## Taxonomies

## Forms A & B

### What is an outcome?

- HESA definition: “The end product of the learning process.”
- Describes the result of student learning at the end of the learning opportunity.
- These results should be measurable (accessible).

When we teach we should have a clear idea of what we want our students to learn. More specifically, on a topic by topic basis, we should be able to stipulate how well each topic needs to be understood. Accordingly, we have to state our objectives in terms that require students to demonstrate their understanding, not just simply tell us about it in invigilated exams. The first step in designing the curriculum objectives, then, is to make clear what levels of understanding we want from our students in what topics, and what performances of understanding would give us this knowledge.

Source:

[http://as.exeter.ac.uk/media/universityofexeter/academicervices/educationenhancement/aspire/pdfs/documents/Biggs,\\_J.\\_\(2003\)\\_Aligning\\_achievement\\_for\\_constructing\\_learning\\_\(HEA,\\_2003\).pdf](http://as.exeter.ac.uk/media/universityofexeter/academicervices/educationenhancement/aspire/pdfs/documents/Biggs,_J._(2003)_Aligning_achievement_for_constructing_learning_(HEA,_2003).pdf)

# Outcomes

## Formulating outcomes

Web Resources



It is helpful to think in terms of appropriate verbs.

Generic high level verbs include: Reflect, hypothesise, solve unseen complex problems, generate new alternatives.

Low level verbs include: Describe, identify, memorise, and so on.

Each discipline and topic will of course have its own appropriate verbs that reflect different levels of understanding, the topic content being the objects the verbs take.

Source:

<https://www.international.heacademy.ac.uk/>

# Outcomes

## Taxonomies

**Bloom**

Web Resources



**SOLO**

Web Resources



Web Resources



The SOLO Taxonomy helps to map levels of understanding that can be built into the intended learning outcomes and to create the assessment criteria or rubrics.

Constructive alignment can be used for individual courses, for degree programmes, and at the institutional level, for aligning all teaching to graduate attributes.

# Outcomes

## Forms A & B



The Division for Institutional Research and Planning (amongst many other functions) co-ordinates institutional quality assurance.

All new programmes must be approved internally and externally. The process and all the necessary templates and dates are clearly outlined on their website. The Form A and B are documents that must be completed and submitted during the above mentioned process.

All information with regards to changes to programmes and modules are also available on their website.

Web Resources



# Assessment

Policy

Purpose

Methods

## **Assessment of students**

Assessment is directly related to and aligned with the outcomes.

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Faulty assumptions about and practices of assessment do more damage by misaligning teaching than any other single factor.

As Ramsden (1992) puts it, the assessment is the curriculum, as far as the students are concerned. They will learn what they think they will be assessed on, not what is in the curriculum, or even on what has been 'covered' in class.

The trick is, then, to make sure the assessment tasks mirror the ILOs. To the teacher, assessment is at the end of the teaching-learning sequence of events, but to the student it is at the beginning. If the curriculum is reflected in the assessment, the teaching activities of the teacher and the learning activities of the learner are both directed towards the same goal.

Source:

[https://www.heacademy.ac.uk/sites/default/files/resources/id477\\_aligning\\_teaching\\_for\\_constructing\\_learning.pdf](https://www.heacademy.ac.uk/sites/default/files/resources/id477_aligning_teaching_for_constructing_learning.pdf)

## Assessment

### Policy

The SU Assessment policy focuses on the *criteria* for excellent practice in assessment. The point of departure in this policy is that lecturers are best placed to make the necessary assessment decisions in their modules. Thus the policy does not propose to be prescriptive with regard to assessment strategies, but rather to create space within which lecturers can make justifiable choices with regard to assessment within their own environments, by offering lecturers a set of criteria against which they could measure their practices.

#### POLICIES

### Assessment policy and practices at Stellenbosch University

By means of this assessment policy, the University strives to make explicit the points of departure relating to policy that are implicit in existing institutional, faculty and departmental regulations and practices. In the spirit of "*excellent scientific practice*", as stated in the University's **mission**, an attempt is made to bring the assessment practices of the University in line with current, research-based views and standards regarding assessment.

# Assessment

Purpose

Student

For learning

Lecturer

Web Resources



Web Resources



Of learning

The primary purpose of assessment is to improve students' learning and teachers' teaching as both respond to the information it provides.

Assessment for learning is an ongoing process that arises out of the interaction between teaching and learning.

Source: <http://assessment.tki.org.nz/Assessment-in-the-classroom/Underlying-principles-of-assessment-for-learning/Purposes-of-assessment>

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1. Assessment for **diagnostic** purposes takes place when the strong and weak points of students in the academic sphere are determined in order to, for example, make suitable remedial actions, selection, admission and placement possible.
2. Assessment for **formative** (i.e. assessment **for** learning) purposes primarily serves the learning process by offering students an opportunity to develop the desired knowledge, skills and attitudes with the aid of timely feedback.
3. Assessment for **summative** (i.e. assessment **of** learning) purposes serves to elucidate decisions and findings on the progress of students, e.g. for promotion or certification, during which value judgements are made on students' performance.
4. Assessment can form part of the information that is used for **feedback purposes** (i.e. assessment **for** quality promotion) to evaluate the quality of a learning and teaching programme. (Source: SU Assessment Policy)

# Assessment

Overview  
and examples:

Web Resources



## Methods

### Peer assessment:

Cornell University: Peer assessment

Web Resources



University of Waikato:  
Peer and self-assessment

Web Resources



### Classroom Assessment Techniques:

Iowa State University: Classroom Assessment Techniques

Web Resources



Atherton J S (2013) Learning and Teaching; Forms of Assessment

Web Resources



University of Texas: Methods of assessment

Web Resources



University of Reading: A – Z of assessment

Web Resources



This page offers links to a variety of possible assessment methods.

The selection of appropriate assessment methods in a course is influenced by many factors: the intended learning outcomes, the discipline and related professional standards, the context of the course and its relationship to other courses, the level of study, the characteristics of the students, the available resources, the delivery mode of the course, and so on. The integration of technologies into assessment can provide opportunities to enhance student experiences and diversify the range of options available for students to learn and demonstrate their learning. Here you will find resources on diverse assessment methods, for diverse contexts of learning and teaching, and with diverse students.

Source: <https://teaching.unsw.edu.au/assessment-methods>

# Design for learning

Overview

Engagement

Learning opportunities

Learning is an active, cumulative process of knowledge building.

Facilitation of meaningful learning therefore implies the creation of learning opportunities that will support the building of knowledge.

Engaging students actively in the learning process is an important pre-requisite for such knowledge building. Dale's cone of learning or retention is useful in this regard (although some people say this is not based on research 😊) .

# Design for learning

## Engagement

## Pedagogies of engagement

## Types of interaction

Student engagement is essential for meaningful learning. Engagement can happen through the implementation of various strategies e.g.. active learning, cooperative learning, collaborative learning, service learning, problem-based learning, group work or group projects, research based learning (inquiry).

The article entitled Pedagogies of engagement: classroom-based practices by Smith, Sheppard, Johnson and Johnson (2005) gives more background and information.



Various methods or techniques can also be implemented to elicit interaction.

## Design for learning

### Engagement

### Pedagogies of engagement

In their ground breaking paper on Pedagogies of Engagement, Smith et al (2007) states that: "Educators, researchers, and policy makers have advocated student involvement for some time as an essential aspect of meaningful learning." They speak about the work done in Engineering, where several means of improving student engagement in undergraduate courses, "including active and cooperative learning, learning communities, service learning, cooperative education, inquiry and problem-based learning, and team projects" have been used. The paper "focuses on classroom-based pedagogies of engagement, particularly cooperative and problem-based learning. [It] includes a brief history, theoretical roots, research support, summary of practices, and suggestions for redesigning engineering classes and programs to include more student engagement. It also lays out the research ahead for advancing pedagogies aimed at more fully enhancing students' involvement in their learning", and is a worthwhile read on the topic.



# Design for learning

## Engagement

### Types of interaction

**Student-lecturer**

**Student-student**

**Student-content**

Through extensive research, Chickering and Gamson (1987) identified seven principles that can improve undergraduate education.

Based on their research, good practice in undergraduate education:

- (1) encourages contact between students and faculty;
- (2) develops reciprocity and cooperation among students;
- (3) uses active learning techniques;
- (4) gives prompt feedback;
- (5) emphasizes time on task;
- (6) communicates high expectations; and
- (7) respects diverse talents and ways of learning.

# Design for learning

## Learning opportunities

Tutorial

Practical

Lecture

Other

Overview and examples:  
Click on PPT 'Learning opportunities'

Web Resources



At SU the formal learning opportunities as mentioned in the yearbook are Lectures, Practical's and Tutorials.

There are however other types of opportunities available which usually focus on student interaction with peers or with content.

# Design for learning

## Learning opportunities

### Lecture

Overview:  
Click on PPT  
'The lecture'



### Flipped classroom



### Just in time teaching



### Concept tests



### Peer instruction



### Conventional



### Active



### Interactivity



### Cooperative learning



### Concentration



### Clickers



### Dale's cone



The lecture is still the most utilised method for teaching and learning at SU. If a conventional lecture is presented the question is how to make it more effective. The flipped classroom technique can also be used.

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# Additional resources

Teaching matters

Web Resources



SU Faculty specific resources

Web Resources



Tomorrow's Professor

Web Resources



CTL Teaching & Learning research

Web Resources



Faculty Focus

Web Resources



CLT Blended learning case studies handbook

Web Resources

