

Supplementary Guidelines

Learning Outcomes and Assessment

A support resource to construct Course Outline documents

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This resource aims to support the construction of quality **Course Outline** documents. The Course Outline is a brief description of the course learning outcomes, assessments and learning content which is used as the basis for development of the Course Description. Understanding the value and purpose of concise and effective learning outcomes and evidence-based best practice assessment tasks, within a constructively aligned framework, is essential for quality student learning.

- Download a template for the [Course Outline Form \(docx 310.0kb\)](#)
- Download a working example of a [Course Outline Guideline \(docx 117.4kb\)](#)

This document was updated through collaborative works by staff in the Centre for Learning, Innovation and Professional Practice, and approved by the Federation University Learning & Teaching Committee in August 2019 to support the review of the [Higher Education Assessment Procedure \(LT1254\)](#) and other relevant policies and procedures.

1. Constructive alignment

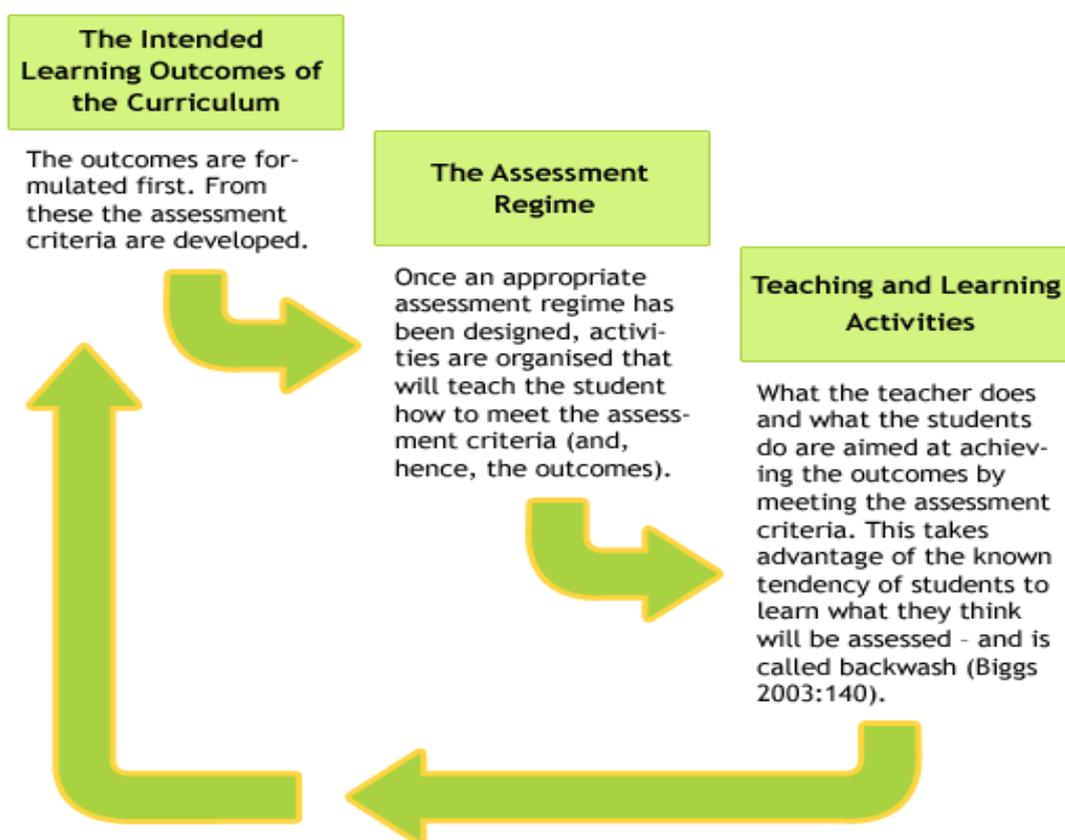
Devised by Professor John Biggs, **constructive alignment** is a framework used in tertiary education settings for ensuring that intended learning outcomes for a course of study are effective, clear and purposeful, and that assessment tasks and learning activities are developed explicitly in alignment with these outcomes. There are two basic concepts behind constructive alignment:

- Learners construct meaning from what they do to learn.
- The teacher makes a deliberate alignment between the planned learning activities and the learning outcomes and how to measure the achievement of those outcomes through assessment.

Constructive alignment within course and curriculum is essential in meeting high quality learning outcomes for our students.

Figure 1: Simple view of constructive alignment

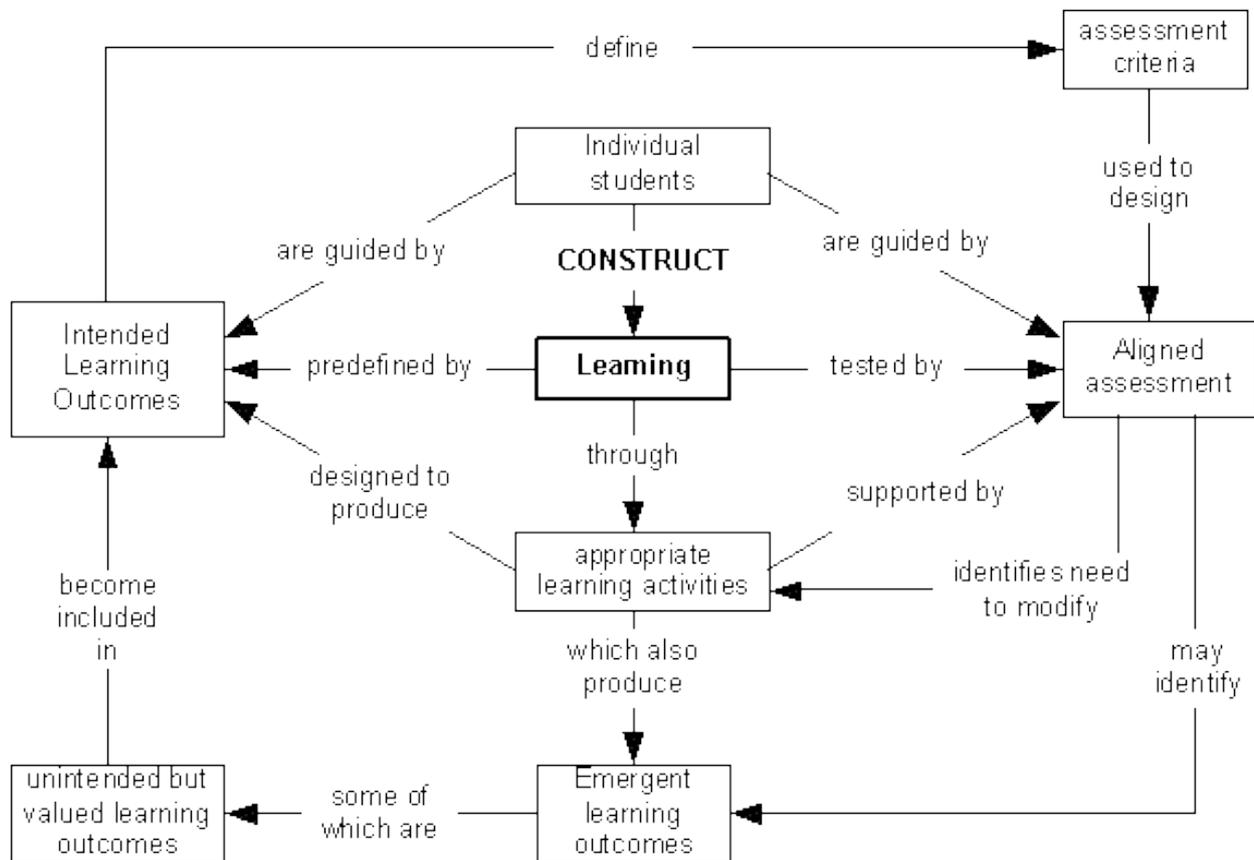
Image accessed from: <http://www.ucdoer.ie/images/3/3c/Aligned-curriculum-model.gif>



In essence, all three elements need to be explicitly linked. All assessment tasks within a course need to be linked to some or all of the intended learning outcomes. And the learning and teaching activities need to address the knowledge, skill and application required to meet the assessment criteria of those assessment tasks, and thus demonstrate achievement of the intended learning outcomes.

Figure 2: Complex view of constructive alignment

Image accessed from: <http://exchange.ac.uk/images/learning-teaching-guide/Image2.gif>



1.1 Further information

For more information on constructive alignment, and how it can support the design and delivery of courses and wider curriculum, consider the following resources:

- Biggs, J. & Tang, C. (2011) *Teaching for quality learning at university*. (4th ed.) New York: Open University Press

2. Learning outcomes

Learning outcomes are an essential component of any course outline because they set out **what students should know** and **be able to do** at the completion of the course.

Effective learning outcomes are important for staff because they:

- form the basis for developing assessment tasks in order to make a judgement on what students know and can do as a result of their learning
- direct what 'content' (knowledge, skills, and application of knowledge and skills) should be taught and what students should learn
- determine what teaching strategies and learning experiences are needed to help students learn
- contextualise selected University generic graduate attributes for the discipline and year level of the course
- inform evaluation of the course

Effective learning outcomes are important for students because they provide them with a:

- framework to guide and focus their studies
- discipline-specific set of statements that articulate with graduate attributes and/or discipline standards at course and/or university level (UoW, 2004).

Learning outcomes can be categorised into three main areas:

- **Knowledge** – What students should know and understand by the time the course is completed.
- **Skills** – What students should be able to do the time the course is completed.
- **Application** – What students should be able to put into practice given the knowledge and skills attained when the course is completed.

2.1 Understanding types of knowledge

In order to develop quality learning outcomes, it is important to understand the types of knowledge that different assessment tasks and learning activities can address. Consider how the following two authors have grouped knowledge:

1. Biggs (1999, pg 41)

- Declarative — knowing what, or knowing about
- Procedural — knowing how to do things
- Conditional — knowing when to do things
- Functioning — knowing how to employ the first three types of knowledge to solve problems and function as an effective professional.

2. Anderson & Krathwohl (2001)

- Factual— basic to specific disciplines such as essential facts, terminology, details or elements
- Conceptual — discipline-specific such as classifications, principles, generalizations, theories, models, or structures
- Procedural — discipline-specific such as methods of inquiry, very specific or finite skills, algorithms, techniques, particular methodologies
- Metacognitive — knowledge of one's own cognitive processes (self-knowledge) including reflective knowledge of how to go about solving problems

2.2 Understanding levels of learning

Developing quality learning outcomes also requires an understanding of the various levels of learning that different assessment tasks and learning activities can elicit. Consider the following three taxonomies that classify levels of learning.

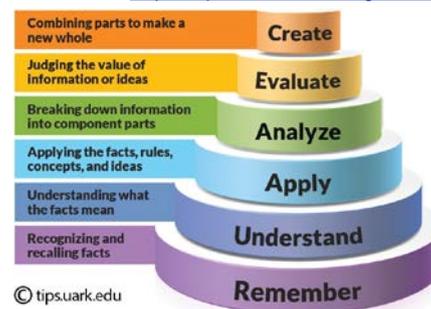
2.2.1 Revised Bloom's Taxonomy

Created by educational psychologist, Benjamin Bloom in 1956, and revised by Anderson & Krathwohl in 2001, the Revised Bloom's Taxonomy is a widely used and effective classification of learning, thinking and understanding. Bloom's taxonomy is divided into three domains:

- Cognitive: knowledge and understanding
- Affective: feelings and attitudes
- Psychomotor: physical skills

Figure 3: Blooms Taxonomy

Imaged assessed from: <https://tips.uark.edu/using-blooms-taxonomy/>



The most relevant one to the higher education sector is the cognitive domain. It is important to be aware of these levels of Bloom's Taxonomy as it underpins the practice of cognitive alignment developed by Biggs and implemented by TEQSA as part of the AQF standards. [Bloom's taxonomy](#) categorises thinking skills from lower order, such as remembering, understanding and applying, to the higher order of creating, evaluating and analysing.

2.2.2 SOLO Taxonomy

SOLO (Structure of Observed Learning Outcomes) taxonomy was developed by [Biggs and Collis \(1982\)](#), and also categorises levels of thinking and learning in terms of complexity, thus being useful when we want to examine the quality of student learning and understanding.

Level of Understanding: Pre-structural

No understanding demonstrated and approach involves acquiring disconnected bits of information. Student misses the point.

Level of Understanding: Uni-structural

Student shows concrete, reductive understanding of the topic. Simple and obvious connections are made but broader significance is not understood.

Indicative verbs: identify, memorise, do simple procedure

Level of Understanding: Multi-structural

Student can understand several components but the understanding of each remains discreet. A number of connections are made but the significance of the whole is not determined. Ideas and concepts around an issue are disorganised and aren't related together

Indicative verbs: enumerate, classify, describe, list, combine, do algorithms

Level of Understanding: Relational

Student can indicate connection between facts and theory, action and purpose. Shows understanding of several components which are integrated conceptually showing understanding of how the parts contribute to the whole. Can apply the concept to familiar problems or work situations.

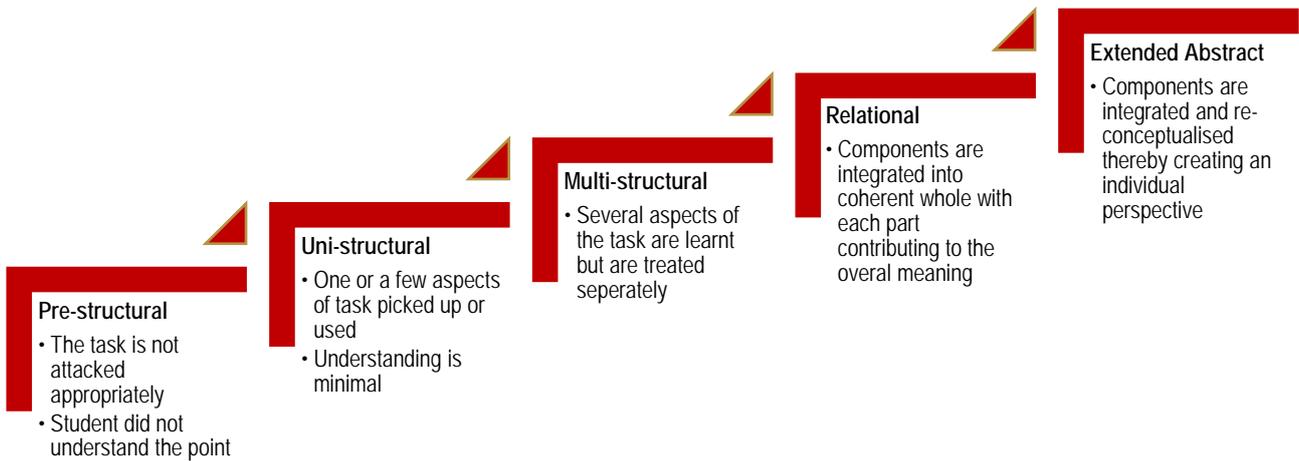
Indicative verbs: compare/contrast, explain causes, integrate, analyse, relate, apply

Level of Understanding: Extended Abstract

Student conceptualises at a level extending beyond what has been dealt with in the actual teaching. Understanding is transferable and generalizable to different areas.

Indicative verbs: theorise, generalise, hypothesise, reflect, generate

Figure 4: SOLO Taxonomy – Levels of Learning
Image adapted from: Biggs (1999)



2.2.3 Marzano & Kendall: The New Taxonomy Education Objectives

Table 1: Marzano & Kendall: The new taxonomy Education Objectives
Accessed from: Marzano & Kendall (2007)

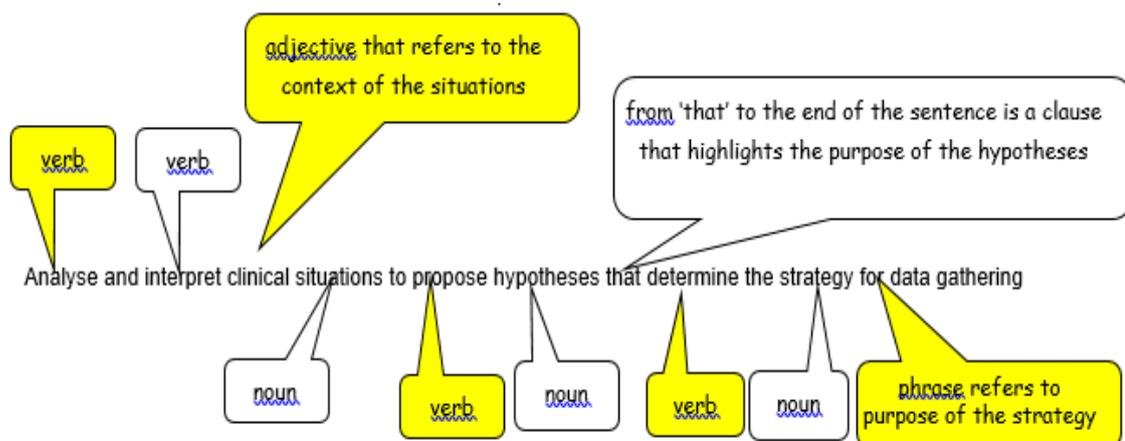
Self-System			
Beliefs About the Importance of Knowledge	Beliefs about Efficacy		Emotions Associated with Knowledge
Metacognitive System			
Specifying Learning Goals	Monitoring the Execution of Knowledge	Monitoring Clarity	Monitoring Accuracy
Cognitive System			
Knowledge Retrieval	Comprehension	Analysis	Knowledge Utilization
Recall Execution	Synthesis Representation	Matching Classifying Error Analysis Generalizing Specifying	Decision Making Problem Solving Experimental Inquiry Investigation
Knowledge Domain			
Information	Mental Procedures	Physical Procedures	

2.3 Key points in writing learning outcomes

When writing learning outcomes, ensure that they are focussed on what the learner should be able to know and do at the end of the course – ie: achievement-oriented.

1. Identify important learning requirements that are about **'knowing'** and **'doing'**, i.e. the range and type of knowledge, skills and application of knowledge and skills. This means not focusing on the fine details such as 'state the formula for...', 'list the causes of...' These sorts of details are for learning experiences or in specific assessment tasks, not in learning outcomes.
2. Learning outcomes should be **broad enough** to provide sufficient detail on how the intentions of the course will be realised, but **not too specific** that they don't allow for variation in the way they can be achieved. If a learning outcome is too broad they end up as overarching goals for the course. For example, outcomes that use words such as 'become aware of', 'appreciate', 'learn about', 'understand', 'become familiar with', 'develop the ability to', are the essence of goals (the 'big picture') and are hard to assess validly. These goals need to be turned into actions. In contrast, if you write outcomes that are too specific, they will restrict what you can teach and assess from year to year.
3. To write learning outcomes as **action statements**, begin with an action verb, e.g. 'demonstrate', 'apply', 'devise', 'reflect'. Then you add other components such as nouns, adjectives, adverbs, phrases, clauses, etc to reflect knowledge and contexts. Ensure the language used reflects the level of knowledge and learning required for the course, year level of study, and AQF level of the program.
4. Keep to **one** discrete, broad learning **outcome per statement**.
5. Ensure that each outcome is **achievable** and **assessable**, and suitable for the particular year level of the course and the discipline.
6. Ensure that the **number of learning outcomes** set for a course is realistically achievable. Too many learning outcomes, and effective demonstration of learning through assessment will be compromised. Too little, and they will not extend the students learning or give enough guidance as to the purpose of the course. Approximately 2 – 3 learning outcomes for each sub-category of 'knowledge', 'skill' and 'application' in a 15 credit point course is a good guide.
7. Check that collectively, the learning outcomes **reflect the initial intent** of the course, and where it fits within the wider curriculum.

Figure 5: Example of an effective learning outcome
Accessed from: UTAS (2011)



2.4 Language and learning outcomes

A well-constructed learning outcome requires the right type of language. As shown in Figure 5, the right words can convey the level of learning and level of knowledge. There are several taxonomy frameworks which assist in classifying learning outcomes – from simple to complex, and from concrete to abstract. All taxonomies have their limitations, however they are helpful in exploring levels of understanding, and supporting the message to be conveyed. Consider the examples provided.

2.4.1 Verbs and Revised Blooms Taxonomy

Table 2: Bloom's Taxonomy – Revised Cognitive Domain

Accessed from: <https://i.pinimg.com/originals/de/32/55/de325591cfda18c570ade00a5dcca79e.png>

CATEGORY	GENERIC SKILLS	SAMPLE VERBS
Remembering Recalling information	The learner is able to recall, restate and remember learning information.	Choose, Cite, Enumerate, Group, Label, List, Listen, Locate, Match, Memorize, Name, Outline, Quote, Read, Recall, Recite, Record, Relate, Repeat, Reproduce, Review, Select, Show, Sort, State, Underline, Write.
Understanding Explaining ideas or concepts	The learner grasps the meaning of information by interpreting and translating what has been learned.	Account for, Annotate, Associate, Classify, Convert, Define, Describe, Discuss, Estimate, Explain, Express, Identify, Indicate, Interpret, Observe, Outline, Recognize, Reorganize, Report, Research, Restate, Retell, Review, Translate
Applying Using information in another familiar situation	The learning makes use of information in a new situation from the one in which it was learned.	Adapt, Apply, Calculate, Categorize, Change, Collect, Compute, Construct, Demonstrate, Dramatize, d/raw, Exhibit, Generalize, Illustrate, Interpret, Interview, Make, Manipulate, Operate, Paint, Practice, Sequence, Show, Sketch, Solve, Translate
Analyzing Critical thinking – Breaking information into parts to explore understanding and relationships	The learner breaks learned information into its parts to best understand that information in an attempt to identify evidence for a conclusion.	Analyze, Appraise, Arrange, Calculate, Categorize, Compare, Contrast, Criticize, Debate, Detect, Diagram, Discriminate, Dissect, Distinguish, Examine, Experiment, Group, Infer, Inquire, Inspect, Investigate, Order, Probe, Question, Relate, Research, Scrutinize, Separate, Sequence, Sift, Subdivide, Summarise, Survey, Test
Evaluating Critical thinking – Justifying a decision or course of action	The learner make decisions based on in-depth reflection, criticism and assessment.	Appraise, Argue, Assess, Choose, Compare, Conclude, Criticize, Critique, Debate, Decide, Deduce, Defend, Determine, Differentiate, Discriminate, Evaluate, Infer, Judge, Justify, Measure, Predict, Prioritize, Probe, Rank, Rate, Recommend, Revise, Score, Select, Validate, Value
Creating Critical thinking – Generating new ideas, products, or ways of viewing things	The learner created new ideas and information using what has been previously learned.	Act, Assemble, Blend, Combine, Compile, Compose, Concoct, Construct, Create, Design, Develop, Devise, Formulate, Forecast, Generate, Hypothesize, Imagine, Invent, Organize, Originate, Predict, Plan, Prepare, Propose, Produce, Set up

2.4.2 Verbs and SOLO Taxonomy

Table 3: Verbs which can describe performance at different SOLO levels

Accessed from: <https://itali.uq.edu.au/files/3047/Resources-teaching-methods-SOLO-taxonomy.pdf>

SOLO LEVEL	VERBS
SOLO 1: Uni-structural	Define, identify, name, draw, find, label, match, follow a simple procedure
SOLO 2: Multi-structural	Describe, list outline, complete, continue, combine, calculate
SOLO 3: Relational	Sequence, classify, compare and contrast, explain (cause and effect), analyse, form an analogy, organise, distinguish, question, relate, apply, describe
SOLO 4: Extended abstract	Generalise, predict, evaluate, reflect, hypothesize, theorise, create, prove, justify, argue, compose, prioritise, design, construct, perform, explain, apply, analyse

2.5 Further information

For more information on learning, student centre-learning and learning outcomes, consider the following resources:

- Biggs & Collis (1982) SOLO Taxonomy. Accessed from: <http://www.johnbiggs.com.au/academic/solo-taxonomy/>
- Centre for Excellence in Learning and Teaching (2019) Revised Bloom's Taxonomy. Accessed from: <http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy/>
- Federation University website – [Staff | Learning and Teaching | Learning](#) – Understanding your learners and their needs
- Fry, K., Ketteridge, S. & Marshall, S. (2015) *A handbook for teaching & learning in higher education: Enhancing academic practice*. (4th ed.) London: Routledge.
- Institute for Teaching and Learning Innovation (n.d.) SOLO Taxonomy. The University of Queensland. Accessed from: <https://itali.uq.edu.au/files/3047/Resources-teaching-methods-SOLO-taxonomy.pdf>
- Marsano, R. & Kendall, J. (2007) *The New Taxonomy of Educational Objectives* (2nd ed.) Hawker Brownlow Education.
- Race, P. (2015) *The lecturers toolkit*. (4th ed.) Oxon, UK: Routledge

3. Assessment

Assessment is the process of firstly gathering evidence, and secondly interpreting that evidence in the light of some defined criterion, in order to form a judgement (Broadfoot, 2007). Assessment is central to learning, and not just about teaching or measuring learning; it is a key part of the whole learning process (Readman & Allen, 2013). Once the intended learning outcomes have been created, the next step in constructive alignment is to consider how the achievement of these outcomes are going to be judged and measured. The Course Outline needs to select assessment types (eg: literature review, oral presentation, report, exam) and a brief outline of the assessment task purpose.

3.1 Principles of assessment

In 2009, the Australian Learning and Teaching Council supported a project developed by staff at the University of Technology Sydney to provide stimulus for the redevelopment of assessment practices in higher education. Entitled *Assessment Futures 2020: Seven Principles of Assessment in Higher Education*, it highlighted seven propositions for assessment reform in higher education. Assessment has most effect when...

1. Assessment is used to engage students in learning that is productive
2. Feedback is used to actively improve student learning
3. Students and teachers become responsible partners in learning and assessment
4. Students are inducted into the assessment practices and cultures of higher education
5. Assessment for learning is placed at the centre of the subject and program design
6. Assessment for learning is a focus for staff and institutional development
7. Assessment provides inclusive and trustworthy representation of student achievement

To view the full document, access from: https://www.uts.edu.au/sites/default/files/Assessment-2020_propositions_final.pdf The Australian Learning & Teaching Council - Assessment 2020 report (pdf, 231kb)

3.2 Understanding assessment

Assessment is an integral part of the learning process and takes on a number of purposes:

- **Assessment for learning** refers to formative assessment that is intended to contribute directly to the learning process through providing feedback, which models success, guides future effort, and gives encouragement.
- **Assessment as learning** reinforces the role of formative assessment. It emphasises the role of students, not only as contributors to the assessment and learning process, but as critical connectors between the learning process and assessment (Earl, 2013).
- **Assessment of learning** refers to summative assessment as a point in time measure. It is for 'checking up' or 'summing up' what an individual learner has achieved. It is often associated with reporting, certification and selection (Broadfoot, 2007).

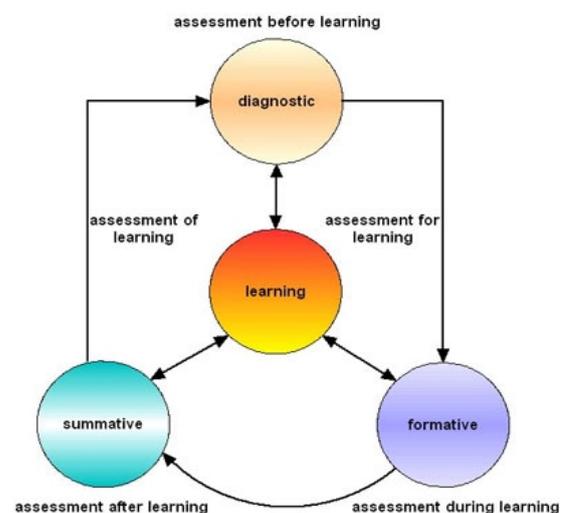
Assessment can take a number of forms depending on the purpose of the assessment within the learning process of the course. It might be diagnostic, formative or summative, and for each those, it may be either formal or informal. Consider the following:

- **Diagnostic Assessment** – Often undertaken at the beginning of a course of study to assess the skills, abilities, interests, experiences, levels of achievement or difficulties of an individual student or a whole class. Involves formal measurements (e.g. IQ/aptitude tests, fitness tests) that are used to establish a starting point or baseline OR informal measurements (e.g. observation, discussions, questioning). Diagnostic assessment informs programing and planning, and learning and teaching methods used, as well as assessment choices.
- **Formative assessment** – Assessment that happens throughout the course, and can often be used to build upon for the next assessment task or learning activity. The primary focus of this kind of assessment is on providing immediate and meaningful feedback to the students on their progress; enabling them to reflect on what they are doing well, and identifying what needs to be improved. It is critical that students are provided with formative feedback throughout the course to give them these opportunities.
- **Summative assessment** – Generally at the end of a course, such as a final exam or major essay. This kind of assessment is used to make judgements and formally measure student achievement against the learning outcomes. Summative assessment can also be used to judge program/course/unit and teaching effectiveness (as a form of evaluation). Providing timely and meaningful feedback on summative tasks to students is important, as it enables them to address gaps in knowledge and/or skill prior to commencing future courses.
- **Informal assessment** – Can include the likes of systematically observing and monitoring students during class learning and teaching experiences; interacting with students to gain a deeper knowledge of what they know, understand and can do; circulating the classroom and posing questions, guiding investigations, motivating and quizzing students; providing opportunities for students to present or report upon their learning and teaching experiences; and collecting, analysing, and providing feedback on in and out of class work samples (e.g. how their group work projects are progressing).
- **Formal assessment** – includes the use of specific assessment strategies to determine the degree to which students have achieved the learning outcomes. Assessment strategies including: essays, exams, reports, projects, presentations, performances, laboratories or workshops, resource development, artwork, creative design tasks, quizzes and tests, journal writing, portfolios.
- **Hurdle assessment** – A hurdle requirement is an assessment mandating a minimum level of performance as a condition of passing the course. Hurdle requirements should only be:
 - determined on pedagogical grounds
 - used where it is necessary to ensure the mastery of core discipline elements
 - used to ensure compliance with health and safety standards
 - used to enhance student performance rather than compel performance or engagement
 - applied sparingly to courses
 - used to meet minimum competency standards or to demonstrate ‘fitness to practice’ for courses related to professional practice.

Figure 6: Relationship between diagnostic, formative, summative assessments and learning

Image accessed from:

<https://www.researchgate.net/publication/228460929>



If hurdles are to be applied, they must be measurable, set to achieve a course learning outcome, approved by the Program Coordinator, noted in the Course Outline, and clearly communicated to students in the Course Description (including consequences of not achieving the hurdle task). The need for equity must be borne in mind when setting and applying hurdles. Examples include:

- Exam mark: A common exam hurdle is 50% - i.e. if a student fails to score 50% in the exam they will fail the course, no matter how small a proportion of the overall mark it comprises. Exam hurdles are particularly relevant in disciplines where decision making around health and safety interventions is imperative, or where group work is used extensively.
- Practical performance: Satisfactorily completing a competency test of a skill may be essential to passing a course. If this is being applied, Course Coordinators need to justify why this is a vital skill. Practical classes designed to meet learning outcomes are also valid within certain courses. Examples include: laboratory safety, distributing medication, and operating machinery.
- Work-integrated learning placement: Satisfactory completion of a work placement within industry, as part of an accrediting body. Examples may include: clinical placement in nursing, exercise science or social work, and education placement in teaching.

Caution must be taken to not misuse assessment to compel or measure engagement in learning, rather than demonstrating achievement in learning. For example:

- **Class attendance or online logs.** Attendance does not equate to learning. Learning can occur outside the classroom, just as students can pay no attention to the learning activities within the classroom. If attendance or logs are to be considered an assessment task, it should not account for more than 10% of the course assessment, and needs to be warranted that the learning outcomes for attending the class or accessing online materials are unlikely to be achieved elsewhere.
- **Class participation or posting in online forums.** Engaging in class or online discussions does not guarantee learning has occurred. Just as listening to a discussion but not participating, or reading the posts of others, can still be a rich avenue for learning. If participation or online posts are to be considered an assessment task, it should not account for more than 10% of the course assessment, and needs to have clear assessment criteria that distinguishes the level of learning students are to demonstrate within that discussion.
- **Online quizzes.** Weekly quizzes as an assessment task are valid, however can be misused to force weekly engagement in online learning materials, rather than actually demonstrating learning (ie: would you require students in a face-to-face tutorial, to sit a small test at the end of class before they leave?) Consider other ways to engage students in their online learning.

3.3 Types of assessment

There is a plethora of assessment task types available for use in the tertiary sector. Choosing the right assessment type depends on what needs to be demonstrated by the student as evidence that they have achieved the intended learning outcome(s) of the course. There is a multitude of ways to assess knowledge, skill or application of knowledge/skill, and there is a range of scholarly evidence that supports the use of some types of assessments over others, depending upon what you are trying to achieve.

Assessment tasks should comprise of an authentic representation of the course intended learning outcomes. All assessment tasks need to be aligned directly to demonstrate the achievement of the intended learning outcomes, and be supported by the learning and teaching activities within the course. The approach to selecting an assessment type is based on the following principles:

- Assessment must encourage and reinforce learning
- Assessment must enable robust and fair judgements about student performance
- Assessment practices must be fair and equitable for all students
- Assessment must maintain academic integrity standards
- Assessment should be evidence-based, best practice.

Another consideration is the inclusion of University graduate attributes within assessment.

- **Self-assessment** – occurs when learners assess their own performance based on the criteria provided. With practice, students can learn to objectively reflect on and critically evaluate their own progress and skill development, identify gaps in their understanding and capabilities, discern how to improve their performance, learn independently and think critically.
- **Peer assessment** – the assessment of students' work by other students of equal status. Students often undertake peer assessment in conjunction with formal self-assessment. They reflect on their own efforts, and extend and enrich this reflection by exchanging feedback on their own and their peers' work. With practice, students can engage in the learning process and develop their capacity to reflect on and critically evaluate each other's learning and skill development.
- **Group assessment** – a method of instruction that gets students to work together. There are various benefits and challenges that come with preparing, developing and facilitating group work with teaching and learning practices. As an assessment task, groups often develop or create a product or piece of work to demonstrate learning and understanding of a particular concept. The assessment may be on the final product or understanding, or on the process of developing that product or understanding. Whilst the benefits of group work are well documented, the issue of allocating marks and feedback to individuals within that group can be a challenge.

Just as learners have strengths and challenges in the ways they absorb and make sense of learning (ie: preferences for reading, listening, doing, conversing with peers, problem solving), so too do learners have strengths in the ways in which they can demonstrate what they have learnt. Ensure there are a variety of assessment types to accommodate the diversity in the ways student can express their learning. Consider the following approaches to matching assessment types to address intended learning outcomes:

Table 4: Required levels and kinds of understanding and suitable assessment

Accessed from: Biggs (1999, p.196)

Levels of knowledge	Levels of understanding	Suitable assessment
1. Basic facts, terminology	Recall, recognition	Multiple choice or short answer
2. Topic knowledge	Individual topics, relational, some multi-structural relations between topics	Gobblets (fill in the gaps), critical incidents
3. Discipline knowledge	Conception of course as a whole	Letter to a friend, concept map
4. Functioning knowledge	Topic or discipline	Problem-solving, research project
5. Laboratory skills	Procedural knowledge	Laboratory behaviour, lab reports
6. Monitoring and evaluation skills	Metacognitive knowledge, self-directed learning	Self and peer assessment

Table 5: Comparison of assessment types
Adapted from Jaques (1989) and Biggs (1999, p. 200)

Type	Possible Learning Outcomes	Possible Advantages	Possible Disadvantages
Journals, diaries and log books	Reflection on practice. Growth in understanding. Reasoning behind judgements and actions. Attitudes, reflection application, sense of relevance	Requires deep thinking about practical exercises and field placements. May help to integrate theory and practice.	Often an unfamiliar assessment tool that students may resist. Difficult to assess attitudes.
Seminar presentation	Oral presentation skills. Lead a discussion. Research, organise information and make an argument. Communication skills	May simulate presentations required in professional practice.	Guidance on effective presentation and group facilitation skills required. Variability in audience may make comparisons difficult.
Performance (music, dance, theatre, etc)	Interpret an artistic work. Creativity. Technical skill.	Multiple assessors improve reliability of a highly subjective assessment event. Assessment by panel will improve reliability	Panel assessment can be highly stressful for students. Criteria for successful performance need to be clearly written.
Creative work (exhibitions, portfolios, websites etc)	Creativity and originality. Technical skill. Application of knowledge. Reflection, unintended outcomes	Allows students to pursue individual interests – can be highly motivating. Allows for creative and original work. Assessment by panel will improve reliability	May require unforeseen amounts of work on the student's part. Time consuming to mark. Reliability in marking difficult to achieve.
Simulated professional tasks	Technical skill. Interpersonal skills. Problem solving ability. Application of knowledge. Attitudes. Application and professional skills	Closely approximates professional work	Preparation of markers' checklists and training of assessors may be necessary to ensure reliability. May be time consuming and expensive to assess. Reliability in marking difficult to achieve.
Laboratory exercises / reports	Practical skills. Safety requirements. Follow procedures accurately. Understanding of scientific method. Document experiments. Skills needed in real life	A learning experience as well as an assessment task – learning by doing.	Written report rather than practical skills usually assessed.
Design tasks	Problem solving ability. Creativity. Technical skills. Presentation skills.	Allows students to pursue individual interests – can be highly motivating. Allows for creative and original work. Assessment by panel will improve reliability. Displays or presentations of design solutions help make standards clear to students.	Difficult to make reliable assessments of widely differing design solutions – clearly written and weighted criteria will help

Type	Possible Learning Outcomes	Possible Advantages	Possible Disadvantages
Class or online participation	Preparation, oral communication skills, comprehension, involvement and enthusiasm.	May improve attendance and preparation. Offers opportunity to assess students' engagement with, and ability to debate, ideas.	Criteria for successful performance need to be clearly written. Assessment may be highly subjective and unreliable. Provision for equal opportunity for participation is required.
Projects and theses	Identify, define and solve problems; research and synthesise information; structure and present an argument. Read widely, interrelate, organize, apply and copy	Allows students to pursue individual interests – can be highly motivating. Allows for creative and original work.	May require unforeseen amounts of work on the student's part. Time consuming to mark. Reliability in marking difficult to achieve.
Rapid Assessment (large class)	Concept map Venn Diagrams Three-minute essay Short Answer Letter to a friend	Coverage, relationships Relationships Level of understanding, sense of relevance Recall courses of information, coverage Holistic understanding, application, reflection	
Assignment - essay	Research and synthesise information; make an argument; interpret and evaluate ideas.	Relatively easy to set. Appropriate for testing higher order thinking.	Reduced reliability with different markers. May be time consuming to mark.
Assignment – problem centred or case study	Problem solving; application and interpretation of knowledge; synthesise and evaluate.	More realistic test of ability, e.g. closer to performances required in professional practice.	Cases / problems must be well designed to include appropriate level of complexity and generate genuine inquiry.
Assignment – short answer questions	Knowledge and understanding.	Reasonably easy to set. Allows broad coverage of syllabus. Consistency in marking.	Little opportunity to make an argument or display original thinking.
Exam - essay	Remember, organise and structure information; structure and present an argument under pressure. Rote, question spotting, speed structuring	Relatively easy to set. Allows confidence about authorship	Different questions often require different levels of ability (eg. describe v. criticise). Comparisons of student performance therefore difficult.
Exam - Open book	Problem solving; application & interpretation of knowledge; use reference materials effectively. Rote, question spotting, speed structuring. Coverage	Less study time spent on memorising; thought required in studying for the exam and in writing the response.	Questions should be set so that they require real thinking and not just looking up the answer.
Exam - Oral / vivas	Oral communication skills; reasoning behind judgement and actions.	May be used to confirm practical / clinical assessments.	May be subjective. Personal factors may influence assessor. Variability in questions asked may mean students face different tests. May be highly stressful for some students.

Type	Possible Learning Outcomes	Possible Advantages	Possible Disadvantages
Exam - Problem centred or case study	Problem solving; application and interpretation of knowledge; synthesise and evaluate material.	More realistic test of ability, e.g. closer to performances required in professional practice.	Cases / problems must be well designed to include appropriate level of complexity and generate genuine inquiry.
Exam - Short answer questions	Knowledge and understanding.	Reasonably easy to set. Allows broad coverage of syllabus. Consistency in marking.	Little opportunity to make an argument; display original thinking.
Exam - MCQ, true / false etc	Knowledge and understanding; interpret data; Recognition strategy, comprehension, coverage	Broad coverage of syllabus possible. Reliable marking.	Difficult and time consuming to set. Cannot test ability to make an argument, defend judgment, and display original thinking.
In-session Tests/Quizzes	Knowledge and understanding; Interpret data; diagnosis.	Useful means of assessing progress. Can provide an early warning sign for students who are experiencing difficulties. Can be used as Pre-test: help prepare students for final exams.	Can be difficult to supervise in large lecture theatre. Little opportunity to make an argument; display original thinking.

Table 6: Suitable assessment tasks according to generic domains of learning outcomes
Accessed from: Nightingale et al. (1996)

Generic domains of learning	Suitable assessment tasks/methods to engender learning per domain	
Thinking critically and making judgments (Developing arguments, reflecting, evaluating, assessing, judging)	<ul style="list-style-type: none"> • Essay • Report • Journal • Letter of advice to... • Present a case for an interest group • Prepare a committee briefing paper for a specific meeting 	<ul style="list-style-type: none"> • Book review (or article) for a particular journal • Write a newspaper article for a foreign newspaper • Comment on an article's theoretical perspective
Solving problems and developing plans (Identifying problems, posing problems, defining problems, analysing data, reviewing, designing experiments, planning, applying information)	<ul style="list-style-type: none"> • Problem scenario • Group work • Work-based problem • Prepare a committee of enquiry report 	<ul style="list-style-type: none"> • Draft a research bid to a realistic brief • Analyse a case • Conference paper (or notes for a conference paper plus annotated bibliography)

Generic domains of learning	Suitable assessment tasks/methods to engender learning per domain	
Performing procedures and demonstrating techniques (Computation, taking readings, using equipment, following laboratory procedures, following protocols, carrying out instructions)	<ul style="list-style-type: none"> • Demonstration • Role play • Make a video (write script and produce/make a video) • Observation of real or simulated professional practice 	<ul style="list-style-type: none"> • Lab report • Produce a poster • Prepare an illustrated manual on using the equipment, for a particular audience
Managing and developing oneself (Working co-operatively, working independently, learning independently, being self-directed, managing time, managing tasks, organising)	<ul style="list-style-type: none"> • Journal • Portfolio 	<ul style="list-style-type: none"> • Learning contract • Group work
Accessing and managing information (Researching, investigating, interpreting, organising information, reviewing and paraphrasing information, collecting data, searching and managing information sources, observing and interpreting)	<ul style="list-style-type: none"> • Annotated bibliography • Project • Dissertation 	<ul style="list-style-type: none"> • Applied task • Applied problem
Demonstrating knowledge and understanding (Recalling, describing, reporting, recounting, recognising, identifying, relating and interrelating)	<ul style="list-style-type: none"> • Written examination • Oral examination • Essay • Report • Comment on the accuracy of a set of records 	<ul style="list-style-type: none"> • Devise an encyclopaedia entry • Produce an A–Z of ... • Write an answer to a client's question • Short answer questions: True/False/ Multiple Choice Questions (paper-based or computer-aided assessment)
Designing, creating, performing (Imagining, visualising, designing, producing, creating, innovating, performing)	<ul style="list-style-type: none"> • Portfolio • Performance • Presentation 	<ul style="list-style-type: none"> • Hypothetical • Projects
Communicating (One and two-way communication, communication within a group, verbal, written and non-verbal communication. Arguing, describing, advocating, interviewing, negotiating, presenting, using specific written forms)	<ul style="list-style-type: none"> • Written presentation (essay, report, reflective paper, etc.) • Oral presentation • Group work • Discussion/debate/role play 	<ul style="list-style-type: none"> • Participate in a "Court of Enquiry" • Presentation to camera • Observation of real or simulated professional practice

3.4 Key points to consider when selecting assessments

With a learner-centred approach to teaching, the assessment process recognises the benefits to students of making sense of, reflecting on and developing their own contributions to knowledge. Assessment should support student engagement in learning and the creation of supportive learning communities, and provide feedback through recognition of achievements against specified criteria.

1. Ensure that assessment types are **evidence based** and represent a valid way to evaluate or measure the achievement of the intended learning outcomes of the course.
2. Ensure the assessment types are **varied** to accommodate the diversity in the ways students can demonstrate their learning.
3. Assessment tasks should be **broad enough** to provide sufficient detail on how the learning outcomes of the course will be demonstrated but **not too specific** that they don't allow for variation in the way they can be achieved.
4. Ensure the assessment tasks **measure the level of knowledge** required.
5. Assessment tasks need to **align with course learning outcomes** as evidence of learning and consider the institutions student **graduate attributes**.
6. Ensure that the **number of assessment tasks** set for a course is realistically achievable. Be careful not to over assess, or under assess student learning. Approximately 2 – 3 assessments for a 15 credit point course is a good guide. Refer to [Supplementary Guidelines \(Student Workloads\)](#) for additional information.
7. Ensure each assessment task is appropriately **weighted** and within a range of 10 – 20% to enable minor adjustments year to year. Refer to [Supplementary Guidelines \(Student Workloads\)](#) for considerations of assessment complexity.
8. Ensure the associated **word limits** (or equivalent for video/audio tools) are appropriate for the weighting of the assessment task. Refer to [Supplementary Guidelines \(Student Workloads\)](#) for specific examples.

3.5 Further information

For more information on assessment and learning, consider the following resources:

- Biggs, J. & Tang, C. (2011) *Teaching for quality learning at university*. (4th ed.) New York: Open University Press
- Federation University website – [Staff | Learning and Teaching | Assessment](#) – Creating effective ways to demonstrate learning
- Fry, K., Ketteridge, S. & Marshall, S. (2015) *A handbook for teaching & learning in higher education: Enhancing academic practice*. (4th ed.) London: Routledge.
- National Union of Students, UK. (2010) *Assessment and feedback benchmarking tool*. Retrieved from: <https://www.ucl.ac.uk/teaching-learning/pdfs/NUS-assessment-and-feedback-benchmarking-tool.pdf>
- Race, P. (2015) *The lecturers toolkit*. (4th ed.) Oxon, UK: Routledge
- Readman, K. & Allen, W. (2013). *Practical planning and assessment*. Melbourne: Oxford University Press
- Queensland University of Technology – Learning and Teaching Unit (2011) Definitions of summative assessment types. Accessed from: https://cms.qut.edu.au/_data/assets/pdf_file/0006/183858/definitions-of-summative-assessment-types-20120801.pdf

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- Broadfoot, P. (2017) *An introduction to assessment*. London: Bloomsbury
- Earl, L. (2013) *Assessment as Learning: Using classroom assessment to maximise student learning*. (2nd ed.) Thousand Oaks, California: Corwin
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- Marzano, R.J. and J.S. Kendall, eds. *The New Taxonomy of Educational Objectives*. 2nd ed. 2007, Corwin Press: Thousand Oaks, California. Accessed from: <http://thekglawyerblog.com/ptblog/articles/from-bloom-to-marzano-a-new-taxonomy-of-educational-objectives-for-plt/>
- Nightingale, P., Wiata, I., Toohey, S., Ryan, G., Hughes, C. and Magin, D. (1996). *Assessing Learning in Universities*. Kensington: UNSW Press. Accessed from: http://www.medev.heacademy.ac.uk/assets/documents/resources/database/id235_assessing_learning_in_universities.pdf
- Readman, K. & Allen, B (2013) *Practical planning and assessment*. Oxford University Press: South Melbourne.
- University of Adelaide (2017) Hurdle Requirements. Accessed from: <https://www.adelaide.edu.au/learning/teaching/assessment/hurdle.html>
- University of Tasmania (UTAS) (2011). *Good Assessment Practice*. Accessed from: http://www.teaching-learning.utas.edu.au/_data/assets/pdf_file/0004/158674/GAG_v16_webversion.pdf
- University of Wollongong (UoW) 2004. *Good Practice Assessment*. Accessed from: http://www.uow.edu.au/about/policy/UOW058614.html#P175_7612
- The Australian Learning & Teaching Council (2009) *Assessment 2020: Seven propositions for assessment reform in higher education*. Accessed from: https://www.uts.edu.au/sites/default/files/Assessment-2020_propositions_final.pdf