Writing Learning Outcomes and Assessment Criteria in Art and Design

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This document has been written to help teachers in art and design who are writing project briefs or unit outlines in learning outcomes form for the first time. It is not meant to be prescriptive but rather a general guide that attempts to clarify the purposes of outcome-led learning and identify some of the pitfalls you might encounter.

You will find that the most successful examples of outcome-led learning come from competency-based learning where it is relatively straightforward for students to provide evidence of their learning because the outcomes are almost always skills oriented. Increasingly, universities are adopting the learning outcomes approach (student-centred) in preference to the aims and objectives approach (teacher-centred). Many examples now exist of text-based subjects working with learning outcomes. One of the major challenges for them is to take the term 'understanding' and redefine it in terms of more specific measurable cognitive (thinking) outcomes. In art and design our challenge is greater because we work with rather more ambiguous terms such as 'creativity', 'imagination', 'originality' etc as well as 'understanding'. A significant challenge for you then will be to articulate learning outcomes in a way which promotes these important cognitive attributes but at the same time provides some useful methods of measuring their achievement.

1 What are learning outcomes?

Learning outcomes are intended to be the clear articulation of what students are expected to understand and be able to do in order to successfully complete a defined period of learning such as a project, unit, module or course. They will be articulated at different levels of generality and specificity depending on the level at which they are aimed. At project or unit level, they should:

- cover the range of cognitive and practical abilities that are deemed to be essential in order to pass the unit
- relate directly to the aims of the unit
- relate directly to the assessment tasks of the unit

A learning outcome is not:

a specified in terms of course content.

The following would not be regarded as a learning outcome:

‘Students will be introduced to the work of.....’

This describes what happens to students on the course. Whilst this may be important for students to know this it does not frame what they have to learn to pass the unit.

b articulated in vague terms.

The following would not be regarded as a helpful way of specifying an outcome:

'You will be familiar with the work of.....'

Students will be expected to demonstrate that they have achieved the learning outcomes by providing supporting evidence. What counts as being familiar with anything? What would the evidence look like? Is 'being familiar with' a helpful way of expressing understanding?

The following is an example taken from a first year module in Heritage Studies:

At the end of the module you will be able to:

- Describe and explain the main outlines of the development of selected areas in South Shropshire since the 18C.
- Critically assess approaches to the presentation and interpretation of landscape and remains of the industrial period
- Define and discuss the main arguments in the debate between heritage and history
- Analyse texts, artefacts and sites using historical and geographical methods as appropriate
- Work with others to research and present material via written and oral media
- Reflect critically on your learning and write an individual report on it

If you were a student on this course would you feel that you have a clear sense of what you are expected to learn? Would you have some sense of what you have to do to demonstrate successful completion of the module?

Each verb indicates clearly what you have to do in relation to the nouns which cover the content of the syllabus. The outcomes cover both cognitive (describe, explain, analyse etc) and practical skills (work with others, present, write etc). Each outcome is unambiguous in so far as you will have a good idea as to what evidence you will need to satisfy them.

A common way of presenting the structure of learning outcomes is:

Outcomes related to cognition

This category would comprise both knowledge content and understanding eg:

- knowledge of substantive material
- understanding of theoretical perspectives, concepts and issues
- the application of knowledge in different contexts
- the analysis of problems and possible solutions

Outcomes related to abilities and skills

This category would comprise those attributes commonly known as transferable skills, key skills, core skills etc such as:

- teamwork
- communication
- time management
- resource management
- workshop skills
- information technology

You might notice at this point that there are some very important cognitive terms associated with art and design, such as **'creativity', 'imagination' and 'originality',** that are missing from this list. How do we construct learning outcomes which capture the nature of these terms? 'Imagination', for instance is, to a large extent, experiential - how do we measure someone's experience of something? How do we know that it has developed? Some colleagues argue that creativity can't be taught. How do we enable students to understand this concept? How can we expect students to be creative and we appear to be unable to articulate what we mean by it? Do we, nevertheless, assess our students creative abilities? In moving towards outcome-led learning in art and design, these are the issues we need to tackle.

2 Why are learning outcomes so important?

There is more than one reason why we should place greater emphasis on learning outcomes. They matter because:

- they make the curriculum transparent for the benefit of learners and other stakeholders
- in moving towards a learning paradigm which supports autonomous learning, it is necessary to be explicit about what we expect students to learn. Describing the syllabus and course content is not sufficient. Whilst it is important for students to know the outline and details of the unit, these only make sense in relation to what we expect students to learn.
- once the learning outcomes have been determined it is then possible to do two things:

  Firstly, we can work out what we have to do to enable students to achieve those learning outcomes. We can construct the syllabus and content and determine which is the most efficient and effective way of students achieving those outcomes.

  Secondly, we can work out how best to assess whether students have achieved those outcomes.

Some issues with learning outcomes

One of the major criticisms of the outcomes model has always been that it only operates effectively if the outcomes specified can be identified and measured. One negative conclusion that can be drawn is that we will end up teaching and assessing only those outcomes that can be easily measured.

The concept of ‘understanding’ has always posed a problem for competency-based learning, yet, to enable students to 'understand' is considered a principal goal of higher education. The difficulty with ‘understanding’ is that it is not considered an observable behaviour. How can we measure it if we can’t observe it? Or, how do we measure the complex cognitive behaviours that contribute to understanding?

One response to this, in the setting of learning outcomes, is to 'dis-aggregate' what is to be understood into more measurable entities, such as;

at the end of the unit students will be able to:

describe and explain.....;
analyse.....;

compare and contrast ....., and so on.

This seems a reasonable resolution. It makes more explicit at the outset what a student needs to do to provide evidence that they understand the conceptual requirements of the tasks set. Or does it? What is the relation between the dis-aggregation of what is to be understood to the re-aggregation of the learning outcomes? Does it follow that if a student satisfies the dis-aggregated learning outcomes that he or she understands the whole? And if understanding has taken place, how is the level of understanding determined? It simply does not follow that a student will be able to make sense of the whole despite making sense (or senses!) of the parts.

Another, similar, anxiety expressed about the dis-aggregation of understanding is that it can encourage teachers to construct the curriculum to meet only the basic requirements of each objective, treating the whole enterprise as ticking off the items on a list. Getting through the list becomes the priority, promoting a surface approach, rather than enabling an holistic and integrated understanding by the students, which is more consistent with a deep approach. Here there is not only the potential for a shift from a qualitative to a quantitative conception of assessment but also there is the likelihood of the list being seen by both teachers and students as the limits of learning.

Learning outcomes are often written with an emphasis on **convergent** rather than **divergent** thinking processes. Convergent thinking involves solving problems that have a particular, unique answer. This kind of thinking is focused, or 'closed'. An example that encourages convergent thinking is:

communicate key theoretical terms through the use of annotated diagrams

This outcome reflects an important ability that students must demonstrate to pass a design unit. It is clear what is required of students and they are likely to do well if they tackle the outcome through logical analysis and focused problem solving.

Divergent thinking, on the other hand, is to do with generating alternatives, where the notion of 'correct' gives way to broader assessments of value such as creativity, imagination and originality (Biggs 1999). How can we encourage students to take risks and challenge orthodoxy if the form of the learning outcomes encourages only one way of thinking? How do we write learning outcomes which encourage students to develop a divergent approach as well as a convergent one, and how do we recognise the quality of the outcome? What would be the evidence?

There is also a temptation with the list to allocate percentage marks against each outcome. This is known as the **analytical approach to assessment**. The adding up of the marks at the end is supposed to somehow capture the quality of the learning of the student. It is conceivable in this situation that students are able to pass stages without really understanding the most important aspects of the subject of study. A civil engineering student might well pass a unit on bridge building by accumulating marks for theory, communication, technology skills etc, and so achieving just over the pass mark - despite his bridge collapsing! Think of the implications in medicine!

Dis-aggregation, where specificity is the intention, can lead to far too many outcomes being generated so the students become more concerned about coverage and details than the overall intention. They simply can't see the wood for the trees. Students who take a surface or strategic approach to learning are likely to concentrate on what they perceive to be the easiest outcomes.

Another concern about learning outcomes is that, in any structured teaching/learning context, students are likely to generate learning outcomes over and above those pre-specified by the teacher. How are these treated in the assessment? In observing that ‘a teacher cannot

always anticipate what valid forms student's constructions may take', Biggs offers us a helpful metaphor:

> *Teacher*: How many diamonds have you got?
> *Student*: I don't have any diamonds.
> *Teacher:* Then you fail!
> *Student*: But you didn't ask me about my jade!
>
> Learners amass treasure not just diamonds.
> (Biggs J 1996)

It seems pointless to develop an outcomes approach to the construction of the curriculum, with the expectation that it will improve the quality of student learning, if the assessment process does not align itself with that approach.

One final observation is that, some colleagues have argued that, if learning outcomes are sufficiently well articulated, there will be no need for assessment criteria. Students will either achieve the learning outcome or they will not. This view is most common in vocational education in which learning is characterised in terms of competencies. There remains the question, however, of how well a student has achieved the learning outcome(s). One response to this is to write the learning outcomes for a unit at different qualitative levels. There are several problems here. The number of outcomes increases at least four times thus creating and compounding some of the problems above. Teachers also find it difficult to differentiate each level sufficiently well for it to be clear to students, hence the whole process becomes counter-productive. Another way of tackling it, it might be argued, is by the level of achievement being determined by the 'academic' judgement of the teacher. This, unfortunately, misses the whole purpose of outcome-led learning. If explicitness is a key factor in outcome-led learning, then the basis on which a teacher makes a judgement about a student's performance is crucial. There is little point in being very clear about what we expect students to learn and then being obtuse about the basis on which they are assessed. We make judgements about the quality of student performance on the basis of criteria whether it be explicit or implicit. If we are to enable all students to aspire to high quality learning then we have to be clear to them what we mean by this.

By establishing the underpinning values on which teachers base their qualitative judgements about student achievement, the sharing of these values by the course team becomes possible. It also enables consistency in the application of judgements by the team and the possibility of comparability to occur across the student cohort.

3 How do we assess learning outcomes?

If learning outcomes are the clear articulation of what we expect students to learn then we also need to be clear about how well they have achieved them. Assessment is considered a major driver in the quality of student learning. Whilst teachers focus mainly on the content and learning tasks when designing and teaching a unit, students often begin with the assessment requirements. This is not surprising. In order to do well on a course students need to know what they have to do to achieve the higher grades. At some point on a project students will ask, 'What do I have to do to do well in this project?'

It must be recognised that when we determine learning outcomes, there will be those outcomes that imply a particular level of learning. For instance, if an outcome requires a student to explain and evaluate something, then a student successfully achieving this is likely to be performing at a more sophisticated level than a student whose response was primarily descriptive. Equally, another learning outcome might require students to demonstrate that they can write a report. This in itself does not imply a level of performance, indeed most

graduates should be capable of this. The application of the **assessment criteria** should therefore determine the level of performance.

The issue arises, therefore, about students who fail to achieve the implied level of performance of one or a range of learning outcomes. By specifying outcomes which imply levels of performance which may not be achieved, are we committing ourselves to something we may not be able to guarantee for students? What happens, in the Heritage Studies example above, when a student tackles the second learning outcome and only manages to describe rather than critically assess? Has the student failed entirely to achieve the outcome or only partially? And whose responsibility is it? In order to avoid this it is better to refer to outcomes as **'intended learning outcomes'**. This way we can signal to students what is required at the top end of the range of outcomes without committing ourselves to any guarantee that they will achieve it. What we must provide, however, is the *opportunity*, through the construction of our curricula, for all students to achieve those outcomes.

There is another advantage to referring to outcomes in this way and that is that students often learn things, as a result of engaging in tasks set, which were not predetermined within the unit but which are, nevertheless, worthwhile learning outcomes in relation to the task. This, therefore, provides recognition during assessment for **'unintended learning outcomes'**.

In art and design, it is not unusual for a student to depart from some of the intended learning outcomes in preference for other outcomes more appropriate to their personal enquiry. Indeed, as they advance through their course they may be responsible for setting their own learning outcomes. These can be referred to as **'negotiated learning outcomes'.**

Evidencing learning outcomes

Learning outcomes are literally what have been learned as a result of learners tackling tasks set - even ones they have set themselves. Learning outcomes are different to the **material outcomes** of learning such as essays, paintings, book-jackets, tables and dresses. It has not been unusual in the past for teachers in art and design to ascribe a grade to the material outcome alone on the assumption that it sums up the total achievement of the learner. Known as the 'connoisseurship' approach to assessment it lends itself more to art appreciation societies that educational organisations. Outcome-led learning questions this approach and challenges teachers to be more explicit about what they value in the learning process. The material outcomes of learning therefore become one of several 'sites' where learning can be evidenced.

Once the learning outcomes are established for a unit then it is seen as important that student achievement is assessed in relation to those outcomes. The assessment tasks need to be designed to cover all of the specified outcomes. Whilst this sounds obvious and, indeed, most tutors follow this rule, it is becoming increasingly important in relation to quality assurance. Quality assurance is placing increased emphasis on the quality of learning outcomes and less on the quality of teaching. This shift of emphasis, from input to output, places the learning outcomes at the beginning of the quality assurance process.

We need, therefore to consider at least the following issues:

- how do students demonstrate that they have achieved the range of learning outcomes - how do they provide the evidence?
- learning outcomes can be achieved at any time during a unit, how, if at all, are they tracked?
- is the selected assessment mode appropriate for the learning outcome?

Creativity, Imagination and Originality

The NACCCE Report, 'Creative Education', Kenneth Robinson (ed) 1998, set out a definition of 'creativity' for the purposes of clarification in the secondary sector although we might consider its use for us in this context..

The report recognises four characteristics of creative processes:

- They always involve thinking and behaving **imaginatively**
- This imaginative activity is **purposeful** (directed to achieve an objective)
- These processes must ultimately generate something **original**
- The outcome must be of some **value** in relation to the objective

Creativity is defined therefore as:

> **Imaginative activity fashioned so as to produce outcomes that are both original and of value**

These terms can be further qualified.

'Imagination' is to do with viewing the world from different perspectives. Acting imaginatively is to do with generating alternative solutions to a given problem or set of problems. Often this involves taking risks as far as the student is concerned. Risk-taking is considered by students and teachers as an important characteristic of design education. It is risk-taking which allows students to challenge their own conceptions of the subject they are studying.

'Originality' is considered in its different categories:

- Individual
  A person's work may be original in relation to their own previous work and output

- Relative
  It may be original in relation to their peer group

- Historic
  The work may be original in terms of anyone's previous output in a particular field; that is, it may be uniquely original

The challenge for the curriculum is to promote imaginative thinking in a supportive environment which rewards risk taking and which is intended to enable to develop a conception of the subject of study, in this case 'design', from a limited, local conception to a sophisticated, world conception.

Assessment criteria

Assessment criteria are effectively the basis on which teachers make academic judgements about students' performances. They make explicit to students and colleagues **how well** the learning outcomes have been achieved. They are, therefore, articulated at different **qualitative** levels of achievement.

It was recognised above that learning outcomes themselves may or may not imply a level of performance. Nevertheless, students need to know clearly what the higher expectations are of them and indeed what these might look like. In the Heritage Studies module, students can legitimately ask what they have to do to do well - what does a higher level outcome look like

in relation to describing and explaining the main outlines of the development of selected areas in South Shropshire in the 18C?

In attempting to write further, more qualitatively sophisticated, outcomes to address this issue, the problem for the teacher remains the same - on what basis are these distinctions being made? What are the generic qualities of learning which enable a teacher to generate different qualitative levels of outcomes in the first place?

Assessment criteria reflect the **values** within a subject or discipline. Traditionally, these values have been applied solely by the teacher when making a judgement about how well a student has performed without any requirement for them to be made explicit. They were usually only derived by students from teacher feedback at the end of a project, often when it was too late to make amends. They were also considered too subjective to be able to be articulated with any clarity, although this didn't prevent students trying to guess what a tutor valued in order to develop a direction for their work.

In an organisation which places emphasis on the quality of learning output as the measure of its success, it needs to be able to explicate what quality learning consists in and how it can be achieved. Students who enter an institution need to know where they are within the subject and what they have to do to improve their abilities. They can only do this if they understand what progression means and looks like. The assessment criteria for the subject should enable a student to develop this picture.

Taken from this point of view, assessment should be **criterion-referenced** rather than **norm-referenced**. Criterion-referenced assessment, which is consonant with outcome-led learning, is intended to measure student's development of learning against a given set of outcomes and standards. Norm-referencing, on the other hand, is a measurement device used to compare students with each other. Traditionally, higher education has employed norm-referencing approaches to assessment, particularly in the final examinations, as a means of determining excellence. The term 'excellence' itself is indicative of an elitist approach to education and 'high standards' might well be a more appropriate term in a learning-led environment.

Criterion referenced assessment, therefore, requires an articulation of the criterion upon which we base our judgements of student performance. Each level should be a clear, coherent explication which maps onto the world rather than being defined in terms of itself. Each level should be qualitatively more sophisticated than the previous one to enable teachers and students to track the development of learning.

As most learning develops, it builds on existing knowledge and experiences and becomes increasingly more complex. Assessment strategies should therefore be able to capture this developing complexity as well as signalling to students what this complexity might look like **holistically**. Assessment criteria, therefore should be articulated at a more generic level than the specific learning outcomes in order to capture the whole learning experience. This avoids the problem of analytical assessment referred to earlier.

It is within the assessment criteria that we might begin to articulate the more complex cognitive abilities which are particular to art and design such as **'creativity', 'imagination', ' originality'** etc. In this way students should be able to understand the specific requirements of each unit through the learning outcomes whilst having some sense of what they might have to do to achieve a high quality solution in addressing the assessment criteria. It is obvious, therefore, that the learning outcomes for a unit should not be considered independently of the assessment criteria.

In Annex 1, the matrix of descriptors has been generated from a perspective of learning which has two axes. The vertical axis reflects a developing conception of and approaches to learning and the horizontal axis reflects a developing conception of the subject. The most

integrated conceptions develop from top left to bottom right. Although learning does not fit neatly into boxes as the descriptors do the matrix offers the possible starting point for anyone wishing to develop assessment criteria in design. They are, inevitably, generic and may be modified in relation to more focused discipline requirements or indeed redrafted using the basic structure as a starting point. Either way, the matrix represents a developmental model which takes into account the two most important aspects of student learning, the approach and the conception of the subject. The matrix can be used also for curriculum design and also for the basis of the team meeting in which the team values are openly shared. In more adventurous contexts the matrix could be the basis of a collaborative assessment regime where students assess themselves and each other.

4 Developing a strategy for assessment in design

There is a whole range of reasons why we assess, from providing an opportunity to give students effective feedback during a project **(formative)** to measuring their achievement overall for the purposes of an award **(summative).** However, if assessment is going to be of any use to a student it must be integrated into their experiences of the project rather than be a bolt-on event at the end. Assessment should be regarded as a learning opportunity.

Research into learning and teaching over the past twenty years has consistently demonstrated that the quality of the outcomes of student learning is often determined by the approach they take to learning (deep/surface) and this in turn is determined by what they think learning consists in.

Conception → Approach → Outcome

Recent research in art and design (Davies and Reid, 2001)has also demonstrated that the quality of the learning outcome is also determined by what the student believes the subject of study consists in. In design, for instance, some students strongly believe that the professional world requires them to be proficient in the skills associated with their particular discipline and they tend to focus on that aspect of project work than any thing else. Other students focus on the problem-solving aspect of design and enjoy the challenge of relating the functional requirements with the aesthetics. Students who have a highly developed conception of the subject tend to see themselves as designers who are change-agents in society. They seek to challenge the boundaries of the subject and often relate the tasks they are required to do with their own developed conception of the world. Students come to higher education, therefore, with significantly different conceptions of both how and what they should learn.

Teachers and their approaches to teaching, not surprisingly, mirror this variation. Some teachers believe in teaching skills in a didactic fashion because they believe that students would be unemployable without them and teaching them in this way at least ensures that all the students have learned the skills. Others see themselves as facilitators with a role of enabling the student to discover for themselves where their values lie in both their approach to learning and what the nature of the subject is. Inevitably, there will be greater variations than this in different learning and teaching contexts but the point here is that there is variation in conceptions and an important task of teaching is to reveal them. Teachers need to know how students' prior conceptions of learning prevent them from being effective learners. The first question in developing the strategy might be:

> How do we design an assessment scheme that encourages students to become more independent as learners?

This raises a whole range of other questions that the teacher needs to address such as: 'Are we clear that we as teachers, who are responsible for the course, all share the same or similar conceptions of what learning independently means?' ' How can we judge the approach that students take to learning when we first meet them?', How does the assessment scheme help us to determine whether a student has taken a deep approach to learning on this project?'

The second important question that needs to be asked is:

> How do we design an assessment scheme that encourages students to develop a more sophisticated conception of the discipline they are studying?

This inevitably raises similar kinds of questions as the first. Namely: 'Do we as teachers share the same conceptions of the subject we are teaching?' 'If not, what might be the consequences when we come to make judgements about student performance?'

These are important questions only insofar as, if they are not addressed and made explicit both to colleagues and students, they will remain implicit but, nevertheless, be the basis on which judgements are made. It is not inconceivable that two teachers could grade a student's work based on two distinctly different conceptions of learning and the subject of study despite the clear articulation of the intended learning outcomes. This raises an issue of the **reliability** of the assessment scheme. The test of reliability requires that the judgements made across all students' work should be consistent.

Underpinning the first part of any assessment strategy, therefore, should be the formal process of the **teaching team meeting**, prior to the design of the project, in order for the teachers to share their values in relation to the broad intentions of the project and how it is intended to promote a deep approach to learning, as well as enabling students to develop a more sophisticated conception of the subject they are studying. The third important question that needs to be asked then is:

> What evidence do we require from students to determine that they have developed their conceptions of both learning and their subject of study?

It is at this point that the specific abilities might be considered. Students develop both **cognitive and practical skills** and the outcome of the integration of these, ie when students are able to do what they know, is often referred to as an **ability.**

This, therefore, leads to the next set of questions the team needs to ask:

> What are the cognitive (thinking) skills that students should demonstrate through this project? How will the project enable students to think like designers? Have we differentiated sufficiently clearly the divergent and the convergent thinking skills?
>
> What are the practical skills that should be demonstrated?

In answering these questions the team is beginning to identify the intended learning outcomes for the project. Often, the designed object is insufficient to demonstrate these and so other devices, such as learning journals, presentations and so on can be used in support.

It is at this point that the aims of the project or unit should be related to the broad aims of the programme itself, since it is the purpose of the project to contribute to the fulfilment of the course aims and objectives. This debate might also serve to inform any alterations or additions that might apply to the aims of the programme.

In asking what evidence is required for students to demonstrate achievement, both learning outcomes and assessment criteria are considered together. This is how it should be since there should be a demonstrable relationship between them. This relationship confirms the **validity** of the assessment scheme insofar as the assessment criteria are seen to assess what students are expected to learn.

This debate will also raise the issue of complex terms such as 'creativity', 'imagination' and 'originality'. The team needs to consider what they mean by these terms in this particular project and what counts as good evidence of students demonstrating their engagement with them.

As was noted earlier, capturing these important concepts within learning outcomes is not particularly straightforward. Requiring students to be creative in a particular project is pointless if they have only a partial understanding of what it means to be creative in your class. Nevertheless, they are important concepts. Students regularly comment that they study design because it is a creative subject within which they can use their imagination. The task of the team is to share with each other, in broad terms, what legitimately counts as fulfilling these expectations. Reference to other, similar, projects is often a way of focusing shared meanings. Some teams organise **'standardising meetings'** where work and judgements from previous assessment are used for precisely this purpose.

The team should now have a sense that the articulation of the project brief allows students to tackle all of the intended learning outcomes. It is imperative that the brief should be cast as a problem to be solved if thinking is an essential part of the brief. **Problem-based learning** is seen as an important strategy in encouraging students to take a deep approach. Just because they have a project set, however, does not mean they have a problem to solve. Students learn best when they are engaged in trying to solve problems they have identified themselves. Ownership of the problem is important in this respect. How can the brief be written so that it is challenging and also captures the imagination of all of the students? 'Design a corporate wine label for Waitrose supermarket chain' is not a problem but an instruction and invites one answer. 'The third-world country of xxxxxx is seeking to exploit its climate and establish itself in the world wine market. What alternatives can a graphic designer offer in helping them to achieve this ambition?' Whilst this identifies a problem, possibly real, it also locates the problem within a broad contextual and cultural framework. Students will have to make many decisions which challenge their concept of graphic design and their own ethical values and their solutions should reflect this.

The team should then map out the project in the formal terms required by the quality assurance framework for the course.

The next step, in an outcome-led learning context, is to negotiate the project with the students. This might include:

- finding out what students understand by the terms used in the project briefing (always start where the students are)
- the possibility of rewriting some of the learning outcomes in the light of the debate
- allowing opportunities for negotiated learning outcomes
- clarifying the assessment criteria and how they relate to the learning outcomes
- identifying the essence of the project so that students don't concentrate on the wrong or easiest part

As the students have now negotiated into the project so the next phase in the assessment strategy is to provide supportive formative assessment as the project is underway. Any judgement made about the students' work must be in relation to the broad framework of the negotiated brief and the assessment criteria. To range beyond this encourages students to feel that there is more than one agenda and that the personal views of the teachers are going to play an equally important role in the assessment. As we noted earlier, students ask the question, quite legitimately, 'What do I have to do to get the best grades?' at some point in the project. The answer must always be: 'Achieve the learning outcomes and aspire to the assessment criteria'. There should be no hidden agendas.

The final assessment event (summative) is the point where judgements are made about the whole performance of the student in relation to the project. In art and design, this normally takes place in the form of a 'crit'. In an outcome-led learning context teachers need to be careful how this event contributes to students summative learning. Although students are involved at this stage, crits can, nevertheless, be teacher-centred. An assessment event which is intended to contribute to student learning requires the students to be able to make their own judgements about their performance. This requires that they understand both the purpose and process of the assessment and that the assessment criteria are sufficiently unambiguous to enable them to apply then to their work.

At this point you need to ensure that the process allows the students' performance in achieving the learning outcomes to be capture holistically by the assessment criteria.

The learning outcomes demonstrate **what has been achieved** and the assessment criteria demonstrate **how well students performed** as a result of tackling the learning outcomes. The assessment criteria should demonstrate a level of achievement upon which the student can build in later projects.

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Checklist for assessment in art and design

Setting to the project

1 Are the learning outcomes:

unambiguous for the purpose of measuring whether they have been achieved
related to both cognitive and practical abilities
written in relation to the assessment criteria

2 Are the assessment criteria:

clear
related to progression in terms of learning and the subject of study
available to students at the beginning of the project
related to the aims and objectives of the course
designed to encourage divergent as well as convergent thinking

3 Does the project (syllabus):

enable students to achieve all of the learning outcomes
allow high achievers to be challenged
make clear to students a range of means of demonstrating achievement of the outcomes

At the beginning of the project

1 Have you set aside time to introduce students to the learning outcomes? Handing out project briefs is important but only part of the job. Students will be learning the meanings of some of the key concepts for the first time. How do you enable students to make sense of these concepts so they don't go off in the wrong direction?

During the project

1 Is there opportunity for a formative assessment to be undertaken so that students really do understand what the learning outcomes are and are clear how they are achieving in relation to the learning outcomes and the assessment criteria?

At final assessment

1 Does the assessment process support the use of the assessment criteria in judging the achievement of the learning outcomes?

2 Is the process a learning opportunity for the students?

3 Are the unintended learning outcomes dealt with appropriately?

Students' Conceptions of Learning Design

Appendix 1

subject *learning and teaching*	**Extrinsic Technical** (Doing)	**Extrinsic Meaning** (Interpreting)	**Intrinsic Meaning** (Living)
Uni-structural	The outcome is entirely skills focused and is intended to provide the 'right' answer. The student will have relied heavily on the teacher for advice in the belief that the teacher knows the 'right' answer.	The outcome will demonstrate a recognition that design is about problem solving but there will only be one obvious answer. The student will rely on the teacher to confirm the appropriateness of the solution.	The purpose of the design outcome will be seen within a social context but the skills developed will be inappropriate to achieve these ambitions.
Multi-structural	The outcome is about learning lots of skills in preparation for work. The student will be able to provide a list of skills acquired. The student will be reliant on the teacher for advice.	The outcome will demonstrate a recognition that design is about problem solving and there will be several possible distinct answers proposed. The articulation of these outcomes will be predominantly descriptive.	The purpose of the design outcome will be seen within a social context. Several skills will be developed through experimentation but there will be a disjunction between aspiration and fulfilment.
Relational	The outcomes are skills focused with an understanding of the interrelationships and hierarchies of techniques required in the design profession. The student will be motivated to explain their insights to others including their teachers	The outcomes will involve alternative solutions to the problems defined using appropriate skills. It will be clear that transformation of knowledge of the subject is taking place. Skills and knowledge are integrated and the student will regard the teacher as one expert amongst many others who can be drawn upon.	The outcome will be articulated within a social context and relate to the needs of the audience/consumers. Design is seen as identifying and solving problems within a moral and social context.
Extended Abstract	The outcome will be the application of their knowledge of skills to support design solutions. The student will use their own initiative in seeking to develop and improve techniques and skills in design by using developments within and beyond the design paradigm.	The outcomes will be about searching for solutions beyond the design paradigm. Students will be able to apply their understanding of problem solving in a range of different contexts and identify appropriate skills and techniques. The student will be an independent learner.	Learning is seen as self-discovery. Being a designer is seen as being a change-agent in society. There will be a strong focus on self-expression, reflection and integration of design principles, abilities and social values. The student will be an autonomous learner.

Curriculum design

skills ⟷ abilities

Learning and teaching

dependence ↕ autonomy

subject *learning and teaching*	**Extrinsic Technical** (Doing)	**Extrinsic Meaning** (Interpreting)	**Intrinsic Meaning** (Living)
Uni-structural			
Multi-structural			
Relational			
Extended Abstract			