

(relevant) learning outcomes, using the criteria for each learning outcome. This analysis uses the same marks matrix as in the analysis above, but this need not be the case.

The marks are now averaged across the learning outcomes (not the assignments) to give an average mark (or grade) for each learning outcome.

	Assessment 1	Assessment 2	Average mark for each outcome (%)
LO1	12	9	42
LO2	12	11	46
LO3	15	10	50
LO4	8	7	30
Average mark (%)			42

The implications for the student are very different in this case. The average mark for the module is still 42%. However, the student has 'failed' on learning outcome 4. That is, they have not demonstrated that they have attained this outcome. There is no compensation for this; students must demonstrate each and every outcome, so this student will have failed the module. Any attempt at recovery through a retaken assignment needs only to focus on learning outcome 4.

Note:

1. In effect, the student has been given two attempts to demonstrate LO4 and has failed on both occasions.
2. Even if the average mark is a fail mark for a learning outcome (30% as in LO4), if any attempt, in any assignment, results in a pass mark (10 or greater in this example), then the student has, at some time during the module, demonstrated this learning outcome, and should pass. For example, marks of 10 and 5 would still result in an average mark of 30% for this learning outcome. This would traditionally be seen as a fail mark, however, the student has demonstrated the outcome in the first assignment, so the module is 'passed'.

Implications for recording and decision –making

For the assessor

1. For each assessment, judgments are made (and marks are awarded or grades are assigned) against the learning outcomes being assessed (using the relevant criteria for the LOs).
2. Orthogonal assessment removes any decision-making in regard to compensation, as it is not necessary to compensate for individual components of assessment.
3. There can be no compensation for a 'failed' learning outcome.
4. It is possible to 'pass' each assignment, but to fail the module. For example, using the grid above, the student has achieved 47% for assignment 1 (pass). If they achieved 15 for LO1 in assignment 2, then they would achieve 43% for this assignment (pass) and an average of 45% for the module (pass). However, they still have not achieved a pass for LO4 on either occasion. This is what matters, so they will fail the module.
5. Feedback to the student on each assignment will need to focus on their attainment against the Los as well as the assignment itself. The student will need to be advised that, even though they may have achieved a 'pass' mark for the assignment, they have failed to demonstrate a learning outcome, and they must demonstrate this LO in the remaining assignment.

Orthogonal assessment

This is probably the most radical change in the philosophy of assessment practice that has come as a result of the move to an outcomes model of programme design and assessment (such as described in the UK-SPEC).

Traditional assessment practice involves a number of assignments which together produce an average mark or grade for the module. Consider the assessment strategy as described in the table below. For the purposes of this analysis, let us assume that there are two assessments, each having four criteria of equal weight (25%). C_{nm} represents the nth criterion of assignment m. We will assume also that the assessors are using a percentage marking scheme and averaging numerically. The pass mark is 40%. The same argument would apply using grades, in which case an algorithm would be used for averaging.

	<i>Assessment 1</i>	<i>Assessment 2</i>
<i>Criteria used for judgments</i>	C11	C21
	C12	C22
	C13	C23
	C14	C24

A student receives marks as shown in the next table:

	<i>Assessment 1</i>	<i>Assessment 2</i>	<i>Average mark (%)</i>
<i>Criteria used for judgments</i>	12	9	
	12	11	
	15	10	
	8	7	
<i>Mark for assignment (%)</i>	47	37	42

The student's average mark for the module is 42%. They have failed the second component (37%), but the rules will allow compensation for marks of 35% or above in one component. Therefore compensation will be applied to the second assignment, and the student passes the module.

However, with an outcomes model, the process is different. Consider the model below. In this outcomes based model, the learning outcomes for the module have been established in the module specification template (assume there are four). These are used consistently across the assignments. That is, the judgments for each assignment are made against the

³ Grade drift is a term used to describe the tendency for a marker to unconsciously revise their judgment of performance. If the first assignment marked is of a high standard, then those that follow will suffer by comparison. Alternatively, if the first few scripts are of a lower quality and receive marks or grades, and then a high quality script is encountered, those that follow will receive lower grades or marks even if they are of the same quality as the first few. Explicit criteria tend to 'tie down' judgments and make them more consistent