# Specialisation or Total Excellence: A study of the UK and Continental Europe marking scales 

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If you are a student or a lecturer coming from Continental Europe to the UK it is difficult not to notice that the marking scales are different. Even the lecturers, who never had any contact with continental Europe marking system but teach Erasmus students are bombarded with questions why such a good work was marked only $75 \%$. This is a rational behaviour as in Europe usually the distinction starts from $90 \%$ and the pass mark is equal to $60 \%$ whereas in the UK it is usually $70 \%$ and $40 \%$ respectively.

The model constructed attempts to explain the results of both systems if pass and distinction are concerned, in particular what is possibility of compensation of lack of knowledge of one LO by the other. The assessment regime is based on assignment with two questions of equal value towards the final grade on each learning outcomes. Each question is marked independently using continuous percentage scale of 0-100\% resulting in two grades of $\mathrm{G}(\mathrm{LO} 1)$ and $\mathrm{G}(\mathrm{LO} 2)$ where $0 \%$ means no knowledge presented and $100 \%$ full knowledge presented. The final grade FG is a simple average of the two partial grades.

To pass the final grade must be higher or equal to pass grade of (pg), parameter set between 0 and $100 \%$ no matter what the individual grades level is. The compensation case occurs when one of the grades G is lower than the $(\mathrm{pg})$ but the final grade FG is higher than it. What in fact means that a participant compensates deficit of one LO knowledge by a surplus in another.

Resulting model relates the possible amount of compensation cases to the total possible grades combination. It uses two-dimensional geometry and with axis representing LO's grades and identifies the area which represents the compensation cases. This area is related to the area representing all possible outcomes.

The function, measuring the degree of possible compensation resulting from the model look as follows:
a. $C A(p g)=- \begin{cases}-6^{*} p g+2 & \text { for } p g \in<0,0.5) \\ 2 * p g-2^{*} & \text { for } p g \in<0.5,1>\end{cases}$

With the graph:


The model can be extended to a case with more than 2 learning outcomes. However, the calculations become more complicated and require multidimensional geometry while not altering the main conclusions.

We can also use the model to determine the compensation not only in case of passing the module but also if a distinction is considered: the higher the distinction grade level the lower possibility of compensating one learning outcome by another.

The model shows that the highest intensity of compensation occurs for the pass grade set at the level of $33 \%$ and any other, higher level decreases it. We must acknowledge here that the model does not determine how much knowledge is needed to reach particular grade except for the cases of $0 \%$ and $100 \%$, with the former meaning no knowledge and $100 \%$ full knowledge. It does not also translate the grades into discretionary marks within a defined scale.

The last issue is tested in the primary research. The case is based on Edinburgh Napier University Behavioural Issues in Finance (FINO9106) module originating from trimester 2 2014/15 exam assessment. The initial assessment of the Module leader is confronted with independent marking of the same scripts by a German lecturer at Frankfurt University of Applied Sciences.

The marked set includes 30 scripts, and the initial results seem to confirm the claim that the level of knowledge for passing as well as for the distinction is the same in both system, which would prove that the British system with higher pass grade allows for more compensation and specialisation.

