Assess the learning levels in different concepts for a student –

To assess the learning levels of different learning outcomes of a student, the following is the idea on which my mode is based. Suppose there are 5 questions which tests this outcome for a particular learning outcome, to assess the learning level for this particular learning outcome each correct question counts 1/5 points towards this particular learning outcome, and if a student answers 3 questions correctly out of these 5 questions then his total points in this learning outcome will be 3/5 = 0.6. Similarly, for every learning outcome this process has been carried out for a particular student to get his points in all the learning outcomes. And this process was iterated for each student to get the points for each student in all the learning outcomes. For those learning outcomes which has sub-parts, the average of all the subparts was taken as the point of that learning outcome. So, by this we can assess the learning levels in different concepts for a student. This type of assessment can be said as content-based assessment.

Predict the performance of the student in different competencies in the subsequent tests-

In the subsequent tests we can predict the student's performance as now we know the student's level in each learning outcome, in the subsequent tests as for each question we know the learning outcomes it is testing, so using these two parameters we can determine the student's performance in each question.

The problem here is about how these two parameters should be combined to get the total mark in each question, we can use Arithmetic mean for each outcome for a question, or geometric mean and then what should be the threshold to decide 0 or 1 for that question.

The one-hot matrices that have been used for each question for learning outcome and for each student's marks is attached and the code that was used to the computation is also attached.

- Adityaraj Singh Chouhan
  Adityaraj.avanti@gmail.com
  9752262859