

# Algorithms indicator scores

## Performance of incoming/outgoing students

For each student:

- Calculate the number of days in the program (End.Date-Start.Date)
- student score =  $CreditsCompleted / (0.20 * DaysInProgram)$
- when  $score > 1$  score = 1

Per university:

- Score =  $100 * average(Student.score)$

## Support and facilities at the host institution

Combine student and trainee-data

Support-score:

- per entry: mean of non-missing support-questions (range 1-5)
- missing if no questions answered
- per university: mean of the per-entry-score

Facilities:

- per entry: mean of non-missing facilities-questions (range 1-5)
- missing if no questions answered
- per university: mean of per-entry-score

Total S&F-score:

- Now there is a support-score and a facilities-score per university
- Weight =  
1 if there is a support and a facilities score for that university  
0.8 if there is only a support-score
- Total.Score =  $(0.80 * SupScore + 0.20 * FacScore) / Weight$   
where FacScore is set to 0 if it is missing  
Total.Score.Rescaled =  $100 * (Total.Score - 1) / 4$

## Academic quality

per entry:

- Combine students and trainee questions on quality
- Score = mean of the non-missing answers (range 1-5)

per university

- Score = average entry.score within the university
- Score.rescaled =  $100 * (Score.univ - 1) / 4$

## Rankings

To calculate the rankings indicator:

1. Only institutions that are ranked in top 500 of at least two of the three rankings (ARWU, QS and THE) will be taken into account
2. Calculate the average ranking based on the ranking positions
3. Calculate the relative score for each institution, the highest ranked institution will get the highest score
  - a. List from best to worst outcome. For equal outcomes, it doesn't matter (are handled later on)
  - b. Assign a score to each position: best position, highest score, worst position 0
  - c. The institutions with the same outcome, get the average score of this group of institutions

Only the most recent upload by the super admin should be taken into account

## Course catalogue information

Answers on the question "Was the receiving institution's course catalogue..." are taken into account, the 4 possible answers are not weighed equally:

- up to date: + 4
- available in time: +3
- complete: +2
- published on the website: +1

Summing these, results in a score between 0 and 10

For the total score:

- Calculate the score per entry
- Per university: score = average score within the university
- Rescale:  
 $score.rescaled=10*score.univ$

### Exchange of mobility documents

To calculate the total score, 3 subscores will be combined. The first two are calculated at student/trainee-level, the third at institution level.

#### Per student

- Subscore 1:
  - Combines two questions:
    - Q1: *Was your Learning Agreement signed by all parties before the start of the mobility?*
      - if the answer is "Yes, all parties signed it before the start": score: 1
      - if the answer is "The learning agreement was never signed": score: 0
    - Q2: *If no, who signed after the start of your mobility period?*
      - if the answer on this question is: *The receiving enterprise/organisation did* : score: 0
      - for other answering options (several answers are possible): score: 1
- Subscore 2:
  - Q4: Did you receive or do you expect to receive the Transcript of Records from the receiving institution within five weeks after publication /proclamation of your results at the receiving institution?
  - Subscore 2 =
    - 1 if answer = Yes
    - 0 if answer = No

To calculate the total score, 3 subscores will be combined. The first two are calculated at student/trainee-level, the third at institution level.

#### Per university

Subscore 1:

- average of the non-missing scores

Subscore 2:

- average of the non-missing scores

Subscore 3: (data= one entry for each university that has submitted a [grading table](#), this information is uploaded in the tool)

- 1 if they submitted a grading table
- 0 otherwise (if the university does not show up in the grading table-dataset)

Final score:

- Total score =  $100*(0.25*Subscore1+0.25*Subscore2+0.5*Subscore3)$

### Mobility rate

Score 1

- Combine the student and the staff-data, combine the in and the out data for all academic years of the selection of academic years
- Calculate the total number of exchanged people per university
- Calculate the percentage of those people moving in/all (range 0-100)

Score 1 =  $100-2*|50-perc.in|$

Score 2

- Combine the student and the staff-data for each of the academic years of the selection
  - Was there any mobility in academic year 1 of the selection: yes (100) or no (0)
  - Was there any mobility in academic year 2 of the selection (if data is available): yes (100) or no (0)
  - Was there any mobility in academic year 3 of the selection (if data is available) yes (100) or no (0)
  - .....

Score 2 = total score/number of academic years

Indicator score = (score 1 + score 2)/2

### Involvement

The score is calculated based on the number of broad (BF) and narrow (NF) isced fields at a particular institution.

e.g.

0110: Education, not further defined

0111: Education science

0210: Arts, not further defined

0211: Audio-visual techniques and media production

0212: Fashion, interior and industrial design

0213: Fine arts

0214: Handicrafts

0610: Information and Communication Technologies (ICTs)

--> 3 BF (0100;0200;0600)

The Logic is:

- Each extra BF is worth the same surplus in score
- Within each value BF, extra NF deserve the same surplus in score
- To avoid institutions with score 0, a distinction is made for BF=1  
--> Note: you can minB to be 1 (in practice, it will be 1 almost all the time I think)

Calculate:

- maxB = max number of Broad field
- minB = min number of Broad field
- minN(BF) = for each value of 'number of BF', see the minimal value of NF
- maxN(BF) = for each value of 'number of BF', see the maximum value of NF

Now, the score for an institution with b BF and n NF is:

1. if  $\text{maxB} > 1$   
Basis =  $(b-1) \cdot 100 / (\text{maxB}-1)$   
If  $b=1$   
Score =  $n \cdot 100 / (\text{maxB}-1) / (\text{maxN}(1) - \text{minN}(1) + 2)$   
If  $b > 1$   
Score =  $\text{basis} + (n - \text{minN}(b)) \cdot 100 / (\text{maxB}-1) / (\text{maxN}(b) - \text{minN}(b) + 1)$
2. if  $\text{maxB} = 1$  (so  $b=1$  for all institutions)  
Score =  $n \cdot 100 / \text{maxN}$

### Educational collaboration

1) Subscore projects:

- Rank on number of projects
- Convert ranking in score 0 to 100 (0 = lowest position, 100 = highest position)
- Institution without projects get 0 score

2) Subscore joint programmes:

- Each institution on the list gets 50
- To calculate the other 50:  $50 \times \text{number of graduates} / \text{total number of graduates}$  for all programmes

Final score: subscore projects + subscore joint programmes

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