

# What proportion of NSS comparisons are statistically significant?

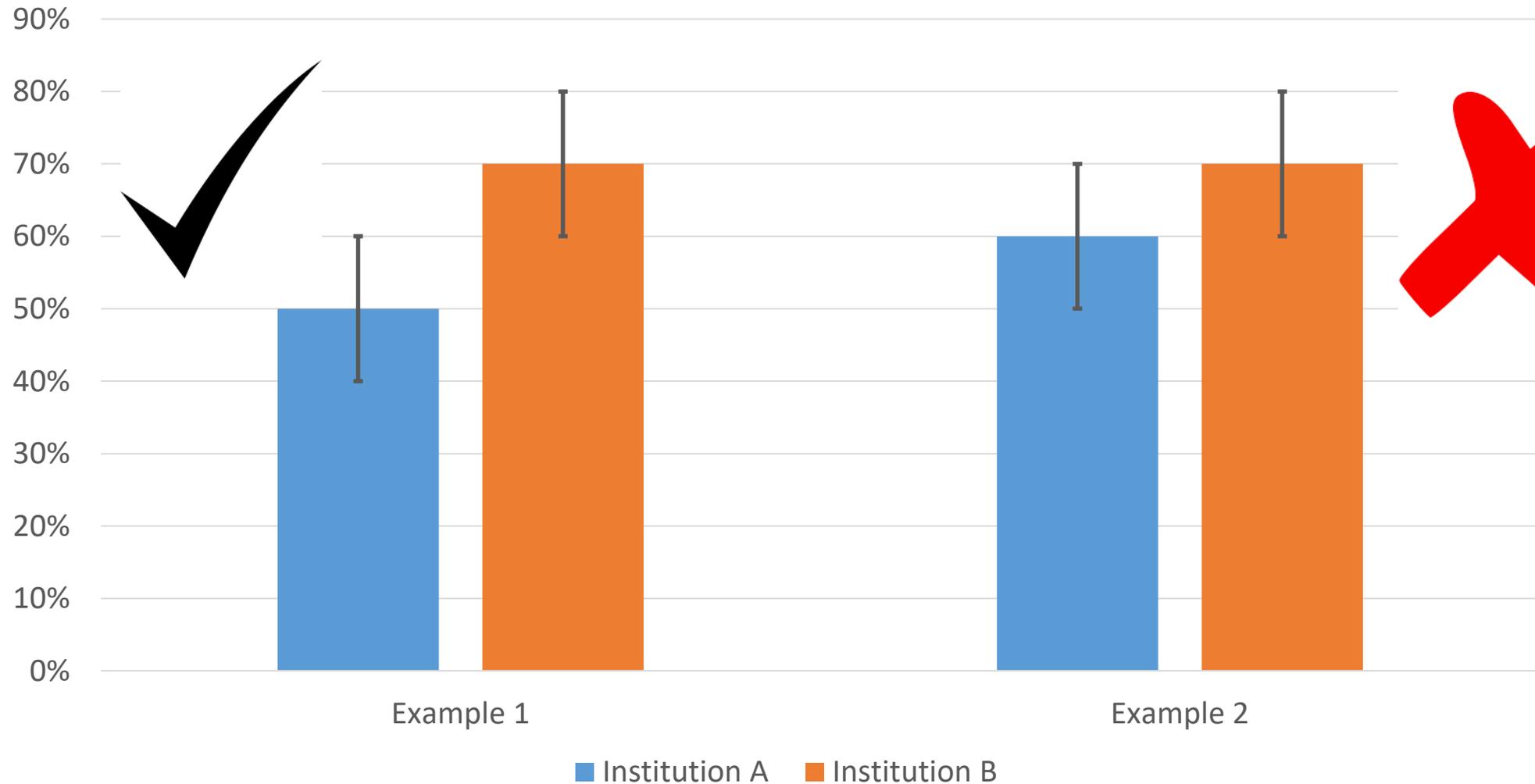
Dr Alex Buckley

*SRHE, December 2018*

[A]t the university level, there are relatively few universities that differ significantly from the mean across all universities and, at the course level, there is even a smaller portion of differences that are statistically significant. This suggests the **inappropriateness of these ratings for the construction of league tables.**

(Cheng and Marsh 2010)

# Statistical significance and confidence intervals



1. How many questions will be different from the sector average?
2. How many questions will be different from last year?
3. How different will the scores be from other institutions?



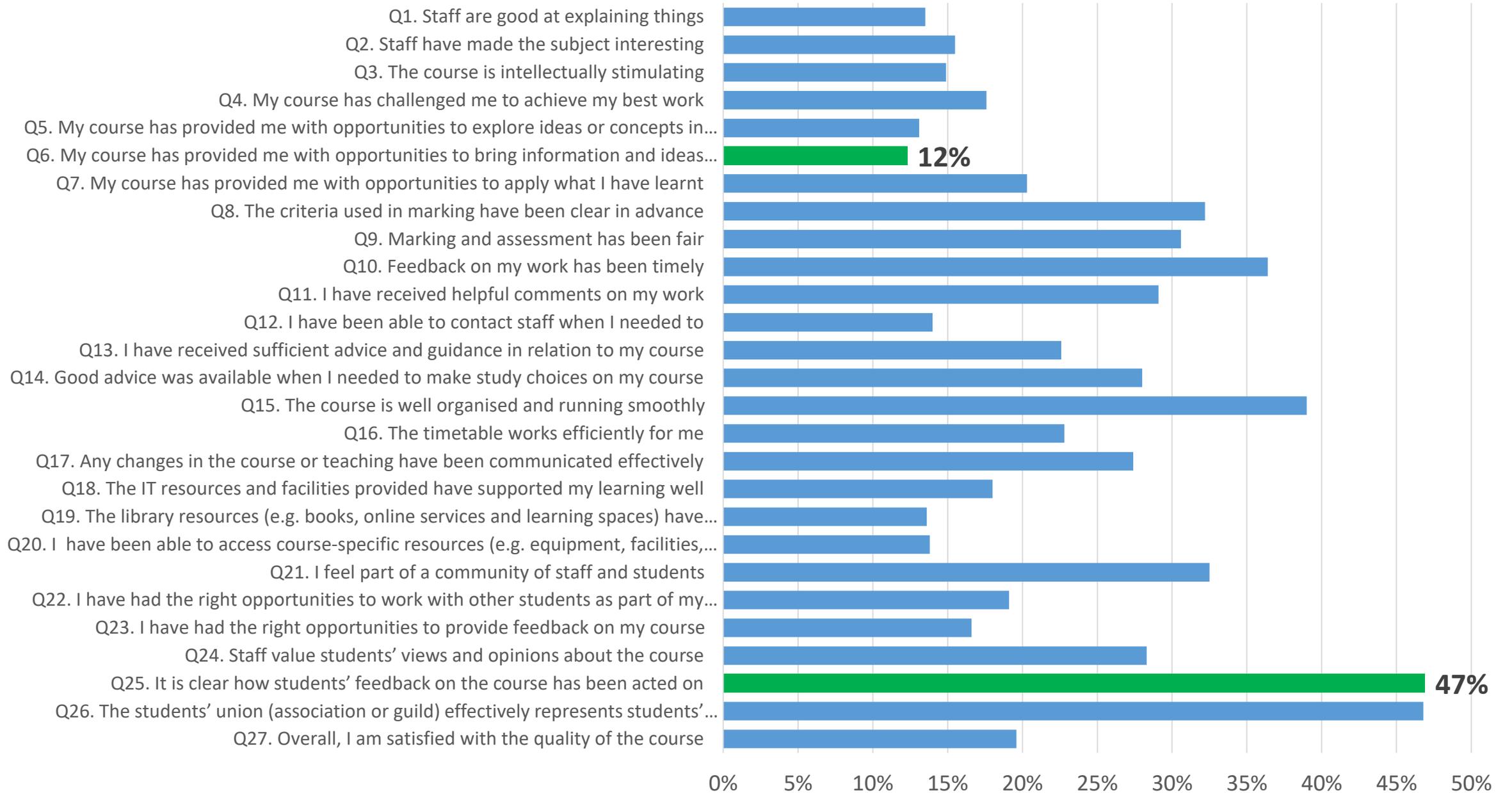
# Data

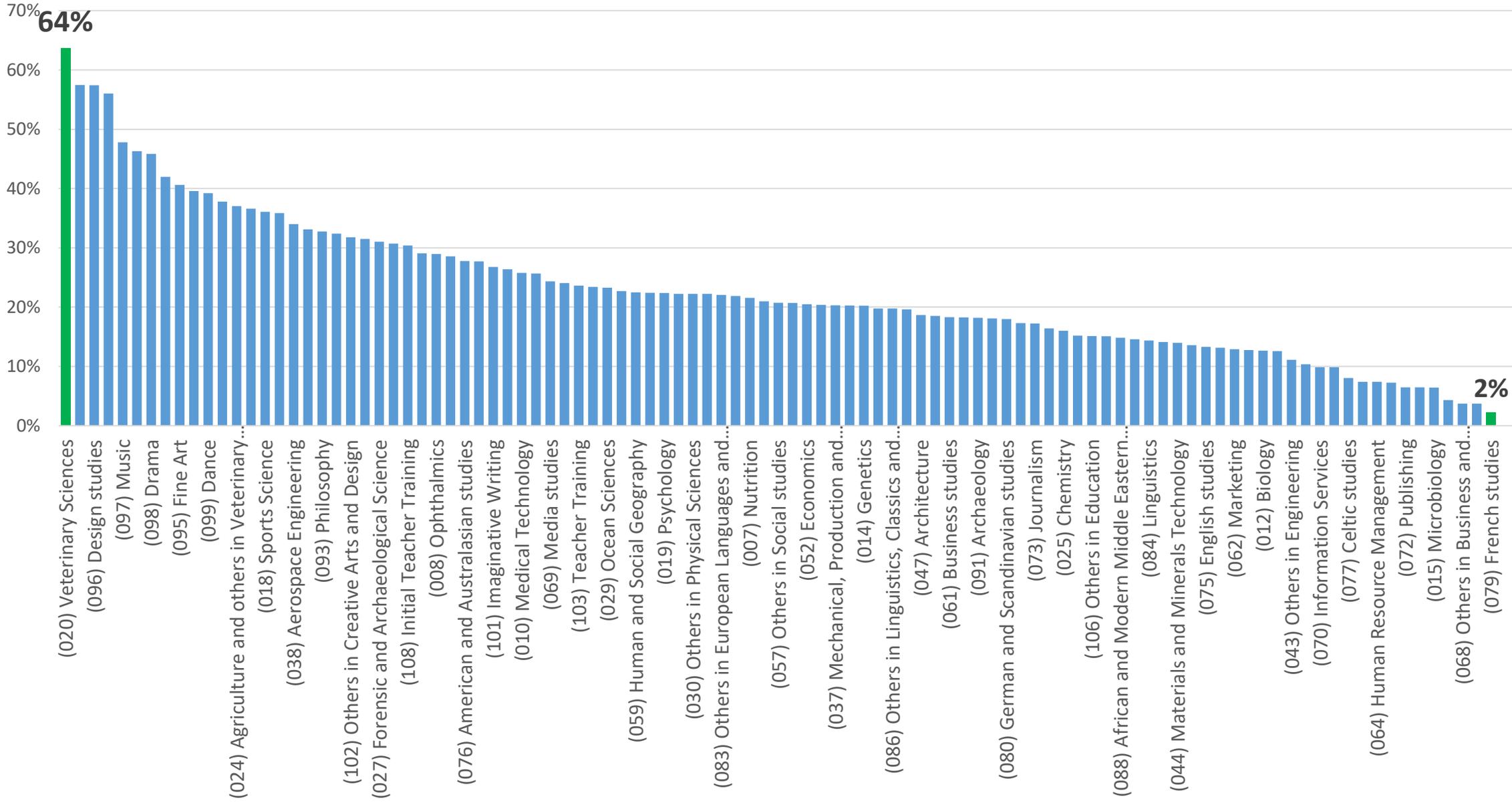
- **Comparisons with sector average**
  - 2018 data
  - 27 questions
  - 108 subjects
  - 147 institutions
  - 105,138 data points
- **Comparisons over time**
  - 2014, 2015 and 2016 data
  - 22 questions
  - 108 subjects
  - 147 institutions
  - 263,604 data points
- **Comparisons between institutions**
  - 2018 data
  - 27 questions
  - 108 subjects
  - 50 institutions
  - 1,969,947 data points

# Comparisons with sector average

24%

(6 questions)

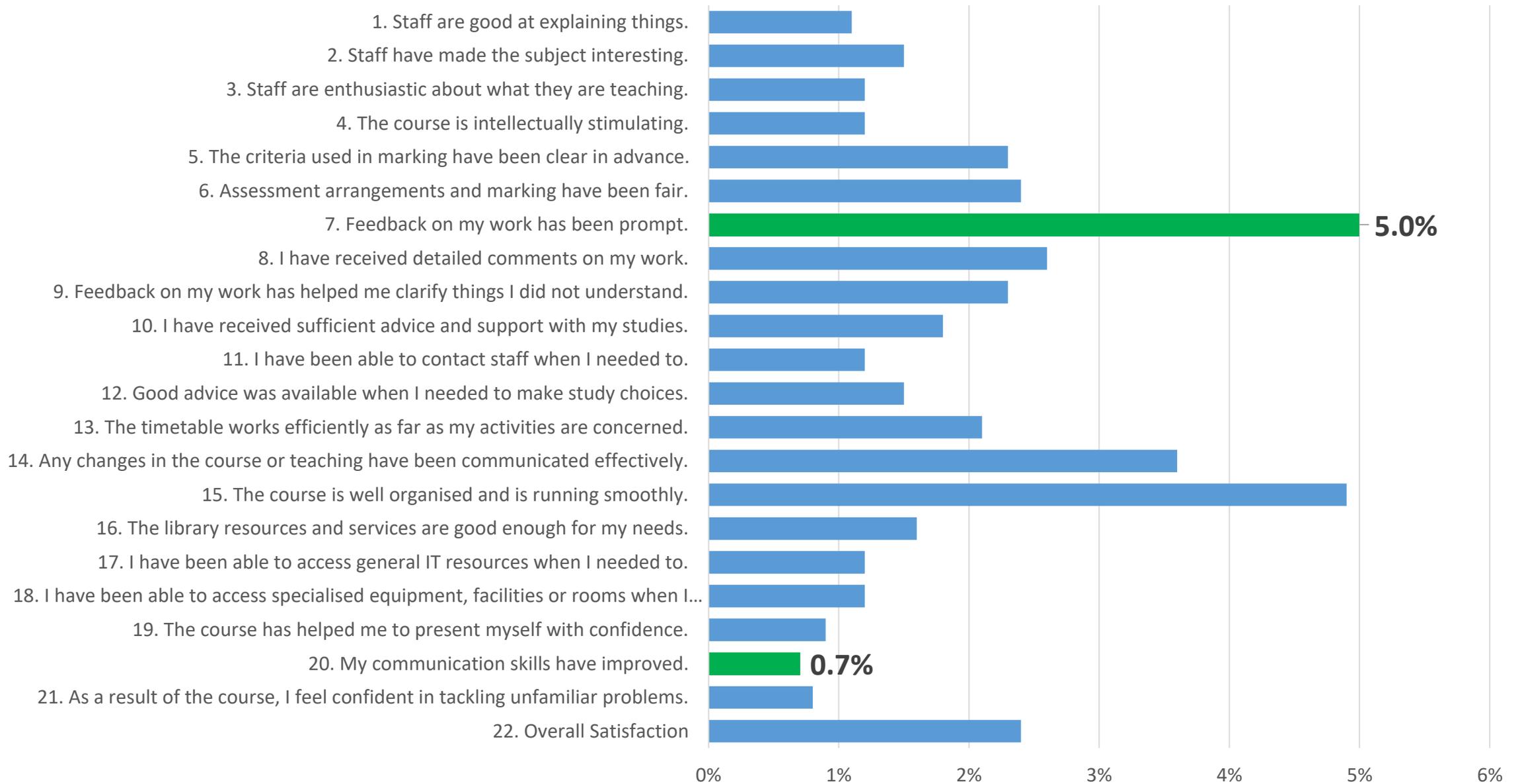


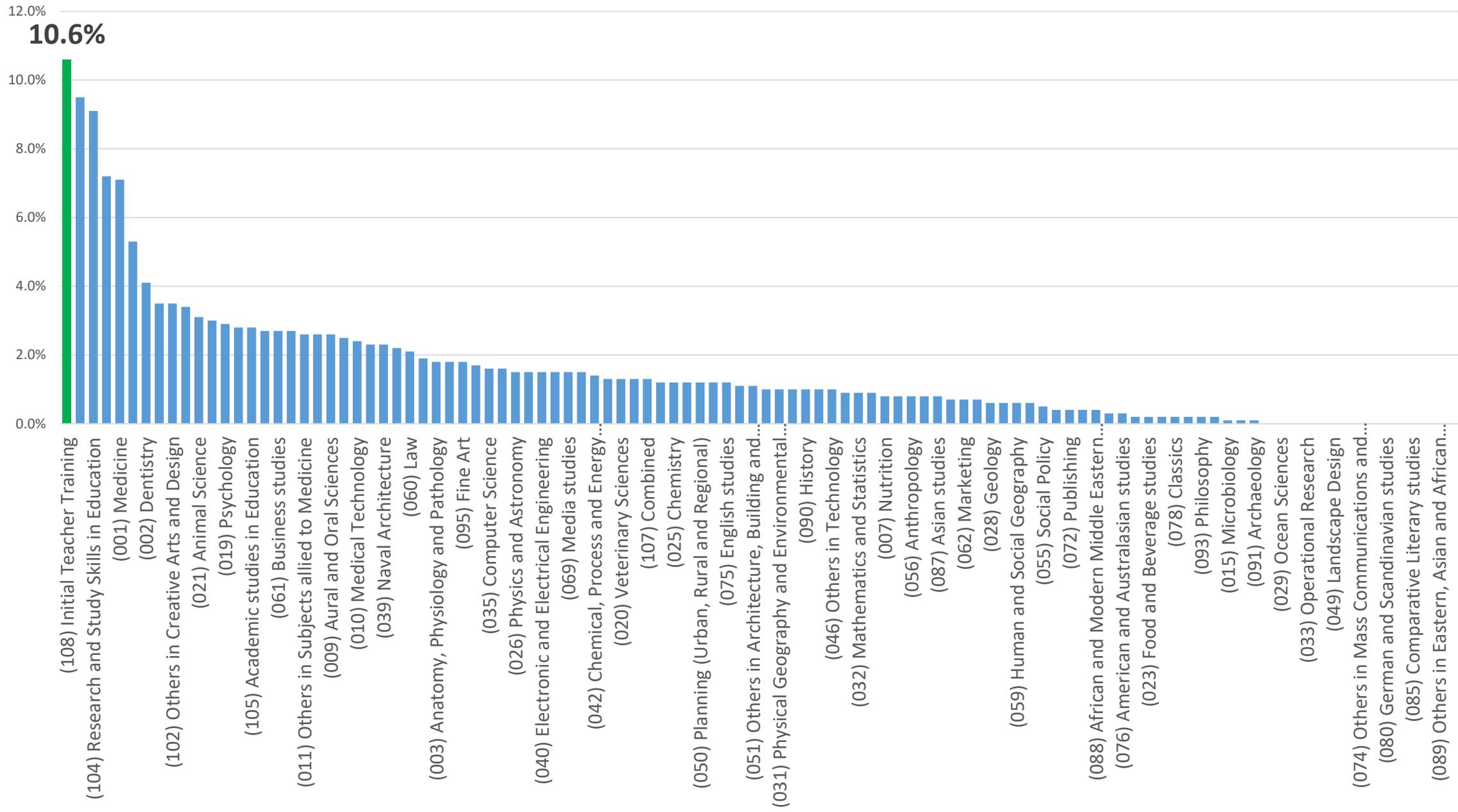


# Comparisons with previous year

2%

(0.5 questions)

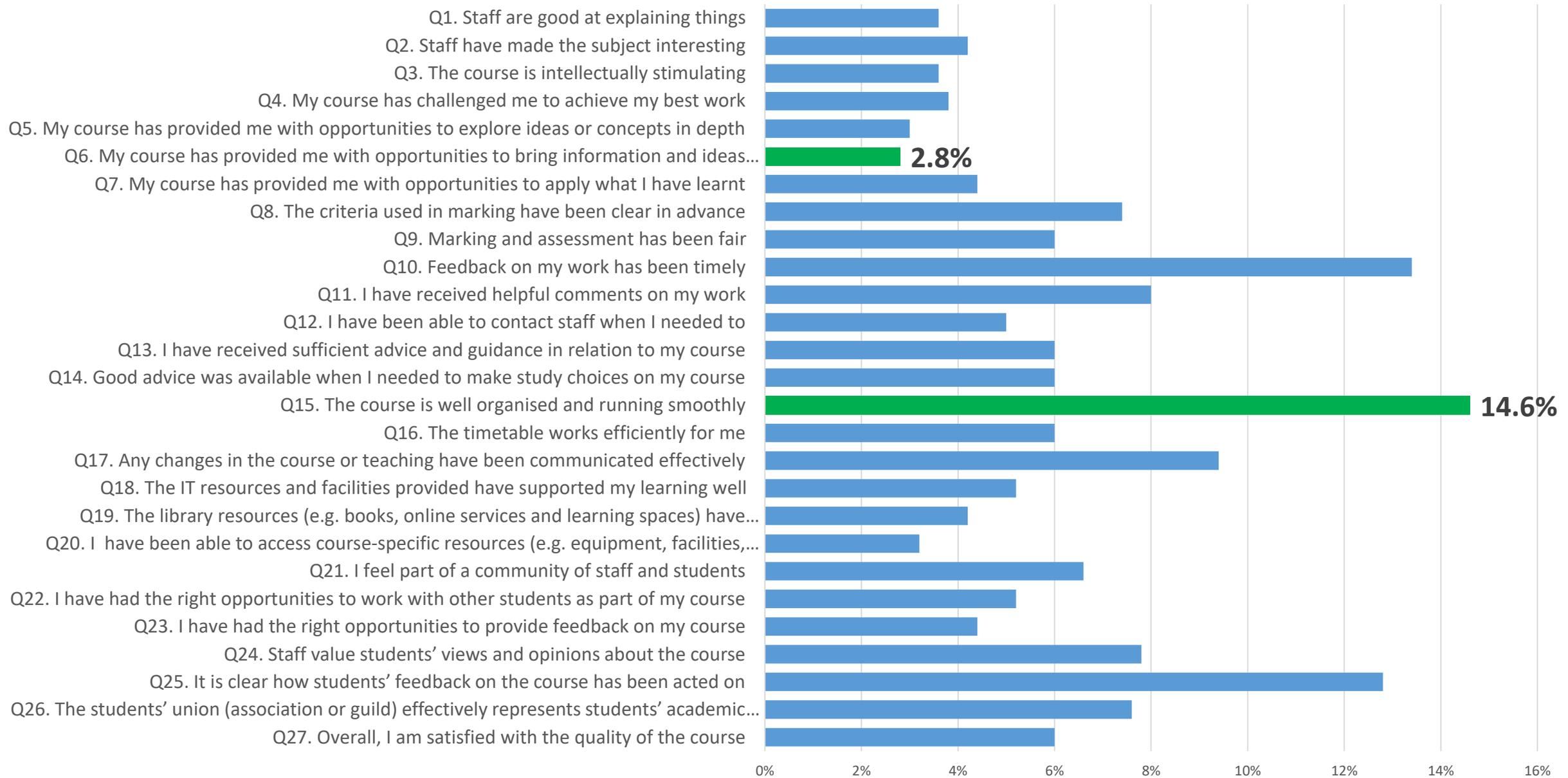




# Comparisons between universities

**6%**

12% of institutions (at subject level) do not statistically significantly differ from any other institution (at subject level), for any question



# Comparisons between universities

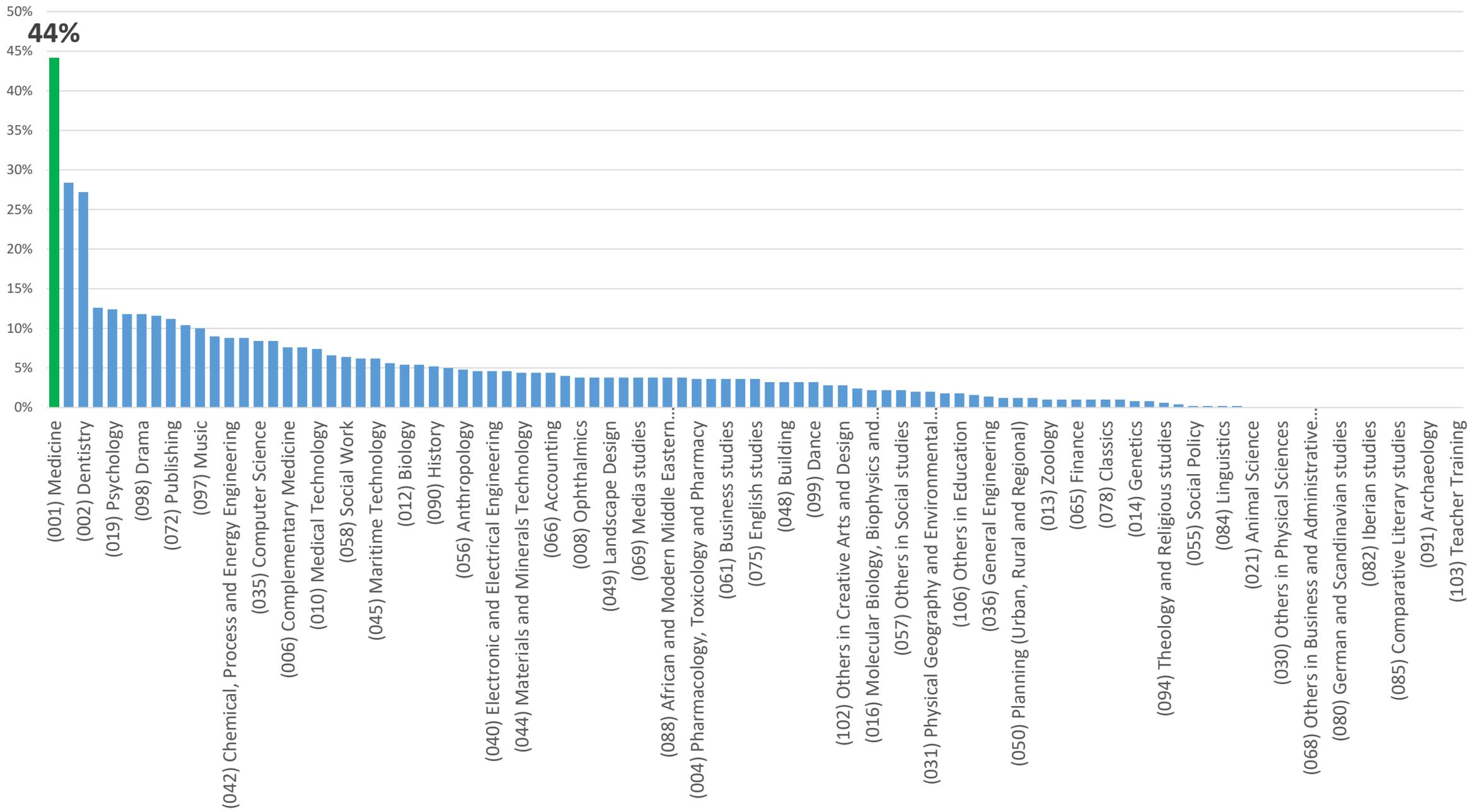
*Q6. My course has provided me with opportunities to bring information and ideas together from different topics*

**77%** of institutions (at subject level) do not differ statistically significantly from any of the other sampled institution

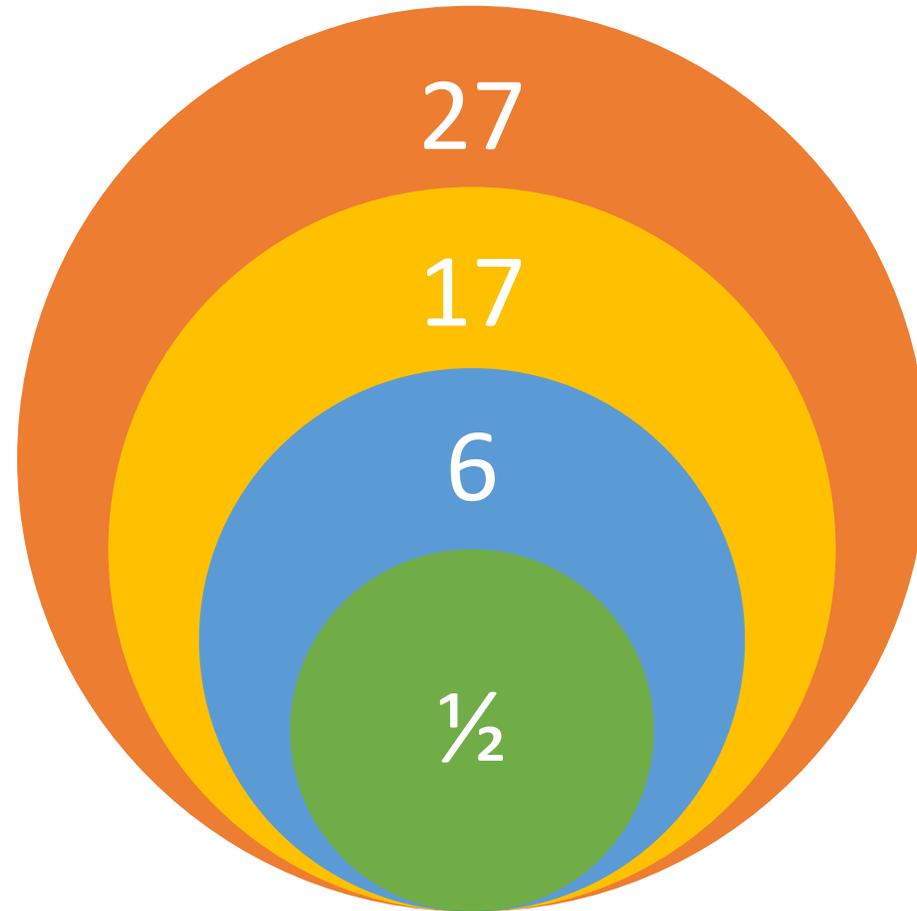
*Q15. The course is well organised and running smoothly*

**37%** of institutions (at subject level) do not differ statistically significantly from any of the other sampled institution

**On average, results for 17 of the 27 questions will differ statistically significantly from at least one other institution**



- Total questions
- Questions that differ from at least one other uni
- Questions that differ from sector average
- Questions that differ from previous year



The anticipation of NSS results was like ‘the sword of Damocles is always hanging over our heads’, as one lecturer put it... [T]he annual cycle of their production and consumption elicited feelings of dread and anxiety.

(Sabri 2013)

# References

Cheng, J. and Marsh, H. (2010) 'National Student Survey: Are differences between universities and courses reliable and meaningful?' *Oxford Review of Education* 36(6): 693-712

Sabri, D. (2013) "Student evaluations of teaching as 'fact-totems': The case of the UK National Student Survey", *Sociological Research Online* 18(4)