Effectiveness of a Final Year Honours Project Skills Workshop

Dr John Barrow & Dr Derek Scott

School of Medicine, Medical Science and Nutrition,

University of Aberdeen, Scotland, UK
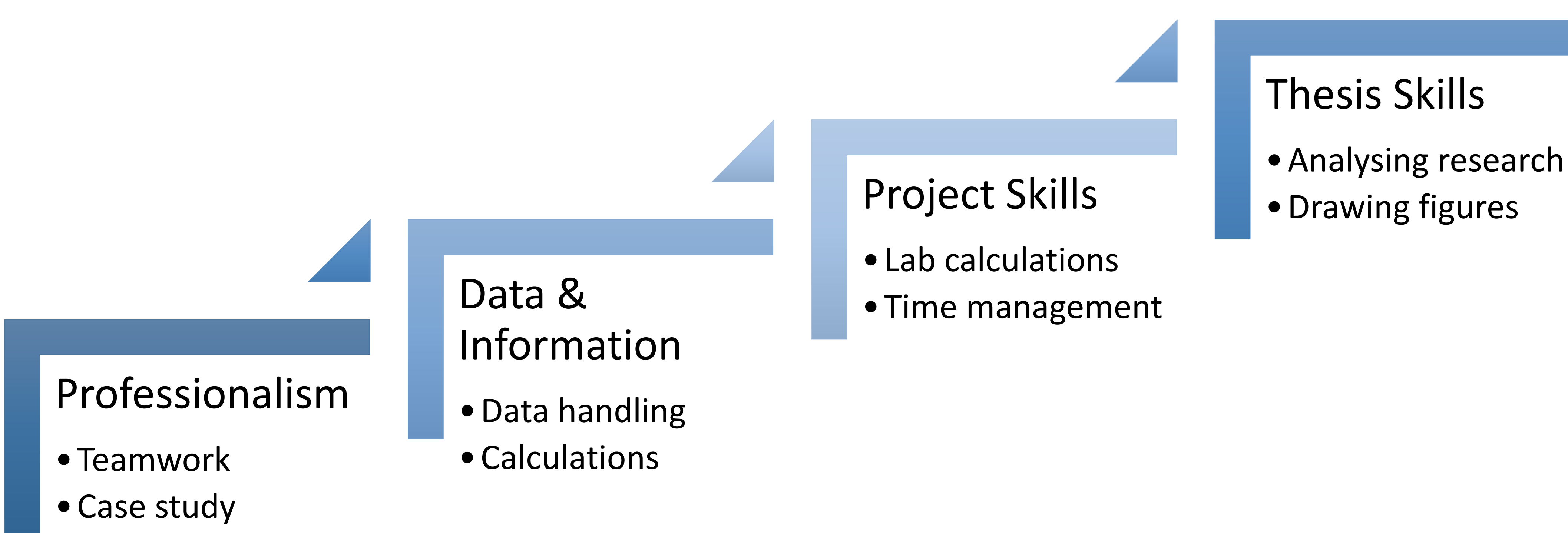
1 4 9 5
UNIVERSITY OF ABERDEEN

Background

Skills development is crucial for any student alongside their academic development. Aligning with this, the Royal Society of Biology (encompassing other learned societies such as Physiological Society and Biochemical Society) has benchmark statements for skills forming a crucial part of an undergraduate degree programme. These benchmark statements coupled with student and staff feedback over recent years highlighting a desire for more training and practically useful skills was the driver to develop a new series of skills workshops. They were delivered for the first time at the end of the first term in academic year 2017-18.

Structure of the Workshop Series

Workshops were run every second day, with students separated into groups of ~40. Sessions were delivered in a Digitally Enhanced Learning Spaces (DELS) at the University of Aberdeen, utilising the technology to facilitate collaboration and active participation.

Thesis Skills
- Analysing research
- Drawing figures

Project Skills
- Lab calculations
- Time management

Data & Information
- Data handling
- Calculations

Professionalism
- Teamwork
- Case study

Survey Methods

- Students were surveyed (using a 7-point Likert scale) and asked to rate their skill level in 15 different skills (from 1 [non-existent] to 7 [excellent])
- Surveys were conducted before and after the workshop series with 210 and 171 respondents respectively (from a class of ~232)
- Post-workshop surveys had additional questions asking for feedback on the workshops

Impact of Workshops

Analysis of student responses highlighted three skill areas that showed a significant improvement following the workshop series (Fig.1). All other skills showed no statically different changes, although 10 of the 15 skill areas showed improved average scores, highlighting the beneficial impact these sessions had.

Sessions were rated positively, with 50% or more of respondents scoring 5 out of 7 or higher for all four workshops (Fig.2). Students also provided written free-text feedback with the most common words being shown in Fig.3.
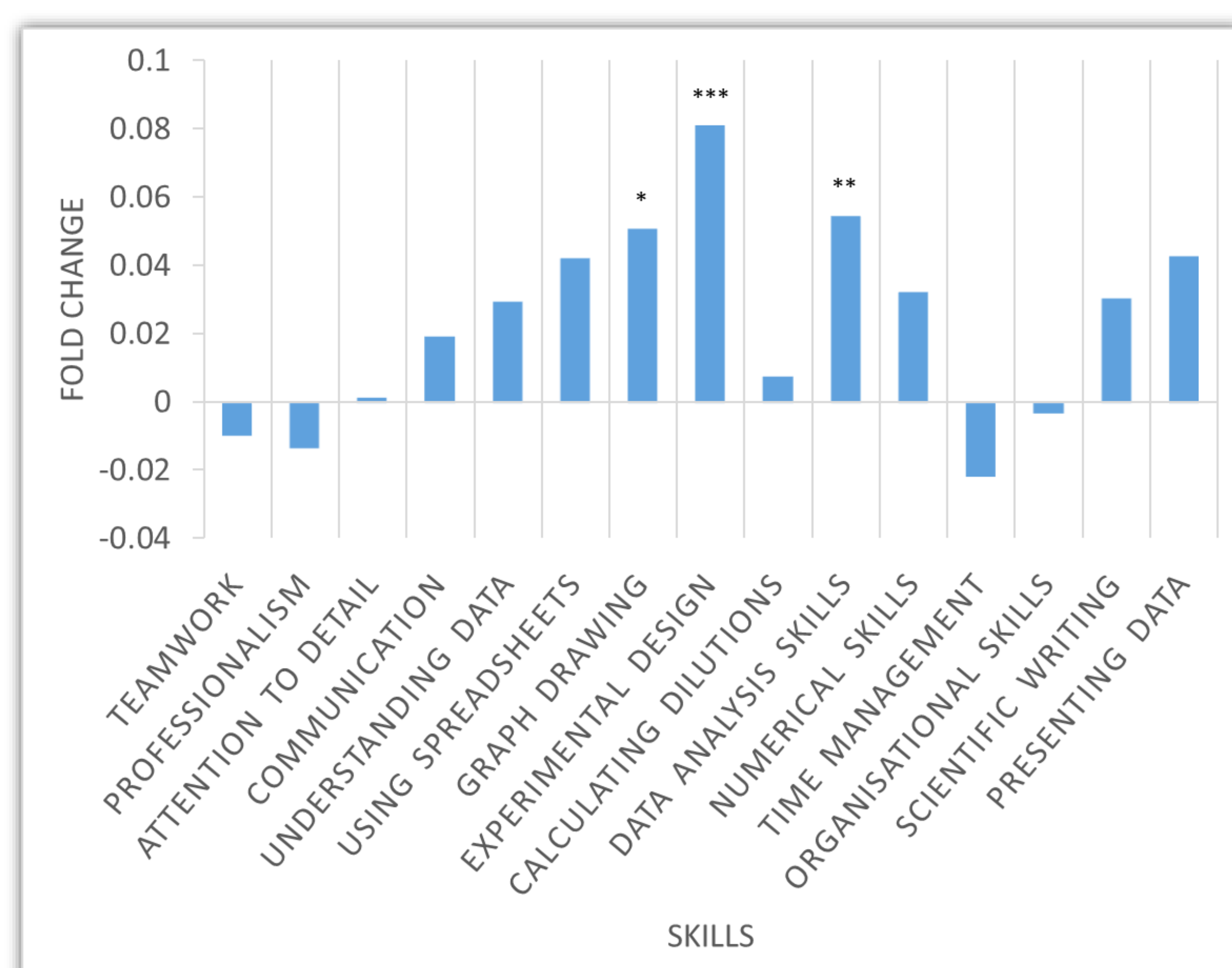

Fig.1 – Fold change response between pre- and post-workshop skills workshops
Students were surveyed and asked to reflect on their own personal opinion of their skills in the areas shown in the graph above. A 7-point Likert scale was used, with response data averaged and the fold change calculated.
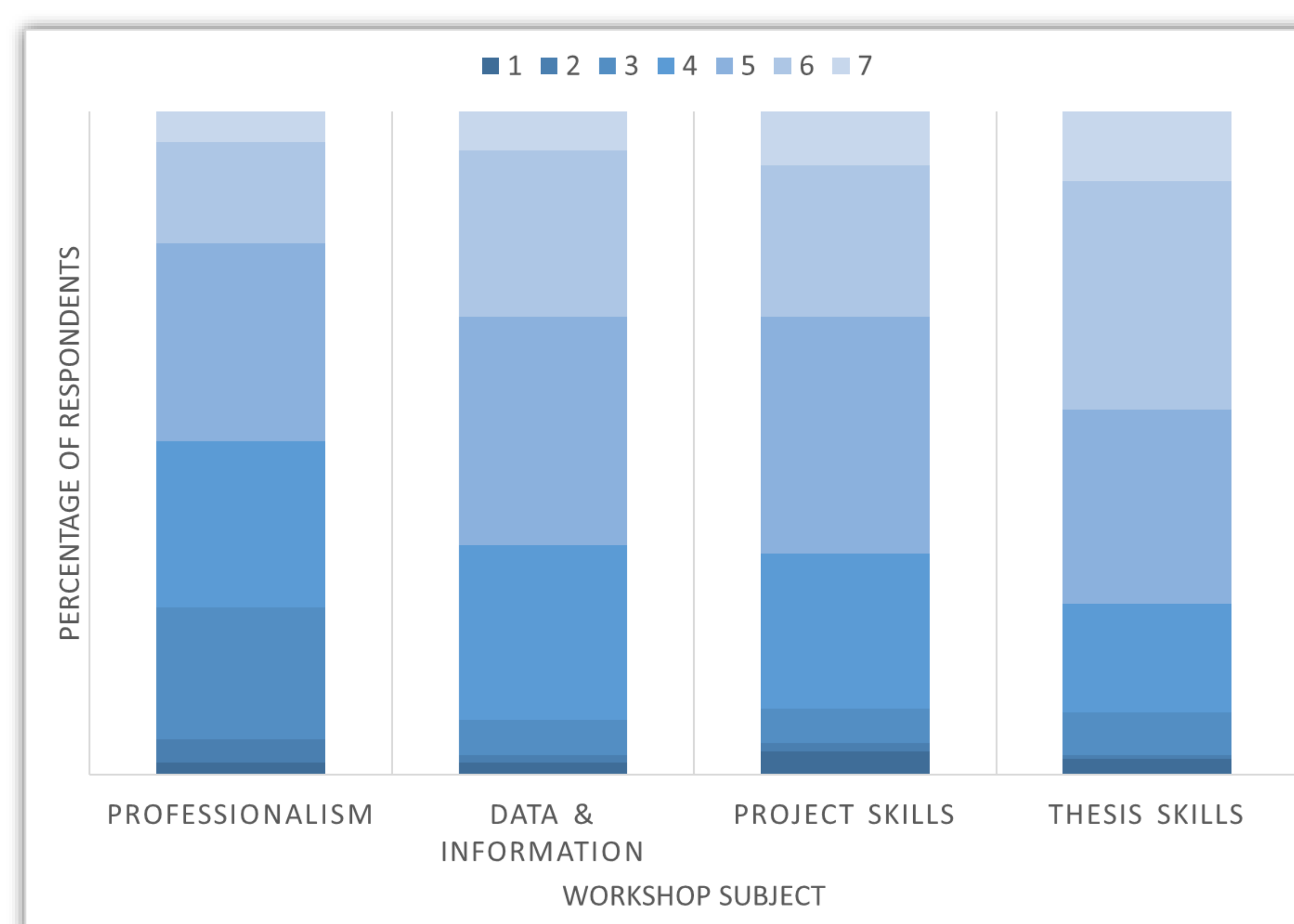** P=<0.05, ** P=<0.01, *** P=<0.001 (paired t-test).*

Fig.2 – Student rating of the four workshops
Students were asked to rate the workshops using a 7-point Likert scale.
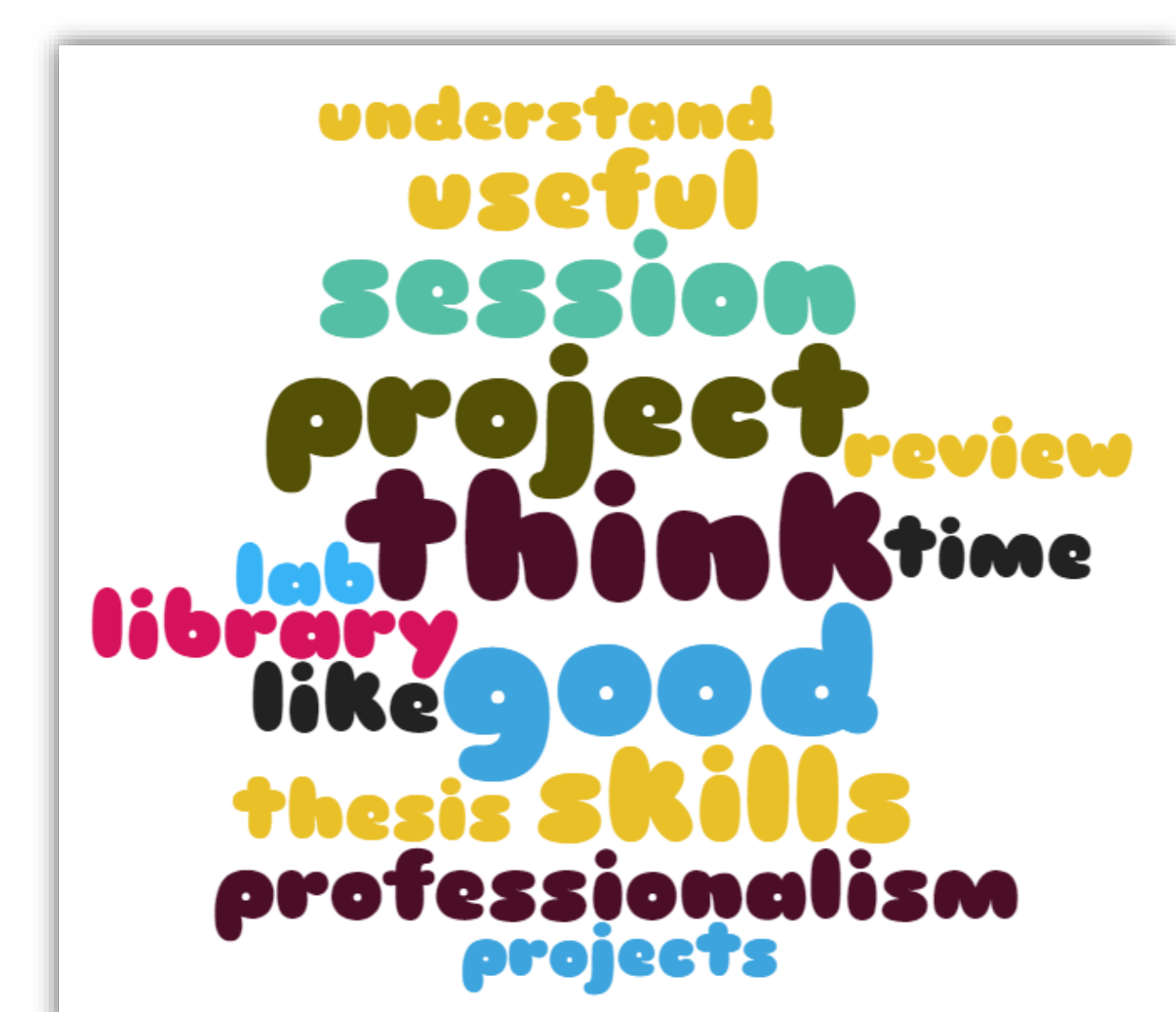

Fig.3 – Word cloud of top 15 words from written student feedback

Summary

Overall, the four sessions were deemed a success based on the feedback during and after the sessions, but there are improvements planned for the future based on comments received. Some changes will be relatively minor, but others will include extra sessions (e.g. exam skills sessions as one topic highlighted by respondents).