

Higher Education learning experiences pre-, peri- and post-Covid-19: what will evolve, and what will survive?

Interim Report: Survey Data Analysis – January 2022

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1. Introduction

- 1.1 The Covid-19 pandemic has stimulated a 'Cambrian Explosion' of innovation in Higher Education teaching and learning approaches. Teachers, students and universities are all actants, each having interests in sustaining valuable learning experiences. Its unpredictability defines the pandemic, yet it is characterised by ongoing commitments to educational values supported by beliefs about educational experience. Learning ecologies and networks have been disrupted, and new learning assemblages continue to emerge.
- 1.2 2021/22 final-year undergraduates are uniquely positioned to reflect upon and evaluate pre-, peri- and post-pandemic learning experiences. Through Level 6 students at Anglia Ruskin University (ARU), this study uses survey and focus group methods to present an analysis of pedagogical and ontological strategies from formal and informal learning environments, considering educational and demographic sub-groups of the study population. We aim to produce recommendations for Higher Education post-Covid-19, melding the best pre-pandemic practice with the best of what the pandemic has brought forth.
- 1.3 This interim report summarises the main findings from the quantitative analysis of survey data, focusing on descriptive findings from the whole study population, and instances where statistically significant findings were made in the comparison of subgroups. It also includes a brief overview of results from the qualitative survey data; a further report on the findings from the qualitative dataset will follow.

2. Methods

- 2.1 Level 6 students from all Faculties at ARU were invited to complete an online survey between 7th November and 7th December 2021. The invitation was circulated via email from Faculty offices.
- 2.2 Quantitative question groups interrogated the following themes:

- Faculty, School and part-time/full-time status (multiple choice, select one per question)
- Study choice during Covid-19 - on campus/online-only - where a choice was available (multiple choice, select one per question)
- Types of educational delivery and informal learning opportunities experienced before, during and emerging from the pandemic (multiple choice; select all that apply)
- Participant ratings (Likert scale, 1-10) of the types of educational delivery and informal learning opportunities experienced for:
 - o Effectiveness for learning
 - o Effectiveness for building positive learning communities
 - o Overall satisfaction
- Personal characteristics: gender; age; ethnicity; presence/absence of physical disability; presence/absence of learning difficulty; presence/absence of caring responsibilities (multiple choice; select one per question).

2.3 Qualitative questions interrogated the following:

- 'Are there any features of your learning from before the Covid-19 pandemic that you miss, and you think we should bring back?' (free text)
- 'Are there any features of your learning from during the Covid-19 pandemic that you think we should keep, even when the pandemic is over?' (free text)
- 'If you have any other comments or reflections about your learning before, during and after the Covid-19 pandemic, please add them here' (free text)

2.4 Quantitative data were analysed descriptively by whole participant population, and by groups of the population delineated by the study-related and personal characteristics of participants.

2.5 Appropriate statistical tests were employed to identify statistically significant differences, at the 5% level, between different sub-groups of respondents. All relevant subgroups were cross-compared. Some similar reported categories were combined where appropriate to enhance the statistical power of relevant analyses.

3. Results

3.1 Overall descriptive statistics

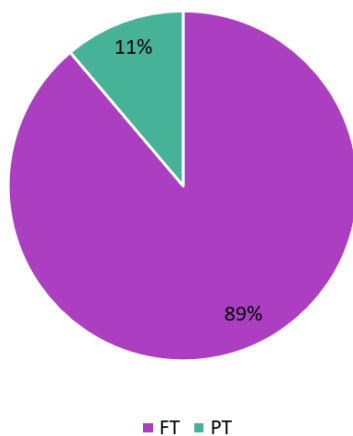
3.1.1 178 valid survey responses were received from current ARU Level 6 students.

3.1.2 Study characteristics of the participant population were broadly proportionate to the overall ARU Level 6 population, and were as follows:

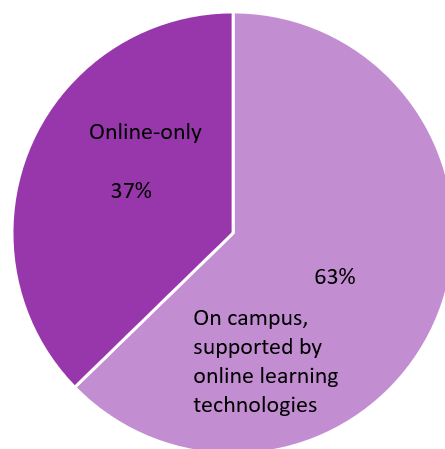
Faculty and School:



Full-time/part-time status:

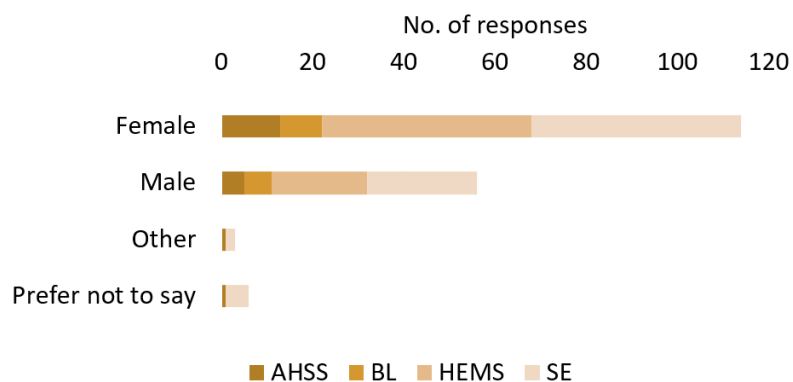


Choice of study mode during Covid-19, where one was available:

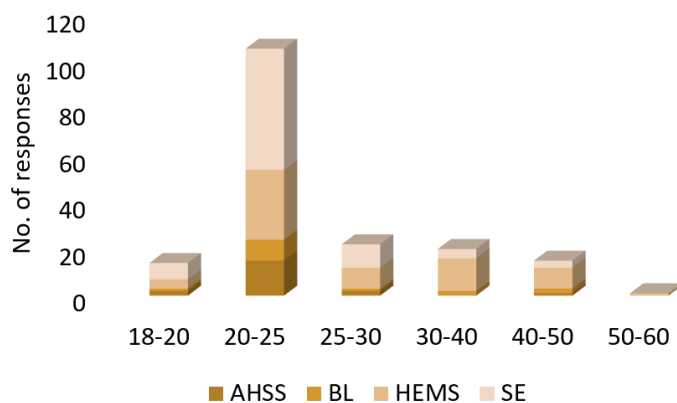


3.1.3 Personal characteristics of the participant population were as follows:

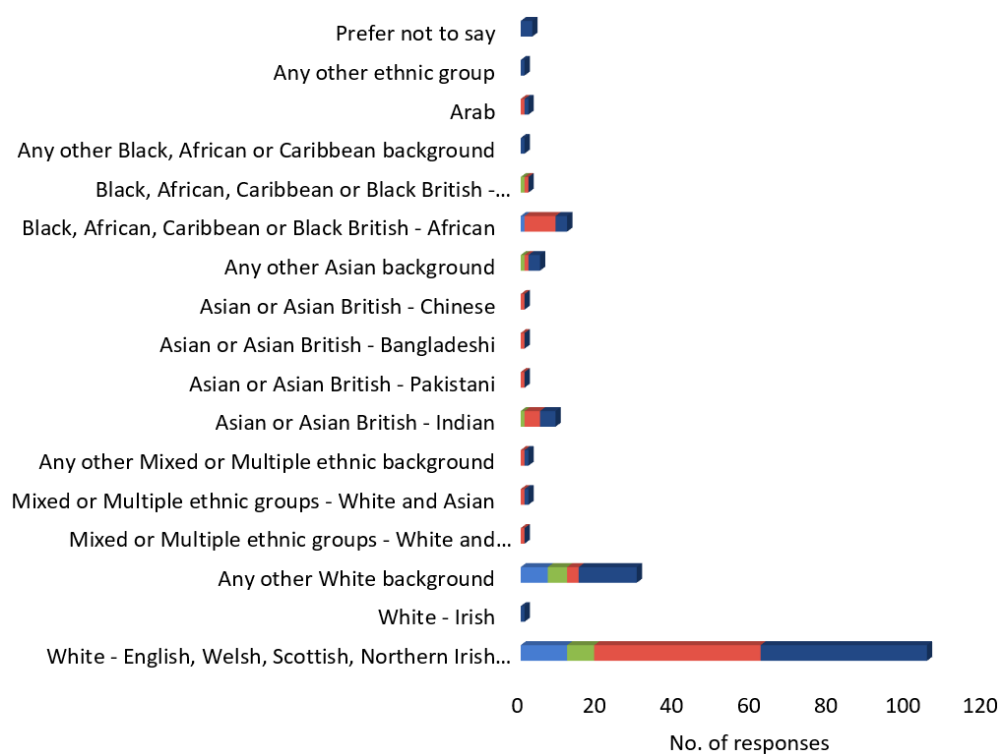
Gender:



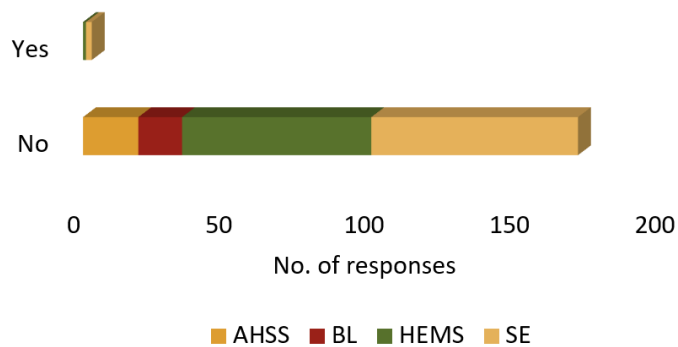
Age:



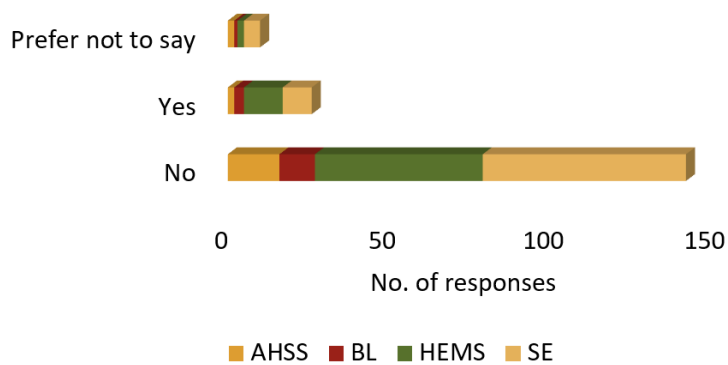
Ethnicity:



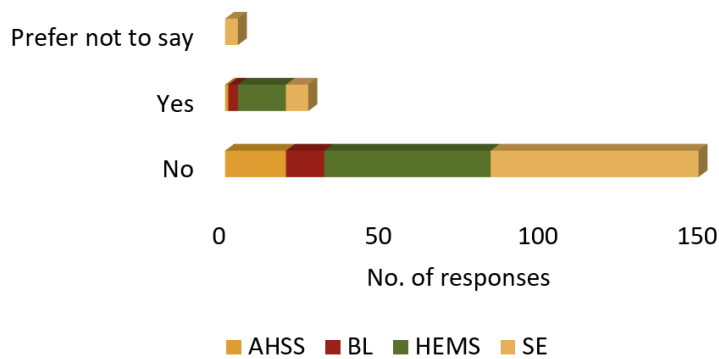
Presence/absence of physical disability:



Presence/absence of learning difficulty:

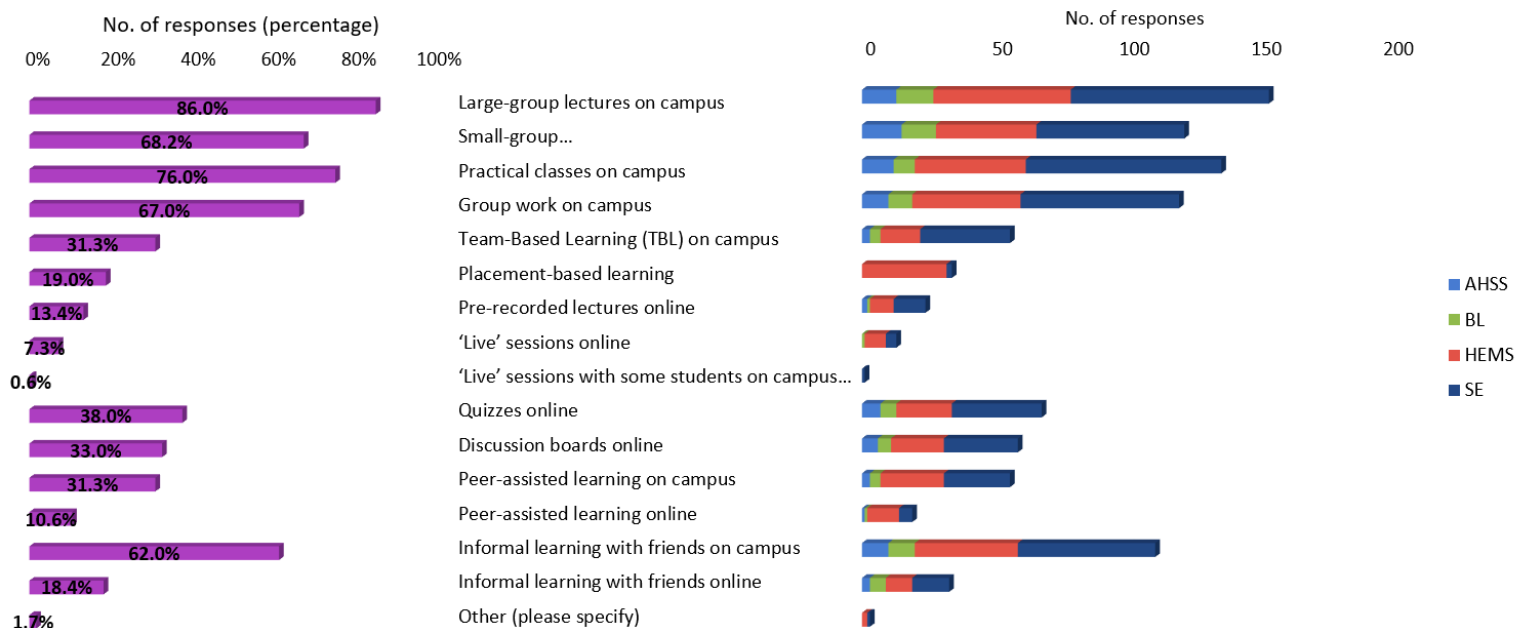


Presence/absence of caring responsibilities:

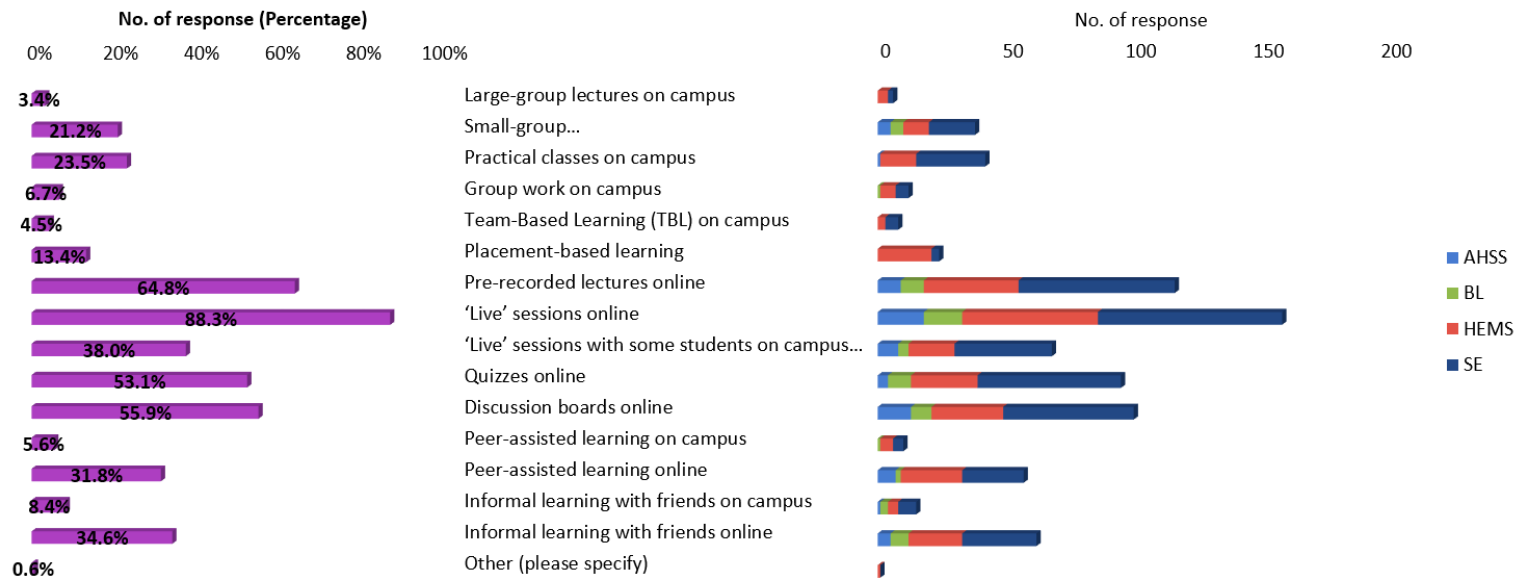


3.1.4 As expected, participants reported experiencing more on-campus forms of educational delivery/informal learning opportunities before the pandemic, more online forms during the pandemic, and a mixture of on-campus and online forms in the current period, emerging from the pandemic. Responses were broadly distributed proportionately across Faculties, with the exception of a greater level of placement-based learning in HEMS than elsewhere.

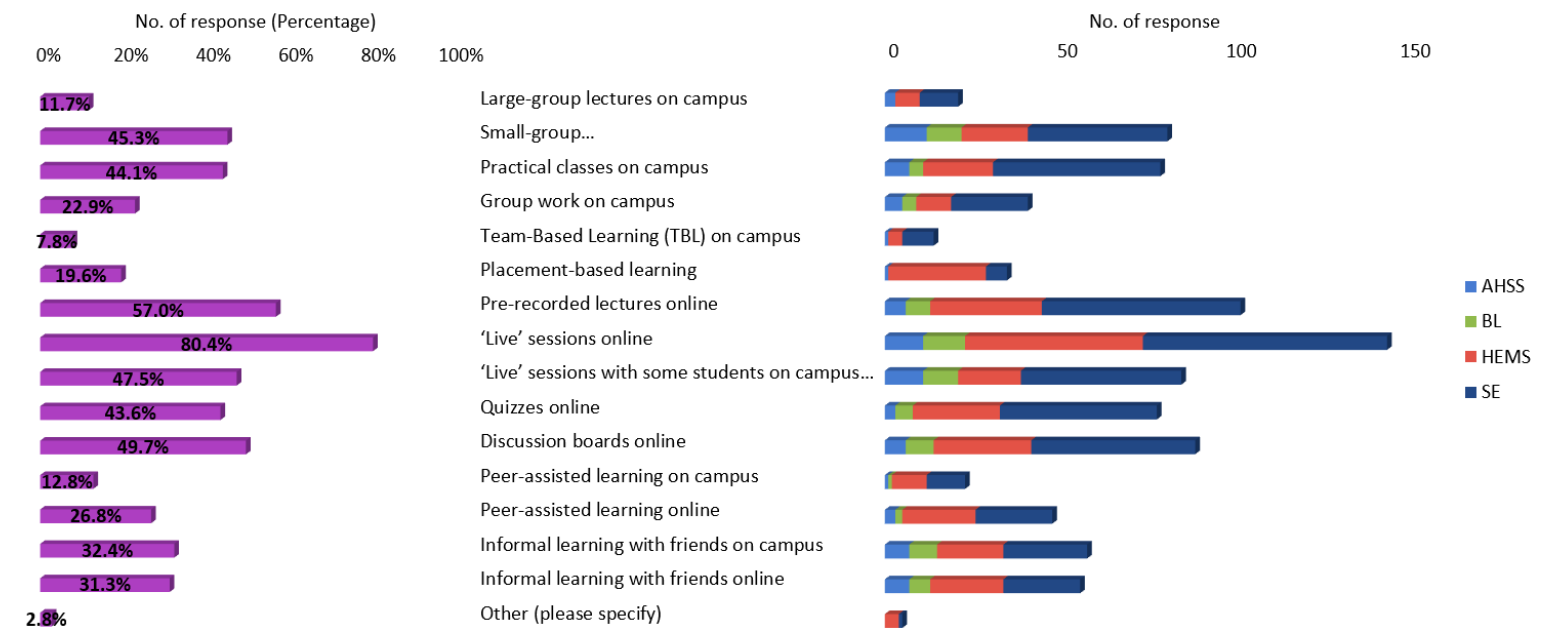
Pre-pandemic:



Peri-pandemic:



Emerging from the pandemic:

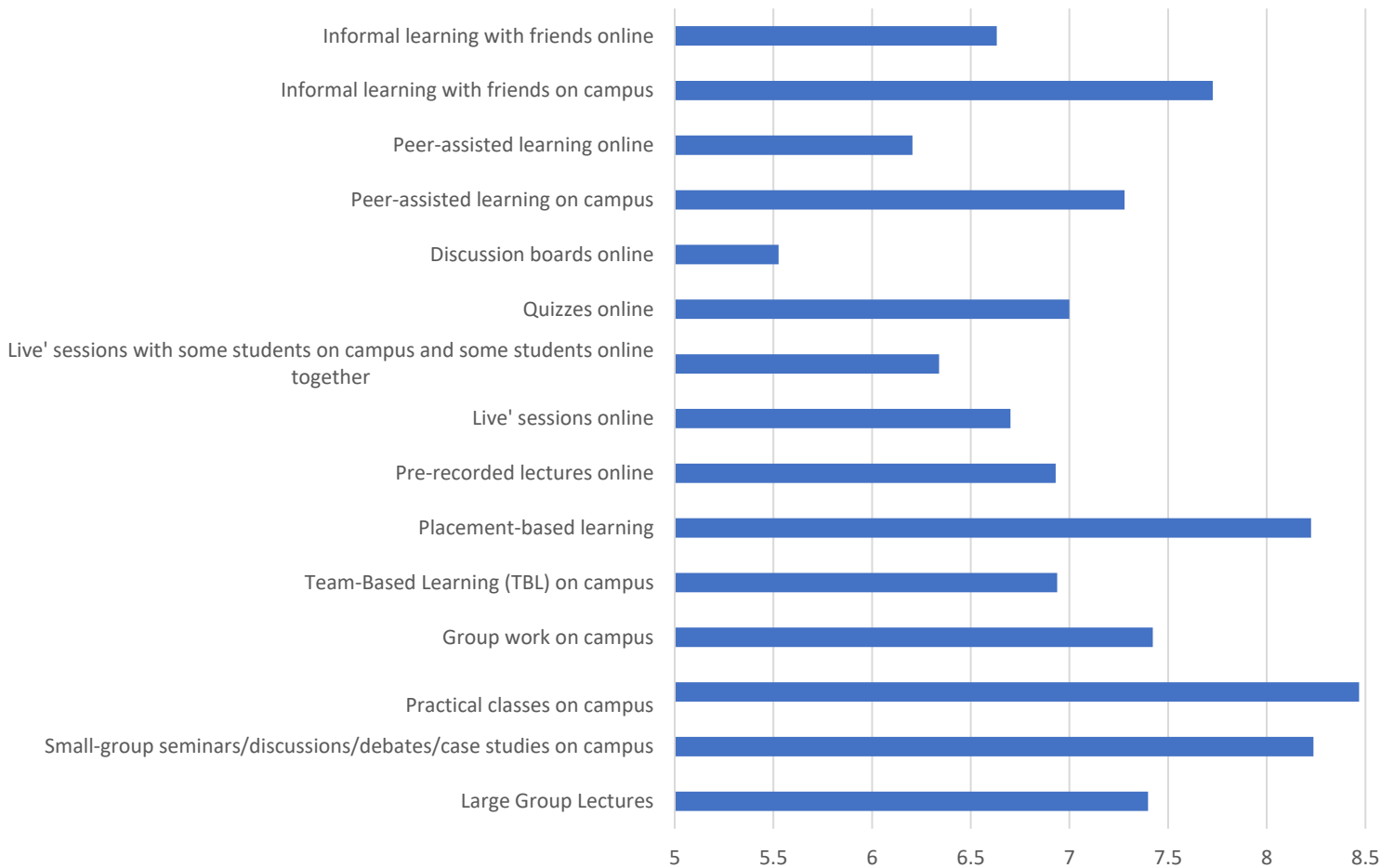


3.2 Overall ratings of effectiveness and satisfaction

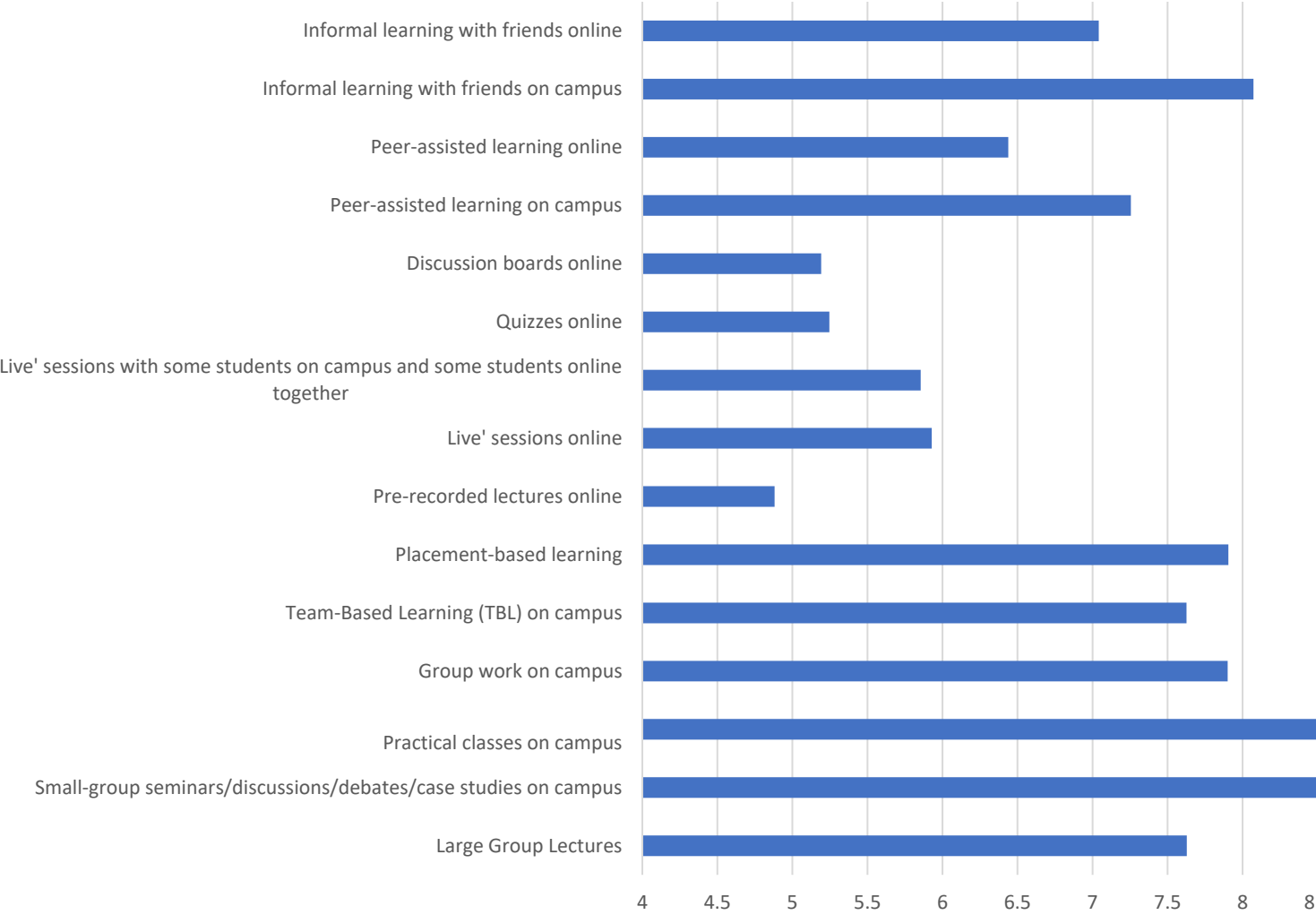
3.2.1 From the participant group as a whole, on-campus forms of learning were generally rated more highly than online forms of learning.

3.2.1.1 Average Likert scale ratings for various forms of learning were as follows:

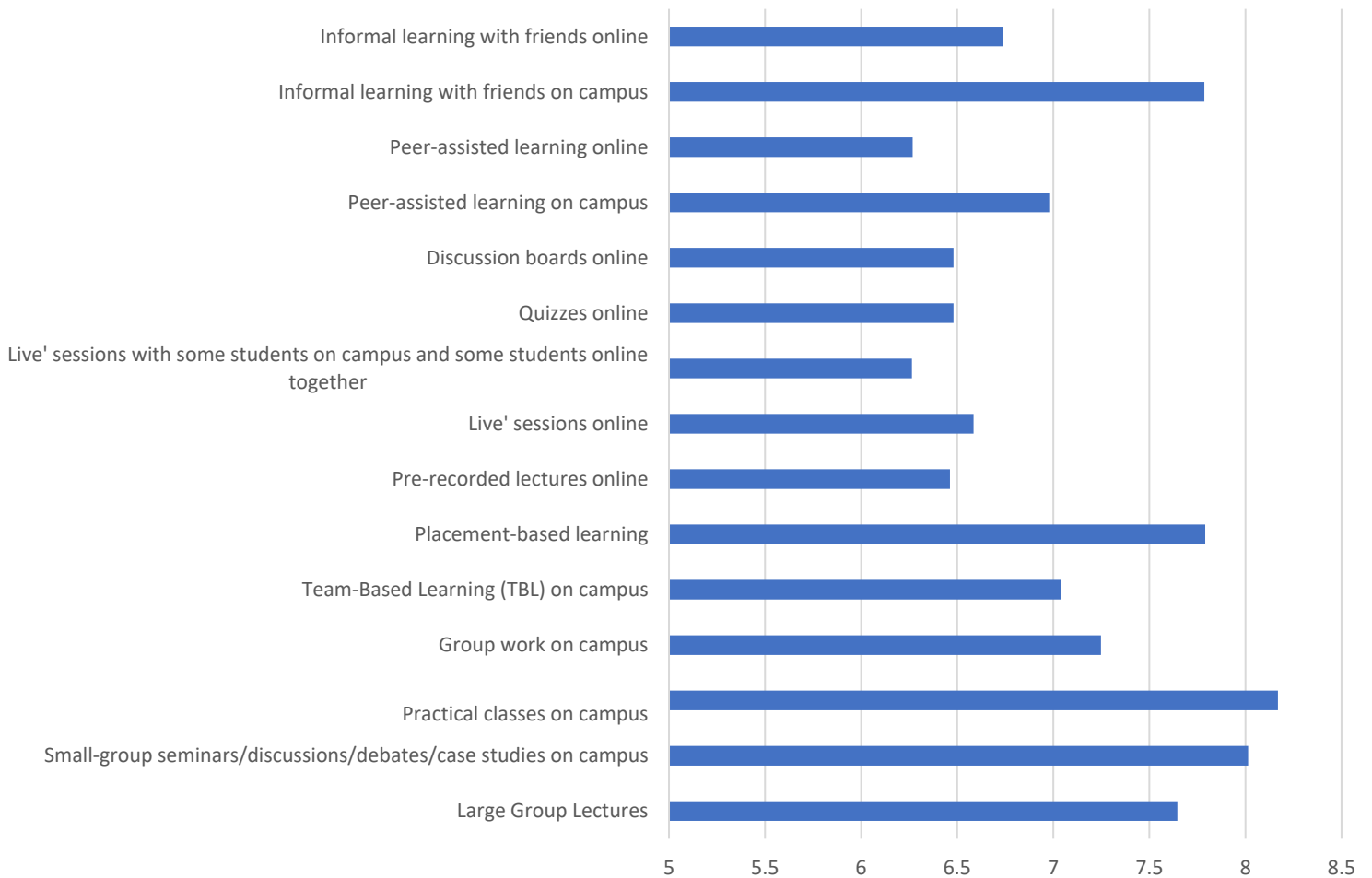
Effectiveness for your learning:



Effectiveness for building positive learning communities:



Overall satisfaction:



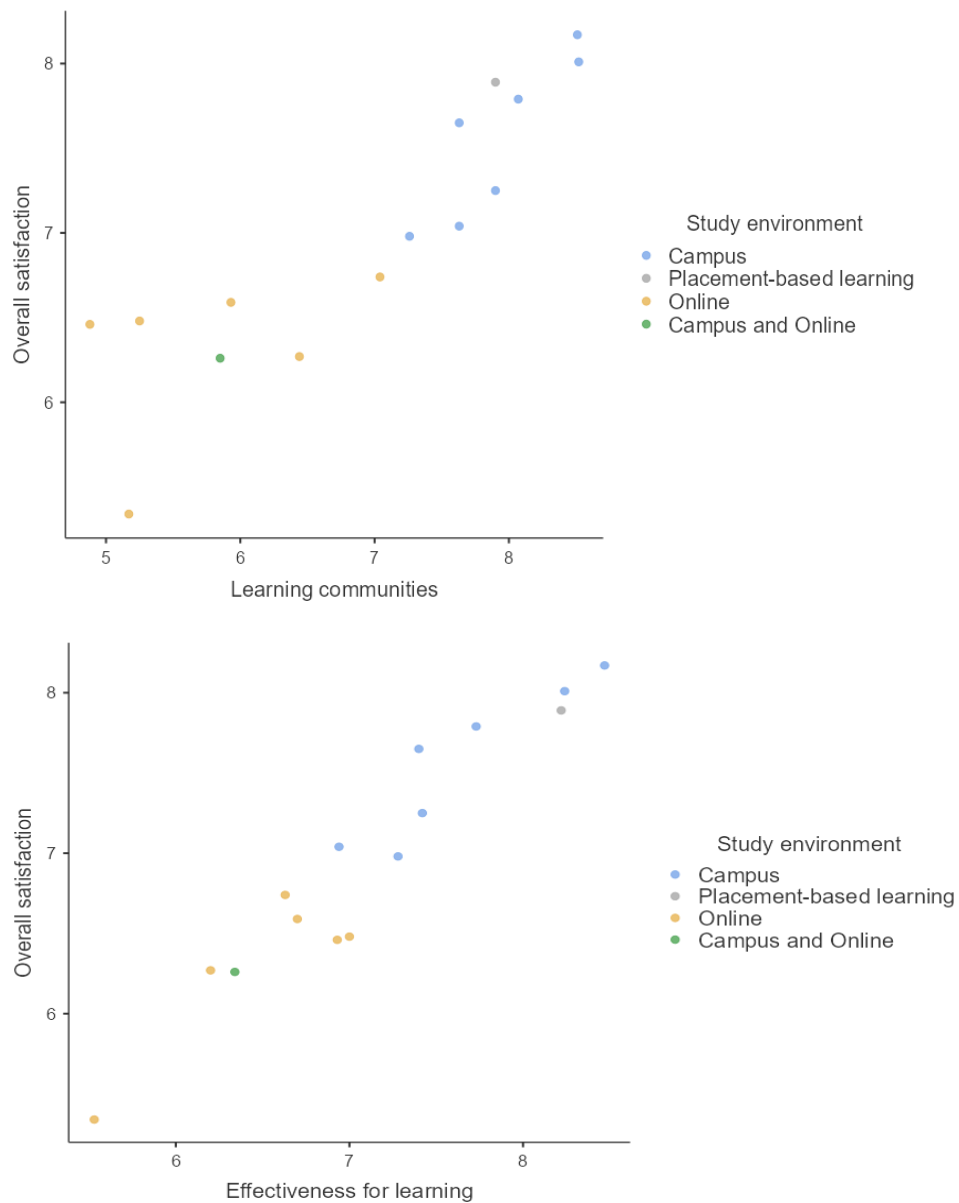
3.2.1.2 Grouping together individual learning activities into on-campus and online categories, statistically significant differences were found in average participant ratings:

3.2.1.2.1 **'Effectiveness for learning'**: 'Campus' (7.64) and 'Online' (6.50). P value 0.022.

3.2.1.2.2 **'Building positive learning communities'**: 'Campus' (7.93) and 'Online' (5.79). P-value = 0.014.

3.2.1.2.3 **'Overall satisfaction'**: 'Campus' (7.56) and 'Online' (6.31). P-value = 0.014.

3.2.1.3 Ratings for 'effectiveness for your learning' and 'effectiveness for building positive learning communities' correlated well with 'overall satisfaction':



3.3 Comparative subgroup analyses of ratings for effectiveness and satisfaction

3.3.1 Subgroup analyses were undertaken on ratings of effectiveness and satisfaction for all possible subdivisions of the dataset by study characteristics and personal characteristics of participants. Statistically significant findings from these analyses are presented here; where a particular comparison between subgroups is not described, no statistically significant difference was found.

3.3.1.1 By Faculty:

- **Pre-recorded lectures** were rated more highly for 'effectiveness for your learning' in SE (7.46) than HEMS (6.33). P value – 0.049.
- **Pre-recorded lectures** were rated more highly for 'overall satisfaction' in SE (7) than HEMS (5.75). P value – 0.037.
- **Informal learning with friends online** was rated more highly for 'overall satisfaction' in SE (7.23) than HEMS (5.78). P value – 0.027.

3.3.1.2 By full-time/part-time status:

- **Small group seminars on campus** were rated more highly for 'effectiveness for your learning' by full-time (7.44) than part-time (6.92) students. P value – 0.023.
- **Practical classes on campus** were rated more highly for 'effectiveness for your learning' by full-time (8.6) than part-time (6.79) students. P value – 0.018.
- **Informal learning with friends on campus** was rated more highly for 'effectiveness for your learning' by full-time (7.86) than part-time (6.2) students. P value – 0.044.
- **Small group seminars on campus** were rated more highly for 'building positive learning communities' by full-time (8.66) than part-time (7.08) students. P value – 0.005.
- **Peer-assisted learning on campus** was rated more highly for 'building positive learning communities' by full-time (7.4) than part-time (6.1) students. P value – 0.049.
- **Small group seminars on campus** were rated more highly for 'overall satisfaction' by full-time (8.14) than part-time (6.69) students. P value – 0.030.
- **Quizzes online** were rated more highly for 'overall satisfaction' by full-time (6.69) than part-time (4.92) students. P value – 0.035.
- **Peer-assisted learning on campus** was rated more highly for 'overall satisfaction' by full-time (7.14) than part-time (5.44) students. P value – 0.042.

3.3.1.3 By gender:

- No significant differences observed.

3.3.1.4 By age:

- **Small group seminars on campus** were rated more highly for 'effectiveness for your learning' by participants aged **18-25** (8.49) than those aged **>25** (7.65) students. P value – 0.015.
- **Pre-recorded lectures online** were rated more highly for 'building positive learning communities' by participants aged **>25** (5.89) than those aged **18-25** (4.44). P value – 0.012.
- Overall, **on-campus forms of learning** were rated more highly for 'effectiveness for your learning' by participants aged **18-25** (7.76) than those aged **>25** (7.34). P value – 0.036.
- Overall, **on-campus forms of learning** were rated more highly for 'building positive learning communities' by participants aged **18-25** (7.71) than those aged **>25** (7.23). P value – 0.016.
- Overall, **online forms of learning** were rated more highly for 'effectiveness for your learning' by participants aged **>25** (6.8) than those aged **18-25** (6.36). P value – 0.045.
- Overall, **on-campus forms of learning** were rated more highly for 'overall satisfaction' by participants aged **18-25** (7.71) than those aged **>25** (7.23). P value – 0.016.

3.3.1.5 By ethnicity:

- No significant differences observed.

3.3.1.6 By presence/absence of physical disability:

- **Large group lectures on campus** were rated more highly for 'effectiveness for your learning' by those **with a physical disability** (9.67) than those who **preferred not to declare** (5.5). P value – 0.049.

- **Practical classes on campus** were rated more highly for ‘**building positive learning communities**’ by those **without a physical disability** (8.65) than those who **preferred not to declare** (5.5). P value – 0.010.

3.3.1.7 By presence/absence of learning difficulty:

- **Live sessions online** were rated more highly for ‘**effectiveness for your learning**’ by those **without a learning difficulty** (6.95) than those **with a learning difficulty** (5.59). P value – 0.030.
- **Quizzes online** were rated more highly for ‘**effectiveness for your learning**’ by those **without a learning difficulty** (7.38) than those **with a learning difficulty** (5.13). P value – 0.003.
- **Quizzes online** were rated more highly for ‘**building positive learning communities**’ by those **without a learning difficulty** (5.5) than those **with a learning difficulty** (3.5). P value – 0.022.
- Overall, **online forms of learning** were rated more highly for ‘**building positive learning communities**’ by those **without a learning difficulty** (5.91) than those **with a learning difficulty** (4.99). P value – 0.049.

3.3.1.8 By presence/absence of caring responsibility:

- **Live sessions with some students on campus and online** were rated more highly for ‘**building positive learning communities**’ by those **with caring responsibilities** (7.3) than those **without caring responsibilities** (5.71). P value – 0.030.
- Overall, **online forms of learning** were rated more highly for ‘**building positive learning communities**’ by those **with caring responsibilities** (6.79) than those **without caring responsibilities** (5.6). P value – <0.001.

3.4 Brief overview of themes from qualitative survey data

3.4.1 83 optional free-text responses were received to the question, ‘Are there any features of your learning experience that you miss, and think we should bring back?’

3.4.1.1 Of these, 39 were variations on ‘**large-group lectures**’. Many responses in favour of bringing back on-campus large-group lectures cited the social aspect, of being together as a whole course group.

3.4.1.2 Other responses included, 'non-assessed practicals', 'field trips', 'peer-assisted learning on campus', and 'group work on campus'.

3.4.2 123 optional free-text responses were received to the question, 'Are there any features of your peri-pandemic learning that you think we should keep, even when the pandemic is over?'

3.4.2.1 Of these, 64 were variations on '**recorded lectures**'. Many responses in favour of bringing back on-campus large-group lectures cited the social aspect, of being together as a whole course group.

3.4.2.2 Other responses included, 'optional online classes', 'possibility to talk to the lecturer via video call', 'Online assessments', 'small-group classes', and 'chat functions in zoom'.

4. Discussion, Conclusions and Recommendations

4.1 Overall, on-campus forms of learning were rated more highly across all measures of effectiveness and satisfaction than online forms of learning. **We should therefore prioritise transition back to on-campus learning as far as possible**, as a general direction of travel.

4.2 Notwithstanding the general direction of travel recommended in 4.1, subgroup analyses revealed contrasts that may be relevant to design/delivery of courses that serve significant numbers of students in such subgroups:

4.2.1 **Part-time** students typically gave **lower ratings for on-campus** forms of learning than full-time students; a greater use of online forms of learning could be explored in courses with significant part-time cohorts.

4.2.2 **Mature (>25)** students typically gave **higher ratings for online** forms of learning than students aged 18-25; a greater use of online forms of learning could be explored in courses with significant mature student cohorts.

4.2.3 **Students with a learning difficulty** typically gave **lower ratings for online** forms of learning than students without a learning difficulty; on-campus learning options should be particularly made accessible for those with a learning difficulty, where possible.

4.2.4 **Students with caring responsibilities** typically gave **higher ratings for online** forms of learning and for **Unified Active Learning (UAL)** than students without caring

responsibilities; online and UAL learning options should be particularly made accessible for those with caring responsibilities, where possible.

- 4.2.5 **SE students** rated **pre-recorded lectures** and **informal learning with friends online** more highly than **HEMS students**. Sharing of good practice between Faculties on the use, format and production of online materials/learning communities may be beneficial.

4.3 Although perhaps in contrast to the contemporary pedagogical move away from **large-group lectures**, this form of learning delivery was popular among survey participants, outperforming 'online recorded lectures' and UAL methods on all quantitative measures:

4.3.1 'Large group lectures' scored well on all Likert-scale questions:

- Effectiveness for your learning – 7.4
- Building positive learning communities – 7.6
- Overall satisfaction – 7.6

4.3.2 'Large group lectures' were by far the **most requested** pre-pandemic form of learning to return in the future of our educational delivery. The social aspects of being together as a course group were emphasised.

Future pedagogical approaches should therefore not overlook the potential role of on-campus large-group lectures as part of a varied and balanced delivery plan, especially where **active learning techniques** can be utilised as part of a large-group lecture setting.

4.4 **Recorded lectures** were the most requested form of learning perceived as a feature of the pandemic to remain in the post-pandemic future. Taken together with the general preference for on-campus forms of learning, these should be considered as **complementary to** – rather than in replacement of – on-campus delivery, as an integral part of our evolving concept of standard face-to-face provision.