

Minutes of the Mathematics Undergraduate Admissions Committee meeting held at 16:00 on Thursday 26 July 2018 in MR15

Present: Stephen Cowley (SJC, Chair), Chris Warner (CDW, Subject Convener), Julia Hawkins (JEMH), Eve Pound (EP), Zain Patel (ZP), Orsola Rath-Spivack (ORS, Faculty Admissions Officer), Stephen Siklos (STCS), Simon Wadsley (SJW), András Zsák (AZ), Stephanie Baughen (SB, SPC Undergraduate Outreach Co-ordinator)

1) Preliminaries

- a) *Apologies:* Apologies were received from David Tong.
- b) *Declarations of interest:* There were no declarations of interest.

2) Minutes of the MUAC meeting 21 February 2018

a) *Approval:* The minutes were read and approved.

b) *Matters arising (not covered elsewhere)*

i) *Deselection Numbers by College*

The Chair reminded the Committee that deselection figures would be needed, especially for comparison between pre- and post-loss of UMS, as the percentage can vary significantly between Colleges.

Action: Subject Convener

ii) *Admissions and Progression Statistics*

The report from ORS was circulated in advance to the Committee. ORS explained that the aim was to produce a wide-ranging analysis, including by:

- a) school type,
- b) region (if feasible)
- c) gender,
- d) ethnicity,
- e) socio-economic classification, (POLAR3, OAC2011, IMD)
- f) residency,
- g) A levels,
- h) STEP.

The Committee was asked to agree on parameters to prioritise. ORS noted that some gender-based analysis had been carried out by Julia Gog and John Lister.

The Committee agreed that point 6 of the report (the effect of varying 'difficulty' of exam questions) was less urgent than points 4 and 5 (whether our admissions criteria are effective and unbiased when judged against attainment, and the effect of exam strategy relative to α 's and β 's, although the latter point is primarily the responsibility of Working Group 2 of the E&D Committee).

SJC noted, in relation to point 5, that our exam questions have much less of a problem element than those, say, 40 years ago. Further, over the past 10 years there has been a large increase in students reporting mental health problems, so it might be helpful to look at the exam questions in relation to the preparation and mind-set of students.

For point 4, SJC suggested focusing on whether correlations between STEP and Tripos results are strong when splitting by state/independent schools, Home/EU/Overseas students, or by gender. ORS noted that if possible it might be helpful to consider A-level results (A*A*A against A*A*A*) in the same way. JEMH suggested considering the academic achievement of schools, though CDW expressed concern that a whole school might not be representative of the type of students we want to consider (for example, those doing Further Mathematics). The Committee discussed how they might consider ethnicity, in relation to the small sample sizes of some groups. The Committee also discussed the best index of socio-economic class to use – there are issues with POLAR3, but OAC, IMD or GINI may be better measures.

SJC asked the Committee to consider these points and to email him and ORS with any ideas.

Action: Members

Subsequently, In line with the discussion, the Chair conveyed to the Admissions and Attainment Analysis Working Group that MUAC would wish to see prioritised an investigation of effectiveness of STEP as an indicator of Tripos performance across multiple constituencies, in particular gender, socio-economic background, school type and residency.

iii) Commercial Providers of Admissions Support

The Committee noted that the Heads of the Departments were not particularly concerned about the Oxford Royale Summer School, and had agreed that such schools can continue to use the CMS. SJC noted that the Senior Tutors Committee are compiling a list of commercial outfits that Colleges are advised to avoid. The Committee agreed that when this is finalised, MUAC should write to the Heads of Departments to recommend that the Faculty uses the same list.

Action: Chair

JEMH noted the unfortunate timing clash between the summer school and July Open Days. It was agreed that ORS and JEMH should liaise with the Faculty to avoid large bookings during peak times.

Action: JEMH and FAO

iv) Correlation between MAT and Oxford Examinations

The Committee was still keen to see statistical analysis of this correlation, and attempts will be made to follow up with contacts at Oxford.

3) Minutes of the DoS Biannual Meeting of 18 May 2018

a) Matters arising

i) Pre-admission Testing and the Loss of UMS

Some Admissions Tutors were concerned that there might be an unmanageable increase in mathematics applications following the loss of UMS scores. MUAC considered how this might be dealt with in this contingency. The Committee agreed that there were two main options available:

- 1) Reduce to offering only one interview per candidate and make more offers. STCS expressed an interest in seeing how many students are awarded significantly different marks in their interviews. SJC said that in Emmanuel it's not uncommon for the same student to be scored quite differently in the two interviews, and this could make the difference between receiving an offer or not. STCS noted that we can control the number of 1,1 grades awarded in STEP, so Colleges could make more offers without needing to increase the entry requirements.
- 2) Require a pre-interview test, such as the Test of Mathematics for University Admission (TMUA). The Committee had reservations about the £30 standard entry fee for the TMUA. SJC noted that it might be possible to come to an agreement with the other Universities who use the test to share payment and thus make the test free to applicants to those universities. SJW observed that paying the full cost of the test might be cheaper than providing a second interview.

JEMH noted that it is undesirable to require both an admissions test *and* STEP, and applicants may be put off in favour of other Universities (such as Oxford, where having successfully made it through the MAT and interview, they will receive an offer conditional only on A levels or the equivalent examinations). ORS said there is a good chance that a high percentage of Cambridge applicants already sit the TMUA for their other applications, and that we could ask those students to let us know so that we might take it into account. There was some concern that this would have a negative effect – students might perceive that taking the TMUA might disadvantage them. The Committee agreed that they should find out the percentage of our applicants who are taking the TMUA and, that if it is significant, discuss making the TMUA a requirement.

CDW mentioned that as Colleges have different procedures for deselection and admission, people outside the University might see the admissions process as unfair, and applicants

sometimes believe they need to apply to certain Colleges to be accepted. This should be borne in mind in drawing up any proposals.

Action: Chair and FAO

ii) Interview Feedback

DoS members were asked to keep examples of particularly good or bad interview reports while fishing from the pool, to be anonymised and provided to interviewers to ensure a more consistent quality of reports.

Action: DoS Members of MUAC

iii) Pooling

The Committee noted that there are no compulsory guidelines for pooling candidates. CDW was aware of some guidelines relating to the overall number of candidates, but did not have these to hand. SJC asked that he email them to the Committee.

Action: Subject Convenor

iv) Contingency Interviewers

There was no update to this item. SJC and ORS will continue working on this.

Action: Chair and FAO

4) Subject Convenor Report

- a) CDW said in summary that the Faculty is broadly doing things right. There are some variances, such as the success rates of candidates from independent, grammar and state schools. He also noted that there is a slight reduction in female offers this year, but that compared to the longer term trend it is not out of line. JEMH asked what quality assurance checks are in place to ensure applicants to different Colleges have a comparable experience of the process. CDW responded that the pool system ought to ensure fair treatment across Colleges. He noted that we encourage Colleges to pool as many applicants as is reasonably possible, but that ultimately we rely on DoSs to decide who is viable.

The Committee agreed that in the spirit of internal review, some sampling be carried out to provide relevant statistics, for example a ratio of success rates of candidates from independent schools against those from state schools by College.

Action: Subject Convenor and FAO

5) Faculty Admissions Officer Report

a) Open Days: Faculty and University

i) University and College tickets and College-only tickets for the University Open Day:

ORS and SJC explained that students can apply for College-only open day tickets, which do not allow them to attend some centrally-organised University events. ORS reported that some students were not aware that the Mathematics Faculty events were still open to these ticket-holders. ORS was asked to add a clarification to our open day booklets and our website, and SB will ask CAO to update their information.

Action: FAO and SB

b) Proposed Change to the morning programme for some Colleges for Faculty Open days:

The Admissions Forum and the Admissions Administrators Group had expressed concerns regarding the two-part booking system for the Open Days. ORS said this item will be brought to the DoS Committee in November. She also emphasised that we do need some form of ticketing for Faculty events to manage the spread of numbers.

ORS suggested that if Colleges were willing, students could book in the same place for both Faculty and College events. ORS said she is willing to manage the bookings in this case. SJC suggested that there could be provision for students to visit more than one College – some Colleges being open to ‘drop in’, and others requiring booking and providing lunch. STCS commented that if Colleges scheduled their events to start at the same time, then students could be free to explore on their own beforehand.

The Committee emphasised that we rely on College events to explain certain technicalities of the admissions process, so that these can be skimmed over during Faculty events.

The Committee agreed to write to the Director of Admissions covering the points raised.

Action: Chair

c) *Possible formal student outreach role:*

ORS explained that an incoming PhD student who has consistently volunteered for access events has asked about the possibility of a more formal voluntary outreach role. This might include helping with open days, summer schools, Teach First, and the STEP Support Programme, and would also provide a good student sounding board for our literature and advice for applicants. JEMH and STCS suggested that this be split into multiple posts, and having a pool of 'trained' students would be useful for schools asking for somebody from the Faculty to speak to their students. The Committee acknowledged that training would need to be provided. SB said that the CAO may be able to provide some training, in addition to training from the Faculty. The Chair asked ORS to produce a draft advert and job description.

Action: FAO

d) *Website:*

ORS said that there were still some changes to the website to be made.

e) *Take-up of A-level Mathematics:*

ORS reported that more schools are restricting their students to only three A-levels, and there is concern that Further Maths may be dropped by some schools. This is a potential problem for students who change their minds partway through their A-levels, e.g. if Further Mathematics is not available at their school.

JEMH reported that the government has confirmed a £16m tender for maths support to go to MEI, who are running the Further Mathematics Support Programme (to be changed to the Advanced Mathematics Support Programme). This allows Core Maths and Further Mathematics support to both be provided under the same umbrella.

ORS commented that a new Cambridge Mathematics Free School has been approved in Chesterton with links to the University, as mentioned in the University's new access agreement (section 3.19). The Committee was not aware of this proposal, and asked SB to find out from CAO who wrote the agreement.

Action: SB

f) *Update on the University's OfS agreement:*

SJC noted that the STEP Support Programme is no longer listed as an aim, and suggested that we check to make sure that funding and support are continuing as normal.

Action: Chair

6) **Undergraduate Offers**

a) *Treatment of Mathematics A-level when taken in Y12:*

The Committee agreed that the phrasing under "Number of A Levels" on the University's general page <https://www.undergraduate.study.cam.ac.uk/applying/entrance-requirements> is somewhat convoluted, but that the entry on the Mathematics specific page is clear.

b) *Alternative Offer:*

It had been suggested that the alternative offer would make little difference to admissions. ORS said that a number of students had asked her about the offer (e.g. at Open Days), and she explained to them that it is aimed at students who are worried by STEP, and is a way of recognising the fact that about third of offer-holders miss their offer and are still accepted. Some students appeared to be relieved, but she had received no quantifiable feedback. SJC said that there had been some worry and discussion on the Student Room forum; ORS offered to investigate.

Action: FAO

7) **STEP matters**

a) *STEP Support Programme:*

JEMH reported that funding for a third year of the Programme had been approved. She noted the delay between putting in the request to bursars and receiving confirmation, and hoped that ongoing funding can be sorted out further in advance (in particular, for the sake of those employed). The DoS Committee has agreed to write a letter to the bursars to emphasise the importance of this.

b) STEP marking criteria:

There have been concerns about restricting candidates to one answer booklet of 44 pages. Some members suggested that extra booklets should be available, but as a disincentive schools should be required to justify in writing why extra booklets have been distributed. SJC said that the discussion with CA was ongoing, and would come back to MUAC at a later date.

The Committee also discussed the policy of not marking any crossed-out work. ZP was concerned that the effect may be to discard marks with which students might otherwise have been credited. The Committee also noted potential conflicting information between different examinations about how questions with multiple attempts would be marked. SJC said that Cambridge Assessment would provide a paper for the next meeting.

c) STEP classing criteria:

No progress has been made, and this will continue as at present. This may be revisited if the alternative offer is a success.

8) SPC Undergraduate Outreach Coordinator

SB updated the Committee about her role, including liaising with JEMH and ORS, analysing widening participation data, and promoting greater communications between the Departments in the School. She reported that CAO are trialling an interdisciplinary Discovery Day for year 10 students. JEMH asked that this not clash with the annual Mathematics year 10 event in early January. SB said she is keen to promote greater communication between the departments in the school, and that she has set up a method to meet people from other departments to share ideas.

CAO has also set up a widening participation fund of £500 per year for departments to claim. There was concern from MUAC that the administrative burden of applying for the grant is large enough to almost cancel out the benefit. The Committee suggested it would be better to have fewer, bigger grants.

ORS asked SB to follow up with CAO for feedback on Mathematics outreach events organised jointly by CAO and the Faculty.

Action: SB

9) Equality and Diversity

ORS noted that this item had largely been covered in earlier items, but emphasised that MUAC should take ownership of monitoring admissions and progression.

10) Membership for 2018-19

SJC expressed a desire to step down as Chair. ORS said that the default Chair is jointly the Subject Convenor and Faculty Admissions Officer. She said that she would be willing to take on the role jointly with Julia Gog (Subject Convenor) or by herself. The Committee agreed to ask Prof. Gog if she is willing to act as joint Chair.

Action: FAO

AZ noted that he will be on sabbatical leave in Lent and Easter Terms 2019, and that a replacement should be found for that time.

Action: Chair

11) Date of Next Meeting

To be confirmed by the Chair. The Committee agreed to invite David Robson from Cambridge Assessment so speak about STEP and related issues.

Action: Chair

12) AOB

The Committee recorded their thanks to Eve Pound, whose help has proved invaluable on a number of occasions over the last two years.