

Patent Examination Board 2020 Examination Session

Candidate Survey Report

1. Introduction

This report consolidates candidate feedback for the Patent Examinations Board (PEB) Qualifying Examinations from 299 survey respondents. Due to the coronavirus pandemic, in 2020 it was necessary to deliver the PEB examinations online, and so this year's survey considers candidates' experience of taking the exams online as well as their preferences for continuing to run the exams online in future years.

Despite the challenges posed by having to rapidly shift the exams to an online format, there was significant improvement in overall satisfaction in the fairness of the PEB exams. From last year, where more than half of participants (57%) had little or no confidence, this year only 21% said they had little or no confidence. 63% of the candidates felt 'some confidence' in the process to lead to fair outcomes and 17% of the candidates felt very confident with the process. From the survey comments, the respondents' level of frustration and anger with the exams seemed significantly lower than in previous years.

As in previous years, satisfaction levels were generally good for FC1, FC2, FC4, FC5, FD2, and FD1. The Patent Examinations Board has continued to improve the exams and there are signs of positive progress. However there were continued concerns with other exams about the following areas (as raised in previous surveys):

- the demand for memorising amounts of material
- the time pressure / length of exams
- inconsistency in marking from examiners
- fairness of the process and relevance of the exams in assessing skills needed to be a competent patent attorney
- candidates would appreciate getting their results more quickly

FD4 in particular continues to be criticised for its extreme time pressure, irrelevance to professional competency, and several candidates raise the issue that it is biased to candidates with a Physics and Engineering background. One respondent analysed the model answers to calculate that a candidate would need to write 55 words per minute to produce a similar model answer.

Candidates appreciated that it was an enormous task to move the exams online and were grateful that they were still able to go ahead with the exams. More than thirty candidates praised the PEB for the achievement of shifting the exams online, in the comments section of the survey:

"I think PEB did an outstanding job to adapt to this unprecedented situation."

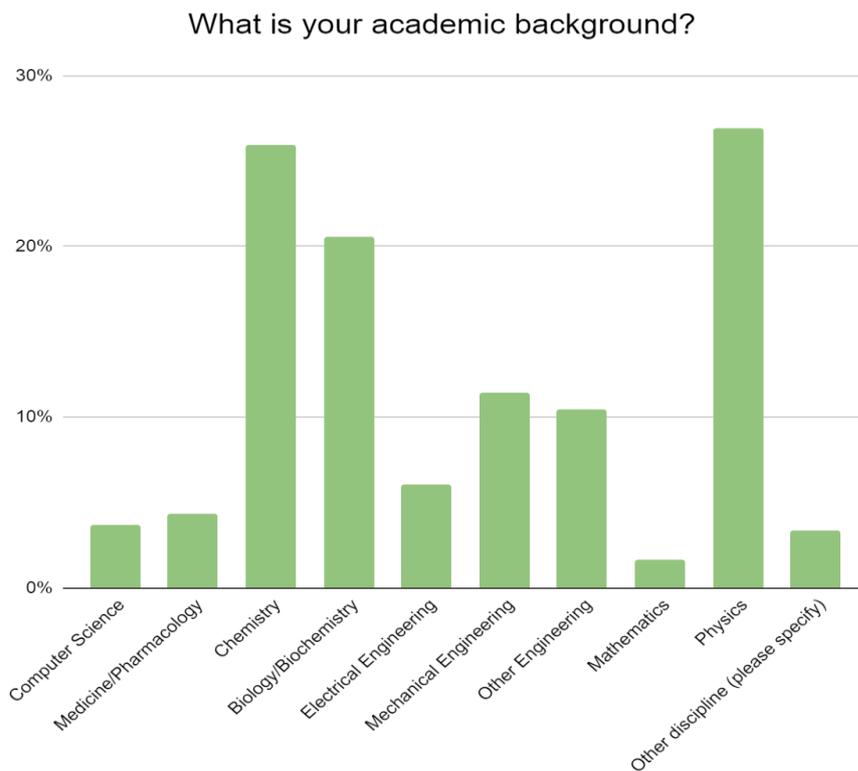
There were many positive comments regarding the preference of having online exams and being able to type exams instead of handwriting them. Many candidates felt that taking the exams online could resolve one of the most critical issues with the exam - the extreme time pressure - and the majority of the candidates were in favour of taking the exams online in future. The majority favoured taking the exam at their firm's premises in future.

Overall the online format ran smoothly, although there were some technical difficulties, for example difficulties in uploading the paper at the end of the exam, PEBX system occasionally lagging and freezing, several candidates had to reboot their computers again to get back to the system. Candidates have unresolved questions as to how CIPA will take into account the technical problems experienced during the exams which in some cases cost the candidates valuable exam time.

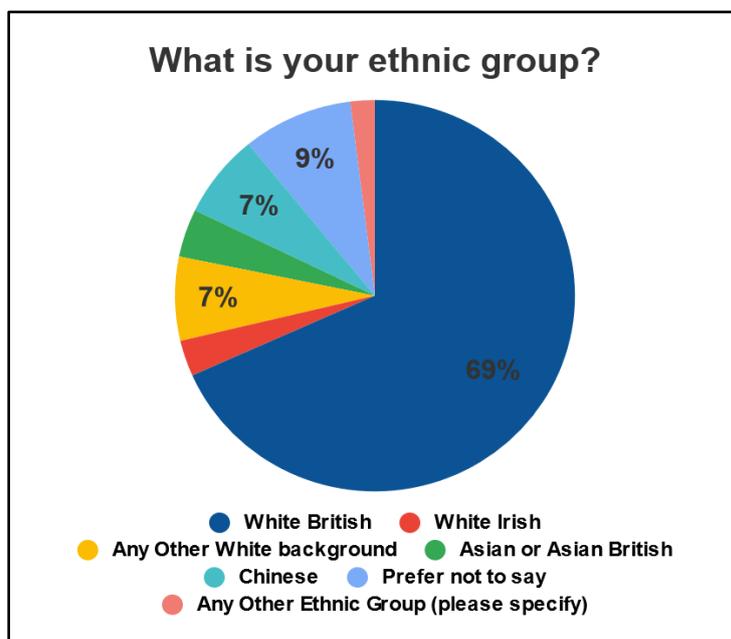
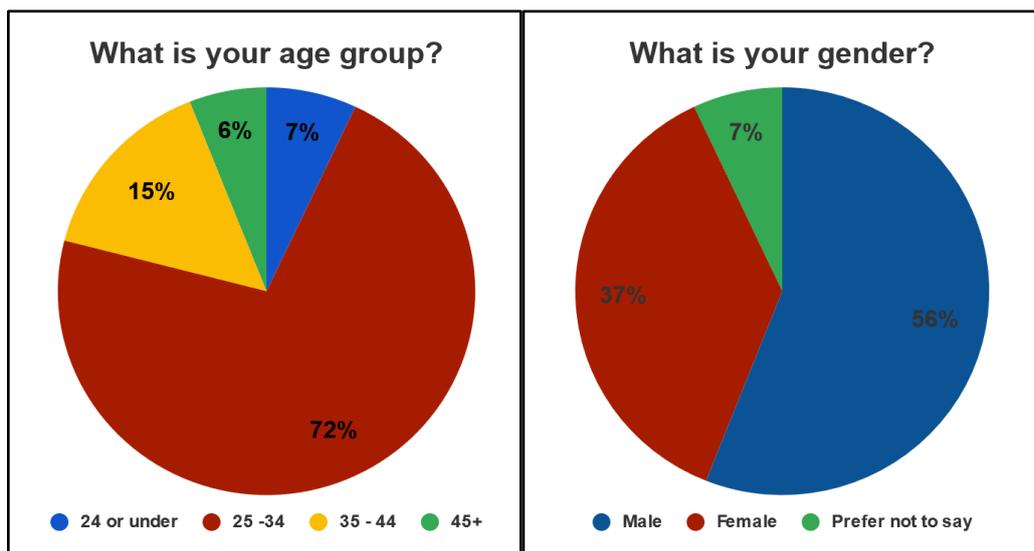
Many candidates found the guidance information confusing as different instructions were released at different times, and very close to the exam deadline. However the circumstances are understandable and candidates expect that issues can be resolved for the next set of exams. Several candidates experienced that the guidance provided by the invigilators varied between exams and between Zoom rooms. Some of these differences were minor and others were more major, such that some candidates might have an unfair advantage due to the inconsistency. Many candidates highlighted the significant amount of stress and uncertainty created by moving to a new system in a very short space time and asked the PEB to consider the exceptional pressure candidates were under this year.

2. Candidate Profile

This year the majority of the candidates came from Physics and Chemistry backgrounds. Other candidates came from Biology/Biochemistry, Medicine, Computer science, other Engineering, Mathematics, Mechanical Engineering, Electrical Engineering and other disciplines.



Like last year, the majority of the candidates were aged between 25-34 (72%), male (56%) and white British (69%).

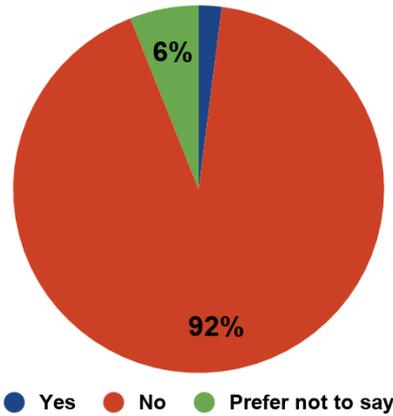


76% of the candidates are white British (white British or other) which is lower compared to last year. The next most commonly selected category was “Prefer not to say”, selected by 9% of the candidates.

7% are Chinese, 4% are Asian or Asian British.

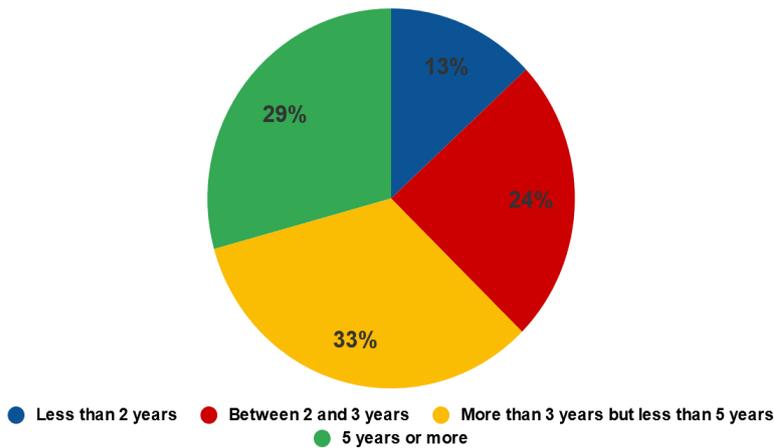
87% of the candidates speak English as their first language.

Do you consider yourself disabled?



2% of the candidates have a disability, and 6% prefer not to say.

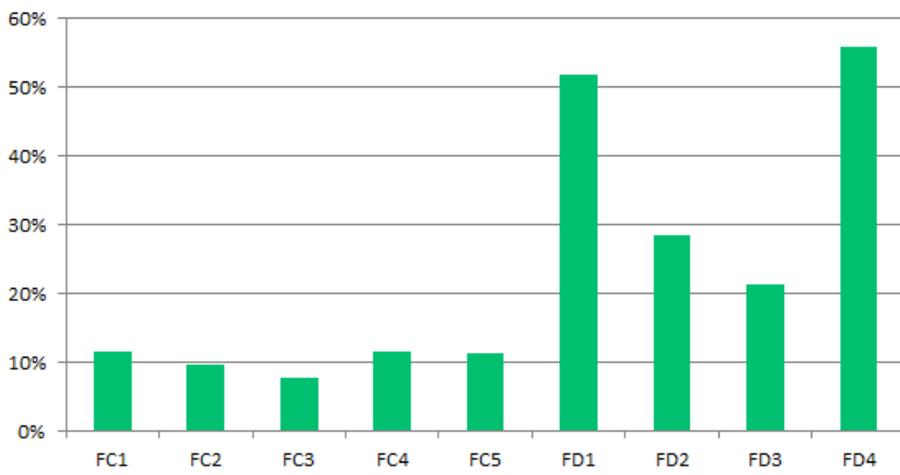
How long have you been working in the patent profession?



This year one third of the candidates (33%) have worked for between 3 and 5 years, 29% have more experience, one quarter of the candidates have worked between 2 and 3 years and nearly a quarter have less than 2 years experience.

3. Candidates' registration for exams

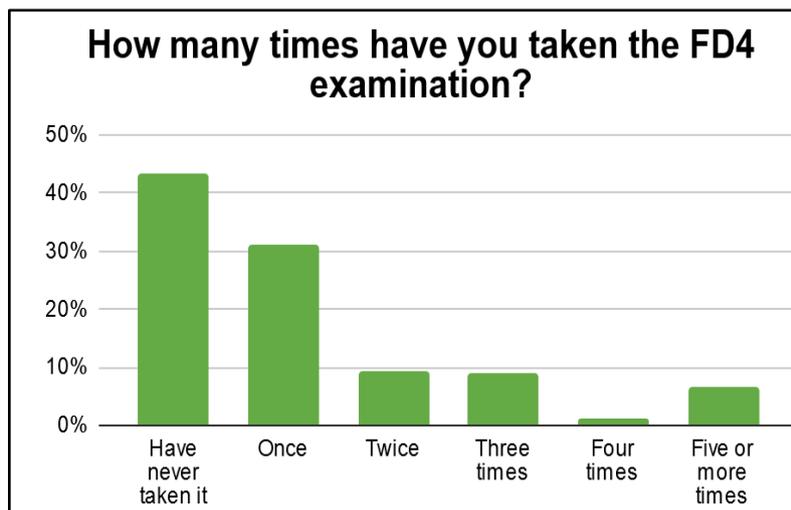
Which examination(s) did you take?



Over half (56%) of the candidates were taking FD4 exams.

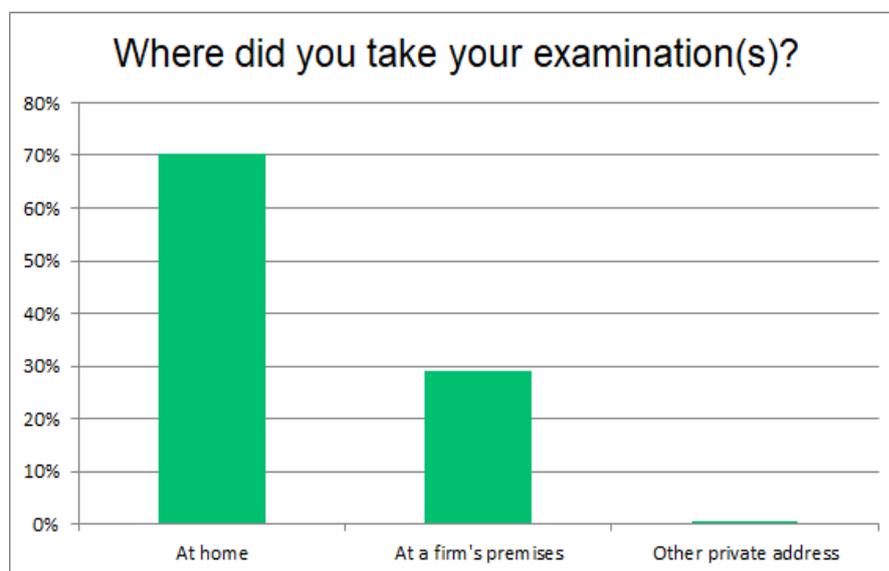
51% of the candidates were taking FD1.

Under a third of candidates were re-taking the FD4 exam.



4. Candidate's examination premises

This year candidates took their exams in other premises besides the traditional exam venues used by CIPA. The majority (70%) of the candidates took their exams at home, 29% of the candidates took their exams at firm premises and 1% took them in another private address.



The top preference was for taking exams at the firm's premises. 68% of the candidates who took their exams at their firm's premises said they would be happy to do so again, and a further 11% said they might be happy to. 7% of the candidates would prefer the traditional exams rooms and 12% would prefer to take them at home or other private addresses.

Despite the challenges experienced, there were many positive comments with a preference for having the exams online again in the future, and confidence that the process would be able to be improved next year in response to the experience and feedback from this year.

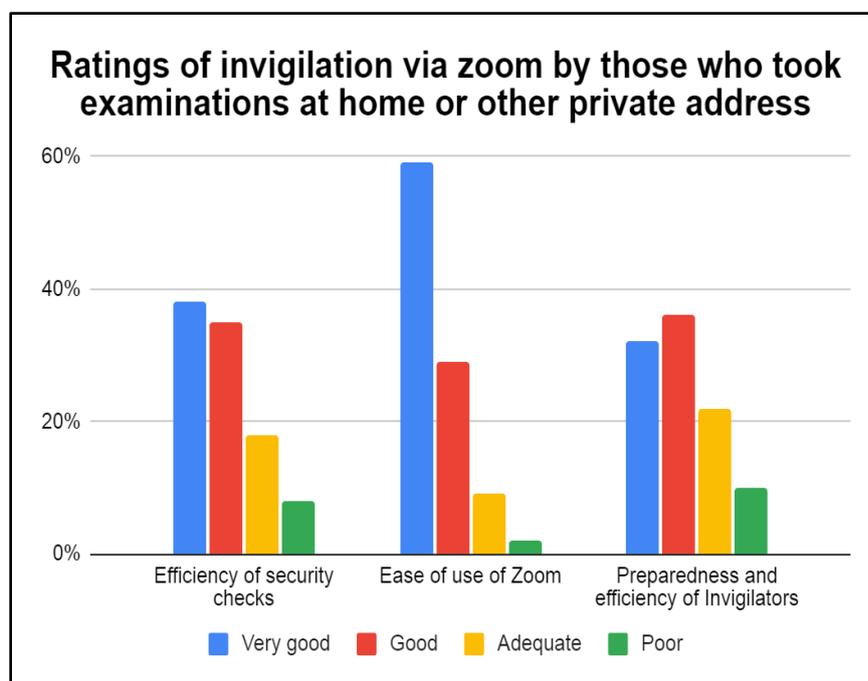
“The online format was a success and should be an option for all years moving forward. This would be beneficial for many candidates and could reduce the cost and admin associated with booking exam halls etc. It is also hoped that the online format may allow the exams to be held more than once a year to give candidates the opportunity to retake exams sooner. Whilst it is appreciated that the PEB were under great time constraints to set up the 2020 exams, earlier and consistent details of the format of the exams would be appreciated in future years. The zoom-based system worked well and should be used in future years. Alternative invigilation systems should not be considered, as this creates confusion for candidates and disrupts preparations.”

“Overall, sitting the exam under new rules/conditions was a good experience. I'd prefer sitting the exams from the comfort of my home/office desk rather than travelling to the test centre with overnight stays etc. I would strongly support the new format of sitting the exams.”

5. Ratings of zoom invigilation - at home and at the firm’s premises

Candidates were asked to rate each of the exams that they took at home or other private addresses according to three aspects:

- Efficiency of security checks
- Ease of use of Zoom
- Preparedness and efficiency of invigilators



The ease of use of zoom at home and other private addresses was the highest rated. 98% of the candidates agreed and partly agreed to the ease of use of zoom.

There was positive feedback about how the zoom invigilation went despite a few setbacks:

“Generally, thought handled and run extremely well, especially given such a drastic change at relatively short notice. Everything worked fine, which I was really surprised about. I think perhaps part of the reason everything worked well was because the 'system' was kept quite simple, i.e. simple Zoom invigilation rather than complicated proctoring system, and simple upload portal for locally processed word docs, rather than requiring answers to be typed directly in only portal”

“The systems worked well and I think I could form a blueprint for the exam logistics going forward. Thank you to all involved.”

73% of respondents said they thought the security checks were good or very good. Preparedness and efficiency of invigilators was rated lower at 68%, with the main concern being consistency and responsiveness of invigilators to Zoom chat messages. One candidate raised the question as to whether seeing inside other candidates' houses without them giving permission was a violation of GDPR.

“There is no reason for one candidate to be able to see into other candidates' houses. Invigilation was inconsistent. No need for people to be sat for an hour before the exam without being allowed to leave. Meant screen time was effectively closer to 7 constant hours for FD4. This was also against the guidelines published by the PEB beforehand as FAQs. Understandable teething problems for the first year but would like to see both resolved for future candidates.”

“Invigilators need to be better prepared. It would have been very helpful if the PEBX trial had also included a trial of the Zoom invigilation”

“There were large discrepancies between invigilators as to the process for entering the zoom room. It was clear that either the instructions to the invigilators weren't clear enough, or that invigilators hadn't fully understood. For example, there were huge discrepancies between the procedures on taking breaks to go to the toilet, and on the extent to which the room was checked before the exam.”

“There was a great deal of inconsistency with the invigilation of the exams to the extent that almost every aspect of the invigilation was carried out differently by different invigilators and was not harmonised. Some of the differences were trivial (for instance whether we had to wait for a reply from the invigilator before leaving to use the toilet, or could just send a message and go) but some of the differences were significant and made the exams an uneven playing field between candidates. Of particular concern was the discrepancy between what conditions candidates were held in after joining the zoom call and before the exam started. On the basis of the literature published by PEB prior to the exams, I was under the impression that we were in exam conditions from the point we joined the zoom call (i.e. 1 hour before the exam started). This was also how the invigilators I had for all four exams treated it. However, during FD3, one of the other candidates in my 'room' indicated that in previous exams they were allowed to leave the room after joining the zoom call in order to continue revision. This difference is particularly problematic for FD1, which requires a lot of memorised knowledge. Having the opportunity to read over notes in the hour before the exam is a huge advantage because this is the optimal time to be 'cramming' (i.e. dedicating information to

short term memory for the exam) ... The way that the exams were invigilated effectively allowed a handful of candidates to cheat by giving them access to study materials for the first hour of exam conditions. Further, sitting in exam conditions for an hour before the exam was a horrible experience and naturally increased candidates' stress, therefore there is a disadvantage to not having the extra revision period.”

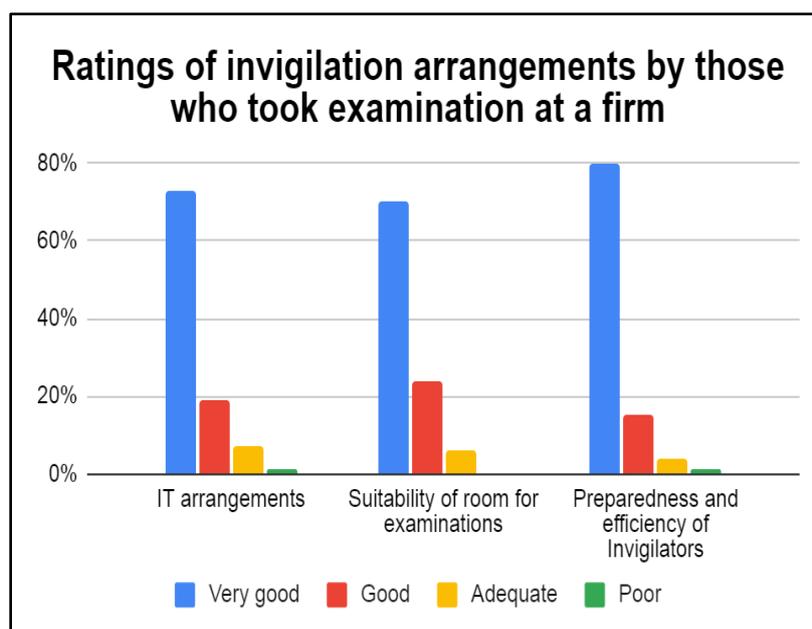
“In one waiting room a person raised a question with an invigilator, who eventually replied that they should contact PEBX. To which the person replied that they had just sent them an email. I was surprised that the person was able to use an external system and for it not to have been flagged up to the invigilator by the monitoring system. I know one other person who said that they emailed PEBX during the exam and the invigilator did not say anything to them either. Therefore if the invigilators could not detect this, the likelihood is they would not detect anyone else using the internet to search answers if needed (like a lot of people do in day to day work, and I think is actually a good reason that these exams move to open book, including use of internet during exams, as the examination should be about knowing where to look if needed, rather than just a great big memory test of laws and key words and phrases that the Examiners require).”

A small number of candidates had concerns about the possibility of cheating.

“It is clearly quite easy to cheat and I'm not sure how you would get around that (e.g. having a reference book in the loo).”

“Zoom invigilation needs to improve on its security aspect. When all the candidates are muted, how would the invigilator know if someone is reading off the answers for the student? Two of my invigilators forgot to check my desk and surroundings and I had to remind them.”

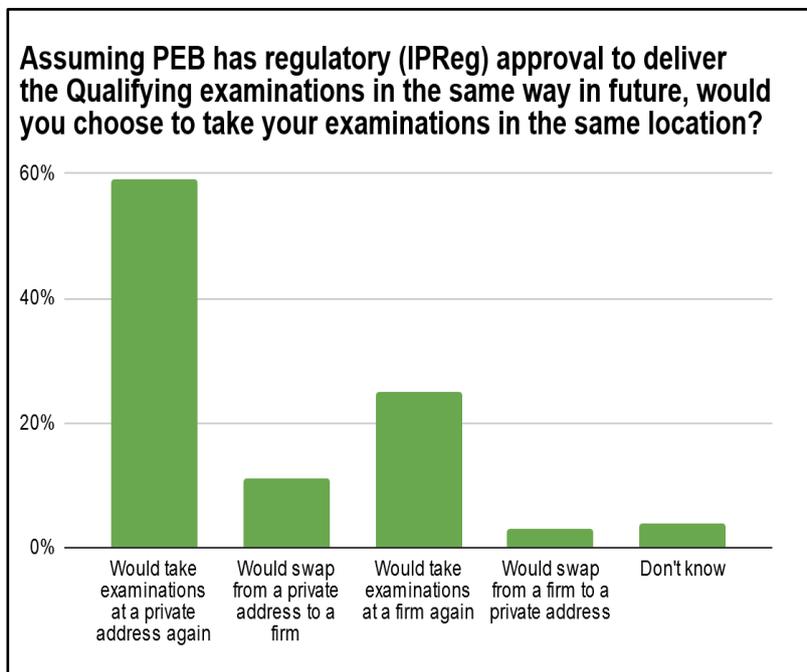
Invigilation at the firm’s premises



Ratings were high for candidates taking the exams at the firm’s premises (though this represented just 29% of respondents). 92% of the candidates said that the IT arrangements were either very good

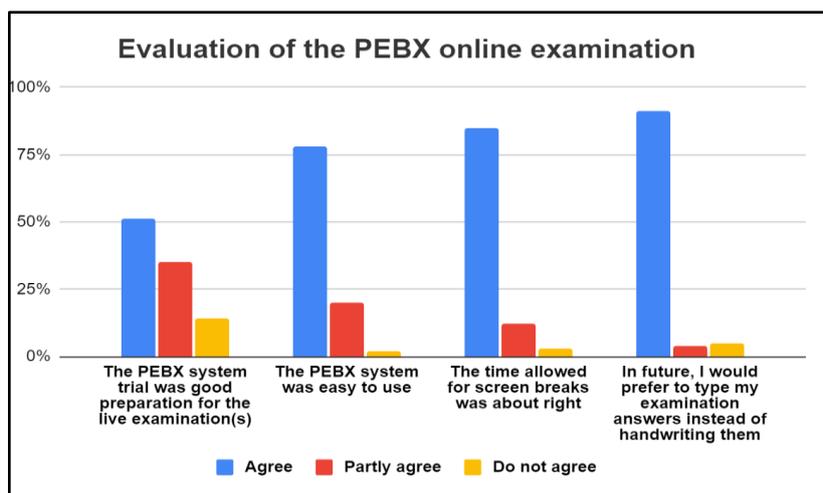
and good, 94% of the candidates said that the suitability of room for examinations were very good and good. 95% of the candidates said that the preparedness and efficiency of invigilators were very good.

Candidates were also asked if they would prefer to choose if they would take their exams in the same way in the future. 59% of the candidates would like to take the exams at a private address again. 25% would take their exams at a firm again, 11% of the candidate said they would swap from a private address to a firm and 4% said they don't know.



6. Candidates evaluation of PEBX online examination

There was a strong preference for typing the exams in future instead of handwriting them, with 95% of respondents saying they agreed or partly agreed. 98% said they agree or partly agree that the PEBX system was easy to use. 97% of the candidates agree and partly agree that the time allowed for screen breaks was about right.



However one candidate noted:

“There was too much time given for screen breaks, printing, scanning, and uploading. This indirectly gives candidates more time to work on the examination paper. This in a way relaxes the time constraints imposed on the candidates as compared to past years where the standard time limits were strictly enforced.”

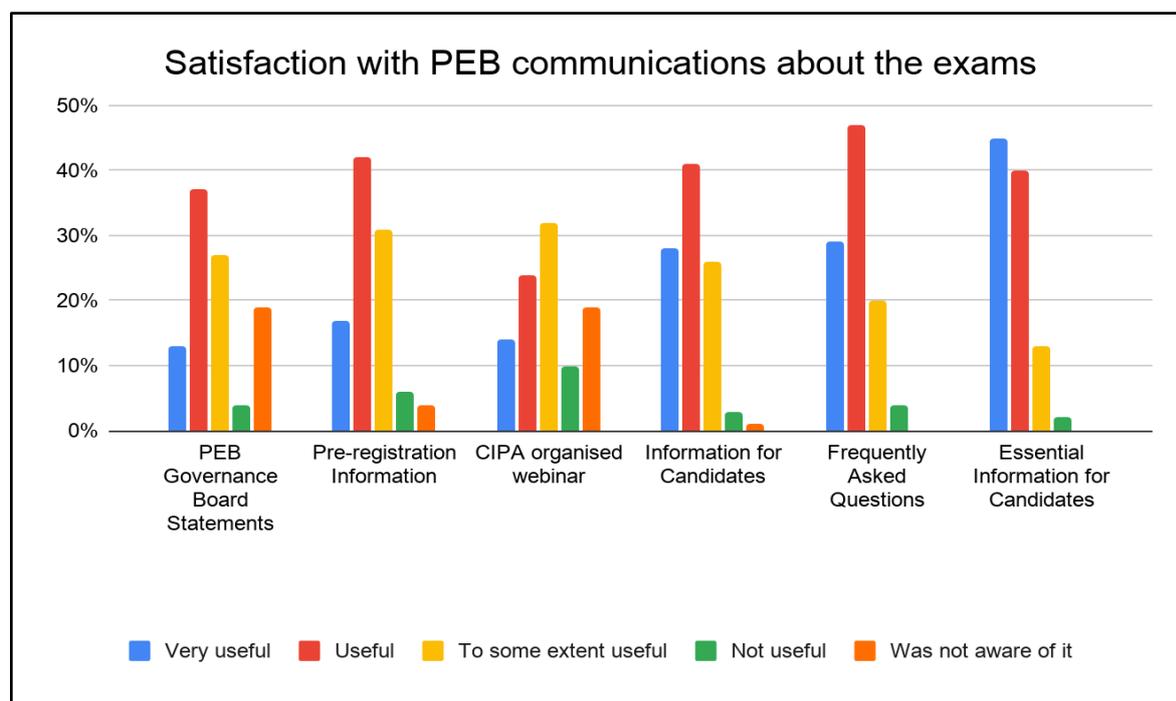
It should be noted that many of the designated contacts reported in the feedback survey that the screen breaks were not fully used.

One candidate commented: “the scope of the screen breaks was not properly explained. If we cannot leave the room then fair enough but this should be made clear. However, I should add that it is hardly a screen break if one is expected to just sit staring at the screen for its duration.”

86% of the candidates agreed and partly agreed that the PEBX system trial was good preparation for the live examinations.

7. PEB communications

The survey also indicated the different ways by which the PEB communicated with the candidates about the online exams.



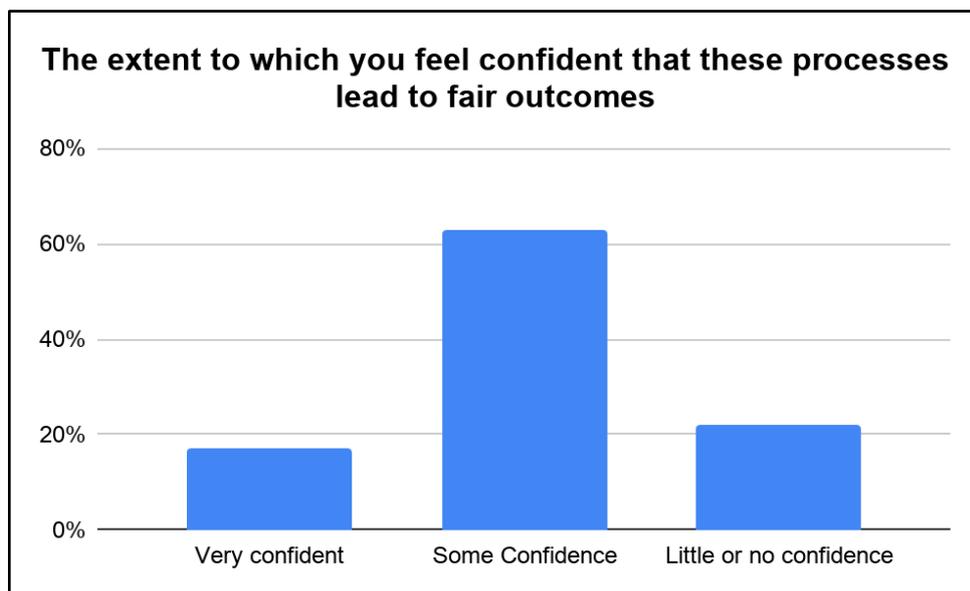
The majority of the candidates 85% rated the ‘Essential information for candidates’, to be useful or very useful, followed closely by the Frequently Asked Questions which 76% of the candidates found to be either useful or very useful.

However there still needs to be increased awareness of the CIPA webinar, as 19% were not aware of it and this was the lowest rated of the support materials.

8. Overall satisfaction with the exams

There was significant improvement in overall satisfaction in the fairness of the PEB exams. From last year, where more than half of participants (57%) had little or no confidence, this year 22% said they had little or no confidence.

63% of the candidates have felt 'some confidence' in the process to lead to fair outcomes and 17% of the candidates felt very confident with the process.



Several candidates raised concerns about the clarity of the questions and the clarity of the marking.

“I feel sometimes the questions are just phrased in a way which really makes it difficult to even understand what the question is trying to get at.”

“They are ok but compared to EQEs you have much less of an idea what marks will be given for what legal point.”

“Impossible to know how to pick up points. And it feels like this is intentional. Final PEB exam marking systems are unpredictable and appear intentionally so. The exams per se are just about tolerable but not the marking system. How you get away with this is hard to understand.”

The issues attracting the most extensive candidate comments were the extra time pressure and also the relevance of the paper to professional competence. (These are attached in the full candidates comments). Moving to an open book was suggested by many as potentially part of the solution. One candidate noted:

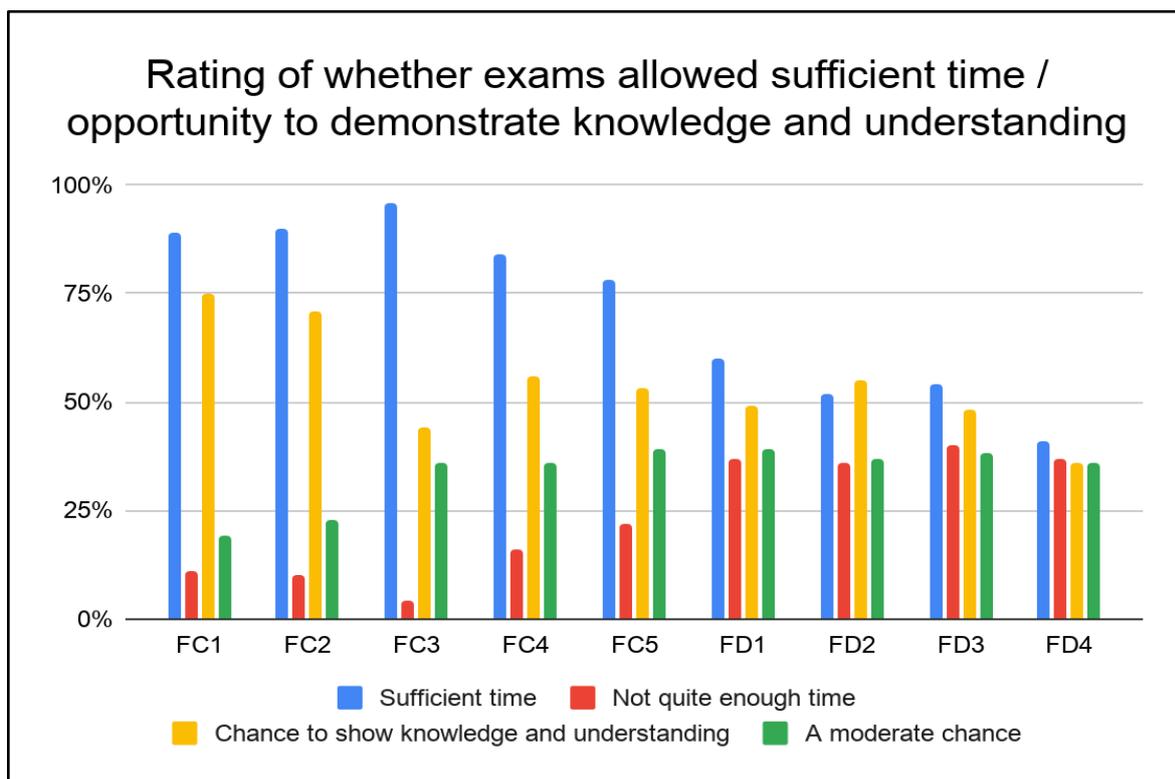
“The problems with FD4 as an inadequate test of fitness to practice have been discussed many times before. Hopefully the Mercer report will provide some useful insight into how this aspect of practice can be assessed in a more appropriate manner.”

Several candidates noted that the tone of the examiners' reports is patronising and demonstrates lack of empathy with the candidates.

9. Satisfaction ratings for individual exams

Candidates were asked to rate each exam to what extent it gave them an opportunity to demonstrate knowledge and whether there was sufficient time to complete the paper. The foundation papers (FC1 - 5) were rated highest in terms of sufficient time and the opportunity to demonstrate knowledge and understanding

The lowest ranked exam in terms of chance to demonstrate knowledge and understanding was the FD4. 27% of the candidates have rated that it has either provided a little opportunity to demonstrate knowledge and understanding or not at all.



FC3 has sufficient time but not the opportunity to demonstrate knowledge and understanding, possibly due to concerns about the syllabus coverage and memorisation. One candidate requested that there be less material and more focused.

Concerns were raised that the FD1 paper that it was more difficult, and more vague and open than in previous years.

One candidate provided a detailed analysis of the word counts of the client letters in previous FD2 papers and recommended that to be reasonable in the time available, it should be between 1000 and 1,500 words (see full candidate comments). The length and lack of clarity in the FD2 was also mentioned by other respondents.

“In FD3 the quality of initial patent drafting was unrealistically appalling. The drafting attorney hadn’t come close to passing FD2 in my view. It was a bit surreal to be faced with such a disaster. I thought FD2 was an excellent problem though I think I may well have failed. Very enjoyable paper.”

The FD4 exam was the lowest rated in terms of time and ability to demonstrate knowledge. Many candidates felt that the FD4 paper was just as time pressured and difficult as in previous years, if not more so and just as irrelevant for professional skills as a patent attorney. More than half of the candidates (59%) rated that the exam did not have quite enough time or nowhere near enough time.

“FD4 was by far the best paper in the past few years, there seemed to be fewer unnecessary distractions in paper, and prior art docs and patents were shorter. But there still seems unnecessary time pressure. In my view, the timing should be sufficient to allow 90% of candidates to comfortably finish every section and have time to review/amend answers.”

“I think the paper shouldn't be a test of how quickly a candidate can write but rather allow them to analyse properly and have time to check their answers - as you would when advising a client. The whole paper is a frantic rush to get through everything as quickly as possible which just wouldn't happen in real life and I don't think fairly allows a candidate to demonstrate their skills.”

“In my view FD4 as an exam remains unfit for purpose, because the time allocated is simply not commensurate with the complexity of the task set.”

“FD4 subject-matter for the 2020 paper was much more difficult compared to the subject-matter for the 2019 paper. Spent too long trying to understand the difficult subject-matter and I was not able to showcase my knowledge.”

Several candidates raised concerns about unfair bias towards physics / engineering backgrounds:

“I've heard time and time again that 'if you can operate a door handle you can access the technology of these exams' but it's just NOT TRUE. I'm a biochemist, and I genuinely struggle with grasping mechanical descriptions written in words. I know that my colleagues with mechanical backgrounds just don't have this problem. For example, the anchor in FD4 this year had a long description of how the anchor was pulled and buried itself into the sea bed. I spent about half an hour trying to figure out how it worked mechanically, but I just didn't get the item from a mechanical point of view - this was obviously key to the exam, because if you don't understand the invention, how can you argue for its inventiveness/lack of? If you insist on making the exams mechanical, they need to be MUCH simpler, otherwise it's (a) not fair and (b) just not a test of the skills you're trying to test) Similarly, the format of the exams (particularly FD4) is just so unlike how you'd handle a case in real life. I found the whole experience stressful and upsetting, because I know that I'm good at my job but I know that I was bad at these exams.”

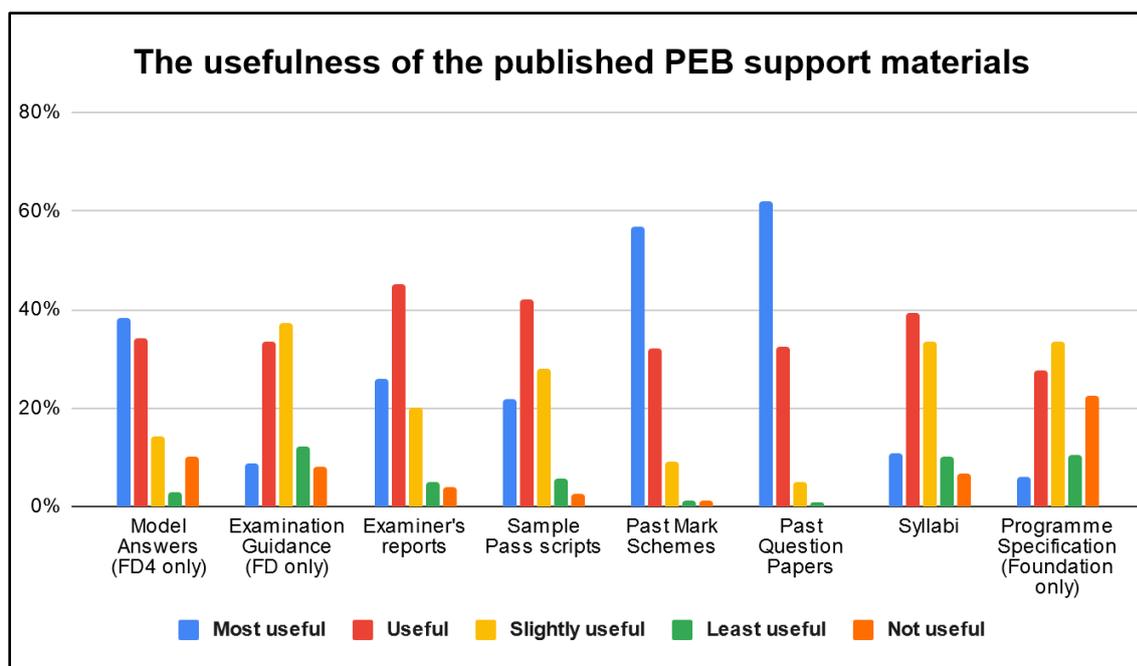
“Firstly, time and time again, the PEB thinks that the exams, and in particular FD4, do not require outside knowledge. This is not the case. People with an engineering or physics background are significantly more advantaged compared to those that have not.”

“I cannot express how disappointed I am with the FD4 exam this year. I am a biochemist and the subject matter was completely inaccessible to me. I reproduce claim 1 to highlight this point....This is not a tangible object that I, or many others I spoke with after the exam, could understand. It uses terminology which I had never encountered (e.g. “fluke”) and defines the invention using parameters completely alien to me in my area of practice (i.e. “a pair of blades (21) disposed symmetrically on either side of a centre line (24) lying in a plane (x, x’, x”, x’”) that includes the shank”). For that reason, FD4 discriminates against candidates from a Biochemistry/Chemistry/Pharma background.

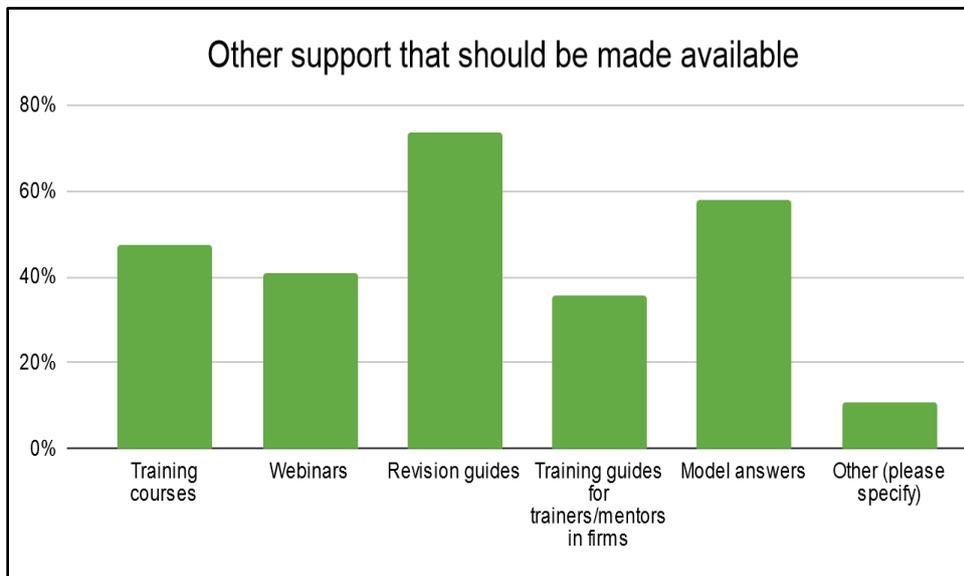
“The complexity of the subject matter is far too variable. For example, how can the subject matter be an envelope one year (2016) and a stockless anchor another! It is simply unacceptable that the barrier to professional qualification is so unpredictable and arbitrary.

“This year the PEB issued model answers to help candidates, but the model answer 1 for 2018 is around 6700 words long. To write this in 2 hours (which is likely around the typical amount of time people are writing in FD4 when you take into account the reading time) a candidate would need to be writing 55 words per minute! These model answers are not useful resources for candidates. This paper certainly does not reflect or correlate to a professional's ability and competence in the relevant area of daily practice. It fails to reflect real life, especially for non-engineers. Additionally, the impact of P6/FD4 on the mental health of candidates cannot be overstated.”

10. Usefulness of PEB support materials



Candidates were asked to rank the usefulness of the published PEB support materials. The lowest ranked supporting material was Programme Specification where 33% of the candidates have ranked it to least useful or not useful at all. 34% of the candidates have said that it was slightly useful. Like last year the majority of the candidates considered the Past mark schemes and past question papers to be most useful. One candidate commented “More centralised guidance on what examiners are looking for. The examiner differs from practice, and so the only way to tell is by reading MANY past papers.”



The majority of respondents (73%) asked for revision guides to be available to them, followed by model answers at 58%. Only a third of Training guides for trainers/ mentors were asked by 35% of the candidates. The candidates also mentioned other materials that should be made available such as:

- Training courses
- Webinars
- Revision guides
- Training guides for Trainers/mentors in firms
- Model answers

52% of the candidates said they are familiar with the published information about PEB's examination setting, marking and awarding processes.

11. Recommendations

Many recommendations were made by the candidates, and these are attached in the full candidate comments report. Key areas include:

- Continue to run the exams online, but if not online then continue to allow use of computers
- Make the exams open book, as this is more like real life practice, and addresses the problem of needing to memorise as well as the potential problem of cheating in an online format
- Detailed suggestions about formatting of the papers and mechanisms for accessing or uploading the papers, including making it easier to read your own script online
- There should be an editable version of the claims available, preferably incorporated into the answer sheet
- Provide means for candidates to include sketches in their answers
- Allow two screens
- Time reminders should be included
- it would be good if, in some way the system could stop anybody from typing anything else in the answer sheets 5 minutes before the very end of the session, and thereby enforce 5 minutes to sort out the submitting of documents
- It was a bit annoying that at the end of the Examination, I had to log back into PEBX to upload the exam answer as it had timed out. If no auto-timeout could be implemented, that would be better
- Provide automatic submission at the end of the exam
- Invigilators should automatically mute participants
- Turn off the screen of candidates (does not allow the candidates to see the others).
- Faster responses to zoom chat
- Enable better recording and communication regarding unforeseen technical difficulties
- Create smoother channels after the exam for the candidates to communicate with the board for any problems that occur
- Reduce the length of the time for the exams, because some people were at their computers for nearly 7 hours
- Resolve the problem of candidates sitting at their computers for up to an hour before the exam starts
- Space the exams
- Clearer instructions about the exam process and requirements, made available to candidates earlier
- Prepare invigilators better and ensure consistency in invigilation
- Make the candidates screen share, so that the invigilator can see if there is any cheating
- Reduce the amount of content especially for FD1 and FD4
- Limit client letters to 1000 - 1500 words (see above FD2)
- Fundamentally review FD4 as it is still not 'fit for purpose'
- Allow exams more than once a year
- Consider coursework for some exams
- Allow for change of venue
- Candidates ask the PEB to take into account the exceptional circumstances and stress on candidates this year

12. Summary

Overall satisfaction with the exams has improved compared with previous years, with 78% of candidates saying they have some or a lot of confidence that the process leads to fair outcomes.

Many candidates praised the PEB team for their hard work which resulted in relatively smooth running of the exams. Many candidates were also in favour of continuing to take the exams online in future years. A couple of candidates mentioned the possibility of cheating, but suggested that this could be resolved if the exams are open book. Several candidates are advocating for open book exams, because they feel that the large amounts of memorisation required are not testing relevant professional skills.

Inevitably there were difficulties in setting up a new online exam system in a short space of time. The changing guidelines caused candidates stress and difficulty in preparing for the exams. Ultimately the lack of clarity in the guidelines resulted in inconsistency in the way the exams were invigilated which may have caused unfair advantage for some candidates. Some candidates experienced problems during the exams with the PEBX screen freezing, difficulty uploading their paper and difficulty in contacting invigilators when problems arose. A small number of candidates said that was a very bad experience overall, but many commenting on the difficulties said they understood the circumstances and expected that these issues would be able to be addressed next time round.

As in previous years, candidates continued to raise concerns about the demand for memorising amounts of material, the time pressure/length of exams, inconsistency in marking from examiners, fairness of the process and relevance of the exams in assessing skills needed to be a competent patent attorney. The ability to type due to the exams being online, did in part address the difficulties in time pressure, though a significant number of candidates still feel it is too time pressured.