

Feasibility study for online exam development (summary)

1. Background

This paper explores different models for taking the 2022 exam online, analysed for IPEd by the Accreditation Board (AB). IPEd has been looking for ways to take the exam online since the inception of accreditation in 2008. Several assumptions underlie this aim, the main ones being:

- most candidates want an online exam
- an online exam will be cheaper to stage
- online delivery will improve access to the exam.

These assumptions have not been put under any scrutiny while other hurdles stood in the way. Two changes to the format of the exam have been crucial steps towards potential online delivery:

- taking the exam **on-screen** (instead of paper): in 2016 and 2018 there were two sets of exam documents, one in Microsoft Word for Windows and another in Microsoft Word for Mac
- making the exam documents **platform-neutral** in 2020: only one set of papers was used for both Windows and Mac computers.

However, the two main hurdles to online delivery have to date been considered insurmountable:

- A. The requirement to include a **practical editing test** (currently in the Manuscript (M) part of the exam) means providing a test environment that is close to how editors actually work – this was part of the push to take the exam on-screen instead of paper-based in the first place. Most editors work in Microsoft Word with Track Changes functionality for general editing projects. Online exam platforms only offer browser-based functionality: multiple-choice, true/false, short-answer text questions. Editing in Word is the one part of the exam that online exam platforms have been technically unable (or unwilling) to accommodate.
- B. The **licensing fees** of online exam platforms are prohibitive: \$25,000 is at the lower end for an out-of-the-box solution that does not fit IPEd's needs and would involve additional custom development costs. Such platforms are considered 'enterprise' solutions – the platforms large enterprises such as universities use, the best-known being Pearsons VUE. Even if vendor fees were within IPEd's budget, vendors have told us that our candidate throughput is not high enough: 'come back when you are examining thousands of candidates each year'.

2. Developments in 2020

In 2020 there were two new developments that presented an opportunity to overcome these final hurdles. Both are a result of the pandemic lockdowns, which made online delivery options an urgent consideration for everyone.

First, the IPEd exam venue provider, Cliftons, partnered with Sydney-based elearning software provider Elumina to offer tailored remote proctoring for exams, in lieu of or in combination with physical exams, for smaller clients. The Cliftons–Elumina solution attempts to overcome both hurdles A and B. After several months of consulting with the AB on demos and refinements, Cliftons provided a detailed proposal, with costs, in early December 2020.

Second, the rise of Zoom in 2020 allowed the AB to offer a low-cost remote solution to a handful of candidates who could not attend a physical venue in conditions as close as possible to venue conditions. Not only did the Zoom solution overcome both hurdles A and B, the experience provided valuable insights and feedback, from both candidate and administrative perspectives, on remote examinations. It also provided a point of comparison for the Cliftons–Elumina solution.

3. Possible models for the 2022 exam

The AB determined that there were four feasible models to consider (Table 1).

Table 1. Comparison of four models for the 2022 exam

Model #	A	B	C	D
Default	Venue	Venue C-E	Remote C-E	Zoom
Exceptions	Zoom	Remote C-E	Venue C-E	Venue Zoom
Format	PDF + Word	Browser + Word	Browser + Word	PDF + Word

C-E: Cliftons-Elumina online solution.

Model A was used for the 2020 exam, with the majority of candidates (94) attending an organised venue and a few (5) participating remotely. This model has been implemented successfully, offers flexibility while also maintaining exam integrity, and has sustainable and manageable costs.

Models B and C are different formats for fully platform-based online exams. Both models require a heavy capital investment of more than \$20,000 for initial software development and also incur ongoing software licensing costs (minimum of \$10,000 based on 90 candidates) for each exam; they also have security issues that would need to be addressed. The AB has calculated that a minimum of 180 candidates would be required for each exam to cover each exam’s licence fees plus other costs of exam development and administration; capital investment would need to come out of general IPEd funds. As the exam has only once in its history had more than 100 candidates, these models are not financially feasible.

Model D entails all candidates taking the exam via Zoom. Although this model sounds easy and cheap, the AB has determined it does not have the organisational resources to deliver this model, principally in terms of sufficient volunteer AEs with the requisite technical skills to invigilate remotely on a one-to-one or one-to-few basis. Further, model D would introduce too many variables to maintain exam integrity: widely varying technical performances, internet speeds, system capabilities, and suitability of home or office set-up. In other words, it would be as potentially discriminatory or inaccessible to some candidates as wholly in-person exams.

4. Candidate preference for venue vs online exam

The 2020 exam candidate survey, conducted in the two-week period immediately after each exam, had a response rate of 85% (n=99); importantly, all 5 remote candidates responded. The overwhelming majority of respondent candidates thought the current format – on-screen, Word + PDF – does not need to change. The majority of these (60) were in favour of holding the current format at computer centres (model A), and 16 thought sitting at home would be better (model D). Only one candidate was in favour of model B (online at a venue) and one in favour of model C (online at home). The remaining responses of ‘Other’ (6) in fact revealed a preference for either model A or D. Thus – contrary to the AB’s expectations – there seems to be very little support for an alternative form of online exam, whether sat at a venue or at home, among candidates who have sat the exam.

5. Conclusion

Based on evaluation of comparative budgets, practicality and candidate preferences for four possible models for the 2022 exam, the most operationally feasible, equitable and cost-effective model for future exams remains the hybrid model used in 2020. The IPEd Board has approved the AB’s recommendation that model A be used again in 2022, and that plans for a fully online exam be shelved until there are sufficient benefits and demand to justify the operational costs and capital outlay.