

GV100 E-ASSESSMENT PILOT STUDY

*This report presents findings of the GV100 pilot
2014-2015*

*Athina Chatzigavriil,
Learning Technologist,
Geraldine Foley,
Assistant Learning
Technologist
& Tarini Fernando,
Research Assistant
Learning Technology and
Innovation,
The London School
of Economics and Political
Science*

Contents

Executive summary	1
Introduction	3
Background	3
Process	3
Stage 1: Invigilated mock exam	4
Stage 2: Self and Peer review	4
Stage 3: Student – Teacher feedback (office hours).....	4
Evaluation Methodology.....	4
Surveys	4
Limitations.....	5
Part 1: The Assessment Experience	5
1.1 Timing of formative mocks	5
1.2 Typed versus handwritten exams	6
1.3 Peer feedback and learning	7
1.4 Bring Your Own Devices (BYOD)	9
1.5 WiFi provision	10
1.6 Communication.....	10
Part 2: The Software Experience.....	10
2.1 Access and technical issues.....	10
Exam4.....	10
Moodle-TII PeerMark.....	11
2.2 Navigation and usability.....	11
Exam4.....	11
Part 3: Software Functionality and Use	12
3.1 Suitability and functionality	12
Exam4.....	12
Moodle-TII PeerMark.....	13
3.2 Hosting and security of personal data	13
3.3 Exam4 Support and training	13
3.4 Cost	13
3.5 Contingency plan	14

Part 3: Concluding Remarks	14
Appendix A: Student information about the GV100 pilot	16
Appendix B: Instructions for invigilators.....	22
Appendix C: On-screen instruction for students	30
Appendix D: Survey questions	33
Appendix E: Excerpt of survey responses	34

Executive summary

This study evaluates the GV100 pilot – a timed, on-campus, invigilated, formative exam at LSE led by Learning Technology and Innovation (LTI) and the Department of Government. The pilot required that students use their own computers and further incorporated a self and peer review process that took place subsequent to the exam. This study investigates how students' reflections of their own work, combined with the peer review process based on specific marking criteria may affect performance. It additionally captures evidence on how best to facilitate the development of assessment and feedback with technology practices at LSE.

The GV100 pilot was carried out in formative assessment context and provided an opportunity to test the Exam4 and Moodle-TII PeerMark software. Moreover, the pilot allowed academic and academic support staff to examine the effect of self-reflection and peer-review processes on learning and performance outcomes. Finally, the GV100 pilot offered an opportunity to reconsider and adapt existing evaluation frameworks and relatedly, placed a new and concentrated emphasis on feedback.

The findings highlighted a general appreciation for peer-assessment practice as a process via which students could get a broader view of topics covered while further contextualizing their own work in relation to their peers. This seemed to allow students to get a better sense of standards and criterion of quality. With regards to typing versus handwriting exams, students displayed a general willingness to engage with typed exams but the views in this regard were mixed. Some students for example, felt that handwriting invoked a more critical thought-process and led to a more clarified focus on analysis.

From a technical perspective, the Exam4 software fulfilled its purpose and proved easy to navigate; the Moodle-TII PeerMark feature in contrast, was not a reliable feature. The pilot also highlighted the importance of ensuring appropriate exam spaces for invigilated e-assessment; WiFi capabilities and power sockets must be available to ensure technical issues are mitigated.

This report details the views of the teacher and students involved with the GV100 pilot while further providing the views and experiences of LTI staff involved.

In summary:

Students

- Students are open to typing versus handwriting exams. It is however, expectedly less about the medium via which the exam takes place and more about the degree to which the formative assessment structure offers a simulation of the summative environment.

- Students value self/peer assessment but nevertheless display a keenness to get feedback from the teacher.
- In general, the mock exam proves a useful preparation exercise for students in leading up to the summative assessment.
- A basic training on the software and its available features would likely be of benefit to students who thus far, seem relatively unaware of features or utilize them in an ad-hoc manner.
- Further training on peer-to-peer feedback is essential to ensure greater consistency across students in this process.
- While administrators felt a mock close to the final exam was problematic, students involved did not seem to share this view. Gathering feedback as to when such a mock exam would be most useful would be important to ensuring the benefits of the exercise are widespread.

LSE

- Current assessment structures whereby a significant portion of a student's mark is derived from a final exam need reconsideration.
- If on-campus invigilated exams are to be scaled, logistical issues around location and WiFi must be considered.
- When employing a Bring Your Own Device (BYOD) method, one power socket per student is critical.
- Security and data protection proves to be of significant importance to all parties involved and must be an area well explored prior to the implementation of e-assessment practice.
- Regulations may need substantial overhaul to facilitate various modes of assessment particularly if using the BYOD model of assessment.
- Provision in case students cannot use their own device must be accounted for prior to implementation.
- Adequate student support and training prior to any summative assessment.

Introduction

This report presents findings of the GV100 pilot which took place in 2014-2015 academic year.

- GV100 – an undergraduate course titled, ‘Introduction to Political Theory’

The report is based on feedback from both students and the GV100 teacher involved. The pilot is part of a wider project to enhance assessment and feedback with technology, led by LTI.

Background

Approximately 240 students were registered for GV100 in the academic year 2014/2015. These students were divided in three GV100 classes taught by 3 teachers. The pilot was the initiative of one of the class teachers of GV100.

The broad aim of this pilot was to investigate how students’ reflections of their own work, combined with the peer review process based on specific marking criteria may affect performance. The pilot was further aimed at investigating students’ perceptions of typing essay questions in exam conditions while providing an opportunity to test the Exam4 and Moodle-Turnitin PeerMark (Moodle-TII PeerMark) platforms.

Moreover, the Department of Government has recognized the need to alter current assessment structures. Students have often stated the 100% exam is problematic as it fails to acknowledge student work completed for the 4 formative essays. Currently, all GV100 formative assessment is essay-based assessment, while the summative assessment is an exam worth 100 percent.

Students in this pilot participated in a timed, on-campus, invigilated exam using their own computers. After the exam, students participated in a self and peer review process based on a set of specific marking criteria.

Process

Students in GV100 were informed about the pilot during regular face-to-face classes. The teacher explained to students the aim of the pilot and the nature of their participation (voluntary). Responses would therefore not count towards a final grade but students would receive both peer and teacher feedback. The information and timescales provided to students with respect to the mock is available in Appendix A.

The pilot took place in the following stages:

Stage 1: Invigilated mock exam

Students were asked to download the software, Exam4¹ prior to the mock exam and take an optional practice exam. The practice exam was intended to give students the opportunity to download/install Exam4, familiarise themselves with the platform, and report and resolve any issues prior to the actual mock exam.

Students had to answer 4 essay questions (from a choice of 16) in 3 hours. Responses were to be typed in Exam4 under invigilated, on-campus exam conditions. The questions were given in hard copy format with additional on-screen instructions provided by the invigilators. Detailed invigilators' instructions were developed and made available to the exam invigilators prior to the exam. The invigilators' instructions and the student on-screen instructions are available in Appendix B and C respectively.

Stage 2: Self and Peer review

Prior to the pilot, students received detailed information about the benefits and purpose of self and peer assessment from their teacher, as well as information about how to effectively participate in the process (see Appendix A). Students were then asked to provide a self and peer-review on Moodle-TII PeerMark.

Once answers were submitted, the teacher paired students based on the questions chosen. The decision to strategically pair students based on essay question chosen was made to increase the chances of peer feedback being completed in a meaningful way; considering the pilot was taking place one week before the actual course summative assessment, there was some concern as to whether students would engage with topics beyond what they chose to write about in order to provide feedback on another student's essay.

Stage 3: Student – Teacher feedback (office hours)

Subsequently, the teacher met students in their relevant pairs during office-hours. During the 10-15 minutes allocated to each pair, students had the chance to discuss the feedback given and received with their teacher.

Evaluation Methodology

This report details the findings of an interview with the teacher coordinating the pilot and LTI staff involved. The report is supplemented by the views collated from the online survey administered to students participating in the pilot.

Surveys

A survey was distributed online to the 30 students who participated in GV100 pilot and yielded 10 responses. The survey consisted of 14 open ended questions that required short-text responses – details of which are available in Appendix D.

¹ www.exam4.com

Limitations

While a detailed account of the process and outcomes of the GV100 pilot were made available through an in-depth interview with the GV100 teacher involved, the limited student feedback gathered from the online survey limits the extent to which student views can be taken as a representative sample. Furthermore, while it is of benefit to hear from students who did participate, it is equally of interest to understand why students who did not participate made the decision they did. The latter views were not sought and constitute a limitation with regards to fully understanding the motivations for engagement in technology-based learning opportunities.

Part 1 of this report focuses on findings from the teacher and students on the assessment experience, Part 2 elaborates on the software experience, and Part 3 covers software functionality and use. Part 4 presents a summary and concluding remarks.

Part 1: The Assessment Experience

1.1 Timing of formative mocks

The pilot took place after all formal formative assessments were completed and 1 week before the formal summative assessment for GV100.

While this late timing provided an opportunity to test a wider subject area of the course, it limited the teacher to pairing students strategically. Should there have been more time, the teacher would have chosen to pair students randomly and not based on the questions they answered (i.e. strategically). A random pairing was viewed as preferable in motivating student learning because students would be required to study topics they did not write about in order to provide meaningful feedback to their peers.

Moreover, the participation rate dropped as the assessment stages progressed – a possible result of the aforementioned timing in relation to the summative exam. Some of the students therefore, completed the essay but did not complete the peer-review and self-reflection components of the pilot. As such, complete participation rates were relatively low.

Total number of students in GV100 ²	Approximately 240
Students given the opportunity to take part in the pilot	80 (33% of full cohort)
Students volunteered for the pilot	54 (67% of those available to take part)
Students participated in Stage 1	41 (51%)

² Please note GV100 is divided into 3 cohorts led by 3 teachers. 1 of the 3 teachers participated in the pilot, thereby providing approximately 80 students the opportunity of participating in the trial.

<i>(invigilated mock exam)</i>	
Students participating in Stage 2 <i>(self and peer assessment)</i>	30 (37%)
Students participating in Stage 3 <i>(office-hours)</i>	27 (33%)

Ensuring the timing of a mock exam is well placed proves crucial. Even though the teacher felt that participation rates dropped due to timing (i.e. the mock exam being placed too close to the final exam), all 10 students who completed the survey stated the timing was “*perfectly reasonable*”, “*good*” or “*perfect*”. This may suggest having a mock closer to the exam is in fact more preferable to students as it offers an even closer simulation of the final.

1.2 Typed versus handwritten exams

Overall, the teacher noticed enthusiasm for introducing the typed exam – a sentiment affirmed by the survey responses but countered with recognition of the disadvantages this alternate method entailed.

“It allowed my to edit my exam answers easily and was not as time consuming as hand writing.”

“Advantages: Easy to go back and make amendments. Disadvantages: Unrealistic in terms of the actual handwritten exam.”

“Main advantage: I was not penalised by my terrible handwriting. Main disadvantage: I was penalised by my slowness at typing.”

“Typing tended to be quicker and allowed for neater edits and changes compared to crossing out and leaving footnotes. As a cost, mistypes were harder to spot, and telling when a paragraph needed to be stopped was more difficult.”

“A) I managed to write a lot more as typing is faster than hand writing. B) I felt less in control of my essay as I found it more difficult to go back to my previous paragraphs in order to check that I was following through with my essay plan. I also still needed to handwrite my essay plan as planning requires brainstorm type sketching which cannot be done on the computer. I made quite a few spelling mistakes due to typing and sometimes didn't finish sentences properly because I was in a hurry at the end and for some reason I didn't notice this. (This obviously doesn't happen when handwriting because I am more aware of my writing. In general I felt that typing my exam made me produce essays of a lesser quality- not necessarily in terms of content but more in terms of grammar/sentence

structure/following through with the essay plan. Also after 3 hours my eyes started to hurt and my hands were cramping from having them in the "claw" position for so long. After the exam I got a really bad headache and felt a bit disoriented - although this may not have been wholly the online exam's fault, I think having to strain your eyes at the screen for 3 hours straight definitely contributed."

When asked specifically as to how students would feel about typing instead of handwriting a final exam in the future, a diversity of views and preferences were presented.

"I would prefer it. Typing made it much easier to write more and arrange ideas better. I was able to write down my ideas much more clearly than on the exam paper yesterday. In the mock I was able to work on 4 different plans if I wanted to, and add things as I thought of them while writing other papers. Also, writing 4 essays in 3 hours is extremely challenging as there is so much to write in so little time. Having the ability to type answers was a huge aid."

"I would be disappointed if I had to type my exams. I did not find that typing was of any advantage except for being able to include more content (although, more content may actually be worse as it may lead you to stray away from focusing on the question). I think hand-writing allows one to be much more vigilant of one's own writing and this leads to producing essays of a higher quality both content wise and grammar/structure wise."

"Slightly apprehensive if it meant that I could not write as quickly. And sometimes I feel that it is easier to see your whole layout when hand writing the exam. So I would suggest that any change to final examinations was accompanied by a change to typing in coursework and mock exams."

"I would not be opposed to the idea."

For essay-based exams Exam4 recommends *"based on long experience that a mixed environment -- where typing is optional and students self-select -- has been entirely viable and free of lingering concerns about inequity. In order to do their best work, some students really want to type. The effectiveness of exam software has been proven over 20 years and many millions of exams in the extremely competitive, sensitive and high-stakes environment of US law schools and lawyer licensing, as well as an increasing number of professional credentialing exams in the UK."*

1.3 Peer feedback and learning

The teacher noticed a large discrepancy in the quality of feedback provided by students. While some students adhered to the detailed indicators provided by the teacher, others

submitted comments that were broad and general. Given there is no way of incentivising behavior in this regard, the feedback process becomes inherently unfair. While students acknowledged the latter, they seemed to nevertheless find it useful to look at another person's work and see how they would assess quality.

"It allowed for an idea of what examiners were looking for, and how to discern whether an answer showed it or not."

"I enjoyed reading other people's work to get a rounder insight of the topics."

"It was harder for me to pick out criticisms from my essays, and much easier to do so in someone else's work. I did learn a lot from marking someone else's work, however."

As the mock exam took place once classes had finished, instructions on how to complete peer feedback were sent via email. However, if the mock exam was to take place during term time, it would be possible to run a peer marking activity within a class, which may give students more training on what is expected of them and how to provide constructive feedback. It may also encourage students to take part in the peer marking process.

Nevertheless, given feedback practice and standards within the department are viewed to be relatively poor in the current context, the teacher's willingness to include supporting questions for the marking criteria (analysis, evidence, organization and style and referencing) to build a stronger understanding of the method of evaluation proved highly valuable. In providing much greater detail as to the marking criteria, the ability to offer "constructive feedback" became a much more feasible and meaningful process. The questions that were provided to students are available in Appendix A.

When asked about peer and self-assessment replacing a formative essay, students had mixed views:

"I think 3 formative essays is already not enough so I would not like to replace it. Yet, I would like adding peer and self-assessment (not replacing it, but adding it as an extra)."

"I am skeptical about peer assessment because I don't know whether to trust the other person or not whereas I fully trust my teacher."

"Excellent idea."

"I would really dislike having one of my formative essays marked by my peer - I wouldn't mind having peer review after having it marked by a teacher but I think teachers' assessments are much more useful than peer assessments."

The views presented highlight trust between peers as a critical factor in enabling the success of peer-reviews. Moreover, students seem to want feedback from the teacher directly, perhaps because the teacher is tasked with offering marks for summative assessments.

When asked as to how useful the mock was in preparing for the summative assessment, one student stated: *“I found it useful for finding flaws with my writing style and how to improve them along with time-management and gaining feedback.”*

Other students offered similar feedback:

“Very useful. It allowed me to really find out what I know and which topics I am really comfortable with”

“It was a useful confidence builder.”

“Very useful in terms of time management”

“Very useful, but if the meeting with a teacher was at least a week before the actual exam, it would have been even better”

“I found it useful for finding flaws with my writing style and how to improve them along with time-management and gaining feedback.”

Excerpts of the survey responses are available in Appendix E.

1.4 Bring Your Own Devices (BYOD)

2 rooms were booked in St. Clements building for the mock exam (STC.S421 & STC.S08). Those students with requirements for additional time were accommodated in smaller rooms (2 in STC.S018 and 1 in ALD.LG01G).

Considering LSE does not have the facilities to accommodate computer based invigilated exams, the BYOD model was adopted for the purpose of the pilot. As such, students were asked to bring their own devices and have them fully charged prior to the mock exam. However, students asked for charging support at a more frequent level than expected. Given the relatively small number of students participating, students had the space to move around the room to locate near sockets. Furthermore, the large number of students using mac computers meant students were able to share chargers amongst themselves. Movement and sharing of this sort may not however, be viable in exam contexts involving large numbers of students.

LTI loaned chargers to accommodate student needs while further ensuring extension leads were made available to ensure students were able to use power sockets in the room.

Additionally, when students are required to use their own devices, the varied reliability and condition of these devices presents a potential area of concern. Some students experienced problems when downloading the Exam4 software due to the age or condition of their laptops. The small size of the pilot cohort meant that alternative plans could be made (an alternative laptop was provided, and students were given more time to accommodate for a later start), but this would not be feasible on a larger scale and contingency plans would need to be developed. A more detailed discussion on contingency planning can be found in Section 3.5 below.

1.5 WiFi provision

While the Exam4 platform is operational without WiFi when typing the exam, WiFi is required for the submission of the exam file to the server.

The pilot highlighted the importance of WiFi accessibility. WiFi was not available in the basement room of St. Clement's building where the exam was held and thus required that students go upstairs to submit their assignments. Such considerations must be accounted for prior to administering formative and/or summative assessments.

1.6 Communication

For the purpose of the pilot, all student communication was handled by LTI. Whenever the teacher's input was required, LTI was responsible for communicating directly with the teacher involved.

The pilot introduced a number of new components all at the same time. It was the first time completing a formative, typed exam, while also being the first time that peer-review and self-reflection were integrated into an assessment structure. The lecturer suggested there may have been too many novel elements introduced at once and suggested a slower introduction of the varied processes. Despite the many novel elements introduced however, communication between LTI and the teacher and the overall implementation process ran smoothly from the beginning to the end of the pilot.

Part 2: The Software Experience

2.1 Access and technical issues

Exam4

Students had one week to download Exam4 and further had the option of completing a practice exam. LTI support was administered primarily via the LTI support email, the details of which were made available to students at the onset of the pilot.

The instructions provided to students pertaining to the download and installation of Exam4 were minimal but clear; neither LTI or the teacher received any email requests for support. Moreover, when asked as to any technical difficulties during the installation or while using the software during the exam, students affirmed “no.” 3 of the 10 students however, noted the software took a long-time to load but offered various explanatory reasons for the latter:

“The software took a long time to launch my script; most people began at different times.”

“Took a long time to work, though this is probably due to the slowness of my old computer.”

“Security checks took nearly 10 minutes as my laptop is a bit older.”

It is worth noting that during the first installation the software runs a series of security checks that may affect the overall length of time needed for installation. Nevertheless, LTI did not receive any emails for support during the practice exam either.

Moodle-TII PeerMark

As the pilot used Moodle-TII PeerMark (i.e. TII PeerMark integrated into Moodle and not the standalone TII PeerMark), findings relate to the functionality of the integration.

While Exam4 was structured to support invigilated, typed exams and was used with ease, the corresponding Moodle-TII PeerMark feature did not meet expectations.

Turnitin PeerMark is designed to allow students to mark other students work using a marking framework uploaded by the teacher. The students can be paired manually by staff or allocated at random. Moreover, marking can be done anonymously or with student details revealed. Unfortunately, in using Moodle-TII PeerMark, students encountered technical difficulties in uploading their reviews and/or accessing their paired reviews. To accommodate the problems encountered, the students who experienced problems were sent work (i.e. PDF exam file) to review directly via email by LTI.

Further problems arose with the software as the teacher could not see what students were submitting and records of who had completed their peer reviews were not accurate. These issues have been reported to Turnitin who are working to resolve them.

2.2 Navigation and usability

Exam4

Based on the survey responses, students seem to find the technical interface clear and user-friendly but made little use of the features.

"I thought the interface was very clear. I tried to use copy and paste but it didn't seem to work on my laptop - maybe I hadn't set the settings for it? No I didn't use the timer tool. However, for an exam like this, It would have been very useful to have been able to set '40- minute timers' as that is how long we should spend on each essay."

"I was not aware that spell-check was enabled, nor was I of font size changes. I was aware of the timer, however, and the features I didn't know about were not essential."

"Spell check was disabled and I was not used to that, everything else clear. One problem that occurred was the following: we were told to start the examination and when you press on the button start exam now, it required some time to check the computer for any viruses etc, so the first five minutes of the exam were wasted. Plus the timer in the actual software only started when the computer completed checking for any viruses, and, therefore, the timer in the software did not match the actual timing of the exam."

There was mixed knowledge of the spell-check feature, few who used the cut/paste functions, and again, a limited number of students who used the timer. These views were from students who both did and did not complete the practice exam. As such, the findings suggest training or an explanation of platform features should be communicated to students explicitly.

Part 3: Software Functionality and Use

A number of technical and other issues were identified during the pilots, details of which are presented below.

3.1 Suitability and functionality

Exam4

Exam4 was used to facilitate an invigilated, on-campus, mock exam. To this end, the software fully supported the purposes of the pilot and was operated with ease by students. The Exam4 functionality is very basic and therefore, only supports essay questions in summative assessment contexts; essay questions are handed to students on paper and students subsequently type in responses.

The online *teacher's inbox* provides PDF files of essays as uploaded by the students. This feature does not provide an online marking tool but the PDF can be easily downloaded and uploaded onto Moodle for online marking.

No additional accounts are required by students to use the Exam4 software. Students are only required to enter their details (first name/surname and LSE Student ID) to start the exam.

The Exam4 platform is based on the US model of exams where students are required to answer all given exam questions on a paper and each typed answer is automatically separated and allocated a number in sequential order. However, this system does not work when students are given a choice of exam questions, as the question number does not reflect the question answered. In order to resolve this problem, students were instructed to enter the number of the question from the exam paper in the response itself to allow markers to see what questions were selected. Students sometimes forgot to do this and LTI staff had to manually add the question answer based on the student's response so that students could be paired up for peer marking. Although this did not result in any complications during the pilot, this platform limitation should be kept in mind for future consideration. Exam4 states that an upcoming version will provide a more flexible interface with anticipated release in 2016.

Moodle-TII PeerMark

Although navigation and usability are fine if the Moodle-TII PeerMark features prove functional, the pilot revealed major issues in actually making the feature operate in the first place. The pilot further highlighted inconsistencies in functionality – what was a problem for one student was not for another.

3.2 Hosting and security of personal data

Currently data of exams submitted on Exam4 are hosted in the US, which may lead to data protection and retention issues in the future.

3.3 Exam4 Support and training

Students were instructed to refer to an online FAQs section in case of queries.

Following the license agreement, LTI had access to Exam4. While there was regular communication with the provider, this communication was mainly in relation to the integration of the PeerMark element as opposed to the Exam4 platform itself. LTI staff were given access to a test site but the actual set up of the exam for the pilot (start date and time and various features available to students) was handled by the Exam4 office. As such, no training on how to use the software itself was necessary.

3.4 Cost

LTI did not have to pay for the pilot license, as the provider offered access to the platform for free. Prior to having access to the software, both parties (LTI and the provider) completed the 'LSE Cloud Assurance Questionnaire' dealing with issues around hosting and information security.

The cost of the pilot was therefore primarily in relation to LTI staff time.

3.5 Contingency plan

One student had to be loaned a laptop while another did not download the software prior to the mock exam. LTI were able to respond to the issues but recognized the need to have a contingency plan in place to allow for a quicker turnaround time to queries.

Supporting the student with downloading the software for example, took approximately 5-8 minutes. While this is a relatively small duration of time, it is still 5-8 minutes less for the formative exam. Moreover, considering the mock exam was a pilot, the time lost was offered to the student. It is obvious however, that such an accommodation cannot be possible under summative exam conditions. Therefore, having a hard-copy of the exam available may be a necessary alternative in the future. A 'handwritten' exam is most often used in response to any issues that make impossible the computer based delivery which serves as a viable option for invigilated on-campus exams.

Contingency planning thus constitutes a key component and a necessary aspect of any effort to scale the use of e-assessment.

Part 3: Concluding Remarks

The major limitation of the pilot comes from the fact that it was extended to a small cohort. As such, findings herein are based on a small number of students. Nevertheless, students and the teacher involved the GV100 appreciated and valued the process. To this end, the teacher involved with the GV100 pilot had a largely favorable view of the process and demonstrated a keenness to explore alternative teaching and learning methods. Having consulted with her students and reviewed the quality of submissions, the lecturer felt students found the pilot useful in terms of preparing for the exam; students gained an awareness of typical problems they were likely to run into (e.g. time constraints), and were able to effectively plan for it prior to the final exam.

Summary of Findings

Students

- Students are open to typing versus handwriting exams. It is however, expectedly less about the medium via which the exam takes place and more about the degree to which the formative assessment structure offers a simulation of the summative environment.
- Students value self/peer assessment but nevertheless display a keenness to get feedback from the teacher.
- In general, the mock exam proves a useful preparation exercise for students in leading up to the summative assessment.
- A basic training on the software and its available features would likely be of benefit to students who thus far, seem relatively unaware of features or utilize them in an ad-hoc manner.

- Further training on peer-to-peer feedback is essential to ensure greater consistency across students in this process.
- While administrators felt a mock close to the final exam was problematic, students involved did not seem to share this view. Gathering feedback as to when such a mock exam would be most useful would be important to ensuring the benefits of the exercise are widespread.

LSE

- Current assessment structures whereby a significant portion of a student's mark is derived from a final exam need reconsideration.
- If on-campus invigilated exams are to be scaled, logistical issues around location and WiFi must be considered.
- When employing a Bring Your Own Device (BYOD) method, one power socket per student is critical.
- Security and data protection proves to be of significant importance to all parties involved and must be an area well explored prior to the implementation of e-assessment practice.
- Regulations may need substantial overhaul to facilitate various modes of assessment particularly if using the BYOD model of assessment.
- Provision in case students cannot use their own device must be accounted for prior to implementation.
- Adequate student support and training prior to any summative assessment.

Appendix A: Student information about the GV100 pilot

GV100 PILOT

WHY ARE WE DOING THIS?

The aims of the pilot are to:

- Raise students' awareness and understanding of intended learning outcomes.
- Develop self-assessment and peer-assessment skills and the ability to give, receive and act upon constructive critical feedback.
- Give students an opportunity to practice and develop their skills at answering timed unseen examination questions in timed conditions in order to prepare for the summative examination.

HOW WILL IT WORK?

- Participation in this test is **voluntary** and your responses **do not bear any weight towards your final grade**.
- The essay questions of this formative test relate to the topics covered in the course.

HOW WILL IT BENEFIT YOU?

The experience will provide you with the opportunity to **better understand what constitutes an excellent (or poor!) exam answer**. It should also help you **identify your strengths and weakness in writing exam answers** and give you a focus of **future development**.

ABOUT THE TEST – GV100 ONLINE FORMATIVE TEST

1. You will sit a **3 hour examination** and answer **4 essay-type questions** (free choice of 16).
2. The test will be held on **Tuesday 5 May 2015**, in rooms in STC from 10:00-13:00. Access to the room will be available from 09:45am so please arrive 5-10 minutes before the test starts.
3. You will need to **bring your own device**, which should have installed Exam4 so that you can access the online software to take the exam and the battery fully charged.

PEER ALLOCATION

After completion of the test your teacher will:

- i. Email you a PDF copy of your own work to be uploaded to an assignment on the GV100 course.
- ii. Give you access to another student's test by **no later than Wednesday 6 May 2015**.
- iii. Offer you a 15 minutes 'pair-feedback' slot for either **Tuesday 12 May 2015 or Wednesday 13 May 2015**.

SELF-ASSESSMENT & PEER-ASSESSMENT

You will have to:

1. Reflect on your own work and how well you have performed in relation to the set assessment criteria. Your self-assessment answers will be recorded on the assignment in Moodle.
2. Then read and mark your peer's answers using the same marking criteria. Your feedback will be also recorded on the assignment in Moodle.
3. Your self-assessment and peer-assessment will be reviewed by your teacher before you will attend the pair-feedback session.
4. You will have from **Wednesday 6 May 2015 to Monday 11 May 2015, 12:00 Noon** to complete the self-assessment and peer-assessment.

HOW Do YOU CARRY OUT SELF- ASSESSMENT & PEER-ASSESSMENT?

Self-assessment is all about reflecting on your own work and making judgements of your work against the set assessment criteria.

Peer-assessment is all about making judgements of the work of your peers. It's a powerful way of turning yourself to an 'assessor', and an opportunity to better understand the assessment criteria.

You will be asked to answer several questions on Analysis, Evidence, Organisation, Style and referencing. You should always refer to the **marking criteria** and provide **qualitative comments** about the learning so that improvements can be made.

You should –

- i) **Identify** *what* has been done well
- ii) **Explain** *why* it has been done well

Then...

- iii) **Identify** *what* has been done poorly
- iv) **Explain** *how* it could be improved

PAIR-FEEDBACK SESSION

During the session you will have the opportunity to discuss the feedback you have received and gave with both your peer and your teacher.

TIMESCALES OF THE PILOT

Date of the week	Task
Tuesday 5 May 2015, 10:00-13:00	GV100 – ONLINE FORMATIVE TEST
Wednesday 6 May 2015	Peer allocation
Thursday 7 May 2015, 9:30AM	Self-assessment & Peer-assessment available to pairs
Monday 11 May 2015, no later than 12:00noon	Deadline for completing self-assessment and peer-assessment
Tuesday 12 May 2015,	Pair-feedback sessions OR
Wednesday 13 May 2015	Pair-feedback sessions

Questions for Self-assessment and peer-assessment

1. Analysis

1. Does the paper answer all aspects of the question?
2. Are your arguments sufficiently developed?
3. Are the counterarguments convincing?
4. Is there critical engagement with the texts/positions presented?

2. Evidence

1. Is the evidence from the text presented in enough detail?
2. Are the texts used properly understood?
3. Are the main concepts and distinctions properly defined?
4. Do the examples used properly support the argument?

3. Organisation

1. Does the introduction give a roadmap of the essay?
2. Is the "one idea per paragraph" principle respected?
3. Does the paper have a clear logical structure?
4. Are the main findings summarised in the conclusion?

4. Style and Referencing

1. Are the grammar and spelling good?
2. Is the sentence structure easy to follow?
3. Does the essay use connectives?
4. Is the reference style appropriate for an exam?

5. Recommendations for the Exam

1. Start ...
2. Stop ...
3. Continue ...

DEPARTMENT OF GOVERNMENT UNDERGRADUATE MARKING SCHEME

<p>First Class Honours (1) 70-100%</p>	<p>A first-class answer will always engage closely with the question and demonstrate distinction both in the range and command of material covered and in argument and analysis. Answers will have a coherent and logical structure and be written in clear and lucid style, integrating theory and evidence, and with a breadth of reference to relevant literature. A first-class mark may be awarded on the basis of more than one set of criteria. The argument may be particularly sophisticated, fluent and incisive. The answer may show exceptional knowledge and understanding of the issues involved. The approach may be original, suggesting new ways of considering material or issues. Grading within the First Class category will depend on the extent and combination of these qualities of sophistication, understanding and originality. While excellence is required to achieve the lower range in the class (70-74), some answers will be outstanding in these regards, achieving marks in a higher range (75-79); truly exceptional answers will achieve marks of 80 and above.</p>
<p>Upper Second (2A) 60-69</p>	<p>An upper second answer will focus closely on the question and show evidence of an intelligent and broad-based engagement with, and understanding of, relevant material. Arguments will be comprehensive, logically structured and clearly organised and expressed, with wide reference to appropriate literature.</p> <p>Grading within the Upper Second Class depends on the extent and combination of these qualities. Answers at the top of the class will contain evidence of a high ability and show superior judgement, prioritisation and sophistication. Those at the bottom of the Class will still be competent, accurate and exhibit wide reading, but will demonstrate less depth of understanding or argument.</p>
<p>Lower Second (2B) 50-59</p>	<p>A lower second answer will contain work which, though generally competent and broadly relevant, is lacking in sophistication, depth and focus. Answers tend to be limited in examples, organisation and breadth of reference. Answers in this Class may contain sections which are of limited direct relevance to the main argument and display a clumsy and unsophisticated approach and style. Good answers which stray from the question set should normally not be marked higher than a Lower Second.</p> <p>Grading within this Class depends on the extent and combination of these characteristics. Answers at the top of the Class will be reasonably well-argued and show a satisfactory knowledge but unimaginative understanding of the issues involved. Answers which would normally fall in the 2A category but which are too short, rushed, unfinished or badly organised should normally be marked as the top band of the Lower Second Class. Those answers at the bottom end of the Class will contain too much indiscriminate information, or factual errors and inaccuracies. Clumsy prose style or competent but pre-packaged answers that bear a limited relation to the question set will generally fall into the bottom end of the Class.</p>
<p>Third (3) 40-49</p>	<p>A third class answer will show little knowledge of specific issues discussed or their broader context and be deficient in grasp, understanding and breadth of reference. There will be little sustained attempt to develop an argument in response to the question and ideas will be poorly organised and expressed. Arguments will be characterised by omission of key points and inaccuracies.</p> <p>Grading within the Third Class depends on the extent and combination of these deficiencies. Answers at the top end of the Class may provide a reasonable answer, but one that is unduly brief, is lacking in organisation, or contains material largely unrelated to the question. Those at the bottom end of the Class will display serious deficiencies in argumentation, logic, understanding of key issues and style.</p>

Fail (F) 0-39	<p>Work that is seriously deficient in knowledge, understanding and salience. The content is mostly irrelevant, with no serious recognition of the demands of the set question. There is no evidence that course material has been understood. Grading within the Class depends on the extent and combination of these deficiencies.</p> <p>An answer at the top end of this Class may refer to themes anticipated by the question and suggest some level of understanding. Yet it will be clearly deficient in key attributes such as knowledge, logical development of argument, etc., and may demonstrate elements of irrelevance and superficiality. Answers where the candidate began to answer the question in an appropriate way, but ran out of time, might fall into this category.</p> <p>Those answers in the middle of the Class may hint at engagement with at least some relevant material. However, the majority of the material will lack relevance, direction, accuracy and substance.</p> <p>An answer at the bottom end of the Class will contain no material of relevance to the question asked. There will be negligible evidence that the candidate has properly understood any of the course materials. Answers where the candidate has barely attempted to answer the question will fall into this bracket.</p> <p>Examiners can award a Zero where the answer is effectively missing, or does not engage at all with the question.</p>
-------------------------	---

Appendix B: Instructions for invigilators

GV100 online mock exam: Instructions for invigilators

Contact Information

If you have a problem in your room please use the numbers below.

LTI: *(mob.tel. number given)*

Teacher: *(tel. number given)* - For questions about the exam paper

General info about the GV100 online mock exam

This mock exam does not count towards students' final mark in any way. Students have voluntarily signed up to take part using their own laptops* using the software Exam4. The exam is 3 hours long and students are required to answer 4 essay-type questions (from a choice of 16). They should type their answers to the questions onto the laptops.

*One student is borrowing a laptop from LTI and it will be brought to the room for him.

Students have been asked to turn up with the Exam4 software already installed on their laptops and their batteries fully charged (see below for the instructions that were sent to them via email on Tuesday 28 April).

As this is a mock examination we will not be as strict with the invigilation but you should still try and make sure that students are completing the mock in exam conditions. See below for instructions and announcements.

BEFORE THE EXAMINATION

▪ Collection of Materials and Examination Room Set-Up: 09:30am

Please come along to the LTI office no later than 09:30am on Tuesday 5th May to collect the exam materials and go to your assigned your room before students arrive.

Bring up the slides of instructions on using Exam4. Take the exam papers, spare extension leads and laptops to your designated room along with a copy of the student list and put out the mock exam papers for every other seat.

Once you have put out the mock exam papers the room must not be left unattended at any time.

▪ Candidate Entry: 09:45am

Students can be admitted to the examination room from 09:45. Ask them to leave all books, notes, bags and coats in the designated area and to seat in every other seat (so don't sit next to each other).

NB Candidates' mobile phones must be turned off and placed under their desks. Under no circumstances is a mobile phone allowed on a candidate's desk.

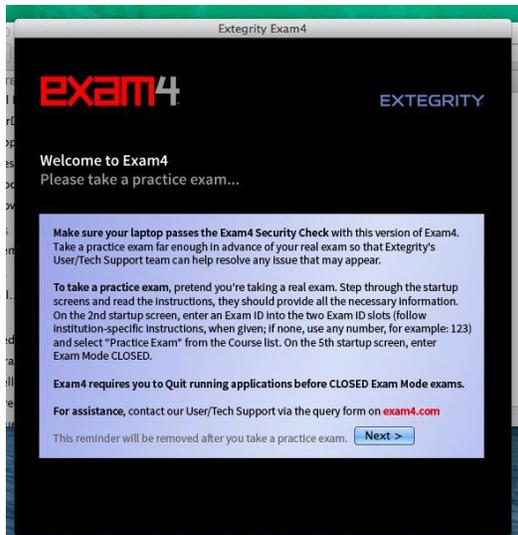
When all candidates are seated and you are ready to begin the examination,

Ask students to turn on their laptops and open the Exam4 software. They should then go through the various screens on Exam4 as per the screen shots below. All students should have already installed Exam4 onto their laptops if they haven't then they can do this now. See the instructions that were sent to students at the end of this document.

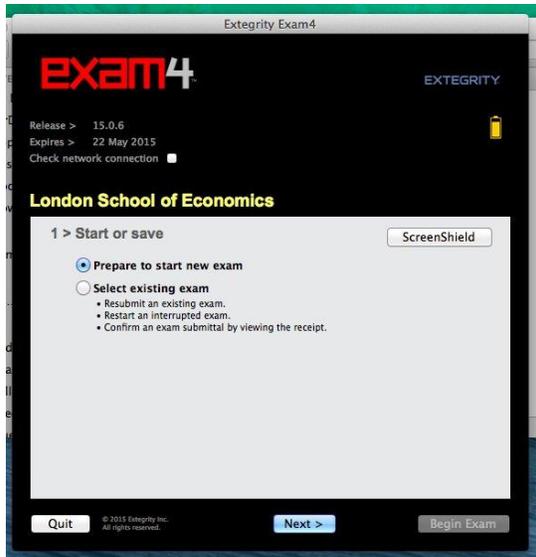
Make the following announcements;

- *You are not permitted to type anything further once I announce that the examination has finished.*
 - *You may not leave the room during the first 30 minutes of the examination or the final 30 minutes.*
 - *I will warn you 30 minutes and 5 minutes before the end of the examination.*
 - *If you have any problems connecting to the GV100 exam on the Exam4 software, need to leave the room, finish early or have any other queries please raise your hand. Do not leave your seat.*
 - *You may now connect to the Exam4 software. Please follow the instructions on the slides shown. If you cannot complete any of the tasks at any point please raise your hand.*
- **Instructions for students to start the exam once they have opened up Exam4 (these will be shown on a Powerpoint presentation to students).**

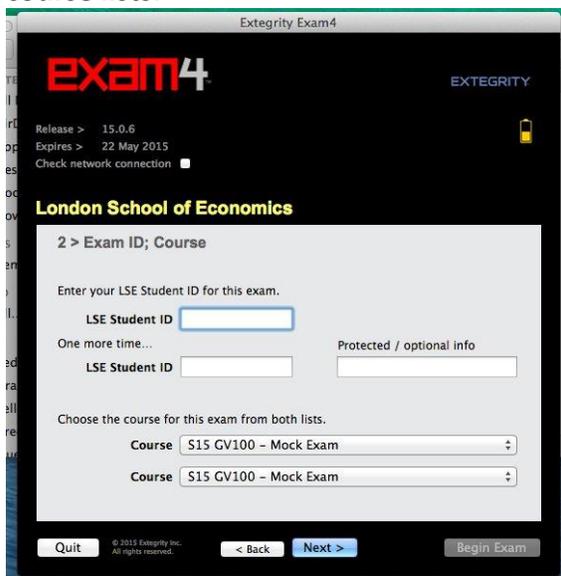
1. Click 'next' on the welcome screen



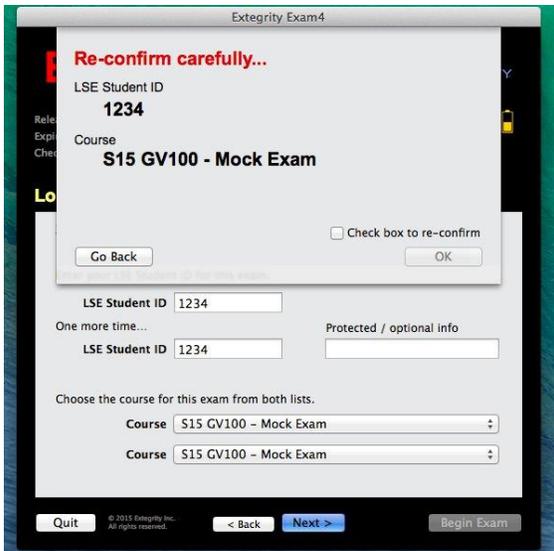
2. Select 'Prepare to start new exam' and next



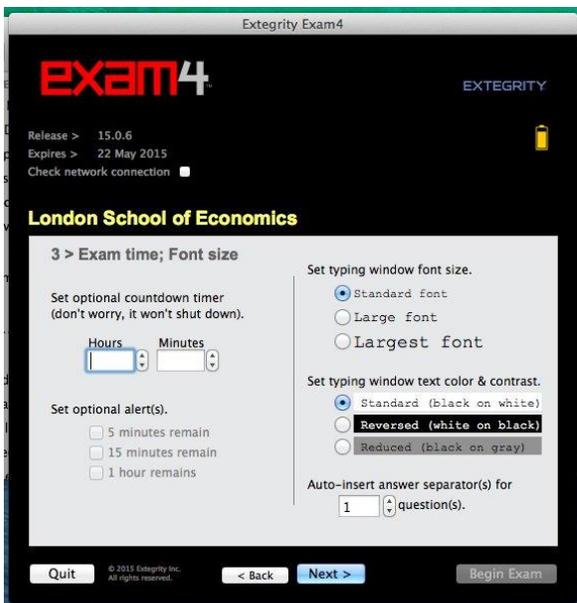
3. Fill in their student ID and select the 'GV100 mock exam' from both drop-down course lists.



4. Check the box to reconfirm



5. Exam time should be filled in as 3 hours and 0 minutes (unless students have been granted extra time). Students have the optional alerts to '5 minutes remain' '15 minutes remain' and '1 hour remains'

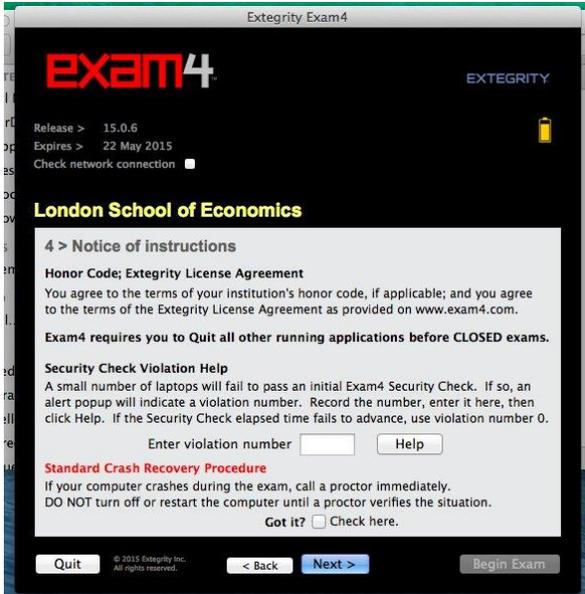


Students have the option to change the typing window font size and typing window text colour and contrast.

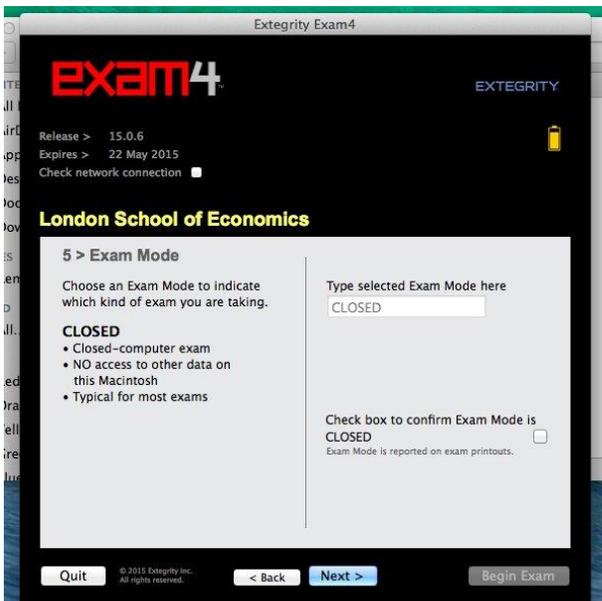
All students should set the 'Auto-insert' answer separator(s) for question(s) as '4'. This will be referred back to later on.

Once all options have been filled in then click next.

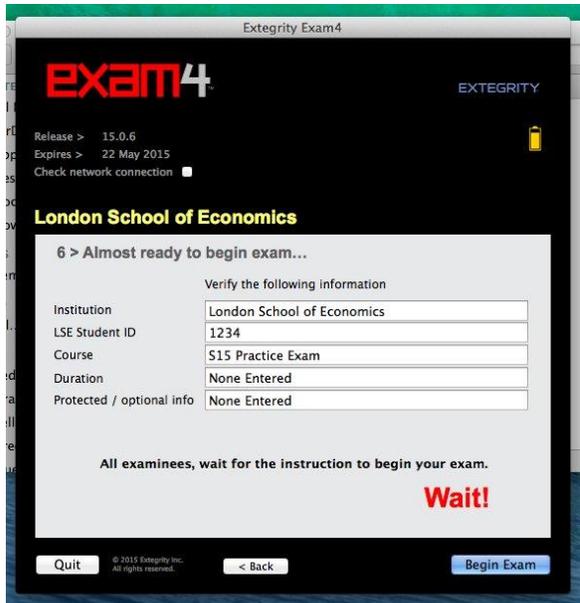
6. Students will then need to click that they understand the crash recovery procedure



7. Check the box to confirm that the exam mode is closed and next.



8. Once all students have done this they must wait for instructions to begin the exam.



Once everyone has completed the above steps then announce that the answer separator will create a break between each question but it is very important that students note the question number from the exam paper before they start typing the answer to their question. This will allow markers to see what questions they have selected.

Ask if anyone has any questions if not then everyone can start by selecting 'Begin exam'

▪ DURING THE EXAMINATION

Let students know when they have 30 minutes and 5 minutes remaining,

Unaccompanied candidates must **not** leave the room during the exam under any circumstances. Any candidate who leaves the examination hall without permission should not be readmitted: they are considered to have cancelled their examination by leaving the room. If they finish the exam early, they should be advised to leave the building quickly and quietly.

Contact your teacher if a candidate raises a query with the question paper. You should never attempt to answer this yourself.

You should:

- Remain vigilant to ensure that candidates are not attempting to gain an unfair advantage by, for example, consulting prohibited books or notes, or communicating with, or copying from, another candidate;
- Periodically patrol the room without disturbing the candidates

- Ensure silence is maintained;

You should not:

- Disturb the candidates by, for example, eating, drinking or talking unnecessarily;

▪ **THE END OF THE EXAMINATION**

At the end of the examination time, ask all students to stop typing and to submit their questions to Exam4. Again instructions are on a Powerpoint slide that can be shown to students.

Candidates are allowed to remove the question paper from the examination room

Return the spare examination papers and other materials to the Examination Office.

▪ **FURTHER INFORMATION**

Early departure

Candidates are not allowed to leave during the first 30 minutes or last 30 minutes of the examination, unless they require the toilet (please see toilet visits). Between those times they may leave the exam early but cannot be readmitted.

Lateness

If a candidate arrives late, you should allow them to take their seat and begin the exam. They should not be allowed extra time to complete the examination.

Mobile phones

Mobile phones must be completely switched off and placed under the candidate's desk. If a mobile phone does ring, locate the phone, switch it off and keep it at the front from where the student can collect it after the examination.

Laptop battery charging

Students can charge their laptops and extension leads should be available in every room to help with this. If a student has not brought their charger and their laptop battery runs out they may borrow a laptop from LTI to continue the exam. They must save their work exit the programme and then they can restart their exam by choosing 'select existing exam' when they log in to Exam4.

Lost property

Any personal belongings left behind in the examination room should be brought to the LTI office

Toilet visits

If a candidate wishes to visit the toilet they **must** be escorted there by an invigilator. They should empty their pockets before they enter the toilet cubicle and their

belongings handed back to them once they return. Students are allowed to go to the toilet in the first and last 30 minutes of the exam.

Except in an emergency, not more than one candidate at a time should be allowed out of the room.

Unexpected candidates

If a candidate arrives at your examination room but is not listed on the register, you should refer to the list to inform them of their correct room.

Specific exam arrangement candidates

Are entitled to 25% extra time (45minutes for a 3 hour exam) but they do not have to use the full time.

Announcements to Candidates

At the Start of the Examination

- You are not permitted to type anything further once I announce that the examination has finished.
- *You may not leave the room during the first 30 minutes of the examination or the final 30 minutes.*
- I shall warn you 30 minutes and 5 minutes before the end of the examination.
- If you have any problems connecting to the GV100 exam on the Exam4 software, need to leave the room, finish early or have any other queries please raise your hand. Do not leave your seat.
- You may now connect to the Exam4 software. Please follow the instructions on the slides shown. If you cannot complete any of the tasks at any point please raise your hand.

During the Examination

- You have 30 minutes remaining. You may not now leave the room.
- You have 5 minutes remaining.

At the End of the Examination

- Please stop typing and follow the instructions on the screen to end the exam and upload your work to exam4.
- Remain silently in your seat until I announce that you may leave.

When you are ready to dismiss the candidates:

- You may now leave.

Appendix C: On-screen instruction for students

Instructions for students using Exam4

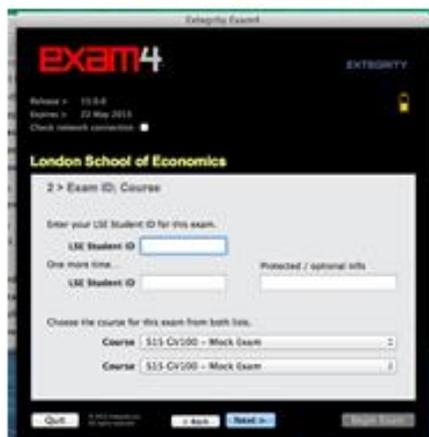
Click 'next' on the welcome screen



Select 'Prepare to start new exam' and next



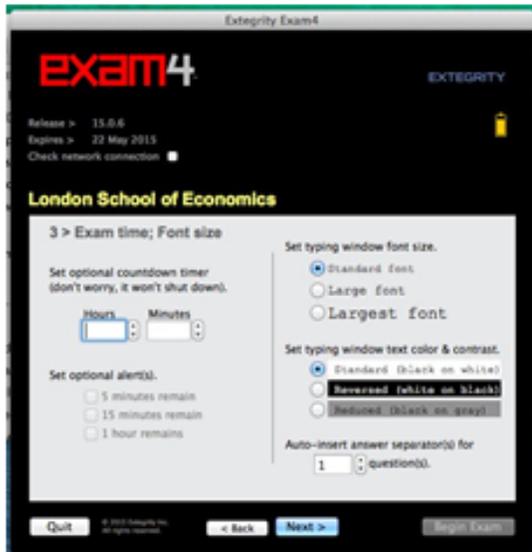
Fill in your student ID number and select the 'GV100 mock exam' from both drop down course lists.



Check the box to reconfirm



Exam time should be filled in as 3 hours and 0 minutes (unless you have been granted extra time). Select if you want to have the optional alerts to '5 minutes remain' '15 minutes remain' and '1 hour remains'

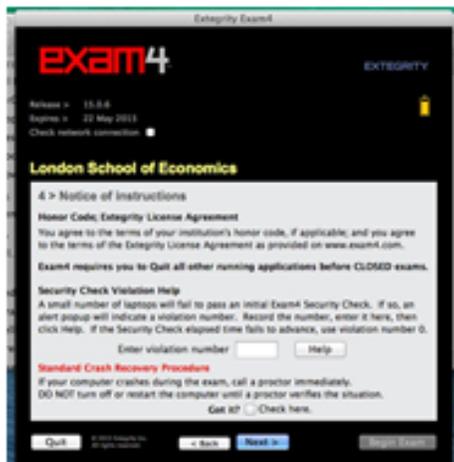


Set the option to change the typing window font size and typing window text colour and contrast.

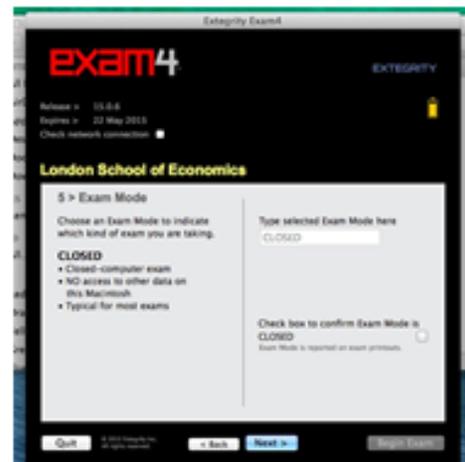
All students should set the 'Auto-insert' answer separator(s) for question(s) as '4'. This will be referred back to later on.

Once all options have been filled in then click next.

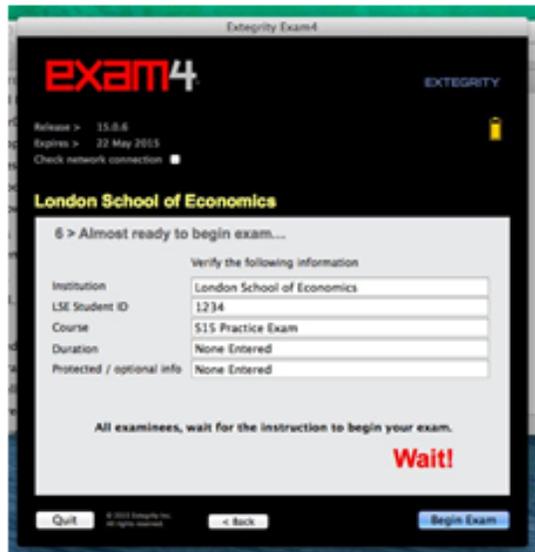
Click that you understand the crash recovery procedure



Check the box to confirm that the exam mode is closed and next.



Now wait for instructions to begin the exam.



The answer separator will create a break between each question but it is very important that you note **the question number from the exam paper** before you start typing the answer to each question.

This will allow markers to see what questions you have selected.

After the exam has finished

- Select 'end exam' and then 'end exam now'
- Tick that you confirm and select 'ok, end exam'
- Select 'submit electronically'

Your work will now be uploaded to exam4

- Tick 'I understand' and ok

You can now leave Exam4.

- Select 'exit' and then I'm sure.

Appendix D: Survey questions

The survey contained 14 open ended questions.

Experience of the mock examination

1. How did you find typing the mock exam as opposed to hand-writing?
 - a. What were the main advantages?
 - b. What were the main disadvantages?
2. What was your experience of taking the mock exam like?
(*You may want to comment on; noise in the room/room temperature/using your own laptop, charging your laptop etc.*)
3. What did you think about the timing of the mock exam? (Two weeks before the real exam?)
4. How useful did you find the experience for preparing for your summative assessment (examination).
5. How would you feel about typing instead of hand-writing your final examination in the future?

Experience of the software

6. Did you experience any technical difficulties installing the software before the exam or while using the software during the exam? If yes please give details about what the difficulties were and how they were resolved.
7. What did you think about the time given to download and try out the practice examination? Was the practice examination useful?
8. How did you find the software? Please take into the account the points below
 - a. Was the interface clear?
 - b. Cut/copy/paste and spell check were enabled; Did you use them?
 - c. Did you use the timer tools/change the font size or anything else?

Experience of the self-assessment and peer-assessment process

9. What are your thoughts of the self and peer assessment process?
 - a. What did you think about marking your own work?
 - b. What did you think about marking someone else's work?
10. What did you think of the feedback you received from your peers?
11. How useful was the feedback session with your teacher?
12. How would you feel about peer and self-assessment replacing one of your formative essays?

Overall thoughts

13. What would you change if we could run a mock exam for students on the course next year?
14. Please let us know of anything else you would like to tell us not covered in the survey.

Appendix E: Excerpt of survey responses

How useful did you find the experience for preparing for your summative assessment (examination)?

Text Response	
not much because no real conditions	
I found it useful for finding flaws with my writing style and how to improve them along with time-management and gaining feedback.	
It was very useful.	
very useful, but if the meeting with a teacher was at least a week before the actual exam, it would have been even better	
very good. Even though it was typed, it still mentally prepared me	
Very useful. It allowed me to really find out what I know and which topics I am really comfortable with	
It was extremely useful for preparing the summative assessment	
It was a useful confidence builder.	
Very useful, I think both the exam and the follow up meeting helped me a lot.	
Very useful in terms of time management	
Total Responses	10