Faculty: Medicine

Department: School of Public Health

Module name: Health Economics

Degree: Global Master of Public Health (Online)

Level: Postgraduate

Approximate number of students: 125

Weighting: 75%

Module ECTS: 5

Module type: Elective

Insights colour key

Educational Developer

Inclusivity

Learning Designer

Registry

Careers

Assessment overview – Capstone Project

The Capstone Project is an individual-level summative assessment prepared for the Health Economics specialisation of the Global Master of Public Health (Online), the `GMPH'. The Capstone is designed to capture the knowledge students will have gained throughout the economic evaluation lessons in this specialisation. This project is comprised of a mix of practical and theoretical aspects, and requires students to plan, undertake, interpret, and draw policy-relevant conclusions from economic evaluations. In layman terms, the Capstone is a mix of a quantitative exam, and case-study format questions, which require students to infer the setting, and draw upon outside knowledge to place the question in context, in order to then answer the question using course materials.

Design decisions

Rationale for the assessment

The design of the Capstone was very much linked to the type of students the GMPH included. The Capstone Project opens up 13 weeks before it is due. Time was allotted specifically to the students (no new coursework online; no online live sessions) for weeks 8-13. When a cohort is largely comprised of online, professional learners, allowing for flexibility of timing and delivery is deemed an important factor.

The Capstone was a supplement to an online, timed MCQ, worth the additional 25% of the marks for the course, delivered at week 8 (the Capstone was due week 13).

Fit with other assessments and the programme/ module

Health Economics is a standalone elective module, so it is not driven how the Capstone fits in with the other programme assessments. However, as the online GMPH is a heavy course, typically enrolling senior health staff, globally, the programme team did look to make sure no other key programme assessments were due right around the same time as the Capstone. The students are taking (perhaps not at the same time, but within the Online GMPH) the core courses of Statistics for Public Health, Epidemiology for Public Health, Foundations of Public Health Practice, Health Protection, Health Systems Development, Population Health Improvement, and a Research Portfolio. The other key summative assessment in this module was an automatically marked 45-minute MCQ.

Practicalities

Preparing students for assessment

The teaching staff presented a live session on the Capstone, trying to alert students to subtleties that might be missed, e.g. needing to look up background material themselves, each question standing independently, etc. The goal of the teaching team is for everyone to learn, and succeed, and one of the difficulties in teaching such a large cohort online is reaching all of the students. Therefore, if anyone ever wants to discuss the Capstone in office hours, et cetera, that was always accepted and welcomed.

Interviewees: Hugo Turner, Natasha Croome and Christa Hansen
Role: Module Lecturers and GTA, respectively

No practice exams were given in advance, as there are limited case studies in countries with the same issues as the Capstone (Vietnam, for example, or something specific to the UK).

Marking arrangements
The Capstone was marked double-blind, by questions. The teaching team created a very detailed rubric, both for marking and for feedback. Thus, consistency in marking could be delivered, even with the open-ended questions. Quantitative problems had rubrics as well. X amount of points if this went wrong, but Y amount of points if they still maintained the right order of interventions, etc.

Feedback arrangements
Feedback comments were assigned for each point of the entire rubric. Additionally, markers were given notes as to how many comments should be made on each section of the Capstone, whether they were comments because a student had missed a significant amount of points, or positive comments because they had completed the section accurately. In this way, the teaching team ensured each student would receive a consistent level and quality of feedback, and this eased the burden on the outside markers.

Management of the process
The most important part of the Capstone of course is monitoring the students seem to understand the content going in. This is always tricky, especially in an online course. The teaching team took close note of one particular section, for example, students continued to ask about in office hours, or a large portion of the students had missed on the MCQ. If that was the case, the teaching team would pro-actively again try to present the material in a different way, trying to assist the students as much as possible to put them in a strong position for the Capstone.

Student experiences with the assessment
As the students are generally senior, management-level professionals, often the course draws healthcare-industry executives expecting more of a `discussion' style format, who can be surprised by the mathematics and technical rigour of a health economics course. Whilst this can make the first few weeks of the course difficult, generally expectations and understandings of the course settle in, and the

level of engagement of the class is generally quite high. The `health' side of the course is most easily understood and the `economics' side of the course can be a bit misunderstood. There have been a few students who have been overwhelmed by the quantitative aspects of the course. Due to the online `go at your own pace' nature of the course, some students can fall behind. In this instance, generally the programme team is approached, and then the Teaching Fellow / Graduate Teaching Assistant is approached, and streamlined advice tailored to that individual is dispensed.

Online adaptations
This is for an online course, so no adaptations needed. However, for an in-person course, this assessment would work as well. The assessment could be distributed to the class with a large window open for submission similar to a standard exam with a due date.

The assessment window could be adapted for students who were in-person, full-time, not working professionals.

Advantages of the assessment type
- Works well for professional learners in online courses when students require flexibility, and are going through the coursework at their own pace;
- This course and assessment allows students to develop time management skills, which is important given the types of roles those students tend to go into. A lot of students are also international so time management in those settings including potential time zone differences is useful. A lot of skills that employers need for Public health practitioners revolve around the ability to apply knowledge to different scenarios, elements of research, critical evaluation of information, situational judgment, interpretation and drawing conclusions – the assessment helps students develop those skills;
- This is a great example of authentic, in-context assessment that is well-suited for the level and proficiency of students (mature, senior working PG students). It seems that the pedagogy/rationale behind it was aligned very well with the student level and their development needs, and designed to work especially well in a remote, nearly self-paced and flexible learning modality;

- Flexibility is absolutely critical for PG programmes designed with a professional/mature cohort in mind, especially ones that have a clear vocational goal in mind. It is great that multiple types of output can be assessed effectively within the project time-frame, and such an assessment design would work fantastically within a remote learning environment;
- Pedagogically-speaking, this type of assessment aligns with Universal Design for Learning principles of offering students an opportunity to complete the assessment based on their own priorities, and by independently, and individually accessing and engaging with the content to be assessed. This might also resonate well with the programme-level LOs in terms of employability, especially if students completing this programme are likely to be in a professional context where individual workload management is key/central to their role;
- Open book exams are much more representative of the skills needed in the workplace. As employees, students will be able to look for information online which brings an extra element of being able to interpret information and pick the right information. Also being able to determine how to manage your time with looking for information is a useful skill to develop as this is something that an employer would expect to be done in a fairly efficient way;
- Once time is invested in the rubric and feedback comments, it simplifies the process of needing outside marking assistance;
- Works well for a mixture of question types, such as calculations, or longer case studies which require background research. In this setting, this is viewed as superior to a standard timed exam as can give space to reflect on answers and update as the knowledge becomes more embedded as students work through material. This is just one benefit of having early, and working in phases, but the student being able to go back to what they have worked on before submitting. This is arguably closer to how we work in real world – we draft, review, update, review…
- This ability to pause and think also caters to the needs of students who might have some learning difficulties as it reduces the time pressure and gives them more processing time;

Limitations of the assessment type
- This assessment has been run in the past with the questions interlinked (e.g. the answer to q2 depends on q1) and it made it much trickier to mark, and students were more confused by the feedback. For online / more independent learning pace courses, individual questions which are not linked are more suited to this assessment;
- Students leave to end and then do not have time required to do the work;
- Hard for students to know when to do the different components;
- Hard to give students indication of how long they should spend on the assessment;
- The biggest risk with technology is a student inadvertently submitting mid-exam, and wanting to resubmit. However, with WISEflow, the assessment is downloaded and then re-uploaded, so this issue is difficult to do accidentally unless the individual does not understand;
- One issue with WISEflow is the burden on the administrative staff's team to train teaching staff and/or markers', not knowing ahead of time who will be doing the bulk of trouble shooting;
- In WISEflow, the feedback mode is a bit tedious; it is helpful to have someone pre-create `rubric' boxes for feedback in advance. With a large cohort, and double-blind marking, individual question-marking for feedback provision may not be wise, for quality assurance.

Advice for implementation
- Be conscious at any given point in time, do the students have enough information to complete parts of the assessment;
- Be responsive, this is very important especially in an online environment;
- Be organised with your marking rubric and feedback. It is an assessment where students can earn partial credit, and they will be eager to get it;
- Educationally-speaking, one thing to take into consideration is whether or not a sequence or timing in which students are advised to complete other programme aspects is needed or helpful for more efficient completion of the project. Good practice would see some signposting or prioritising recommended by the programme team in terms of how students access each course element (incl. assessment);

- It is important to ensure that software used allows for changes to be made to the layout of the question and the exam to make it accessible to all students. In terms of the font there is often an assumption that Times New Roman is a good font to use while in reality it is really difficult for anybody with specific learning difficulties to process. In terms of the layout of the exam questions on the page, having to scroll down between the question and an answer can be challenging hence the question and answer should be visible together without the need to scroll. Another consideration needs to be given to where the buttons are placed and avoiding placing next and submit buttons close together as students with visual perceptual difficulties or eyesight problems might find this challenging and accidentally click the wrong button. If a screen reader is required it is important to make sure that the text is accessible;

- Help students reflect on their learning so that they can better understand how approaching this type of assessment with exam like components helps them develop skills needed in professional lives;

- To make this even closer aligned with authentic practice in the workplace you could consider adding a group working component that is reflective of professional practice;

- As is the case with any assessment method it is paramount that students understand 'the rules of the game'. They need to understand what is expected of them in terms of outputs and understand the difference between different criteria and performance at each level. With a level of flexibility built in into the assessment design, it is also useful to give them an indicative timeline so that they do not fall behind. This timeline should also include extensions linked to any need for mitigation;