

Information technology in a global society
Higher level and standard level
Paper 2

Wednesday 8 November 2017 (morning)

1 hour 15 minutes

ARTICLE

Instructions to candidates

- Do not open this booklet until instructed to do so.
- This booklet contains the article required for information technology in a global society higher level and standard level paper 2.

Theme: Education and training

IT system: Virtual learning environment (VLE) for learners to participate in online courses

A massive open online course (MOOC) is an online course delivered over the web and aimed at a large number of learners. Well-known universities, such as Massachusetts Institute of Technology (MIT) and Harvard, were the first to develop a platform where their professors could collaborate and contribute to an open access (OA) education.

- 5 MOOCs offer an education to a wide range of people, such as stay-at-home parents, retirees and students who are looking for an alternative to the traditional face-to-face (F2F) classroom. There are no entry requirements for MOOCs. Anyone may enrol on a course, no matter where they live or what qualifications they hold.
- 10 MOOCs are the latest trend in online learning and have been used by over 400 universities. In 2014 there were 2400 courses and between 16 and 18 million registered learners. However, these courses have been criticized for their low completion rates. In some cases, only 7% of learners finished the course, in others, 25% of learners did not view the content of the first module.

- 15 MOOCs consist of a range of online content on plain HTML pages or more interactive pages (**Figure 1**). Some courses are synchronous and users may make use of features such as interactive whiteboards, live chats and webinars*. Others may be asynchronous with uploaded recorded video lectures and collaborative learning in the form of blogs and online discussions.

Having very large numbers of learners can be challenging for the IT support team and also for course managers. The cost of developing a MOOC can be up to \$300 000 depending on the quality and complexity of the course interface, which smaller universities may not be able to afford.

- 20 MOOCs are available 24 hours per day and seven days per week, and some are free. MOOCs do not always lead to a formal qualification but they allow learners to develop their careers or personal interests in their own time.

- 25 Some employers are now looking at MOOCs as indicators of an employee's motivation and willingness for personal development. However, a recent survey showed that 56% of employers still preferred a job applicant with a degree from a traditional university as opposed to one from an online course.

There are concerns about the future of MOOCs. Will they replace traditional universities? What will be the impact on lecturers? Are MOOCs sustainable?

[Source: Is the 95% MOOC dropout rate the big issue? www.mediacore.com
 Massive Open Online courses – MOOCs www.mediacore.com/blog/massive-open-online-course-moocs
 Researchers explore who is taking MOOCs and why so many drop out, 8 March 2013, www.insidehighered.com
 Harvard MIT: Despite low completion rates, MOOCs work,
 21 January 2014, <http://hechingerreport.org/Harvard-mit-despite-low-completion-rates>
 What is wrong with MOOCs? Key issues to consider before launching your first MOOC, 3 August 2015,
<http://elearningindustry.com>
 Employers and students still prefer brick and mortar not online education, 23 September 2013,
<http://hechingered.org/content/employers-and-students-still>
 The dark side of the MOOCs: Big problems with massively open online courses, 2015, <http://distancelearn.about.com>
<http://www.webopedia.com/TERM/W/Webinar.html>]

* webinars: a webinar (short for web-based seminar) is a presentation, lecture, workshop or seminar that is transmitted over the web using videoconferencing software

Figure 1: An example of content from a MOOC module

The screenshot displays a MOOC interface for 'MITx: 6.00x Introduction to Computer Science and Programming'. The top navigation bar includes 'Courseware', 'Course Info', 'Textbook', 'Discussion', 'Wiki', and 'Progress'. A dropdown menu is open, showing 'undefinedllai'. The main content area is titled 'TYPES OF KNOWLEDGE' and features a video player. The video player shows a man speaking, with a transcript below it. The transcript text is: 'Eric Grimson: Ok, so we want to think about computational problem solving. We want to understand, what does it mean to think computationally? That leads to the philosophical question, so what's computation? And like a good philosophical question, that leads to'. The video player controls show a play button, a progress bar at 0:05 / 6:06, a speed control set to 1.0x, a volume icon, and a CC icon. The left sidebar contains a navigation menu with 'Overview', 'Week 1' (expanded), and 'Week 2'. Under 'Week 1', there are three items: 'Introduction to Computation Lecture Sequence', 'Core Elements of Programs Lecture Sequence', and 'Problem Set 1 Problem set'. The 'Introduction to Computation Lecture Sequence' item is highlighted.

[Source: Image courtesy of MIT]