

# **Assessing Students at Remote Sites: Open Book Take Home Test & Other Assessments**

**Aida Suraya Md. Yunus**

**2<sup>nd</sup> July 2020**

# Topics

#1

Online lectures, online and offline assessments.

2

Assessment Strategies for Online/Remote Teaching

3

Open Book Take Home Test

4

Helping Students Cope with Open Book Take Home Tests

5

Minimizing Cheating in Online Assessments

**COVID19 MCO → abrupt move to online teaching as continuity plan. Some lecturers were unprepared for this. Unlike the conduct of courses designed as online courses from the start.**

## ACC/349 - COST ACCOUNTING 📄

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### Description

This course introduces cost terminology and flows, standard cost systems, relevant costing, budgeting, inventory control, capital asset selection, responsibility accounting, and performance measurement.

This **undergraduate course** is 5 weeks.

*This course has a prerequisite. Please see details in the Prerequisite section below.*

**PLEASE NOTE:**  
Attendance and participation are mandatory in all university courses, and specific requirements may differ by course. If attendance requirements are not met, a student may be removed from the course. Please review the Course Attendance Policy in the **Catalog** for more information.

### Course Objectives

Fundamentals of Managerial Accounting

ACC/349 - Available
07, Jul, 2020
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Add to Cart

: COST ACCOUNTING

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Type: Instructor Led

Dates: Jul 07, 2020 to Aug 10, 2020

Campus: Online Campus

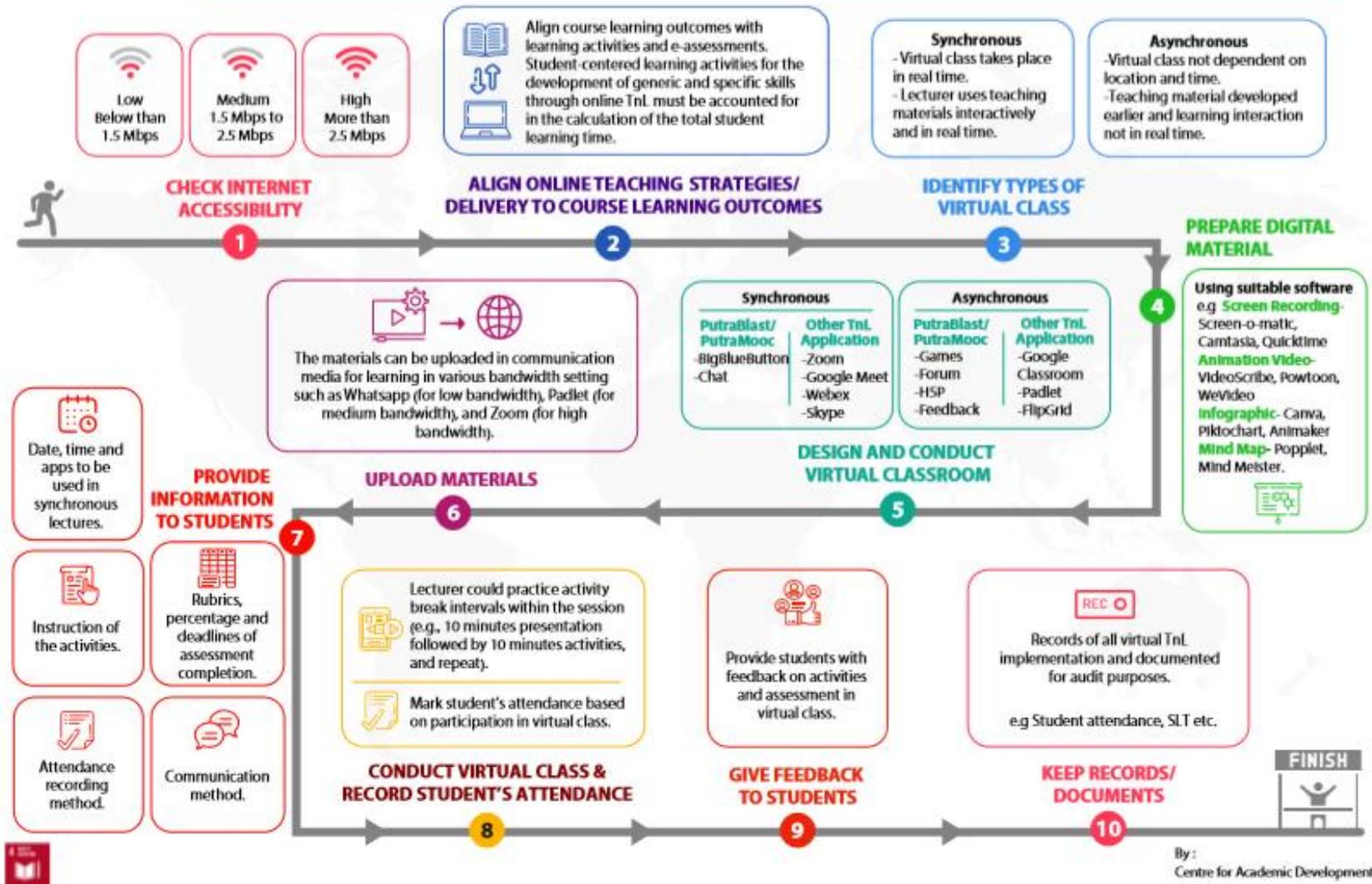
Building: Online Non-Degree

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Course Fee(s):	Undergraduate Tuition credit (3 units)	\$1,194.00
Section Fees:	Resource Fee	\$170.00

**Needs to be better prepared for next semester. Incorporate frequent, lower stakes assessments into the course.**

# PART 1: IMPLEMENTATION OF THE VIRTUAL CLASSROOM IN UPM



By: Centre for Academic Development

# Coping with online lectures

ZULITA MUSTAFA  
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**M**ANY are finding video conferencing exhausting as they have to pay more attention to and process non-verbal cues, such as facial expressions and body language.

Due to the Covid-19 pandemic, education institutions do not have much choice but to conduct more teaching and learning activities via video conferencing.

Universiti Malaya Faculty of Education Associate Professor Dr Dorothy Dewitt who lectures at Universiti Malaya Faculty of Education said her online lectures via the Zoom app took up more of her energy than normal lectures.



Associate Professor Dr Dorothy Dewitt

She said she had to be more alert during her lectures as she needed to figure out whether a student was asking a question during the teleconferencing session or through the chat box.

"Can they understand me? Sometimes, I need to see the chat box and revert my attention to the presentation slides because I need to ensure my students understand the lecture.

"I am sure they are also tired as they are straining their eyes not to miss anything," she added.

Dewitt said when she was presenting the slides, it was difficult to see her students' expression.

"As everyone is included on the monitor screen, their images become small up to the point where I am unable to see their expressions."

Dewitt is not alone in experiencing these problems.

Universiti Putra Malaysia Faculty of Educational Studies dean Professor Dr Aida Suraya Md Yunus said some lecturers were mentally stressed by the technology as it drained them of their energy, especially those who are not tech-savvy.

Aida said setting up an online lecture session required time as she needed to identify the right time to disburse teaching materials, as well as make sure that the video and audio qualities were adequate.

She said her lectures were usually based on the same teaching materials that she used for ordinary classroom sessions.

"Whatever the teaching platform is, the delivery of lectures will still be the same. In a normal class, you may ask questions or discuss issues. The same goes for online lecture sessions.

"However, you may need to get more creative and take the initiative to come up with quizzes via Kahoot [a free game-based learning platform that makes learning fun]," Aida said.



An online Masters of Instructional Technology class by the Education Faculty of Universiti Malaya conducted using Microsoft Teams.



**Some lecturers were mentally stressed by the technology as it drained them of their energy, especially those who are not tech-savvy.**

PROFESSOR DR AIDA SURAYA MD YUNUS  
Universiti Putra Malaysia Faculty of Educational Studies dean

To avoid fatigue during a live stream of a lecture, Universiti Malaysia Pahang Faculty of Industrial Management programme head (entrepreneurship) Dr Diyana Kamaruddin would mix her lessons with different teaching methods.

To ensure that her students keep paying attention, Diyana said: "I usually conduct an online lecture for 15 to 20 minutes, and then have them go into their 'discussion rooms'.

"This way, they can understand the teaching materials and conduct more discussions between themselves. I will then resume the class session with them presenting their ideas."

Three days before the implementation of the Movement Control Order, Universiti Teknologi Mara Faculty of Communication and Media Studies public relations lecturer Mohd Nur Najmi Nuji and his students had started their online distance learning due to the Covid-19 pandemic and stay-at-



Mohd Nur Najmi Nuji



Dr Diyana Kamaruddin

home [or on-campus] policy.

He said implementing video conferencing was a non-issue as he had been teaching part-time online students via the iClass system.

However, he said, it would be harder to implement among full-time students.

Najmi said conducting video conferencing drained him of his energy as he needed to ensure his students could understand his lecturers and that he had to check on chat boxes for questions by students, which took time.

Najmi said there were several factors contributed towards an effective and efficient online lecture session.

"We need to make sure the state of readiness of infrastructures, such as the Internet, the evolving mindset of educators and students, as well as the skill of educators in using online features," he added.



**Beyond online** – to cater for those who has no or limited accessibility – for TnL and assessment activities.

Remote learning - can include activities such as self directed learning packets, synchronous and asynchronous learning activities in various learning management systems, and interactive web services that are considered e-learning.

**Multiple means of representation for learning** - through texts, videos, images (e.g., infographics, posters), audio, open educational resources (OER) (ie. through LMS, web meeting platfroms, whatsapp, chat, emails, learning packets)



**Headline - This Malaysian student spent 24 hours on a tree in order to get internet signal to complete her exams**



# STUDENTS' PREFERABLE PLATFORM FOR ONLINE CLASSES

 ZOOM MEETING	 PUTRABLAST	 GOOGLE MEET	 WHATSAPP	 CISCO WEBEX	 GOOGLE HANGOUTS	 MICROSOFT TEAM
Platform for video and audio conferencing, chat, and webinars	Learning content, teaching and monitoring of the learning process in UPM.	Real-time meetings by Google	Text and voice messaging apps	Cisco's cloud-based web and video conferencing service	Unified communications service	Chat-based collaboration tool that provides global, remote, and dispersed team
<b>VIDEO CONFERENCE TIME LIMIT</b>						
40 minutes	Unlimited	60 minutes	Unlimited	24 hours	Unlimited	4 hours
<b>DATA CONSUMED PER HOUR</b>						
810 MB	60 MB	1.4 GB	270 MB	1 GB	810 MB	225 MB
<b>FILE SHARING LIMIT</b>						
512 MB	20 MB	200 MB	128 MB	Unlimited	200 MB	50 MB
						
 <b>3.5</b>	 <b>3.7</b>	 <b>3.8</b>	 <b>3.7</b>	 <b>2.7</b>	 <b>2.9</b>	 <b>2.7</b>

by Academic & Research MPPUPM

MAJLIS PERWAKILAN PELAJAR UPM SESI 2019/2020

# Changing grading practices

ZULITA MUSTAFA  
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**W**ITH campus closures and face-to-face courses being moved online, lecturers and students face another challenge at the end of the semester. Lecturers must produce, administer and score final exams, while students have to sit assessments and examinations in extraordinary settings — online and at home.

Some academicians are adapting to the new norm of assessing their students, while others express concern over the efficiency and accountability of online assessments.

Associate Professor Dr Dorothy Dewitt from the Department of Curriculum and Instructional Technology, Faculty of Education, Universiti Malaya, said with online learning, evaluating students' performance would need a different approach.

With free access to references and textbooks, she said conducting exams online should not only test students on factual knowledge, which require only a correct answer.

"A formative assessment can include, for instance, students developing strategies for problem-solving, creating content through posters and videos, and summarising what they have learnt.

"So, to check whether students understand and are not merely copying the answers from somewhere, students should learn to justify opinions and defend arguments.

"This will require them to use their higher-order thinking skills," she added.

Dewitt said students should be allowed to explore concepts and test ideas, and, at the same time, teachers could give feedback to improve their results.

"I have asked students to summarise papers they read in the form of an infographic, displaying content or main points of a particular subject using apps like Canva.

"I also love to get ideas from students' responses on an interactive wall, like Padlet. I will ask them to share their ideas and I can check whether they have got the right understanding from the answers given.

"At the end of the day, the critical thinking in the responses and posts can be evaluated as well as content knowledge," she said.

Dr Diyana Kamaruddin, head of programme (Entrepreneurship) at Universiti Malaysia Pahang's Faculty of Industrial Management, said instructors would have to change their

assessment strategies.

"In an open-ended question, there is no truly right or wrong answer. It stands on the justification given by the person answering the assessment."

"Instructors would need to be open-minded and see whether the answers could be applied in that particular situation, and must not be based strictly on an answer scheme.

"This type of assessment might not necessarily be harder in terms of difficulty level. The concept might be a little foreign for students," she said.

Diyana said exams could take an open-book approach, too.

"It could be done in a case-study question, where students would have to think and apply their knowledge in the situations described.

"Don't write difficult questions as some might not have grasped the concept of answering these questions yet, especially if they are first-year undergraduate students.

"It is also important for instructors



Yung Mun Sin

students on how to answer case-study questions," she added.

Former Universiti Putra Malaysia's Faculty of Educational Studies dean

Professor Dr Aida Suraya Md Yunus was worried that online exams might create problems if not administered the same way as the traditional approach.

Aida said if tests could be monitored and the authenticity of test takers could be determined, then any levels of questions could be included for the assessments.

"It can also be a proctored exam, where someone can be appointed to observe students taking the exams," she said.

However, in an open-book exam, it will be more challenging for instructors to develop questions with answers that one could not easily find in books or on the web.

"These type of questions require a high level of thinking, such as making analysis, evaluation or creation based on Bloom's Revised Taxonomy to respond to the questions.

"Creating may mean getting students to propose a strategy or model or plan, where they may need to do a lot of searching, reading and reflecting to come up with answers," said Aida.

Tunku Abdul Rahman University College Bachelor of Commerce student Yong Mun Sin said she had done a few online assessments since remote learning commenced.

Her preparation for the tests included practising typing speed and mastering formulas using Microsoft Excel to perform calculations.

"Instead of just memorising, I make sure I fully understand the topics. Classroom assessments usually test your book knowledge, whereas online assessments will require students to think out of the box and adopt critical thinking."



With campus closures, students have to sit for tests and examinations online and at home. PIC FROM FREEPIK.COM.



**So, to check whether students understand and are not merely copying the answers from somewhere, students should learn to justify opinions and defend arguments.**

**ASSOCIATE PROFESSOR DR DOROTHY DEWITT**  
Department of Curriculum and Instructional Technology, Faculty of Education, Universiti Malaya

said the third-year student.

Yong said she was a bit concerned about her online test performance since she tended to lose focus easily at home.

"I have yet to receive my results for the online assessments, but I was not able to present a complete answer for all parts of the questions on time as I couldn't type faster.

"I personally prefer the conventional classroom assessment because I am used to writing answers with pen and paper instead of typing them into Microsoft Word and Microsoft Excel.

"I hope to improve my performance by answering online tests since this could be the future of education, replacing face-to-face classroom assessments," she said.

Universiti Pendidikan Sultan Idris third-year student Mohamad Fariz Zahi Mohd Zani said online assessments offered greater flexibility in terms of time, compared with traditional classroom assessments.

"With online tests, students are usually given a period of time to answer anytime when we are available, so we won't be as nervous. Conversely, classroom assessments are a bit rigid and I tend to feel stressed having to answer the test in the allocated time.

"Students are also informed earlier for an online assessment, which provides ample amount of time for us to prepare. A normal classroom assessment can sometimes be done abruptly, which results in poorer performance due to the lack of revision time."

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## Online assessments pose new challenges

FROM PAGE 19

The Bachelor of Science (Mathematics) with Education student explained that classroom assessment questions normally depended on students' ability to memorise formulas since students were not allowed to refer to them in the exam hall.

"Online assessment questions focus on the application of the formulas, and how we use them in daily life. Since the tests are done at home, lecturers cannot be sure that there are no formulas lying around. Therefore, they have

to tweak the questions to adapt to the situation," he said.

Universiti Malaya Teaching English as Second Language student Siti Aisyah Mohd Adaha said online or remote tests could be troublesome if technical issues occurred.

"Problems usually arise with the web server, internet connection or the device that I use. I prefer taking tests in classrooms. In the case of continuous assessments, like assignments and forums, however, I prefer handing them in

online using the university's platform.

"Some might not take online tests as seriously as they would for classroom tests. But at the end of the day, the same amount of effort and preparation has to be done for online tests.

"Limited time is given to students to answer questions online. So the probability of students cheating is low. Students have no choice but to answer right away as there is no time to spare for them to check their notes or Google the answers.

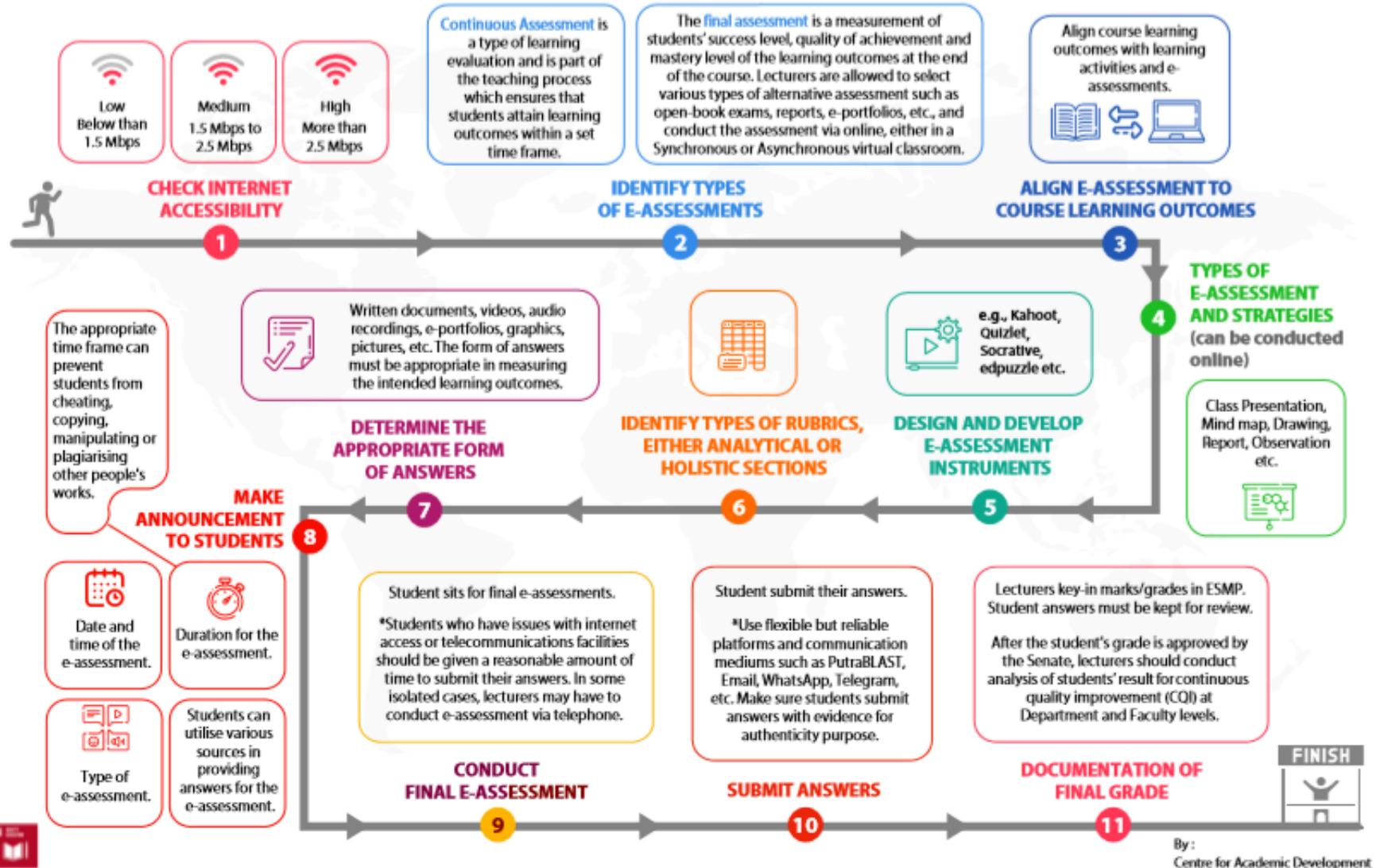
"Students can get creative and have their way around to cheat. So with this thought in mind, it's probably the reason why some of my lecturers decided to hold open-book tests while we are at home.

"As exciting as that may sound to us, we know that our lecturers will ensure that the questions will be worthy enough to challenge our cognitive skills. So we do have to do a lot of reading, maybe even more than usual, to prepare for the tests," she said.



# Assessment Strategies for Online/Remote Teaching

# PART 2: IMPLEMENTATION OF E-ASSESSMENT IN UPM



By: Centre for Academic Development



## UPSI batal peperiksaan akhir semua kursus

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TANJUNG MALIM: Memahami masalah capaian internet dihadapi sesetengah mahasiswa, Universiti Pendidikan Sultan Idris (UPSI) mengambil ketetapan tidak melaksanakan peperiksaan akhir bagi semua kursus pada pengajian semester ini.

Naib Canselornya, Prof Datuk Dr Mohammad Shatar Sabran, berkata penularan COVID-19 di negara ini menyukarkan kehidupan pelajar universiti, termasuk dalam menguruskan sistem pendidikan.

Justeru, Mohammad Shatar berkata, memikirkan masalah yang dihadapi pelajar, UPSI menukarkan peperiksaan akhir kepada pelaksanaan kerja kursus, projek atau aktiviti pembelajaran lain yang juga boleh dibuat pentaksiran bagi menggantikan peperiksaan akhir.

"Ia dapat menyelesaikan banyak masalah yang dihadapi pelajar seperti liputan internet selain mengadakan beberapa kaedah lain yang sesuai untuk memudahkan mereka belajar," katanya.

Beliau berkata, UPSI juga mengirimitkan secara pos lebih 500 unit pemacu 'pen drive' yang dimasukkan nota-nota kuliah dan lain-lain bahan pengajaran kepada mahasiswa yang tiada akses internet.

# Constructive Alignment

**Constructive alignment** is a principle used for devising teaching and learning activities, and assessment tasks, that directly address the learning outcomes intended in a way not typically achieved in traditional lectures, tutorial classes and examinations (Biggs and Tang, 2011).

Build strong connections between course outcomes and what is assessed.

## Learning Outcomes

Measurable outcomes are articulated first. From these, the assessment criteria are developed.

## Assessment Methods

Once the (aligned) assessments have been designed, resources are chosen and activities are planned. The curriculum is designed to align the assessments with the outcomes.

## Teaching and Learning Activities

What the teacher does and what the students do are aimed at achieving the outcomes by meeting the assessment criteria. This takes advantage of the known tendency of students to learn what they think will be assessed.



# Examples of Possible Assessment Options



# OPEN BOOK TAKE HOME TEST



## OPEN

- Higher education is supposed to equip students with intellectual abilities and skills.

## BOOK

- Open-book exams test ability to quickly find relevant information and then to understand, analyse, apply knowledge and think critically. conducted online

## TEST

- Tests ability to find and use information for problem solving, and to deliver well-structured and well-presented arguments and solutions.

- Open-book exam questions usually require application of knowledge, and they may be essay-style questions or involve problem solving or delivering solutions.

## OPEN

- Tests used to assess how well students organize information, understand and analyze main concepts, and write effective responses.

## BOOK

- Can limit the resources that they can refer to but it is hard to detect.

## TEST

- Questions should be of higher order (according to Bloom's Taxonomy) which requires analytical/critical/creative thinking.



OPEN  
BOOK

- Take-home exams can be a very effective tool for assessing students' learning, but also present some challenges in ensuring equity for those taking them. The format **gives students more time and flexibility to complete an advanced or complex assignment**, perhaps with more resources, than they would have in a seated final exam.



TEST

- Many sources suggest that **take-home exams work best with open-ended questions, and in more advanced courses**

Source: <https://honor.fas.harvard.edu/take-home-exams-tell-it-it>

## OPEN

- Discuss with students about **academic integrity** with respect to this kind of open-ended assignment.

## BOOK

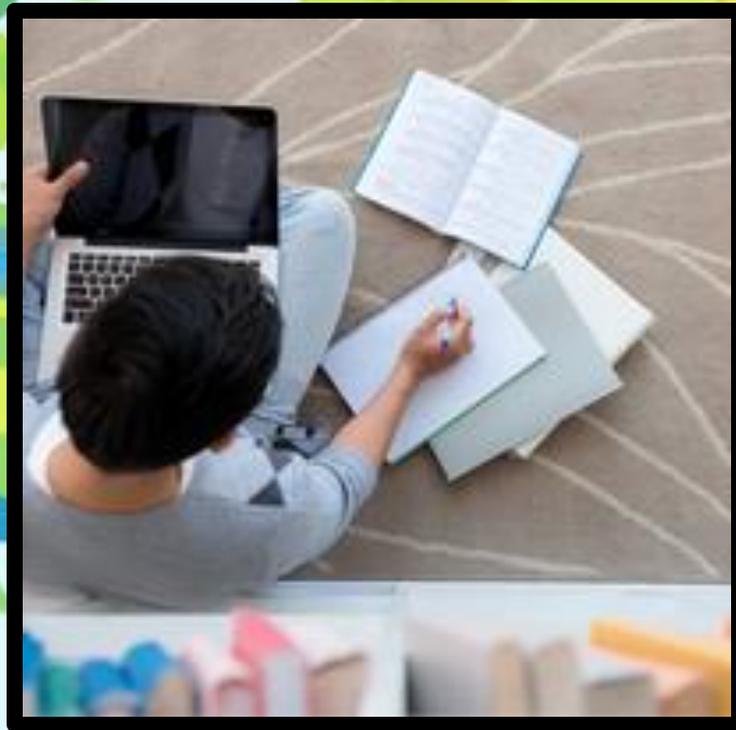
- Ask students to articulate importance of doing their own work, or what is the **broader value of scholarly** integrity, or how this assignment might be challenging in this respect?

## TEST

- **Have students sign an affirmation statement when they receive the exam or when they turn it in** - Sample Affirmation Text “I affirm my awareness of the standards of the Harvard College Honor Code.”

Source: <https://honor.fas.harvard.edu/take-home-exams-tell-it-it>

# EXAMPLES OF OPEN BOOK TAKE HOME TESTS



## International Business Transactions and the Law - Autumn 2015

### Take-Home Exam

This exam includes six questions. You must answer two out of the six questions. Each question is of equal weighting.

**Around 1,000 – 1,500 words should be sufficient to answer each question.**

The questions require you to advise hypothetical clients regarding their rights and/or liabilities in the scenarios outlined, with reference to relevant laws.

Where relevant, your answers should clearly state any assumptions you are making, and/or any additional information that would change the advice provided to your hypothetical clients

For all questions below, assume that Kamaria is a member of the World Trade Organisation (WTO), and that it has ratified the Amended Hague-Visby Rules.

Your answers to this exam must be submitted by 11:59pm on Monday 15 June 2015 via **Turnitin**.

<https://www.studocu.com/en-au/document/university-of-technology-sydney/international-business-transactions-and-the-law/past-exams/samplepractice-exam-2015-questions-and-answers-take-home-exam/299438/view>

## Sample Question: Univ of Technology Sydney

### QUESTION 1

Over recent years, Kamaria has significantly expanded its car manufacturing industry, which has flourished due to Kamaria's very low labour costs and the very generous government grants and tax exceptions which the Kamarian government provides to exporters. Kamaria has progressively increased the numbers of cars that it is exporting to overseas markets, including Australia. By contrast, due to increasing production costs, Australia's car market has been struggling. It has been estimated that Kamarian-made cars sell for around half the price of Australian-made cars.

The Australian Car Manufacturing Council, which is the peak body for Australian car manufacturers, is very concerned at Kamaria's practices – which it sees as undermining the “level playing field” in car manufacturing. The Council fears Kamaria's practices could make Australian car manufacturing plants unviable and ultimately lead to the collapse of Australia's car manufacturing industry. After consulting with their members, the Council decides to request the Australian federal government to take urgent action to address the current situation.

**The Australian Car Manufacturing Council seeks your advice about the possible measures it could request the Australian federal government to take action in this scenario.**

## Sample Question: Univ of Technology Sydney

### QUESTION 2

Kangaroo Fried Burgers (KFB) is an Australian fast food company that has grown significantly over recent years. After rapidly expanding throughout Australia and New Zealand, KFB's board of directors has decided to expand its business into Kamaria. KFB's board views Kamaria as a potentially lucrative market, as its economy is growing rapidly. Whilst the Kamarian government encourages foreign businesses to set up operations there (with many foreign businesses vying to commence operations there), connections with the ruling family are vital to successfully establish new businesses. The Kamarian government encourages foreign businesses to form joint ventures with businesses controlled by members of the Kamarian ruling family – under which the Kamarian ruling family businesses retain 60 per cent of the profits from these businesses. As an alternative, the Kamarian government allows foreign businesses to establish subsidiary companies in Kamaria, which do not have the 60 per cent profit sharing requirement. However, establishing these subsidiary companies usually requires quite substantial “facilitation payments” to be made to the Kamarian Minister for Development.

**The board of KFB seeks your advice about the preferable business structure for it to use in establishing and running its new business in Kamaria, and any legal issues that might arise from these options.**

Name: \_\_\_\_\_

Biostatistics 1st year Comprehensive Examination: Applied Take-Home Exam

Due June 9th, 2016 by 5pm. Late exams will not be accepted. Instructions:

1. This exam is to be **completed independently. Do not discuss your work with anyone else.**
2. There are 2 questions and 3 pages.
3. Answer each question to the best of your ability. Read the exam carefully.
4. Be as specific as possible and type up your answers.
5. This is a take-home examination. You may consult books, notes, and papers. You may use the Internet as a research resource. However, **you may not consult or discuss this exam with another human being, directly or indirectly, nor may you seek help from another individual on the internet (e.g., no posting questions to chat rooms or message boards).**
6. If you have any questions, please contact Professor Blume by email or by phone (cell: 615-545-2656). Texting is fine as well. Do not worry about being polite. Contact Professor Blume as needed; call for emergencies.
7. Turn in your exam by emailing it to Professor Blume at [j.blume@vanderbilt.edu](mailto:j.blume@vanderbilt.edu) AND Amanda Harding at [amanda.harding@vanderbilt.edu](mailto:amanda.harding@vanderbilt.edu). Your exam is not submitted until Professor Blume or Ms. Harding confirm your exam was received. Alternatively, you may turn in a hard copy to either person by the deadline. If you do not receive confirmation you should assume that your exam has not been received.
8. Vanderbilt's academic honor code applies; adhere to the spirit of this code. Link to this exam:  
[https://dl.dropboxusercontent.com/u/25204698/Comps/Comp2016\\_1yr\\_ATH\\_Final.pdf](https://dl.dropboxusercontent.com/u/25204698/Comps/Comp2016_1yr_ATH_Final.pdf)

## 2. Analysis of Prostate Cancer Data

**Objective:** Investigate if prostate-specific antigen (PSA) and/or Gleason score can be used to predict whether the tumor has penetrated the prostatic capsule. Questions to be answered are listed on the next page.

**Background:** Prostate cancer is cancer that begins in tissues of the prostate gland. The prostate capsule is the membrane that surrounds the prostate gland. As prostate cancer advances, the disease may extend into the capsule (extraprostatic extension) or beyond (extracapsular extension) and into the seminal vesicles. Capsular penetration is a poor prognostic indicator, which accounts for a reduced survival expectancy and a higher progression rate following radical prostatectomy. PSA is an enzyme produced in the epithelial cells of both benign and malignant tissue of the prostate. PSA is used as a tumor marker to determine the presence of prostate cancer because a greater prostatic volume, associated with prostate cancer, produces larger amount of prostate-specific antigen. PSA is measured in samples of blood. After a prostate biopsy, a pathologist examines the samples of prostate cancer cells to see how the patterns, sizes, and shapes are different from healthy prostate cells. The pathologist assigns a Gleason grade to the most common pattern of prostate cancer cells and assigns a second Gleason grade to the second-most common pattern of prostate cancer cells. These two Gleason grades indicate the cancer's aggressiveness, which in turn indicates how quickly prostate cancer may extend out of the prostate gland. The Gleason score is the sum of the two Gleason grades: Gleason 1 + Gleason 2.

Table of variables in data set

<b>Variable</b>	<b>Description</b>	<b>Codes/Values</b>	<b>Name</b>
1	Identification Code	1 to 380	id
2	Tumor Penetration of Prostatic Capsule	0=No Penetration 1=Penetration	capsule
3	Age	Years	age
4	Race	1=White 2=Black	race
5	Results of the Digital Rectal Exam	1= No Nodule 2= Unilobar Nodule (Left) 3= Unilobar Nodule (right) 4=Bilobar Nodule	dpros
6	Detection of Capsular Involvement in Rectal Exam	1=No 2=Yes	dcaps
7	Prostatic Specific Antigen Value	mg/ml	psa
8	Tumor Volume Obtained from Ultrasound	cm <sup>3</sup>	vol
9	Total Gleason Score	0 to 10	gleason

### Investigative Questions:

1. Summarize the variables in the data set. Use figures and/or tables as necessary.
2. Consider PSA alone to predict capsular penetration.
  - a. Do you recommend transforming *psa* prior to analysis? Explain.
  - b. What is the odds ratio (provide a point estimate and confidence interval) associated with an increase of 10 mg/ml? Provide an interpretation.
  - c. For what range of PSA values would you predict capsular penetration? How does this prediction perform?
3. Consider Gleason score alone to predict capsular penetration.
  - a. The Gleason score takes on discrete, but ordinal, values. Should this affect your analysis? Explain.
  - b. What is the odds ratio (provide a point estimate and confidence interval) associated with an increase of 1 unit in the score? Provide an interpretation.
  - c. For what range of Gleason values would you predict capsular penetration? How does this prediction perform?
4. Consider PSA and Gleason score together to predict capsular penetration.
  - a. What is the odds ratio (provide a point estimate and confidence interval) associated with an increase of 10 mg/ml in PSA? Provide an interpretation.
  - b. Do these measures provide a better prediction model when used together? Explain.
  - c. Provide an index measure (function of *psa* and *gleason*) and related cutpoint for predicting capsular penetration? How does this prediction perform?
5. Now consider the remaining covariables. Does controlling for all or a subset of these result in an improved prediction model? Explain. What model do you recommend?
6. A 68 year-old black man presents with a PSA of 17.1 mg/ml and a Gleason score of 9. His tumor volume measured at 35 cm<sup>3</sup>. The digital rectal exam found a bilobar nodule with no detection of capsular involvement. Using your prediction model, what is the estimated probability of capsular penetration (provide a point estimate and confidence interval)? What would you predict for this subject? Compare your result to the subject with *id=89*.

**Directions:** Answers the questions and write a brief summary of your findings from the model you recommended in part (5) (summary should be less than two paragraphs). Put all code and output in an appendix, except when explicitly requested in a question.

#### Data:

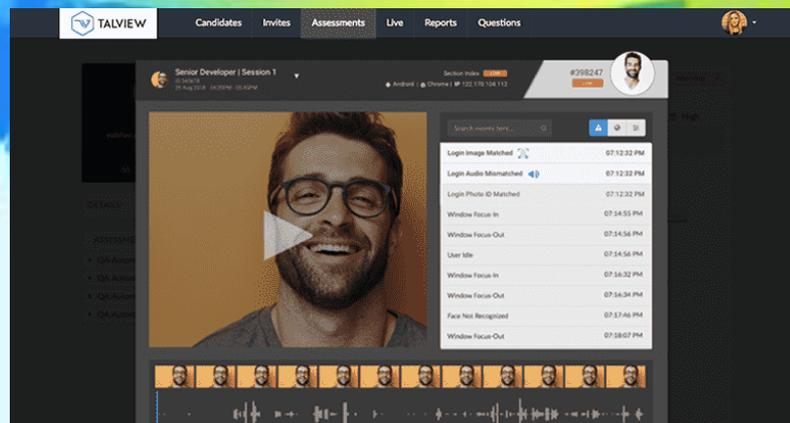
CSV file: [https://dl.dropboxusercontent.com/u/25204698/Comps/prostate\\_study.csv](https://dl.dropboxusercontent.com/u/25204698/Comps/prostate_study.csv)

STATA file: [https://dl.dropboxusercontent.com/u/25204698/Comps/Prostate\\_study.dta](https://dl.dropboxusercontent.com/u/25204698/Comps/Prostate_study.dta)

- This is a take-home exam. **The instructor is not unaware of the possibilities that exist for obtaining exam solutions outside of one's own abilities.** Therefore, the general rules apply:
- You **may not collaborate or otherwise work with anyone else either physically or virtually.** The work submitted must be your understanding.
- You may use your notes, your course text, and any online tutorials that do not require you to interact with another person. The murkiness about “using online tutorials” is resolved below:
  - **Do not submit your exam problems to someone or some agency who will do the exam for you.** These people do everyone except themselves a disservice. They harm you because you won't learn and therefore won't earn (neither money nor the joy of knowing something). They mock the education process. They benefit by collecting cash because you may not know something. Don't let this be a pattern for your life. **A grade is a grade and over time will mean less and less, but knowledge acquired pays dividends for as long as you retain that knowledge.**
  - **The instructor reserves the right to ask the student submitting the exam to explain the answers for any or all problems on the exam. If the student is unable to provide a satisfactory answer, then it will be assumed that the work was not done in an earnest manner and as such the problem in question will receive no credit.**

# Can one conduct the 'regular' 2 hrs exam for students at remote sites?

- Yes, but must have means to authenticate the test taker – human proctor, automated online proctoring, or monitored through platforms such as zoom, google meet.
- Chances that they can cheat is quite high.
- Many studies have been done on these issues.



Talview's system is completely automated and is always monitoring suspicious activity using advanced video and audio analytics. Our software ensures the candidate focuses on the test screen; monitors the light and other factors in the room; checks for suspicious objects and background voice activity; and watches the browser window to detect changes.

# Using the 'regular' tests for open book take home test

- Consist of multiple choice questions, short essays
- Give limited time given to answer
- Students can all take the test at the same time or at different time but questions must be randomized
- Give one question at a time – no looking back
- Considering the number of questions, time allotted, and the unique order of questions for each student, there just wouldn't be time for students to inappropriately collaborate.
- Must be made difficult to “just look up.”
- Create questions of higher order [Bloom's level questions](#). NO RECALL QUESTIONS.

# OTHER FORMS OF OPEN TAKE HOME TESTS/ ASSESSMENTS



# Assessment for Practical Work

- **Competency in actually setting up** the assigned task using materials and equipment available
- Can **post video** on you tube
- Problems in cases where **students do not have the equipment**/tools/machines to complete the tasks given
- May use **Indirect Assessment of Practical Skills (IAPS)** where students' skills are inferred in a written examination or through some other secondary form of assessment.

# Online Oral Test

- Provide nearly **immediate feedback** and so allow the student to learn as they are tested.
- Two main drawbacks: **amount of time required and the problem of record-keeping.**
- Using any stable platforms eg google meet, zoom, skype

# Reading Assignment

- Summarize paper using infographic
- Sharing ideas – eg padlet
- Open ended – to justify, defend, cannot be based on a fixed answer scheme

# Reflective paper

- Identifies the **most significant learnings**, and why they are significant to the learner
- **Includes analysis**, not just description account of the event/activity
- Identifies **changes in behaviour**, specifically those that change practice, and the reasons for these changes
- Includes **other (potentially critical) perspectives** as well as your own: it requires you to 'stand back' from the event/activity
- A reflective assessment should include an **Action Plan** that states what change will be made, when it will be made, and the expected outcomes

Metacognition is an awareness of one's own thought processes. As such, it involves an almost simultaneous, conscious degree of self-awareness. "This is how I approach or think about a situation"; "this is how I might best approach this particular concept in order to more fully understand it"; "this is how I am thinking about this issue and it is or is not effective"; "these are other possible approaches I might take instead" (Courts and McInerney, 1993 p.57)

# Example – Reflective Paper

## Example 2: An Example for a Knowledge-Based Learning Event

1. What were the major learnings for you in this learning activity?
  - a. Why were these learnings the most significant ones of this learning activity?
  - b. What is the key evidence behind the new learning? Reliability, validity and generalizability of the evidence?
  - c. What are the key implications of the new learning?
2. How do these new learnings differ from your previous learnings and/or experience?
  - a. What are the implications for your practice and patient care of these changes in knowledge?
3. How will you apply these new learnings:
  - a. For new patients
  - b. For current patients (e.g., review files, advise to see physician, contact physician)

# Quiz

- **Short but frequent quizzes** can help both the instructor and the student track their learning progress. A quiz can be just 10-15 questions long to provide sufficient information for feedback.
- For multiple choice quizzes, **automated grading** can save instructors time and provide quick feedback for students.
- For short answer or short constructed response items, **instructors may want to provide additional commentary feedback** through emails or through the use of a private communication platform in a Learning Management System.
- <https://sites.psu.edu/onlineassessment/gather-evidence/>

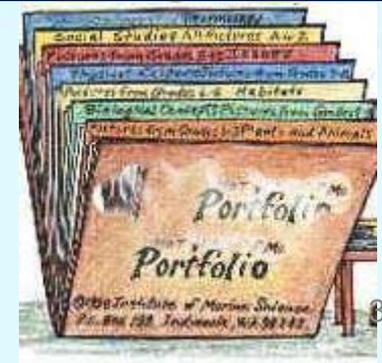
# Projects

- Projects can include **simulations, role playing, case studies, problem solving exercises, group collaborative work, and brainstorming or debates** on various topics.
- For individual projects, participants in group projects should receive **peer feedback** for a variety of viewpoints. An online environment allows students or the instructor to give and receive immediate feedback.
- Students **present their findings** and conclusions via websites/blogs/forums/discussion boards.
- Instructors need to provide **evaluation forms for self-evaluation and peer assessment**
- <https://sites.psu.edu/onlineassessment/gather-evidence/>

# Portfolio

- Students can be creative in **showcasing their learning and growth** through various combinations of papers, audio/video, and/or presentations.
- Instructors can also pre-determine what ought to be included in each portfolio
- **Peer reviews** of portfolios can also serve as an effective learning and assessment tool
- <https://sites.psu.edu/onlineassessment/gather-evidence/>

Include entries that demonstrate a progression of student understandings and ultimately mastery of the concepts



# Presentations

- Presentations can be in the form of informational web pages such as blogs, web-based student-generated quizzes, video/audio, or slide shows.
- Students can construct knowledge collaboratively, and engage in self and peer reflection.  
Peer **assessment** can enhance students' learning as they read and **assess** one another, developing their discrimination skills and learning from the discourse community.

<https://sites.psu.edu/onlineassessment/gather-evidence/>

# Case Study

- Case studies can be used for individual or group assessment
- Asynchronous communication environment (discussion/blogs instead of chat) is actually more appropriate for problem based approaches because students have more time to reflect and collaborate with each other.
- Teams of 5-6 are recommended.
- Each team member can be responsible for contributing responses for one or more cases by posting their reports and supporting materials. Other team members then respond with questions to the original posts. Based on question and critiques from team members, students can revise individual reports. Instructor can follow up by asking students to develop a case from their real world experience. Students can use a variety of methods such as simulation/games, videos, slide shows, photos, staged dialogue, and narration over text and images.



for students

## Synthesize

- Remind them that they are **evaluated on their ability to synthesize data from multiple sources** (books and scholarly articles). Should show that **multiple sources were used to develop conclusions**.

## Avoid Plagiarism

- Remind students that they **cannot take credit for another person's ideas without proper attribution**. Must know how to **cite and quote** from a source and **avoid over-relying** on others' ideas and words. Produce **turnitin** report together with the test/assignments.



for students

## Proofread

- Check **spelling, grammatical, and other errors before turning it in.** It is **expected** since students are given ample time to work on the test.

## Do Your Own Work

- **Don't discuss/ask others to complete take-home tests.** It can easily be identified. Resist the temptation to compare tests with other students.



for students

## Keep Copies

- **Save a copy** of your take-home test besides having it in your desktop. Save all correspondences to show that the test was sent on time.

## Don't Wait Until the Last Minute

- **Do not procrastinate.** Examiners have high expectations for the output that is being submitted. Begin the test as soon as possible.



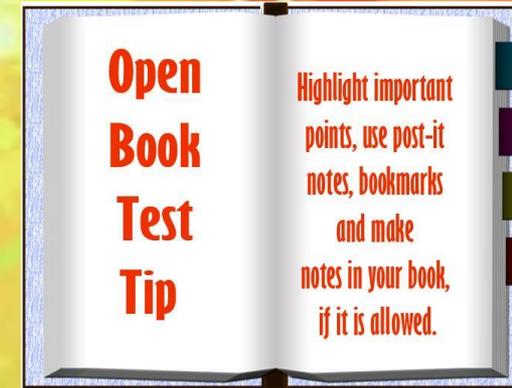
REMINDER for students

- Make sure that they receive confirmation that the test has been received by the lecturer.



# Helping students prepare for the exam

- Know major concepts, organization of main ideas, and relationships between different concepts.
- Use **lecture notes** to zero in on what the instructor is likely to ask on the exam.
- Plan ahead by creating an **outline of the material**.
- Anticipate the test questions. Use your imagination as to what material will be covered..

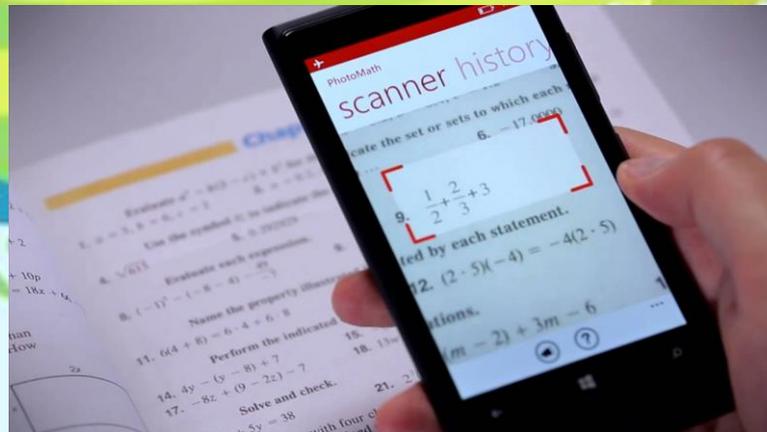


# Helping students prepare for the exam

- Prepare **potential answers** to your anticipated questions.
- Mark with **sticky notes, highlighting, color coding**, or other markers those sections of your textbook or notes that might address different potential questions. Clearly **label the markers** with specific descriptions, so those sections can be found easily during the exam.
- Make **lists of important facts** and other details in an organized way, so this information will be readily available as you need it during the exam

# MINIMIZING CHEATING IN ONLINE ASSESSMENTS

Research in this area suggests over 50% of college students cheat on an exam or test at some point, and most cheating occurs in-person because most teaching occurs in-person (Landers, 2020)



# HIGH-TECH CHEATING



# Students cheat even for in-class exams



# Check out!!



- How To Cheat On Some Online Multiple Choice Tests
- HOW To HACK and find ANSWERS to Questions in ONLINE EXAMS TESTS in any Website TRICK - PART 1 !

MCQ can only be conducted as an online assessment option if it is proctored or can be monitored online and with just enough time given for completion.

# Strategies for Minimizing Cheating in Online Assessments

- **Use Question Banks** - students can choose questions groups
- **Mix Objective and Subjective Questions** - Mixing objective and subjective questions may not prevent students from sharing answers/information, but it may limit the effect on a student's final grade (Watson and Sottile, 2010).
- **Set a Timer** - Those adequately prepared to take a test are less likely to rely on books or notes compared with unprepared students.

# Strategies for Minimizing Cheating in Online Assessments

- **Display One Question at a Time** - With multiple questions displayed on a computer screen, it is easy for students to take screen captures/photos with their mobile devices and share them with other students. While students can still technically create images of single questions, or even copy/paste them into a document, it is more time consuming and unwieldy.

Source: <https://sites.baylor.edu/idblog/2018/05/16/7-strategies-for-minimizing-cheating-in-online-assessments-with-canvas/>

# Strategies for Minimizing Cheating in Online Assessments

- **Limit the Number of Attempts** – When the ***Allow Multiple Attempts*** is disabled (suggestion using Canvas), students only have one attempt to answer. This can minimize student attempts at answering potentially incorrect test questions.  
Consider allowing multiple attempts for low-stakes assessments (short quizzes) while allowing one attempt for high-stakes assessments (mid-terms and final exams).

Source: <https://sites.baylor.edu/idblog/2018/05/16/7-strategies-for-minimizing-cheating-in-online-assessments-with-canvas/>

7/2/2020

## Strategies for Minimizing Cheating in Online Assessments

- **Limit Feedback Displayed to Students** – Faculty can limit what types of feedback are displayed upon completion of a test (Remember: Assessment as and for learning)
- **Be Purposefully Selective in Assessment Methods** – Consider using multiple choice for lower stakes assessment of student learning. In assessing student mastery of course outcomes, considered other methods (e.g. portfolios, performance tasks, presentations, reports). Designed to measure different course outcomes.

# Friendly Reminders



## BE CONSIDERATE

**Treat  
Others Kindly**

- Be considerate (this is not a normal semester nor a normal and conducive learning experience)

## Reminder!

- Send multiple reminders to students

## BE FLEXIBLE

- Be flexible with time (for students who provide valid reasons)

# MAKE SURE THE ASSESSMENTS ARE VALID, RELIABLE & AUTHENTIC



## Validity of Assessment Task

**Validity refers to the ability of the assessment to measure what it is supposed to measure.**

- Assessment methods and instruments must be appropriate with the desired levels of learning outcomes to be attained.
- Various forms (such as tests, assignments, presentations) to assess the different learning domains and the CLOs determined for the course. More than one task and source of evidence are needed as a basis of judgment of students' competence.
- Test coverage must focus on gathering evidences to determine LO attainment.
- Examination and test questions should be validated by another person with expertise in the area assessed.



## Psychological Assessment



# Reliability of Assessment Task

- Reliability refers to the degree of consistency and accuracy of the assessment outcomes.
- It reflects the extent to which the assessment will provide similar outcomes for candidates with equal competence at different times or places, regardless of the person conducting the assessment.



## Increasing reliability:

- Provide **clear instructions** on how to answer questions in all tests.
- Develop **marking schemes/rubrics** as a guide to ensure standardization in marking. Vague scoring criteria threaten reliability.
- Ensure a **fair distribution of marks** for each question/task.
- Provide **clear guides for observing and recording evidences**.
- Ensure that the **test venue is conducive** and that the tests are administered in a fair manner.
- In cases of multiple examiners, conduct **moderation in marking**. The appointed moderators determine appropriateness of the standards and marking.
- Develop **tests of appropriate length**. Very short tests are less reliable.

# Authentic Assessment

EDUCATION UNION  
TIE  
TEACHERS IN EDUCATION

fo Frank Audio

1

## WHY USE AUTHENTIC ASSESSMENTS?



AUTHENTIC ASSESSMENTS ARE THE BEST WAY TO DETERMINE LIFE ACHIEVEMENT



ESSAYS AND CLASS TESTS DO NOT RELATE TO THE REAL WORLD

2

## HOW TO INCORPORATE AUTHENTIC ASSESSMENTS

ART STUDENTS SHOULD BE ASSESSED BY THEIR ARTISTIC TALENTS



TRY YOUR BEST TO RELATE AUTHENTIC ASSESSMENTS TO REAL WORLD PROBLEMS

3

## HIGHER ORDER THINKING SKILLS



THESE ASSESSMENTS MUST CHALLENGE YOUR STUDENTS TO CREATE AND SOLVE PROBLEMS



ALSO LET YOUR STUDENTS' IMAGINATION CREATE THESE ASSESSMENTS

4

## APPLY LEARNED KNOWLEDGE



ALL STUDENTS MUST ONE DAY APPLY WHAT THEY LEARNED IN SCHOOL TO WORK SETTINGS

REAL LIFE DOES NOT OCCUR WITH MULTIPLE CHOICE QUESTIONS AND ESSAYS

5

## RUBRICS



AUTHENTIC ASSESSMENTS ARE MOSTLY SUBJECTIVE

RUBRICS ARE NEEDED TO SET CRITERIA AND GOALS FOR YOUR STUDENTS

- application of acquired knowledge and skills to real-world situations
- determine whether students can put their learning to gather information, analyze it down to relevance and using it to solve problems.



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