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INF2002 - HUMAN COMPUTER INTERACTION  
TEAM PROJECT PART 1

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# Introduction

## Problem

Higher education faces numerous challenges that affect both teaching and learning. One significant challenge is the large number of students in a single class, which often prevents personalised attention and support. Variations in the teaching quality due to differences in instructors' experience and skill levels is another concern. Traditional assessment methods may not always accurately reflect a student's comprehension and application of concepts. In addition, accommodating a wide range of abilities and learning styles is a considerable challenge. Although technology holds promise for enhancing learning, its integration into education needs careful planning and execution. The pressing question is whether we can harness technology and data-driven strategies to overcome these challenges and foster more personalised and effective learning experiences in higher education.

## Focus Area

Higher Education

## Activity / Situation

Students have difficulty understanding or learning from lesson materials.

# Needfinding

## Interview

We recently engaged in heartfelt conversations with a group of seven students and two professors. Their stories painted a vivid picture of the challenges they face in their academic journey. Our goal was simple, yet ambitious: to create an environment where all can thrive, transforming challenges into stepping stones towards growth and innovation.

For general questions asked during the interview, please refer to "General Interview Questions" under Appendix.

## Interview Results

Most of the students are given slides as a primary source of information as a lesson material.

Many students are provided with presentation slides as their primary learning materials. However, they mentioned that they struggle to understand some of these slides because they lack detailed information or examples. The slides that they struggle to understand are usually overly concise, with just key points, and do not provide enough explanation, making it hard for students to grasp essential concepts. This results in them having to rely on lectures for information.

A significant issue arises from this heavy reliance on lectures for information. Students feel obligated to attend lectures because the slides do not offer comprehensive content. This creates problems as the students find lectures difficult to focus on, and they might not be time-efficient for all students. Moreover, lecture quality can vary based on the professor, further complicating the situation. Some lecturers are very thorough and have methods to keep up engagement to ensure students are able to absorb the materials while some lecturers are "by the book" and just read out. Although they can access the lecture recordings at a later time, they find it time inefficient as they need to spend time reviewing lengthy recordings to extract the information they require.

Some students mentioned that some modules are adopting the "flip-board" learning approach, where the students receive lecture slides and sometimes pre-recorded lectures before the actual class. While this promotes self-directed learning, it becomes challenging when the slides lack depth, making it tedious to prepare. Students might also have to take graded quizzes based on this incomplete information.

Hence, students felt that lecture slides should be detailed and independent as a source of information. They should provide sufficient explanation and examples when introducing key points or concepts, instead of being concise.

Despite the challenges that students face regarding lectures, they acknowledge that interactive tools like Kahoot quizzes and Padlet discussions during lectures can significantly improve the learning experience and keep up engagement or attention span. Hence, students felt that lectures should focus more on interactive activities that review their knowledge on the topic being taught. Some students also felt that linking industry experiences from lecturer's with the subject may also help visualise the information better.

There are some improvements suggested from the students. First, the lecture recordings. Sometimes, the lecture recordings were not uploaded after the actual lectures were conducted, which led to students not able to review the lecture recordings for revision. Next, students find that if the professor starts the topic by introducing the concept followed by some examples, it will be helpful for them to grasp the content and have a better understanding.

Based on the interviews with the professors, they find that the addition of pre-read will be beneficial to students, as the students can foresee contents that they do not understand and ask deeper questions during the lectures. While preparing for lesson materials, they mostly change some of the parameters in past years papers or go online to research for contents that can be used for our lesson materials. There are some considerations made when preparing for materials, such as the understanding and background of students, time and the number of students in the class.

According to the professors, they believe that a possible reason why students may struggle to understand lesson materials can be due to poor time management, as students are already overloaded with many assignments. Without proper time management, students may not have the time to finish their assignment in time, or even have time for revision. The professors believe that the current lesson materials can still be further improved based on the illustration of certain concepts, to make it more understandable for students. Next, due to the emergence of ChatGPT, they also feel that it can be used to enhance the learning

process of the students. However, they are still searching for a way to prevent students from plainly copying answers from ChatGPT.

## Survey

We have chosen the survey as one of our need finding methods because it is relatively quick to complete and causes minimal disruption to the school day. They can be administered to large samples in a short space of time, making them time-efficient. Survey consists of 6 questions and were sent to students in SIT campus to fill up.

The purpose is to find out students' perception of school learning materials, their way of approach to studying, the effectiveness of teaching methods by the school and suggestions of improvements for the school.

Here is our survey questions:

1. What lessons materials are provided for the course?
2. What do you feel about the lesson materials?
3. Based on the previous question, why do you feel this way?
4. How do you typically approach studying and understanding the lecture material?
5. Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials?
6. What do you think can be done to improve the lesson materials?

## Survey Results

The feedback from SIT students on their course materials and teaching methods varies. While some students say the materials are extensive and in-depth, others believe they are lacking in detail and difficult to understand.

The average satisfaction score sits at 5.5 out of 10, suggesting mixed feelings amongst the students. This score indicates there is potential to enhance both the quality and delivery of course materials. A substantial number of students resort to external resources, such as YouTube, Khanacademy, and W33 schools, to supplement their learning. This points towards a need for more detailed and comprehensive materials provided by the institution itself.

When it comes to teaching methods, the feedback is split. Half of the students surveyed do not believe that the teaching methods used in their classes are beneficial in understanding the course materials. This feedback highlights a need for more engaging and interactive teaching methods, which can cater to a variety of learning styles and preferences.

To enhance the quality of course materials, some students have suggested including more detailed explanations in the slides and not merely reading from them. Other suggestions include creating practice questions for students to work through at their own pace, and providing "cheat sheets" or mind maps to help condense and compact the course content.

Students would benefit from more thorough and complete course materials, more effective teaching methods, and more resources such as practice problems and study guides, according to the surveys.

# Task Analysis

## Results:

### Course Materials:

**Student Feedback:** Student opinions on course materials vary; some find them extensive and in-depth, while others believe they lack detail and clarity.

**Average Satisfaction Score:** The average satisfaction score of 5.5 out of 10 suggests mixed feelings among students, indicating room for improvement in the quality and delivery of course materials.

**External Resources:** Many students resort to external resources like YouTube, Khan Academy, and W33 Schools to supplement their learning, signalling a need for more comprehensive and detailed materials provided by the institution.

**Suggestions for Improvement:** Students suggest including more detailed explanations in slides, creating practice questions, and providing "cheatsheets" or mindmaps to condense course content.

### Teaching Methods:

**Student Feedback:** Feedback on teaching methods is divided, with half of the students expressing dissatisfaction with their effectiveness in understanding course materials.

**Need for Interactive Methods:** The feedback highlights the need for more engaging and interactive teaching methods that cater to diverse learning styles and preferences.

### Flip-Board Learning Style:

**Student Experience:** Some modules adopt the "flip-board" learning style, requiring students to study independently before lectures. However, this approach presents challenges when lecture slides lack depth and detail.

### Interactive Elements:

**Value of Interaction:** Students acknowledge the value of interactive elements, such as Kahoot quizzes, Padlet discussions, and engagement strategies during lectures, in enhancing the learning experience.

## Conclusions:

**Course Materials:** There is a need for more comprehensive, detailed, and clear course materials. Providing supplementary resources like practice questions and study aids can enhance the learning experience.

**Teaching Methods:** Teaching methods should be more interactive and effective in helping students understand course materials. Catering to diverse learning styles is essential.

Flip-Board Learning: The "flip-board" learning style can promote self-directed learning but should be accompanied by informative and detailed lecture materials.

Interactive Elements: Incorporating interactive tools and activities in lectures can mitigate challenges associated with traditional teaching methods and engage students effectively.

Additional Improvements: Constant updating of materials and lecture recordings, integration of interactive platforms like Kahoot, and a teaching approach that introduces concepts followed by examples can further enhance the learning experience.

In conclusion, addressing these findings can lead to more effective teaching and learning experiences for students at SIT, ensuring that course materials are comprehensive, teaching methods are engaging, and interactive elements are maximised.

### User Needs Statements:

1. The students need comprehensive and clear course materials to better understand course content.
2. The students need effective and engaging teaching methods to make learning more enjoyable and impactful.
3. The students need more informative lesson materials to better study independently.
4. The students need the interactive learning elements to enhance engagement and comprehension during lectures.
5. Students need quicker access to lecture recordings to review them for revision.

### Explanation:

1. **Comprehensive and Clear Course Materials:**  
Students need course materials that are comprehensive, detailed, and clear, providing in-depth explanations of concepts and subjects. They require materials that facilitate their understanding of the course content without the need for extensive external resources or while self-directed learning.
2. **Effective and Engaging Teaching Methods:**  
Users express the need for teaching methods that are not only effective in helping them understand the course materials but also engaging. They seek teaching approaches that cater to diverse learning styles and preferences, making learning more enjoyable and impactful.
3. **Support for Self-Directed Learning:**  
Some students engage in self-directed learning with the "flip-board" approach. They need lecture materials that are informative and detailed to support their independent study efforts, ensuring they can effectively prepare before lectures.
4. **Interactive Learning Elements:**  
Students value interactive elements in their learning experience. They require the incorporation of interactive tools and activities during lectures, such as Kahoot quizzes and Padlet discussions, to enhance engagement and comprehension.
5. **Quicker access to lecture recordings:**  
Due to the nature of lectures, some students may have missed out on certain topics during lecture due to reasons such as the speed of the lecture or sickness. Lecture recordings allow students to catch up or clarify topics of the lecture.

# Appendix

## General Interview Questions:

Here is the general questions:

For Students

Background:

What you study

What lesson materials you are provided usually (e.g. slides, labs,...)

How do they usually teach with the lesson materials (how they conduct their classes, labs)

Question:

What do you feel about the lesson materials (like it? Hate it? why?)

How do you typically approach studying and understanding lesson materials?

Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials? Why or why not?

What do you think can be done to improve the lesson materials

Ask if required:

Does current style of teaching help you understand lesson materials better? Why or why not

Do you prefer lectures conducted online or offline?

What do you think of lectures conducted online ?

Do you want lectures to have more active participation activities if any,if not tell me why.

For Lecturers:

How do you prepare the lesson materials?

In your experience, what are some common reasons why students may struggle to understand or learn lesson materials?

What is your preferred way of teaching?

Do you think that the lesson materials can still be further improved? Why or why not?

## Interview Transcript:

### Interview 1

What lesson materials:

slides in pdf,

tutorials,

labs,

lecture recordings that can be rewatched,

online resources/links that he doesn't touch (no time to touch since too many projects and assignments to do, not important in curriculum, also not graded)

How they teach with lesson materials:

Normally go through the lesson materials during lecture



Sometimes expected to pre study slides before lecture, then lesson will be Q&A or interactive activities

E.g. kahoot, slido. Most of time done in labs or lectures themselves

How he feels about lesson materials:

Varies across module, but 6/10 or 7/10 on average

The bad modules: Slides are unclear and confusing. They are meant for lecturers to do presentations with them, so they are useless on their own. Hence, the modules that depends on self-learning and uses such slides is a bad combination.

About Intro to SE: weekly graded quizzes are added stress

Slides should come with pre recorded video, as slides are hard to interpret (no explanations or elaborations, very little details, it mostly suitable for presentation by lecturers, not for self study)

Would be better if lecturer records themselves.

Maybe because concept is too foreign, but he has to rewatch the lectures multiple times to understand something

No clear examples provided, everything is dependent on the student

The good modules: Well elaborated explanations in slides, that is not reliant on online lectures. During lectures, they will go through processes described step by step. They will do demonstrations during the lectures.

For example, during ICT1011 Computer orgs and arch, the lecturer uses the MSP430 to demonstrate during lecture, and also uses pen and paper to demonstrate how assembly code work.

Extra:

math 2 slides

- too abstract
- examples

The professor blame people for not attending his lectures and tutorials, even though people dont attend because they do not help.

Tutorials conducted by other professors are very helpful, as tutorial teacher will go through concept a bit, before going through the questions.

Some Takeaway

The process of introducing concept -> doing example questions -> having clear answers or good example is very helpful.

...

## **Interview 2:**

Questions:

- Management/marketing in different university
- Slides,lecture recording after class, additional content (videos) to explain the subject in further detail, quizzes,LMS materials.
- In depth during tutorial, brief during lecture.

Prefers slides provided before classes which allows interviewee to go through content beforehand. Access to lecture recordings allows interviewee to go through information that may had been missed out. Wishes more access to digital materials(E-library/E-Textbooks).

Digital Materials:

E-Library with wider access beyond peer-reviewed articles  
Digital slides/notes  
Lecture Recordings  
Pre-lecture Recordings

Approaches professors during tutorials, as professors are able to provide immediate guidance and clear student's doubt. While doing assignment, interviewee would rely on search engine to find reliable sources and guides. Interviewee also reaches out to her peers.

The teaching methods vary from professors, it's highly dependant on who the professor is for the class. There are professors who does not like requests such as access to digital materials (lecture recordings), with the perception that students should pay attention during lectures than relying on the recordings.

There are professors who does take in such feedbacks and provide students with access to digital materials, and even upload digital readings to further student's understanding. With tech-savvy professors, lectures are generally much more interesting, which captures students attention.

Tech Savvy Professors:

Incorporates engaging quiz/QnA, such as kahoot to help students understands.  
Ensures lecture is being recorded before starting the lecture.  
Consistently utilise the digital technologies to educate students.

Traditional Professors:

Reading and teaching off the books/slides.  
Such lectures can be dry and difficult for students to sit through.

Access to lecture recordings allowed interviewee to input more details on lecture content and expand on interviewee's understanding of the content taught during the weeks. Some lecturers would upload the lecture recordings which allows students to go through lecture content with the knowledge they learnt during the day due to interviewee's experiences shared among fellow cohort that with delay of uploading lecture recordings may hamper student's understanding or memorisation of content taught.

Standardise lecture recording procedures across the board. All professors should align their stand in providing digital materials, such as fundamental lecture recording. There cannot be professors who does lecture recording, and another half of the professors who refuses to record their lectures.

Ask if required:

Traditional teaching methods that does not rely on technology hinders interviewee's understanding of the lesson.

- Particularly, online lectures/tutorials or classes integrating digital technologies have helped interviewee' better understand the lecture content. She observes that she is more attentive and drawn to interactive classes as it piques her interest.

Prefers online classes as it is more accessible and more schedule friendly (access from anywhere than strict location).

- Able to attend classes at anywhere, anytime.

Loves online classes due to flexibility which allows interviewee to plan schedules outside classes.

- Such as working part-time.

- Online class allows student to study from their own comfort and preferred environment.

-Yes, online classes can be a challenge to hold student's engagement and participation. Having cameras on for every class may not be a strict requirement and the online environment does not feel like an actual class when students are hiding behind their monitors.

Such situations will lead to lower participation especially in Zoom breakout rooms.

Lecturers could have encouraged students to have their cameras turned on and actively participate in QnAs.

Even by pointing out different students to answer a question would make a difference, than going through the whole lecture with zero interaction.

Expects and hopes that professors could have incorporated or utilised more edutainment such as Kahoot/Pictionary/20 Questions.

Takeaway: Sole reliance on technology improvements to keep up subjects.

### **Interview 3:**

Background: SIT year 2 ICT IS student

Lesson materials: slides pdf and some module provide videos

How classes are conducted: Lecture online and lab in school. Now school is changing to flip classroom style

Question:

- Some of the module lecture slides are not well-detailed.

- Nope, Normally Mr. Tim read up lecture slides before the online lecture and if he does not understand, he will listen through the online lecture again or read through information from online

- dont understand because not detailed enough

- e.g. picture only slides (HCI)

- dont prefer lecture recording because harder to focus, not time efficient

- Some of the lecture slides can be detailed in further, because in some modules, the slides information are not that many and students will only understand when the lecturer go through, but some of the students prefer to self-study as they feel bored hearing lectures.

- slides should have elaborated explanation

- (Style of teaching - flip style) Yes, because after self-reading, any questions that Mr Tim are not clear, he will ask the lecturer during the lectures

- Prefer online, more interactive

- Online lectures have its good points such as saving the time to travel to school but because of this comfort, sometimes at home it is too comfortable and it is easy to zone out halfway through the lecture and use phone

-Yes, when others answered wrongly for a question during the activity, the students can learn from the mistakes made by them

Takeaway: some prefer self-study style and doesn't like to listen to the online lectures, which they prefer to have well-detailed lecture slides

#### **Interview 4:**

Background: SIT Year 2 ICT student

Question:

1. What do you feel about the lesson materials (slides, tutorials, labs, recordings, extra resources), like it? Hate it? why?

Material is fine but some do not have a detailed explanation.

2. Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials? Why or why not?

I feel that it varies from class to class, it may be quite stressful when profs decide to do like pre-lesson quizzes when there's a lot of workload for the students already.

3. Do you prefer lectures conducted online or offline?

online

4. Do you want lectures to have more active participation activities if any, if not tell me why.

Sometimes people don't really listen to the lectures, so some activities may get them to participate and learn more.

5. What do you think can be done to improve the lesson materials?

Constant updating of materials and make lecture/ tutorial recording more accessible.

#### **Interview 5:**

Background: SIT Professor

Questions:

How do you prepare the lesson materials?

Remark: Most of these materials are so called passed down from previous years. Of course on our end, we have to go through it to figure out whether it is still relevant. Of course we also made some adjustments, to make sure the content will not be similar to last trimester or last run, so that on our end we just do our part to prevent so called copying.

In terms of preparation, we also have to check the hardware and software requirements if there is a need and they are being used.

What are some of the factors or considerations that influence how you prepare the lesson materials?

Remark: Review the content to see whether it is still doable, change some of the parameters in the content, so it will be different from last run. Of course the consideration is to make sure that we can so called help prevent cheating or copying from the previous one. And then, of course the other thing is to check software and hardware requirements if there is such requirements that they will be using in certain software or hardware, to make sure that we have the readied available hardware and software for the class.

In your experience, what are some common reasons why students may struggle to understand or learn lesson materials?

Remark: Ok, from my experience, of course I think students are overloaded with a lot of other things, and of course if they can do their time management better, that would certainly help. One of the things that I have realised is students only start to look at the lab sheet when they are in the lab session. Ideally, they should read about the lab sheet before coming to the lab or to the lesson. That would help a lot, in the sense that they would be able to be more able absorb the knowledge given by the lecturer or the instructor, because by then they would have read the lab sheet and they can foresee what they do not understand, rather than they try to figure it out at home after the lab.

What is your preferred way of teaching?

Remark: Ok, so far from my experience, I have find out that the branded learning approach which is almost like what we known as the flip classroom approach, is very doable. In this approach, we provide all the materials for the students at least one week in advance. And upon the student coming to the lab or lecture, we have a some sort like quiz to check whether the student has some pre-reading on the topic, so that we can assess how far or how slow we have gone into the topic or the lesson. On the other end, it will also become useful because we will like the students to do their pre-reading and preparation at home, and when it come to the lab or lecture, they will be more able to engage in lesson because they would be able to ask deeper questions, because after reading it, they should have some understanding and ask more deeper questions, and we will be able to clarify those questions in advance. Whereas if they are just learning at that time, they have to go back home, digest, and then come back. On the other end, we also want to make sure that we close the whole lab session with a simple quiz, so that we can close the chapter better.

Sub-question: Just like the "Intro to SE", now they also got the pre-read.

Remark: Yes, I think it will be useful because they actually force students to do a bit of pre-reading which is actually good, because once you get into momentum, you are actually helping yourself.

Do you think that the lesson materials can still be further improved? Why or why not?

Remark: Ok, current materials have to be reviewed because of the emerging of ChatGPT. ChatGPT is a very useful tool, it certainly helps to enhance the learning process if it is used correctly, because well, you can ask ChatGPT about what you don't understand and they can give you the so-called reasonably good answer. Of course, we have to take it with a bit of verification. On the other end, if we are just blindly using it to answer questions that are being post to us, then we will not be learning anything, we would just be using it as a feedback to other people's questions, just becoming a relay station. In this aspect of the ChatGPT, for teaching as well as for materials, we certainly have to review. On my end, we are trying to make sure a way that ChatGPT is a good tool to use and we encourage students to use it. But on the other end, we also want to figure out a way for the students to use it effectively for the learning, not so-called as a relay station to just feed forward the answers back to the instructor.

### **Interview 6:**

Background: SIT Professor

How do you prepare your lesson materials? For example, the slides, or the tutorials and labs that we see on xsite today.

This one can definitely do task analysis

I google around and find textbook

If there is no textbook, im in deep trouble

Have to look around other related materials

May have to go into research topics to see the tutorials that you see today, and spend some time to read them

Research paper/document (something more cutting edge), normally like 10 or 20 pages and digest it

Think about how do I filter it and make it easy for someone who is in year 1 or year 2 to understand -> type it out on the slides or put it into tutorial/lab

For tutorial/lab, first have to think what is the outcome that I want, what is the thing that I want to test, what is it meaningful and important to test and check, what is the objective doing this tutorial or lab

After that, think of how I am going to assess or check the knowledge. From there I will also have to read the textbook and filter whatever that is needed, and put into tutorial/lab

Think about how am I going to mark it, what is the criteria for the marking, there is certain criteria that has to map back to the objective

What are some of the factors or considerations that influence how you prepare the lesson materials? Do you think that the lesson materials can be improved further?

Factors

depend on how much people know now, what is their background, do they know something, cover before or don't know anything

Then that will affect how I will prepare the lesson materials

If don't know anything, starting from scratch, then need to give something

If not then you can assume they know or there is a prerequisite, then you move on to something else

How many people are there

Will affect the amount of time you can spend with one person, marking etc

Time, how much do I have left

Have to make a trade off

Would you want to get a timely reply or not

Affect how you will prepare the lesson materials

Sometime when running out of time, maybe cut down/reduce something, depends

How can the materials be improved further

It definitely can improve further

Number 1: the illustration of certain concepts could be improve further

Number 2: how the lesson materials will be assess, obviously assessment methods that would require more practice and more time to evaluate would be better

### **Interview 7:**

Background: SIT Year 2 ICT SE Student

Question:

1. What do you feel about the lesson materials (slides, tutorials,labs, recordings, extra resources), like it? Hate it? why?

I feel that the lesson materials are okay. However, there are lecture slides in certain module that are not very clear.

2. Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials? Why or why not?

I feel that the current teaching methods is effective, as they have platform such as Slido where students can put in their queries about the topics.

3. Do you prefer lectures conducted online or offline?

Online

4. Do you want lectures to have more active participation activities if any,if not tell me why.

Yes, as it makes the lecture more interactive and engaging.

5. What do you think can be done to improve the lesson materials?

For the lecture slides, I think it can add in some examples for each topics, to make it more understandable and clear.

Interview 8:

For students

-Business (Banking/Finance),poly

-LMS(Slides,tutorials,workshops,learning in and out of a class room with specific software for the industry (RapidMiner for machine learning,Tableau for data sorting).

-Lecturers will often constantly have interactions with the class ,gives assignments beforehand,answer assignment questions on the spot or do presentations on news article related to the course. Will often gather in groups for discussion. Learn necessary skills(read news article to keep up with current affairs,learn analysis of the market, read data charts,analyze and conclude from data to do the trade.

Questions:

-Sufficient,but were taught or encourage not to rely only on school materials and do outside research often. Combine both sources together for co learning with the other class (such as discussions).

-Always be open minded to learn new information and willing to receive knowledge. As much as materials that are given by the school, try to go to other seminar to learn more course related topics. Theres only so much the materials can give to a person in knowledge so try to spread out and learn new things to contribute to own project.

-Definitely, Provides basic understanding (macro/micro economy,business management, communication) Some lecturers do hands on interactions(kahoot/different platforms such as trading platforms/computer labs for practical).Some of them just show materials(videos) and do basic interactions with classrooms) . Some of them are more passionate and are willing to share with their experiences in the sector(share examples and difficulties used to face in sector, share law cases that they used to handle and link them with the topic for better education).

Ask if required:

-Yes, The different styles do help the students to experience multiple methods (more self sufficient/independent, more materials to help) .The lecturers are very understanding and they answer a lot of enquiries due to availability(respond to emails quite fast,stays back for lecture relatively long)

-Prefer online lectures because can go back on recordings to get clarification or missed subjects, but still thinks the human element is important so does not mind. Feels online doesn't really help to maintain attention span ,offline is better for grabbing attention.

-Feels the same as the offline material,depending on the lecturer material delivery and interactions. Face to face interactions are not there in comparison. Feels that the barrier of online interaction does not help to get support for certain introverted students.



-Yes, It does help keep the mind going and active for the lecture and prevents loss of attention span.

#### Interview 9:

-Landscape Architecture and Plant Science (poly)

-Lecture notes(powerpoint slides) ,Books for additional independent study.

-Either self study(sometime narrated notes) or just read through slides(does not explain in detail unless the student ask for clarification) .Clarification not clear enough. Not a lot of guidance otherwise.

#### Questions:

-Theres good and bad sides. Self directed which does not feel that stressful because OTOT and wont feel stressed whether they understand the materials faster/slower. Bad side is the interviewee feel that the lecturers are becoming complacent with teaching methods( Sometimes the lecturer does not understand the lecture material when the interviewee was asking for clarification based on experience).

-In terms of study materials, write down notes in own words to understand better for better thought process. Search on own research materials and ask classmates to understand lesson materials better because he feels the lecturers don't really understand it.

- No, when lecturer are "explaining the materials",they don't really explain,they just read out the slides. When it is self directed learning, they will narrate the recorded slides with more explanation but interviewee feels that due to the speed of the narration, he feels the attention span is easily lost and thus does not absorb the materials.

-Re-review the lecture materials due to said experience. If they were to use narrated slides,it would be good to implement a way to speed up or slow down narration.

#### Ask if required:

-no, Teaching methods are unreliable, wished the methods are to be modernised and adapt the way they teach to be more suited to the current generation.

-Online, Easier to record and playback the lecture, makes it more accessible.

-Depends on the students, A lot of the lecturers are using the tools in disposal to interact with the student in other schools but interviewee's experience with lecturers don't utilize the

tools for online lectures, making the lectures more boring than it could be. Potential is high but they are not utilizing it.

-Yes. It helps with engagement and encourages the student to try more.

## Survey questions:

What lessons materials are provided for the course \*

☐ Slides

☐ Labs

☐ Tutorials

☐ External Resources

☐ Textbook

☐ Other: \_\_\_\_\_

What do you feel about the lesson materials? \*

1 2 3 4 5 6 7 8 9 10

Strongly dislike

☐☐☐☐☐☐☐☐☐☐

Strongly like

Based on the previous question, why do you feel this way? \*

Your answer \_\_\_\_\_

How do you typically approach studying and understanding the lecture material \*

- ☐ Watch lecture recordings
- ☐ Learning from online research (e.g. Google, Youtube, Khanacademy)
- ☐ Consulting Professors
- ☐ Redo tutorials/labs
- ☐ Other: \_\_\_\_\_

Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials? \*

- ☐ Yes
- ☐ No

What do you think can be done to improve the lesson materials. \*

Your answer \_\_\_\_\_

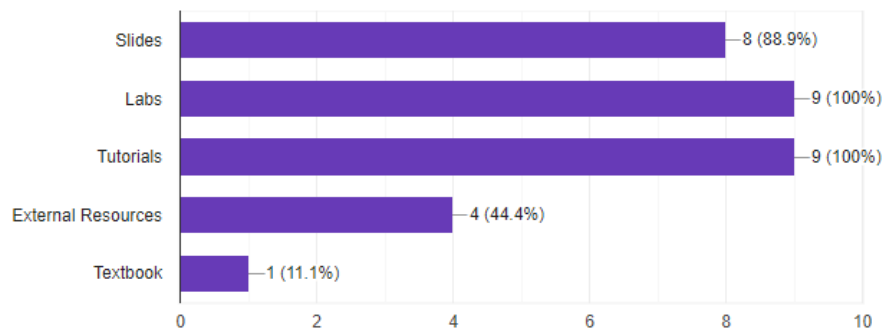
## Survey Response:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Timestamp	What lessons materials a	What do you feel about it	Based on the previous q	How do you typically app	Do you feel that the tead	What do you think can be done to improve the lesson materials.						
2	9/20/2023 12:50:38	Slides, Labs, Tutorials		5	There seem to be a lack	Watch lecture recordings	Yes	Provide more explanation and it would be better if there would be practice questions that we can do at our own pace.					
3	9/20/2023 12:50:09	Slides, Labs, Tutorials		6	As the materials are very	Learning from online res	No	Having a more detailed explanations on the section of the lecture slides					
4	9/20/2023 13:03:20	Slides, Labs, Tutorials		7	The quality of the lesson	Watch lecture recordings	No	I think that the content that we are expected to learn can be condensed and compacted into a "cheatsheet" or maybe mindmap/diagram/chart. Expecting everyone to learn all con					
5	9/20/2023 13:20:02	Slides, Labs, Tutorials		3	All questions, very little a	Learning from online res	No	More down to earth and related lectures. Also as most presenting professors would say, "don't just read off the slide"					
6	9/20/2023 13:57:55	Labs, Tutorials, External		5	Every module is a flipped	Watch lecture recordings	No	Lesson materials are usually insufficient. It would be better if the school provides free pdf of books and lecture materials from different university and professors.					
7	9/21/2023 7:50:24	Slides, Labs, Tutorials, E		8	The lesson materials giv	Watch lecture recordings	Yes	By checking with the students if the lesson materials are clear					
8	9/21/2023 9:01:50	Slides, Labs, Tutorials, E		5	Some of the lab might be	Learning from online res	Yes	Providing a more detailed explanation would be beneficial.					
9	9/21/2023 17:52:49	Slides, Labs, Tutorials, E		10	The resources are usual	Learning from online res	Yes	I think the current materials are good as it is					
10	9/22/2023 14:04:35	Slides, Labs, Tutorials		6	Some of the slides are n	Watch lecture recordings	No	By providing a more detailed slides content and maybe putting external helpful links at each slides so students can read up on their own if they could not understand the slides con					

### What lessons materials are provided for the course

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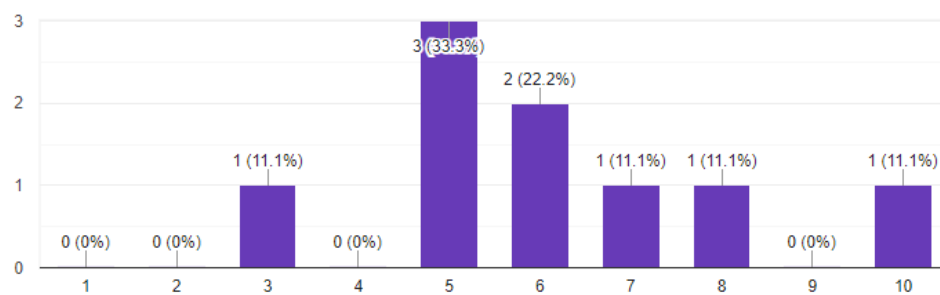
9 responses



### What do you feel about the lesson materials?

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9 responses



### Based on the previous question, why do you feel this way?

9 responses

There seem to be a lack of explanations from the resources provided.

As the materials are very vague and not really detailed, so it doesnt benefit us in a way

The quality of the lesson materials really depend on the module in my opinion. Some of them are quite decent quality, explaining in depth the lesson concepts we are required to learn so that we have a good grasp of understanding on the information that we are expected to know for our course of study. However, there are some modules that have slides of just straight up images which does not really help in our learning at all. Looking back at such slides, I have to decipher for myself what I am expected to learn, which can be extremely time-consuming and frustrating.

All questions, very little answer or guidance

Every module is a flipped classroom and materials are usually insufficient to cover.

The lesson materials given are okay, however some module materials are difficult to understand

Some of the lab might lack precise or explicit guidance.

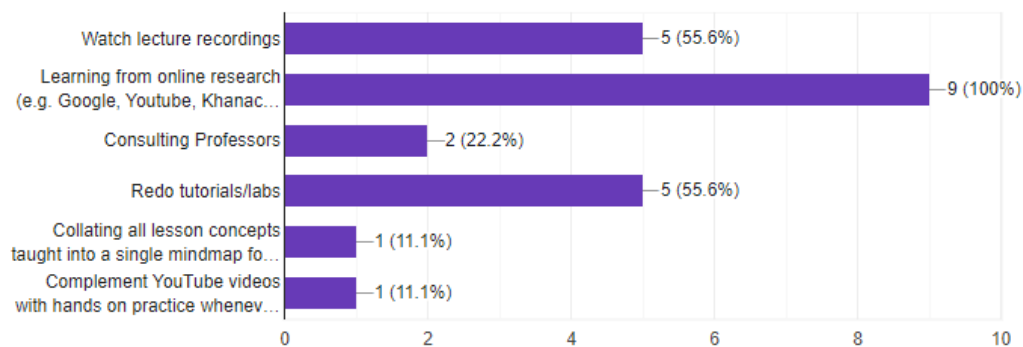
The resources are usually in depth with thorough explanations on the topics we are studying. Thus, it only sometimes requires self research to find out more.

Some of the slides are not detailed enough, when I read up on my own I could not understand the content and must listen to lectures by the professor which I find sometimes the lectures are too boring and I can't focus.

### How do you typically approach studying and understanding the lecture material

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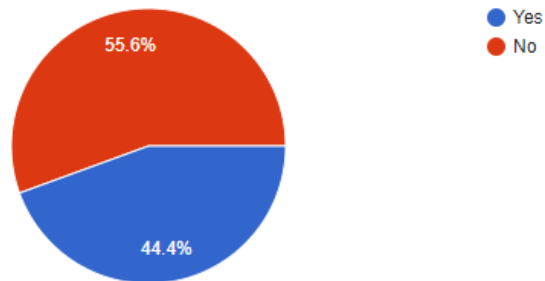
9 responses



Do you feel that the teaching methods used in your classes effectively help you understand the lesson materials?

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9 responses



What do you think can be done to improve the lesson materials.

9 responses

Provide more explanation and it would be better if there would be practice questions that we can do at our own pace.

Having a more detailed explanations on the section of the lecture slides

I think that the content that we are expected to learn can be condensed and compacted into a "cheatsheet" or maybe mindmap/diagram/chart. Expecting everyone to learn all concepts of a lesson before the actual lesson can be extremely time-consuming and having such a resource given to us by lecturers would really minimize the amount of workload we have to deal with for pre-class work.

More down to earth and related lectures. Also as most presenting professors would say, "don't just read off the slide"

Lesson materials are usually insufficient. It would be better if the school provides free pdf of books and lecture materials from different university and professors.

By checking with the students if the lesson materials are clear

Providing a more detailed explanation would be beneficial.

I think the current materials are good as it is!

By providing a more detailed slides content and maybe putting external helpful links at each slides so students can read up on their own if they could not understand the slides content.