AAF Assoc Prof Frei's talk 10th June 2021

Professor Carrington

Okay this is rather terrifying talking to so many people from around the different parts of the world well good afternoon everyone who's here it's lovely to see you welcome to webinar three in this really important series we are happy to have you here and now that we have all started to get to know each other already the chat is lighting up and hopefully we will engage in some really interesting discussions I think particularly around this presentation it has some really interesting aspects that we will all learn from before we start the session if you're here to listen to professor Frei speak please make sure you're on mute uh please don't be offended if you are accidentally off mute and I come along and mute you as one of the co-hosts it's just we're all from so many different countries it does get kind of messy at times if you are having connection issues please feel free to turn off your camera and to use the chat function as much as you would like and I'm going to start with an acknowledgement of country this is an important event and this is a really important acknowledgement the Australian ASEAN academics for online education during COVID 19 and beyond acknowledges the traditional owners of the land where this program was developed the Palawa people of lutruwita nations we pay respect to the traditional owners and to elders past present emerging of the land on which all of the Tasmanian campuses stand on behalf of the University of Tasmania we acknowledge all countries participating in this for and also acknowledge their elders and ancestors and their legacy to us we acknowledge the traditional owners of the lands where our partners and participants live and work across Australia and across southeast Asia our university has a particular commitment of place and so those words have a lot of meaning for us and our work in the university is around building a much better understanding of indigenous knowledges around the world and in Tasmania and incorporating those into the work that our students do so we take that acknowledgement really seriously now where am I excuse me I'm just choking so today we are really lucky to have a presentation by Professor Fei from the Australian maritime institute he's going to speak for a while sharing his screen and then he's going to stop and he's going to allow for questions along the way so he may do that one or two times and at the end we'll have time for questions comments maybe more in-depth discussion we'll have around 30 minutes for that but also as the discussion goes along and as the presentation goes along please feel absolutely free to use the check function to use questions we'll monitor and come back to those when we get a moment.

So without further ado it is my absolute pleasure to introduce the first speaker from the University of Tasmania in this series associate professor of five from the Australian maritime college now he has had a vast experience and huge success uh he received his PhD with a focus on business management in 2009 from the Australian maritime college and since then he's developed a world-class reputation as a researcher teacher and supervisor and importantly for this event he has been at the forefront of online delivery and innovative practices for a nber of years and before completing his PhD Dr Fei completed a bachelor of engineering and a master's in business administration he has two main areas of research expertise and they're both fascinating one is in logistics and supply chain management and including something that became really relevant during COVID-19 in food supply chains the other research focus he follows is the han capital development in the maritime industry

and he looks at issues specifically related to maritime engineering and sorry education and training demand and supply and safety related to han factors. His research has been supported over a nber of years by really significant funding success he has amassed a funding total of coming up towards four million dollars and they have supported his research into these really interesting and important areas he also not only is an amazing teacher and researcher but he has significant industry experience which lends a particular authenticity to his academic roles he's worked in the shipping industry and in logistics and this practical knowledge works its way into how he works with students and his really extensive knowledge base so it is with absolutely great pleasure that I welcome professor Fei to this event as our speaker and I will now hand over to his excellent presentation.

Professor Fei

Thank you thank you very much uh Professor Carrington uh for your very kind introduction and thank you for Dr Vinh To for inviting me for this for and this is a fantastic opportunity for Australia between University of Tasmania and also the ASEAN countries to share our experience in online education and our experience during the pandemic and probably some sorts post the COVID-19 era.

Online presence

- Content: from PDF files to interactive web-page design and anything in between
- Delivery: a mixed use of pre-recording, live sessions using Zoom or Web-conferencing with accessory tools
- Engagement:
  - ✓ Peer-to-peer: Ranging from limited engagement to designed, monitored and assessed engagement activities
  - ✓ Lecturer-students: online post, email, one-to-one/one-to-small group consultation
- Assessment: fit for purpose; a compromise; delayed

So my presentation is online education and a question about whether this is an emergent responses to the COVID noun team or a necessity.

Australian Maritime College

✓ The Australian national institute for maritime education, training and research

✓ Two national centers with four discipline areas

- National center for Ports and Shipping
  - Maritime business and international logistics (MLM)
  - Ocean seafaring (OS)
  - Coastal seafaring and VET courses (MOCS)

✓ National center for Maritime Engineering and Hydrodynamics (MEH)

We are at the Australian maritime college and maritime college is the Australia national institute for maritime education training and the research now we provide the programs right from certificate one and at the vocational education training level rather to PhD level and everything in between so we are very unique compared to other parts of the university.

At the Australia maritime college, we have two national centres with four very different discipline areas and I'm going to share my experience of our online education prior to the COVID 19 and sorts in the post COVID 19.

Now our first national centre is for the ports and the shipping. In this national centre we have three discipline areas the first one is the maritime business and international logistics. In this discipline in this department we have distance education and we started actually in the middle of 1990s so we had many years we have had many years of uh distance education uh I'll try not to call online discussion education because over 20 years 20 years ago we didn't have that sort of online platform but we started the distance education in the middle of 1990s and also we have roughly about 50 percent of international students in our student cohort in this discipline and many international students will study uh by distance and they're truly distant students not just students because you know they are located interstate somewhere in Australia we have over 20 different nationalities of students in our programs and we have both undergraduate program and also poster graded program and we started our sort of online journey roughly about 2010 so far we got over 10 years of experience and then the second part is the ocean seafaring which is very different I actually come from a seafaring background I worked on ships in the shipping industry 14 years.

This is a very different discipline in the sense that we actually have in addition to the higher education compliance we also have to comply with external regulatory bodies in Australia were called Australian maritime safety authority so what we do actually not just to comply with the hired quality assurance system for example we need to actually comply with the regulation externally and this actually has some implications on how we actually conduct our online education and also we have about 40 international students in that discipline and the online presence from that discipline actually started roughly about 2016. So it's less than five years of experience. Then we have the

coastal seafaring that's the vet sector vocational education and training majority domestic students and the online education experience once again very limited very limited,

And then we have the second national centre for maritime engineering and hydrodynamic. We have about 80 percent of international students in the poster graded program and then 80 percent domestic students in the undergraduate program and this centre with two programs requiring lots of lab exercise and lots of teaching obviously in classrooms. And also we have to act we have the external accreditation which is the engineers Australia and once again we needed to actually meet the requirements both ends the online experience of that area started from roughly about 2015 so five years' experience so with this background with this background I'll explain to you about the pre-COVID 19 online education versus the post or during the year COVID 19 online education.

Pre-COVID-19online education

	Content	Delivery	Engagement	Assessment
MLM	Fully online	Blended	Blended	Fully online (on-campus exam)
OS	Limited	Classroom	Classroom	Classroom + Quizzes
MOCS	Limited	Classroom	Classroom	Classroom
MEH	Limited	Classroom	Classroom	Classroom + Quizzes

So with the first one the maritime and the logistics management area before the COVID 19 we already have we had the fully online content so I'll explain later on it's not just the content we have pretty much fully online design. Because we have to deliver both to campus and also distance students and the delivery as indicated here is blended so we have the classroom teaching plus recording of whatever happening in the classroom including tutorial sessions and then uploaded and made available to uh students doing distance.

Engagement once again blended which means we have uh in classroom engagement plus the online platform engagement. Assessment we have fully online for the coursework but for the exam we have two different actuary formats one is the set exam that's sort of in in the classroom and invigilated. Then we have for distance students take home exam we have different design but make sure the equivalence between the two cohorts.

For ocean seafaring uh very different picture very limited content online uh pre-COVID 19. And the vast or almost all the activity happening in the classroom engagement classroom and assessment only quizzes. Some of the quizzes actually made available online and completed by students online and obviously all the exams invigilated the seated exam. Same for the vet sector and even they did not even have any online assessment at all. For the national centre for the maritime engineering

once again limited content because they very much rely on textbooks. And very limited content online.

Classroom delivery and engagement mainly only through the classroom once again tutorial sessions workshops or lab activities and they have simulations as well. In terms of assessment they have mainly classroom based assessments uh but with some quizzes online.

Now I have to mention also the MLM maritime logistics and management area it's not just the assessment online available online. The marking actually occurred also online and including online gradebook etc fully online. So as you can imagine as the when the time came we had to actually respond to COVID 19 and the consequent campus of closure the maritime and logistics management area had very little impact.

Online education after responses to COVID-19

	Content	Delivery	Engagement	Assessment
MLM	Fully online	Fully online	Fully online	Fully online
OS	Online	Fully online	Fully online	Fully online
MOCS	Some online	Some online	Some online	Some online
MEH	Limited	Fully online	Fully online	Fully online

So what actually needed or had to be changed was just the exam for the distance students. So it's pretty much we use the take home exam for distance students and use the same format exactly same assessment for our on-campus students so we removed invigilated exam altogether and very smoothly. And of course, we actually have done quite a lot in terms of the delivery engagement I'll explain later on it's not just say well because we've been doing this all the time so we don't need to actually make any changes at all it's just the capacity already been developed and that wasn't so much a surprise when we had to actually respond. But lots of work in that in that period actually being done to improve the delivery, synchronous and asynchronous delivery and also the engagement.

For ocean seafaring lots of work and all the contents wherever possible moved online but in different in at different level as compared to uh what actually happened in the MLM area because moving content online could be just upload a pdf document but wherever possible content being moved online, and delivery became fully online. Engagement well had to be fully online assessment fully online but in different way. Now compared to a maritime logistics and management we have the Australian maritime safety authority the requirement to have invigilated the exam. So what we did was actually have online invigilated exam. So once again that was an innovation but it's still online it's just online invigilated. For the vet sector, contents some moved online. But still many of those just simply could not be moved online because they there were so many practicals which not

possible to be done online and delivery a mix of those and the innovation actually was to deliver whatever the content possibly could be move online and be done remotely by students.

And because the majority of students in that area are domestic students domestic students so that actually provided a sort of new form of delivery to students where they can complete all the content at home they don't need to actually travel to AMC because majority of students interstate we have very small number of students actually from Tasmania. So this actually saved a lot of time and probably cost to students they completed content online and then only came to the campus to complete practicals and then the exams.

Engagement was obviously as far as the content the delivery concerned that there was some online sort of form of engagement but also the other part is on campus. When the campus actually opened or reopened. Assessment limited online assessment limited online assessment. For the maritime engineering content online still limited simply because the discipline is like this as I explained. Students have textbooks and online part is just those uh sessions tutorial sessions probably recorded, or some pre-recorded lectures loaded online. And the delivery fully online of course both synchronous and asynchronous so synchronous delivery sessions live sessions and still we're still doing these live sessions for on campus and distance students this year.

We had we had the third the first semester we had some students or in fact the majority of students on campus but we still had international students so we actually deliver at the same time to in classroom students and also students online. Engagement fully online and also assessment fully online now that as I I'll explain later on online yes fully online because that's otherwise we have to delay those. And the external accredited accreditation body actually doesn't require unregulated exam as the case for ocean seafaring, but some feedback indicates this might be adjusted compromise. Although yes assist don't take home but might be a compromise I'll explain why this is the case.

Online presence

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o Engagement:
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So online presence yes when we say we have online presence but the level of online presence varies significantly from just the pdf loaded in the online space to the learning management system to very

much interactive way the page design and then we have anything in between. So varying level of online content in terms of delivery a mixed use of pre-recording live sessions and we use zoom or web conferencing web conferencing is a program embedded in our learning management system, while zoom is an external application. We use actual mix of those. Now best practice in delivery we provided pre-recording of fundamental knowledge of fundamental content so the content part pre-recorded using obviously using PowerPoint slides. But then we also have live session mainly focusing on problem solving and discussions questions uh group works. So the online session the online session is very different from the pre-recorded lecture normally.

And the students are comfortable with either zoom or web conferencing and there are lots of details here obviously when you're using the two different programs they are different because one is embedded in our system university system and the other one is external. So in terms of how we actually provide later on the recorded decisions there will be some work there will be some work in terms of engagement once again the level of engagement uh very different.

So, I have the peer-to-peer engagement and also the lecture of and students engagement. So peer-to-peer engagement well ranging from very limited engagement which means well it's not purposely designed it's just say well if it happens okay we'll let it happen if not well not much can be done. And then we have the other end, very much designed monitored and assess the engagement activity so this is on the other end of the engagement level.

So some of those units or the discipline areas will have very good design to actually encourage facilitate engagement and monitor engagement. And some of those engagement activities even being assessed, so students actually have to complete or have to engage.

And then we have the assessment part now a sales assessment can be designed fit for purpose that's the good part in the case of the maritime logistics and management. So in that area designed for the purpose. And not much of a problem but then assessment kind of just a compromise between what should be done or what is audio versus what can be done. So with the campus closure and lots of students actually overseas because they can't actually travel back because of the border restriction, so for the maritime engineering for example the change to the assessment to take home. Yes it's been done, but it may be a compromise in the sense that lectures and students those actually doubt about the actual assessment the authenticity of the assessment and the integrity of the assessment. And also the question of what we actually assessing students are we assisting students fundamental knowledge? Can this be done open book?

So this also eventually comes to a question about what kind of engineers we actually we are training. So it's a question about whether it's possible to actually redesign the assessment so that we have the integrity in the assessment and in fact we're assessing the real attainment of students learning outcomes. So a range of questions there. For seafaring for seafaring, some of those exams can be done or were done through the online and regulated exam but some exams simply could not be done so being delayed. And once again it's common across different areas within the university now. This mainly because we have to comply with external professional accreditation bodies or other authorities. And therefore requirements to have a certain form of assessment and obviously some of those assessments simply can only be completed in lab or using the facility or equipment on campus.

Moving online – the challenges

- Time and resources
- Standards and consistency
- Digital literacy of students and academic staff
- Assessment design
- Attendance and engagement
- Practical

So we had many challenges when we're actually moving online to respond the campus cruiser the first one time and resources the time was very limited and it was very urgent because it's it was an emergency response and then we had a very limited time to actually move things online and to plan the delivery and the rest of engagement assistance the rest of it and the resource issue resource issue.

We obviously require support required support and where the resources are from and then the next question is what kind of standards had to be followed and the consistency across the different units within a discipline and or any consistency actually across different discipline areas. Because people did the different things and they had different preferences and the students sometimes got confused.

Just when using the two applications zoom or web conferencing sometimes student got confused because they studying a program and different units actually were delivered in very different ways. So the standards and the consistency and then the digital literacy of students and academic stuff well we obviously, you know in our programs, we have students like those really young ones they're very much sort of familiar with the technology digital literacy not a problem. But at the same time we have students very much sort of mature age students and they probably haven't actually done any study in the last 20 years and they just came to campus for a degree for a program to up skill in their area and they're not necessarily familiar with the technology or the digital literacy required for them to complete their study fully online.

And also the same thing is true for academic staff even now still it's a learning process it's a learning process. So lots of academic stuff actually required higher level of support required a very high level of support all aspects of online education from content moving content to online to designing a quiz to designing the exam etc required significant assistance from the university. And then the assessment design once again. It's not just simply just moving things online it doesn't work that way certainly it doesn't work that way, between the city exam and the take home exam the whole thing had to be redesigned. Had it to be redesigned. And then those practical in the seafaring ocean seafaring and maritime engineering students actually have to use labs and workshops to complete the practical side of it and once again it's required from external body especially for ocean seafaring.

Success factor – commitment

✓ University provided resources and support through each college
  - o Moving content online: template
  - o Assessment (re)design
  - o Workshops for teaching staff
  - o Online resources for students and staff

✓ Willingness of teaching staff
  - o Can-to attitude
  - o Think outside the box

✓ Community of practice to share
  - o Experience
  - o Successful stories
  - o Best practices
  - o Student feedback

So it's been challenging time very challenging time so with all those challenges there obviously a lot of other challenges are just related to these here these are or could possibly include but again uh we look at when we're looking back well we were able to actually transit in a short period of time and with a good success level I would say. There were certain factors that I believe made the transition successful.

The first one and probably most important one commitment of all levels within the university. And the university provide resources and supporters through each college. Now at the University of Tasmania we already have the learning management system for many years and this is essential for us actually moving online without this would not be possible and then moving content online. I mentioned in the previous slide about the standards and the consistency and the college actually through the college a template was actually provided to teaching staff they could use and relatively straightforward and with limited effort moving content into the template so that the content actually presented online in a good way and consistent in terms of assessment redesign.

We had the support from the college the academic development team that's what we call them a team of the professional providing support to different areas not just assessment redesign but also the design of online content how do we present.

Then the college also provided workshops for teaching staff taking through people for example how to actually set up a quiz in the online space? So workshops many workshops being held during that period of time and then online resources for both students and the staff so UTAS provides very good resources online for students and teaching staff. How to use learning management system and how to design or for students how to actually access or how to utilize the online resources. So that's sort of the university level and through the college.

And then we have the willingness of teaching staff a can-do attitude was very important because well yes that was a necessity we had to respond but to what level we can achieve? Well that was actually a matter of how all the teaching staff react to the requirement and how much effort each one actually put into it.

And then we had lots of innovations actually out of it it's not simply it wasn't just a simply uh it's it was an emergency response. But instead lots of innovation and the thinking other side of the box. Well I had actually lots of examples which are new because they contacted me about what they were doing or they were thinking to do so thinking other side of the box so lots of things previously thought impossible became possible through this process.

And also community of practice to share experience because each one had different experience had different ideas learned different things and was very important for people actually to share and in fact we had many sessions of informal formal experience sharing within the Australia maritime college. It wasn't just within discipline but also cross-discipline. And also people talked about their successful stories it could be a very small thing it could be very small it could be overall design designing something and then we have we had the best practices best practices.

And also, another important area was student feedback. Now we had meetings formal informal sessions with students from earlier stage of the transition online so we're constantly we continuously collected feedback from students in relation to how they felt about the online experience. So wherever possible we improve we adjust and with resources we had to improve the content include improve student experience online.

And also part of that of course not necessarily directly relate to their studies, but rather their own experience their feeling of isolation for example their morale during their studies. So uh we had cross-coordinators and unit coordinators sometimes we called the students just to make sure they were all right and also indicating then that the support is always there and teaching staff are willingness to provide support and help when needed.

Success factor – engagement

✓Engagement with content – students need to know
- o Why: the relevance to subject, assessment, and application
- o What (to achieve): the learning outcomes
- o How: the steps

✓Engagement with peer
- o Live session – synchronous
- o Online forum – asynchronous
- o Motivation

✓Engagement with lecturer
- o Regular communication
- o Available
- o Willing to help

So the second area of or second factor success factor is engagement now in the online environment very different because we couldn't see students, physically students couldn't see each other students couldn't see their lecture and it was very challenging to be engaged.

So engagement started from the content started from content so it's it wasn't just a matter of moving things online or taking the learning management system as a repository now it doesn't work that way. When students doing their study alone students needed to know why they're doing this so we needed to tell students the relevance of the relevance of the content or learning activity to the subject or the relevance of that particular learning activity to assessment. And the education part

now that part actually that part actually designed in the online environment. And then what to achieve? So students needed to know well after they finish the learning activities, well what to achieve? So we present or explain very clearly the learning outcomes need to be achieved. Now this is not the unit level learning outcomes rather each week. When we give students learning activities content for them to go through our certain articles for them to read we tell we tell them several thought points three areas you have to well you need to achieve after you finish all those. And then we also told the students the steps how are you going to achieve those so we told the student this is the first step, complete this part first you got those questions to answer when you look at this so step by step very clear. So it's a road map it's a road map it's not just a content present online off you go you finish it down.

And then we have the engagement with their peer students. So that was actually achieved through live session obviously synchronous live session wherever possible we encouraged students to participate to attend. But it is just as otherwise in classroom sessions you always have students who don't attend regardless. But it's more obviously more challenging in the online environment so what we did was, we provided all the information about online sessions obviously and to remind the students of the online live sessions to all students.

The attendance overall the attendance overall was very encouraging in fact and we had the students because of the time zone we started for example I had a unit started nine o'clock in the morning a post graduate unit I had students from Australia and I had students from Indian I had students from Middle East so when I started nine o'clock in in the morning some students in the middle of the night three o'clock in the morning probably, because we had the European students as well so it was very encouraging. Students actually attended the class the live sessions.

And then we had online for so that's the asynchronous engagement or communication we designed a for students to interact with each other, so in later on in the second half of this present presentation I'll show you what that means or what we have we have done. And then the motivation we encourage students we encourage students this is a difficult time we're all in and we work together so show the support and work together.

And then the engagement with lecture regular communication with students so just to show students the lecture is always there the teaching stuff always there to support and to show that we are available to help and willing to help and this is once again very important for students for their moral morale and for their willingness to engage.

Success factor – monitoring

Using analytics provided by the Learning Management System (LMS) to monitor

✓ Student engagement with content

✓ Student completion of assessments

✓ Interactions (in the online forums)

✓ Study progress

An example of using Intelligent Agent for monitoring is provided separately

Monitoring so with all those things happening all we have done we needed to know what's happening with the student side. So we use analytics provided by the learning management system to monitor student engagement with content their completion of assessment the interaction and the study progress so I'll use example to explain the monitoring in the second half. So I'll just stop here just for a few minutes just in case if you want if you want to ask any questions.

Professor Carrington

Well thank you for a really interesting and compelling talk so far I'm really looking forward to the next part. We have a number of questions in the chat room I'm wondering if we could invite some people to unmute and ask their question uh the first one we've got is from yeah I'm sorry about how I'm going to say your name uh lee wang way to ask you the question of Professor Fei sorry are you still here? Nope okay the question was *to know more about assessing online the kind of different ways that you utilized engagement and the things you did to keep to assess students things like mini tasks assignments presentations reports* I think this person is looking for some concrete examples of the things that could do online to assess students that's clear.

Professor Fei

Okay one example I probably can give here is for online discussion for assessment. So it's kind of one stone kills two birds. we designed assessment a task we provide provided the students number of topics and separate students into groups and with that question students had to actually come up with their own viewpoints. And this is a statement the original contribution as we're called they had to actually make their own judgment towards that particular question in that group. And the second part once the students completed the first part, the second part students actually could view all the posts in the online space and then they had to actually comment on others viewpoints and with justification. So that's sort of a design where actually the assessment occurred online but also encourage the students to engage to interact with each other.

Professor Carrington

Thank you I'm just so impressed by the amount of detailed planning and reflection that you and your colleagues put into this. It certainly wasn't a case of throw everything online it's just fascinating now we have a question from Swasti who I can see in the chat window would you like to unmute and ask your questions Swasti?

Swasti (Indonesia)

I'm sorry I have uh trouble with my uh signal I've written in the chat box what do you think if an institution make or build like a production team uh to help uh teachers or lecturers to make a good material for teaching like a video or animation maybe so the teacher can focus on the content but other people help them to make a good material? Because not all of the teacher I think that have skills to make a good video what do you think is it okay is it uh is it allowed or what do you think thank you?

Professor Fei

That's a very good question I'll probably put it this way if the task or the idea is or requires significant input and with the idea uh proposed proposal from the teaching staff and then requires the support from academic developer development team or other professional assistants. But also I wanted to make that point majority of those things needed to be initiated from the teaching staff because the teaching staff know the best of what needed and how should it be done. So it's not necessary all the time we need to actually design or develop something from the scratch the open sort of there are lots of open resources we can tap into and this is a part of the online design in fact in the content so you know almost all the units within the maritime and the logistics management area we utilize open resources multimedia or videos from YouTube for example where when relevant and that you'll be surprised how much you actually you found from open resources. And that's when we actually provide a link to the content area students just one stop kind of shopping this just reading from that same page. And the hard links provided so they do everything in the learning management system but as I said needed to be initiated from the teaching staff and we needed asking support from the university and we're fortunate enough that we have fantastic support from the university through the colleges okay.

Professor Carrington

We have dedicated units but as Orofessor Fei is saying you have to know what you want and the pedagogic reason for it they don't do that for you there's a really good question we have another assessment question from Fin would you like to ask your question okay?

Fin (Indonesia)

thank you prof Carrington yeah thank you thank you well my name is adolfina christifu you can just call me Fin I'm from Indonesia from chiangrai university in Papua okay my question is about my concern is about assessment especially for individual students practicum okay this is a bit hard for me I mean to do assessment for online uh especially for synchronized a synchronous online learning uh if you uh Professor Fei if you have an experience on this and how to deal with the assessment and perhaps you may share your exam sample rubrics to do the assessment for students practicum? So because this is a part of assessment on the practicum so that's why I want to know more about this thank you.

Professor Fei

Thank you for the assessment the essential part of that design assessment design is the question about whether we are assessing or how do we assist students learning outcomes so the first thing we need to be very clear is what the learning outcomes of students are and once we know clearly about learning outcomes we start designing how do we assess them so there are a number of

questions. The first one is the authenticity of it whether we are truly assessing students achievement or attainment of the learning outcomes. And the second part is the integrity because in online environment if this is not invigilated how do we know the students actually doing the job not somewhere else? So this comes to a range of things that well the first thing is obviously you we don't design something students can easily google and find the answer for. Now this must be very much in the context and it's applied and that's exactly what need we needed to do in the higher education it's not just because in this environment we needed to we would leave the fundamental knowledge but what students needed to do is to find how to apply what they have learned. So we provide cases so it's context based students can't just find the answer from google they need to come up with their understanding of that particular context or a case before they can come up with the answer. So that's just sort of uh one of those things we actually we have to do and the practical part if the assessment of the practical rely on certain equipment of our facility then uh it's difficult uh but this is probably a discussion we can have for future when we use education technology for example VR and AI now we at AMC we actually already started using this so in the virtual reality we design those things people don't necessarily need to be in the simulation room they don't need to be physically there, but they through the virtual reality they can actually experience they can actually touch on those buttons and they will see the result to operate a machine engine for example. And also there is an area where we actually been planning and depending on you know the resources we have requires obviously in investment. For example for the engineering space we have those labs normally operated physically by students but can be done remotely.

So with the software and with rob robot robots we can actually remotely operate those equipment in a lab. And by doing this we can actually finish uh we can complete assessment uh for particles if those equipment or possible physical equipment or facility required but that's sort of a discussion probably uh for moving forward and what we can achieve.

Professor Carrington

I'm very aware of time ticking by we have another couple of questions on assessment there's a theme coming through here but we might go on to the second half of your talk and then come back to these questions to make sure you get your time.

Professor Fei

Thank you yeah thank you so the second part I'll give you an example of monitoring students learning their progress and how do we actually create that digital connections in the online space so in our learning management system the university actually provides we have a function called in intelligent agents so it's just one of many functions available in the learning management system.

So I'll explain how I actually use it for range of things so I'll explain the digital connection and what I have done and what's being achieved and I'll give you I'll give you some evidence of what I have claimed.

So digital connections in this context in this context it's about student engagement with online content well we have invested our time lots of efforts and probably financially but then we wanted to know if students actually utilizing those resources at all and then we need to look at the peer interactions through the discussion for because we created those virtual space but we want to know how students actually interacting with each other and also students interactions with lecture either by email online or other forms and student engagement in e-activities.
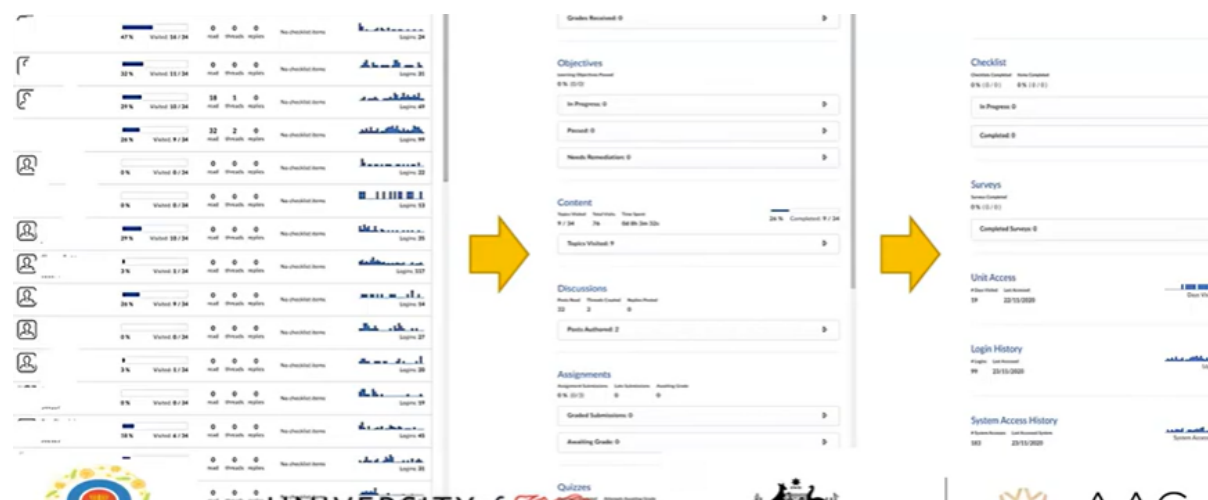
So this is something probably a little bit too small but I'll explain now what I put here actually is something we all as teaching staff can actually pull out from the learning management system

without needing any assistance from someone else because it's there you just need to understand how to actually pull it out.

So for the left part I'll have the class list all the students I'll remove the student's name for privacy and then you see you can see the bars on the right end and that's their login activities. I can sort of zoom in to see a particular student, the student's progress summary as you can see from the grades objectives, the content the discussion, assignment the quizzes etc.

And then I can zoom in further to see the actual unit access activities well on which day the student actually accessed to the unit and located something and the login history etc so I I can see everything there and then the student for.

I'll explain sort of the discussion from if you say look at just all actually have other forums as well not just this I'll put the first thing introduce yourself online you see 1992 posts now in the in that class I think I had about 30 assumption students so as you imagine well on average each student actually post it three times at least and then more of your discussion because that was sort of extracted just during the semester. So by that time more module discussion because that unit has 12 modules one module each week. So students actually put things for module discussion so they had questions and the students actually helped each other well. Sometimes I got into it sometimes I just left the students to actually help them each other because we had students school leavers we had students been working in the industry for 20 years. So they helped each other and they interacted with each other very well. And about assignment I put things there sometimes I got involved sometimes I just leave them just left them to work their own

But with this what did I do actually I I didn't just say well yes I'll just check out those and finish I got some idea no I actually utilize the analytics and utilize the intelligent agent as a function and I'll put some set up some monitoring small programs there so as you can see I have engagement which means I can set up if a particular student hasn't engaged in the unit content or other activities in the last five days an automatic but personalized email will be sent to that student. So here the name it's not dear student it's the other name and then I'll put a message a personal message there so students receive that message and they will the student found okay well my lecture actually was monitoring me or better to do something so that's about engagement and I also have say high achievement assessment and lower sort of achievement whatever I'll send a message out to students. Now this actually automatically done I actually didn't actually check each student's and especially when if you had a couple hundred students in the classroom this basically virtually impossible task. Now all these were actually automatically done through the system I what I did was just set it up.

So as you can see from the right side I could set setup for anything I could set up something about the assignment submission about the score about checklist the learning activities are put there whether this particular student already completed it or not uh whether submission being laid if late a message once again be sent to the students everything automatic.

The outcome so what is the outcome after I have done all this increase the student engagement online because I'll check the data analytics and it the easier way was to check the first week when I ran the engagement uh message I'll probably find okay well six or ten students met that requirement which means 10 students in the last 5 days or whatever days you set up you put their head and technically engaged online. And the next week I ran again well it reduced to only five and the next round again probably only a couple of them. So students actually started engaging online. So that reflected from the number of students not engaging in unit or in terms of content completion and increase the peer-to-peer interactions as reflected from the discussion forum. And also students contacted me when they had problems or they requested a certain help or whatever. And also students increased the students awareness of their own learning progress because they received the moment message about their performance in a particular assessment or learning activity and many of those students actually came to me said well yes I got your message and that's what happened so whatever. So increase the awareness of the learning progress.

Responses from Online Engagement Message

Thanks for your e-mail. Yes I have been very busy here at the port with the lockdown, mainly dealing with our ████████████ development and costs associated with the downtime, so lots of time with lawyers. I have been doing the readings etc which I had downloaded and the text and will catch up in the next week or so.

Thank you for your email regarding to my studying. I am experiencing some difficulties during the lock down so I need to spend a lot time to handle my situation. This email is to reassure that I will try my best to catch up with the class.

Thank you for reaching out. As it happens, I am battling to manage my current workload and study commitments; notwithstanding, my seasonal work commitments cease in 10 days, after which I will have ample time to focus on my studies.

And then I'll have some evidence well when I say well it's increased improved and this the evidence I'll just sort of I'll receive the lots of emails actually in fact from students now this is this is uh the first one was a student working full-time in the industry and he said well thanks for your email you have been I have been very busy here at the port he worked in the port with lockdown mainly dealing with a bigger project and you know spending lots of time with lawyer but doing readings exactly so tell basically telling me what happened tell me what happened and I got just sort of three emails part of the emails I received from three students that I got lots of those emails that was when students received the automatic message. But to each student that message was unique and

Responses from High Achievement Message

Thank you so much for your kind words and encouragement. You should also be commended for the way in which you have seamlessly transitioned the delivery of unit content in these unprecedented times.

It can often be difficult as a distance student to feel engaged with the class and teaching staff. I am pleased to report that this was not the case in your class and your model of student engagement and presentation of material should be a model for other lecturers to follow.

Thank you for your email and encouragement to me on assignment 2 and further studying. I followed your guidance after assignment 1, checking the documents in Mylo and thinking about the meaning of "discuss" and "analysis". But I cannot make progress without your help.

In similar way with I'll encourage students our con rather I say congratulate students when they achieved high scores and once again automatic messages sent out to students and sometimes you'll be surprised how actually students appreciative with our acknowledgement of their achievements so once again it's very important it's very important it's not just in online sort of environment but in the normal environment it's very important we acknowledge we celebrate the achievements.

o Is online education the future of education? – flexibility, accessibility, customized learning experience, cost-effectiveness

o Student cohorts
  o School leavers
  o Mature-age students

o Learning experience and outcomes

o Educational technologies: big data analytics, artificial intelligence, virtual reality (VR) and augmented reality (AR)

So with this our thoughts our online education in a positive COVID19 era now is all my education the future of education some people argue that yes that's the future the reason the argent for this is because the flexibility it provides students can do their study at a time really convenient to them because we have students you know with family or work commitment and also accessibility. We have we have students working in the navy and for those seafarers they own ships but it doesn't matter with online education they can do their study anywhere and then customize learning experience because they can design their design their own pace their own way of study and it's cost effective because they don't need to travel they save their accommodation on campus, they can live there with their family. So all those benefits and but we have other things to consider.

So depending on what kind of student cohorts for us we have student cohorts including school leavers but also those mature age students with full-time work commitment and with their family so the needs of those people are different for some students they prefer say well I want on-campus

study, because I paid for it because I want a university life it's not just a study I wanted I want to experience university as a life part of my life. And so we all need to consider those the learning experience and the outcomes what experience do we provide to students? Or what kind of learning experience and outcomes students want from us?

And then the last area is the education technologies what technology is available and can actually facilitate so that's about big data analytics so it's about the monitoring part analysis but also it can help us actually on marketing for example uh our artificial intelligence. Once again there is an issue about assessment design and about the integrity of assessment so if we leave students give assessment to students and let them to compete by themselves off campus we don't say them we don't even have exam, do we trust well there is a way we can you use artificial intelligence to identify any abnormal when it comes to completing the assessment.

So I'll actually experiment myself in terms of identifying any abnormal outcomes so I design a small assessment only five or ten marks and then large assessment with 20 or 30 marks. So students if they want to have the assessment done by somewhere else or in extreme case they engage what we call contract the cheating they normally don't bother to have that five marks of assessment done by someone else, they do about themselves so you have that pattern. And then when you read the second assessment 30 you find oh completely different the way they write they're completed is completely different. So this is actually artificial intelligence because we try to identify the pattern and identify difference and we know what's happening.

And then virtual reality or augmented reality that we can apply in our teaching and this will certainly enhance student learning experience and make lots of things impossible at the moment possible in future.

And thank you very much for your attention and any questions.
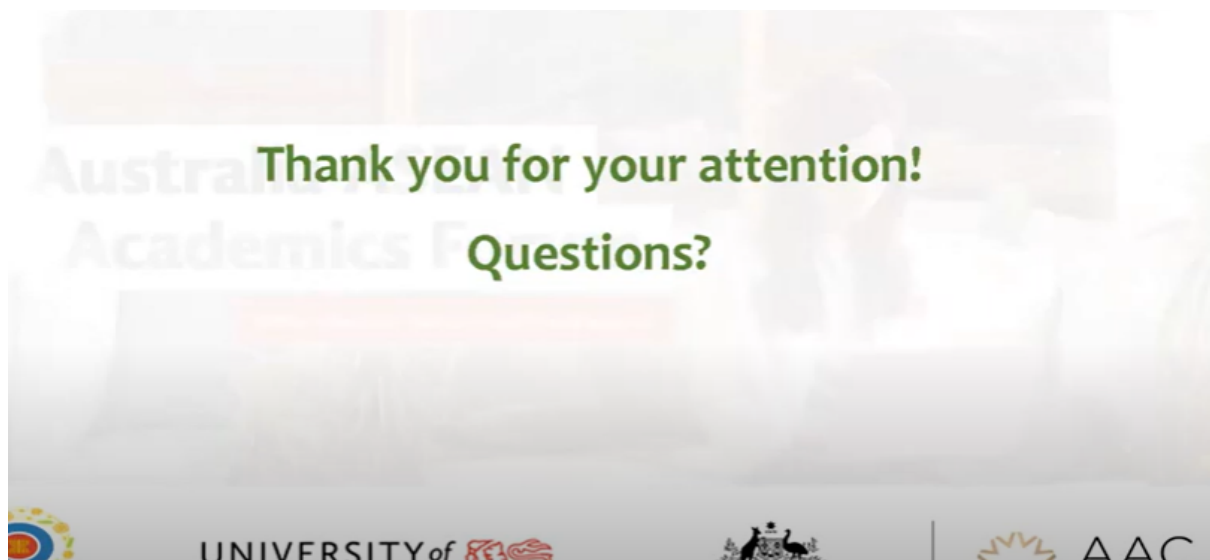
Professor Carrington

 oh wow where to start I'm going to go back to the question that assessment does not go away in the stream of questions everyone is very interested in how you how you approach assessment how you've made it sustainable or all the different things is Adriyani still here because this is an issue that has been identified here?

Finn (Indonesia)

that comes up a lot yes I'm still here ah please go with your question it's a great question okay thank you for that professor Carrington and yeah actually I've already written my question on the chat box there so I'm just gonna read it if you don't mind so yeah uh professor Fei I don't know if you have experienced students who couldn't attend the online meeting and couldn't access the internet due to very very poor internet connectivity and as a result they couldn't submit the assignments and couldn't take the exams so I wonder if you have any suggestions to handle the problem for teachers like me even up to now I've been experiencing that in my situation here in Indonesia.

Professor Fei

Thank you very much thank you it's a great question because we actually have had this sort of issue in the maritime and the logistics management area for for quite a long time and acknowledging that students in different countries and having different internet connection and also we do have students actually working on ships offshore we have Australia domestic students working in in the navy for example and with limited internet access. So uh what we've been doing is well the content part we can actually we provide right from or not right from beginning of the semester in fact two weeks before the semester we provide all those contents online and also we provide all the assessment two weeks prior to the commencement of a semester. So giving stuff enough time to actually to download whatever they need for their study and also we are flexible in terms of the request for extension with justification obviously so this actually considers sometimes the difficulties in accessing online contents materials and also submitting assessments.

So with more time it's more likely that students will find a time when they're able to get connected. But the key here is we provide ahead of the time and the giving time giving enough time for students. And the extension thing once again we have had that experience because we started a distant distance education a long time ago 20, 25 years ago and we had to actually cater for students working full-time and due to their work commitment, we sort of provide that flexibility for students to have more time to complete.

Now this is sometimes where people argue that well this might not be fair to others well it's not the case we look at what students need to achieve their learning outcomes and within still within that sort of overall semester period of time but it's just the flexibility of submitting well yes more work to the lecture but it's good for students.

I'm not sure if I answered your question obviously we can't provide that sort of internet connection for students but we can actually through a sort of a wider time window they may be able to find a window where they can actually access. And also another thing I probably want to mention here is we stopped doing this now but we did it before we actually created digital resources basically we actually collect all the digital resources in the USB and send the USB to students so at one stage in the transition between sort of distance education moving to fully online we had a stage where we actually send we even send the DVDs with everything on the DVD understand to students and then we moved to USB everything on the USB we created eBooks of units and then put the eBooks into the DVD or USB and physically sent to students and worked at a different stage all worked.

Professor Carrington

That's amazing here in Tasmania we don't have great internet access in some parts as well because it's a very regional and remote area and when COVID-19 hit all of the primary schools and secondary

schools closed down so all the students were working from home with their families and it turned out that lots and lots of students didn't have laptops and lots and lots didn't have internet access, so the state government was lending out laptops and sending dongles some and USBs with some of the digital content on and in areas where they were even more remote where they couldn't make that work they actually printed out the content. So we were using a combination of high-tech plus old technology to try and you know hold everybody together and keep them learning. So I think your question was really important because that's always going to be an issue connectivity and access is always going to be a problem okay. So in this we've got another question from Sapto about the details of actually delivering this online

Sapto (Indonesia)

Professor Fei nice to meet you I'd like to have some questions and representation anything uh when you are talk about the synchronous I think it need much time and student readiness and then the online vole uh synchronized will be good a nice autonomy for students and then when we talk about motivation will be built unconsciously and simultaneously when the lecturers saw a fantastic presentation then about uh teaching a learning process. I think that we aware that the students not only study but one subject but many subjects in semester that students must study about your subject in my opinion the learning of your subject need studying practice studying practically more than so how do you convey the library uh what is what is because of teaching one subject need a semester or six months how do you simplify your lesson plan this is my question?

Professor Fei

If I took uh took it correctly we don't we actually we don't actually simplified the unit uh or the contents we changed the form and the redesigned student learning uh process and I'll put it this way when it comes to students learning of multiple units not necessarily just one unit multiple units for students it's probably it's a time management I suppose a time management issue. And believe it or not within a participant area we actually work with each other with them sort of within a particular cohort and normally we have full-time student secretary enrolled in four units what we do we always it's not just during COVID-19. we work as a team say well for 4.4 units we have multiple assessments in each unit and we work on the deadlines. We try not asking students to actually submit three assessments or full assessment in in the same day or in the same way, we actually we move across so students actually can complete one each week same as the exam we give a period. Students have time to compete within a given period a reasonable period for them so it's important that it's at least within a discipline area the teaching stuff academic stuff needed to work as a team and we always consider from student perspective how they actually approach their study and what kind of workload we're giving them and what kind of time or sometimes we need to understand the stress students have.

So if we always consider the student success is the key to our teaching then we have that the perspective right and when we do the things we do it right. I'm not sure if I'll answer your question sorry.

Professor Carrington

Thank you very much for that it really seems that people are fired up and really interested in the work that you were doing around assessment there are even more questions. Where was I going with that so yes assessment is definitely the flavour of the month or day or moment there's another

question about adult learners here from Lou Putu Atini are you still here and would like to ask your question?

Lou Putu Atini (Indonesia)

or will I ask it for you well yeah I'm here professor thank you so much hello everyone uh thank you it's a fantastic uh I mean presentation it's really I learned so much from your presentation this is uh the question is very related to Adriyani's questions because in teaching adult learners postgraduate students master and doctoral program uh we have a curriculum and then we already plan ahead of all the assessment but as a matter of fact in the practice the students come from all over Indonesia and they have very different uh you know uh different luck with connection I have to say. So with the assessment that we already design, then there is a possibility that they can't do that. For example one of the assignments to do a mini research on a spatial issue and then because of the COVID 19 they really stuck inside of their home and they also have very limited uh access to internet so this is uh I just wonder what's your suggestion for flexibility here and also choices it's uh yeah flexibility and choices for the assessment?

Professor Fei

Thank you I'll probably take a more sort of a general approach when it comes to uh flexibility to uh to assessment now the during the COVID 19 when we had to actually respond to it and the part of that was obviously assessment because at the beginning or before the semester started all the assessments already been designed. So the process was actually to check in each unit how the assessment could be redesigned and there was a sort of a design process and the design process wasn't just a sort of individual stuff it was more a teamwork between the unit coordinator in utas we call unit coordinator teaching staff and the course coordinator so look at the redesigned assessment and making sure it's wherever possible it's equivalent to the previous design and assessing students learning outcomes and there was a process of approval so it's a quality assurance so it's not just to say well yes we are going to change it and we make it uh flexible the previous design assessment will not be couldn't be done and therefore would required a different one there was a process in addition to the initial discussion assist discussion and the design so making sure that the redesigned assessments are equivalent to the previous one and assessing students learning outcomes and therefore it's also quality assurance so with sort of with a particular assessment.

You know probably will be I don't know if in your case if your design assessment uh sort of require access to probably to physical equipment or trouble to collect a certain data or whatever and with the travel restrictions this couldn't this would not be possible then it could be, an alternative could be you design a scenario a case study so you design the cases study instead of students actually having to go out you use alternative to replace. So it's once again it's very common for us to design those context-based scenarios for students actually to do and without needing physically go in somewhere but of course they students still they're still different but that probably something we could do.

Professor Carrington

Thank you very much for the great question and the great response now I'm aware that we have one minute left so I'm going to jump to my question which is are you going to continue with this online blended model that you've developed during COVID or are you going to go back to the old way?

Professor Fei

Great I'll probably put it this way for the within the Australia maritime college for the maritime and logistics management this will continue online education will improve and we in fact we continuously improving the online education part and the responses or what we have done overall in the maritime college it's it wasn't just the outcome from the online education it was a change to thinking to manage it so although we probably not continue fully continue with the online education because with the uh the lifts on travel restrictions we have more students on campus and the Mexican students can travel interstate so in maritime engineering for example we have 85 of students already on campus so we'll change the way we do it for example one thing we will do is we still have the online component delivery it's blended but we actually flip the classroom so we deliver the content apart online and the classroom physical classroom session will be as I said problem solving discussion group work applications will you enhance the student experience in fact but we'll we're not going back to what it was.

Professor Carrington

Brilliant and what is so clear from your presentation is that you and your colleagues took this challenge and you used it to rethink how you approached the learning of students how you approach the pedagogy how you understood engagement in different ways it's so thoughtful and reflective it's such a powerful model.

I'm going to take away from this one quote from you early on and you said things that were impossible became possible and I think that's what I'm going to take away from you. It's really hard to change the way that you approach and think things after you've been doing this for a while but you've really changed things around and I'm I want to bring that into my school it's so impressive.

So on behalf of everyone I'm going to call time because people are starting to leave they have other commitments professor Fei thank you so much for being our speaker this evening and it's been an amazing talk I think it's been life-changing for me at least running the school of education and I would like to end with those thanks.