ASCILITE Wavelength Episode 3 Transcript

Opening

Host: Welcome to this edition of the ASCILITE Wavelength Podcast. I am your guest host, Michael Cowling. In this episode, I talk with Michael Blumenstein about artificial intelligence and what it means for learning and teaching. Amanda White continues her series on Academic Integrity, examining the issues from an academic's perspective. Lastly, our students tell us what has helped and hindered their university experience in "The Student Voice".

Segment 1: Michael Cowling interviews Michael Blumenstein

Host: In September 2021, I had the honour of speaking with Professor Michael Blumenstein from the University of Technology Sydney. At the time, he was the Associate Dean (Research Strategy and Management) but is now the Deputy Dean Research & Innovation for the Faculty of Engineering and IT. Michael is an expert in artificial intelligence and information and communication technology and has a long and varied career in the space.

Michael Cowling: So, welcome Michael. Thanks for being.

Michael Blumenstein: Thanks so much Michael. It's a pleasure to be here from lockdown here in Sydney.

Cowling: Awesome awesome, yes, it's a virtual holiday, if not a physical holiday. So, let's start with a softball question for you, and that's easy one, right? So, tell us a little bit about one of your most passionate discipline projects that relates to learning and teaching. So, as I said, you're a recognised researcher, tell us a little bit about your discipline and how your discipline ties into learning and teaching, and maybe something you've done in the past in that area.

Blumenstein: Thanks Michael, yeah look, I might start off by saying that—you know, as you pointed out—I've been working in sort of the area of computing, computer science, IT, whatever you wanna call it now for some time. Interestingly, my start in learning and teaching was straightaway into programming. That's where it all began, so I taught large programming subjects for a very long time. So, although my discipline is mainly in artificial intelligence—or in those days used to be called computational intelligence. And, of course, a lot of people are now really putting their own spin on what AI is. It's been around as field since the 40s. But a lot of people think it's new, but my research in that area spans from around the 90s, where we started going to what's called the "Winter of AI". Because a lot of people, you know, were sort of saying, "Well, I had its great run, and you know it was there was back propagation in neural networks and some of those terms aren't even used anymore today, but they were the hot topics of the day. And then what ended up happening was that I attended a conference in 2000, where I talked about AI, and the people come up to me and say, oh, why are you talking about such a backward topic? That's the past AI is, so it's amazing how things have changed, and now it's the hottest topic on the planet in terms of technology. So, I suppose the connection there, if we go back to my learning and teaching is, you know, I started with programming, where you did a lot of subjects in say Java, C, C++ and the teaching of those sort of, you know, work for, which is the fundamentals and building blocks of where we are now with people using far more different sort of application areas, like using Python and other approaches, to programming AI. But I also taught AI subjects as well, such as evolution, neural computing, and a few other things. But I would say my biggest sort of passion for a while was, look because programming was such a tough thing to teach anyone who's taught programming we'll realise that it's probably the most difficult thing to teach beuase it's something that requires some theoretical knowledge, but it's really very practical, and you know, without hands on, without really providing good examples, you end up finding the students' eyes glaze over if you can't engage them properly. So,

one thing we also wanted to do was to really try and provide something for the students that could enable them to also get really real-time feedback. So our passionate project I was working on was a piece of software called GAME, and it was called the Generic Automated Marking Environment and this is this was years ago, but we wanted to create something that was of benefit to the lecturer or the teacher but also provide rapid feedback to students, and it was actually a system we developed. Unfortunately, it never made it past prototype, but we actually were able to ingest code from multiple languages—C, Java, C++—and then mark them automatically and then provide automatic feedback in a rapid way so that students could actually take the literally automated feedback. So, it wasn't there. Right, but it was clever in those days to provide something rapid that they could then take and quickly use to change or update their code, and it provides them an opportunity to get rapid responses, so the big thing about students is that they want feedback immediately. You know, and of course, sometimes feedback comes later and then you know after they've done this huge assignment, they go, "Oh well, you know. Thanks for giving this feedback. Now it would have been helpful before." So imagine if you could put something in even like things you're testing and get the feedback automatically from a computer system, and that's sort of where we were with that. We really were sort of pushing the boundaries in those days. Now there are a lot of systems available and a lot of web-based systems and lots of material to help students in the programming space. But I think we published a really nice article in the Journal of Computers in Education, which is—now talking academically—a nicely ranked, Tier A publication. It described the system, and it was something we really were passionate about. And then in the end, we end up looking at releasing GAME2, which would have been the next version of it. But in the end, unfortunately it didn't get a chance to sort of materialise in a sort of scaled way, but that was something that really was on my mind a lot when I was teaching programming languages because to me that's the fundamental of everything. When you talk about IT, and I'm a big advocate for supporting anything we can to ensure that more people get that experience during their degrees and their career.

Cowling: Awesome. Yes indeed, marking programming drives me absolutely bonkers, and you've been pretty modest about computers in education, I can tell you that the ASCILITE audience will be listening to this now going, "Wow! He published in Computers in Education, generally considered, I think, the top journal in the field of educational technology" That's a fairly modest review of it.

So talk to me a little bit about the challenges. As you and I have known each other for a long time and hopefully that's for the people that are listening who don't know that I've known Michael for two decades, probably longer, and so I've seen him evolve as a teacher teaching these ICT students kind of in parallel with me, I think. In a lot of ways, and so you've mentioned the challenge. One of the challenges of teaching those ICT students is that they want feedback immediately. Do you think there are other challenges that are particular to ICT students? The students we tend to deal with and how do you deal with those kinds of teaching challenges?

Blumenstein: I do think a big challenge is A. the expectations of lecturers and academics and B. the expectations with the students coming into a degree. I mean, we're now seeing a resurgence in, certainly in my university, the Bachelor of Computer Science is the hottest thing since sliced bread in our faculty. We're getting so many students, which is really positive I think. But it all relates to the trends, I think externally. We're seeing so much demand for students with those skills. So, I think it's managing expectations. With students, I think the challenge there is that you can just drop into a computer science degree, and everything will be easy. If you're not…and some of us like you and me, Michael, we probably evolved. You know we'll sort of weaned off of computers as we were going through school and going into university. Whereas, there is this now interest for people from sort of different backgrounds, disciplines that want to take up computing, so I think it's about you know

those expectations of the students and how we manage those. I think we really have to also better understand whether the schools that people go to are preparing people to… Everyone on about growing the STEM graduates and the STEM pipeline, but is there enough preparation for students as they come in for the first subject in the first degree they do at university. Generally speaking, I think hopefully things are starting to minimise around technical skills. In my day, you know the peak of my programming teaching prowess, we didn't have digital natives. We didn't have people who were immediately…who was so attached to technology. But now I'm seeing it in in my children, I'm seeing it around that a lot of people already have that technology background when they walk into the classroom. But it's the use of technology, as opposed to the creation of technology. And that's what I think we really need to emphasise is that we still need to push certain things, such as problem solving. We need to push things that are not language specific. We need to push things that are not necessarily vendor technology specific. It's about how you to deal with technology, how do you come up with the tools to be able to develop things on any technology? And that's the advantage of what university can provide. But I think sometimes that's lacking in understanding when people walk into a degree, and it's the advantage of actually getting a university education is actually providing that holistic approach to things.

So yeah, look, I think the usual things are there like that. But the other thing is, I think, how do you handle assessment? That's the other big thing I think. We were just talking about GAME and that platform we developed for marking. What's the best way for creating assessment that's really testing the students? I remember doing myself open book exams. Is that the best way? Do we need to really push more subjects that they're being offered at universities research, which have no exams, and they're all practical and hands on? So I think there's still a debate around that about what's the best approach to. That, but at the end of the day, for the students we also have to keep in mind that students are very creative where they find answers to things and how they collaborate with their student colleagues. And I think we have we, as academics have to come up with, you know, innovative approaches to A. ensure that we're we're testing the students' individual capability as well as their ability to work in groups, whilst also maintaining the integrity of the process. So with the new digital advances that are occurring, we have a lot of challenges to deal with, and that's something that we have to deal with, not only for the benefit of ensuring that we are really understanding the performance of a student in a particular classroom, but also giving valuable feedback and upskilling and the student in when they undertake a particular subject or degree that they do. So yeah, they're both very very broad things, but I think it's still things that are important today.

Cowling: That's it. Look, it's really interesting to talk to you, to hear you talk about managing expectations, and one of my favourite authors, John Biggs, who talks about constructive alignment in teaching, often talks about one of the issues with academics is that we're all their top students, right? You know not to be too egotistical, although it's currently a problem for a lot of us, is that we tend to be the top students. And so, we do expect that all of the other students coming in are gonna be like us, and they're not all like us, right? He gives the example of Robert or Susan, Susan would graduate from university with anybody teaching her, right? Robert, he's trying to do the minimum. You know, he's got a part-time job. He's got lots of other stuff going on, and he just wants to get through his degree. But I think you make a really good point, and it's interesting to hear you talk about computer science and that need to kind of get under the hood, a little bit as well, and that difference between these students that expect that they'll come into the degree application-oriented. "Digital natives" is that term you used. We could talk about digital natives for 20 minutes. I think we won't. But, that idea that even though they're digital natives, maybe there's this disconnect for them to know that well, no, if you're gonna do computer science that you actually need to get

under the hood, and understand how all of these things work. I think it's fascinating to hear you talk about that, 'cause you're right, it is almost waves, right? You know we had computer science. Then, we had ICT and applications for a while. It's really interesting to hear that down at UTS you're getting back toward sort of core computer science.

Blumenstein: It's huge actually. So, I was also the head of school. That was my first role when I was at UTS at the time. Interestingly, it was called the School of Software, which to me was the most interesting name for a school. And then I turned up and I go—'cause I came from the school of ICT at Griffith University, which is the job before. When I took the School of Software, on which was interesting about that name was very simple. School of Software, easy or SOS? And you know, and you think yourself OK, makes sense. It's simple. Maybe that's and that the other day, what do students care about the name of this? But what's interesting is, since I left the head of school role, one thing I did do, which I am Proud of, is I created or recreated the computer science degree because we didn't have one when I arrived. And it's interesting you talk about waves, because it's exactly right there was a Bachelor of IT, but no Bachelor of Computer Science, so we created that. And then after I left that role, the next head of school created the School of Computer Science, which is far better in terms of the acronym—SOCS. So yes, it is waves, but we're in the biggest plateau now..sorry, not both…the biggest peak of the computer science being hot, and it's because it feeds into all this other stuff, like areas like AI and other in other really hot areas, so it's a good time to be in computer science for students and the staff.

Cowling: Awesome awesome. So, I'm gonna ask you more of a computer science question, a little bit less about learning and teaching, sort of tangentially. Obviously, your reputation is as an artificial intelligence, neural networks. You know, AI guy expert. Do you think the robots are eventually going to replace you and me, make us redundant in the classroom? Is that the ultimate expression of your GAME system that you were describing before? Or am I safe in my job?

Blumenstein: I think it's a fantastic question, Michael, and I think, I have to preface my answer with saying something. You know there's a big movement out there that is literally scared of AI. OK, I don't know if you've noticed, but there is a groundswell even being taken on by some of our most reputable associations and organisations. Some of your listeners may know about the IEEE, for example or the Australian Computer Society, and there are also international bodies. They're all concerned about what AI is, what's going to happen with AI. There's even a whole research area is now emerging about the ethics of AI, bias, even weaponization, and the end of the world by Skynet. You know, and I don't know some of your listeners may not remember Terminator 2 because it's a long time ago, but…

Cowling: I talk about it in my class, and more and more, students eyes glaze over every year, I'm afraid.

Blumenstein: Isn't it funny? And you know, in my opening talks on AI, I actually show a visual from one of my favourite movies, *2001: A Space Odyssey*, and the number of people that put up their hands. So it's interesting, I used to teach more to students and now I'm teaching more to adult learners. So, it was interesting 'cause when you go to people who are not fresh minted out of school, you get no hands up when you ask, "Have you seen this movie?" But what that movie was all about was computers going haywire, and what we're talking about here with your question is, "Will automation take over? Will there be ethical issues? Will there be major problems?" And I would just like to calm everyone down and say, "Look, we're not even there yet."

AI is hot for one reason, and that is because, well, there's a couple of reasons. But one of the reasons is this advent of what's come about called deep learning, and you mentioned you're on that works because I mentioned it earlier, which is, you know, the, what's the connectionist approach to training a machine to learn right? And deep learning was just this massive innovation that could do it better, faster, consume more data and get better results. So, a lot of people have become worried that…that's the reason for why people are worried is because it's so accurate and can do so many things. But one thing it can't do is that when you've got a system that can recognise, say, someone's voice or another system that can recognise someone's face or another set. There is no system yet developed, that's a generic AI, and what you'd need to replace you in the classroom would be a robot which has generic AI. It can teach. It can listen. It can talk. It can understand. It can grab a coffee. It can make a coffee. It can hold a cup of coffee. We don't have that yet. OK, I know your question was a bit more provocative, and I'm trying. But I have to say that. I'm confident that your job is secure. Mine's secure. But I was telling my daughter the other day, that probably her, her sons or daughters might experience a different world. And yeah, it is true that the rate of AI and that sort of stuff is evolving at a rate which is significant because there's so much interest in it. And it's reflected again, as I go back to my original point, in the demand for computer science degrees and the demand from industry. But I have to say, that we're on the trajectory, but I think I'm a big advocate for AI for good. I think, as with the GAME system that I described earlier, it's about any technologies developed at this day and age is all about supporting the academic, the teacher, the person that's imparting knowledge to our students. So, I'm embracing the technology. And maybe any of the AI that's coming out as more of a support mechanism to ensure that the human aspect of teaching and learning is boosted and is augmented, so that that's my take on it.

Cowling: Awesome, that sounds good. That sounds good. My job is safe, at least my job is safe. And my kids jobs? Not so much as you say, or their kids not so much. But let's not worry about then, you know, let's say but my job is safe.

I say a similar thing to my students in my class, which is general artificial intelligence is very specific, and, you're right, it's very, very exciting at the moment with all the stuff that's going on. But yeah, we're not quite. We're not quite Terminator 2 Skynet levels for quite a while. I don't think. Yeah, James Cameron overestimated, I think when Skynet would happen.

Let's get on the last question…the last final question, which I ask everybody, right? Which is the magic wand question, and the magic wand question is you've now been, as you said, head of school at Griffith University, head of school at UTS. You're now associate Dean research strategy and management in the Faculty of Engineering and IT, there at UTS. So, you've got a pretty wide sort of view of education and have had for a while. If you could wave a magic wand and you could change one thing about education and technology or just education or higher education, what would you change?

Blumenstein: That's a very good question, and it's a tough one. I know that most people would probably answer this question by actually trying to solve something in the education itself and the approach to teaching and learning or the technology and teaching and learning, or the pedagogy or whatever it may be, and usually it would be for the advantage of the student, but also to you know, empower the teacher to do the best possible. I will say one thing, which is quite different, and maybe it's an evasion of your question instead, is that I think that everyone in the teaching and learning area, everyone in higher education, is doing the best they possibly can for their students. Most people really do care about how their students learn and ensuring the best possible outcome for those students so they can, at the end of the day, which is probably what they want—getting a good job, work either in industry, work in academia, wherever.

I think what I'd really like to change is actually the perception and the marketing around higher education. I really do feel that there is a lot of people think that there's a disconnect between higher education and the real world, for example, right? And that means industry, you know. And yet, we—you, me, we all—we all work with industry. We all talk to industry or get their feedback and want to do the best thing, but there is actually disconnect in terms of the perception. I do see a lot of stuff going around, you know. Maybe it's just proliferated because of social media and other things. I'm saying that do we need higher education, you know? And has the day of the ivory tower come to an end? Have we now grown out of needing it? I think we need it more than ever before, and it comes back to the issue of misinformation that's going on. It comes back to the issue of, even just AI. Look at how people are perceiving AI. If they think that tomorrow the world is coming to an end because of AI, or someone will steal their job, whatever. It's just that the technology advances are bringing a shift. It will be a shift to the to the workforce. It'll actually bring new opportunities. It's not going all dark and gloomy and the same thing with higher education. I think, we are still the remaining bastions of being able to provide really substantial support foundations for the educational lifelong learning journey, out of any other institution in the world, in the country. And there's a lot of stuff popping up—short courses and private providers, and people can download stuff online, even diplomas, degrees. Yet, but really, the sort of education that's offered here in in higher education, it's not about a particular platform or a particular technology. It's about providing a way for people to learn how to learn, and it gives an environment where you can try things, test things, fail, but really be prepared for the for the next stage of the journey, whether it's an industry or anything else.

So, if there's anything I could change, it would be for us to get the message out that it’s really important for all the great things that are going on in learning and teaching to continue in higher education. As the world grows in misinformation, we have the opportunity to provide very quality education and pathway for students to pursue their dreams and their careers. So, that's not necessarily just a job for higher education institutions, that's also hopefully a job for industry and other stakeholders, hopefully, to realise that this is the actually the best time for educational institutions and that the support we get should grow rather than be diminished. So, hopefully, I haven't evaded your question too much, but it's just something with my perspective.

Cowling: No, look, I added recently to my class at my university an entire week on fake news and misinformation because I agree it's a massive problem we've sort of has built up over the last decade or so for us, but I was trying to imagine the headline as you were talking. I was like, what is the headline gonna be, you know? “Blumenstein says we should knock down the ivory tower.” And then you changed your mind. And then we were keeping the ivory tower, but we were keeping the academics but knocking down the ivory tower, but we still need the academics to exist to fight misinformation. So, I can't quite imagine the headline that we we're knocking down the ivory tower, but the academics still need to exist to fight that misinformation. I don't know the metaphors are getting all mixed up, Michael, but I'm glad you mentioned the ivory tower.

Blumenstein: Maybe I'll summarise your one sentence. The perception is that we live in ivory towers, but the reality inside our higher education institutions is that that they are producing really good quality material for teaching and learning. The people are doing a great job. The students are getting really great benefit, and that needs to be the story that needs to be told. And so, higher education must persevere. It must be put up as a bastion of really good quality education that everyone can benefit from, and I hope that that's something that industry and other stakeholders will help us promote as we move into the next step of our evolution in this new world of technology and other new sources of information that that are upon us.

Cowling: That's good. I think that's a good headline. We'll use that later, yeah? Awesome, well thank you, Michael. That was my final question. So, I'll finish by saying thank you so much for the conversation. It's been really great to talk to you about technology. I think you've established your reputation as a technology expert. So, well done and yes, thank you so much for being here.

Blumenstein: Thanks so much Michael. It's been an absolute pleasure. I can't wait to be able to get in touch with you face to face, when I'm out of lock down one day, so looking forward to that day.

Cowling: Keep my fingers crossed for the for the lockdown break.

Blumenstein: Thanks Michael.

Mid-Program Break

Announcer: This podcast is brought to you by ASCILITE and tell as the Technology Enhanced Learning Accreditation Standards. TELAS is a rigorously derived framework that recognizes quality online learning through a certification process. The standards for free. Find out how to get your course certified at www.TELAS.edu.au Now back to our podcast.

Segment 2: Interview with Victoria Clout, Deputy Head of Teaching at the UNSW School of Accounting, Auditing and Taxation

Host: Welcome back. Dr Amanda White now continues her three-part series highlighting issues and challenges in academic integrity. In this segment, we hear the challenges from an academic's perspective and some of the challenges with trying to stay ahead of academic integrity violations.

This segment also makes mention of Course Hero, a website that has been connected with contract cheating, as well as violations of copyright and predatory business practices. In 2020, Australia adopted legislation that prohibits and carries penalties, including fines of up to $100,000 and gaol time for promoting or selling such services. Some institutions have even gone so far as to prevent access to the pages through their networks, and students using such services face institutional penalties up to and including subject failure, suspension and exclusion.

Amanda White: I'm here with Doctor Victoria Clout. Victoria is a close friend of mine. We've been accounting academics together for a really long time at different institutions, but Victoria is Deputy Head of Teaching at the UNSW School of Accounting, Auditing and Taxation. Victoria welcome.

Victoria Clout: Hi Amanda, nice to be with you.

White: So being both accounts we have large cohorts of students, students that might not always want to be accountants, or from studying our subjects 'cause it's a core subject or they're studying accounting for other reasons. What have been your experiences with academic integrity?

Clout: Well, it used to be a long, long time ago that students would try and copy each other assignments, and I encountered this as I was working for the university at the satellite campus in a small country town, and I discovered that two assignments were virtually the same for two groups. And I thought this is such a strange thing. I only had 30 groups at this campus. And then I had to think about what's happening. How did this happen? And my initial reaction was that everyone get a 0. So, I was brand new lecture at the time, but then I didn't action matters. I had had a chat with the Deputy Head of Teaching in the Business School, and she said, "Well, we better do an investigation." And one student, he had stolen off of the printer in the library, the copy of the assignment, and then he typed it in and gave it to his group members, who unwittingly had received this. So, that was like almost this way the dinosaur era. We've moved forward.

I was an early pioneer of online quizzes, and I had big test banks, and I was trying to do everything right. And one year, I was just like all this year's got everything right. There's something going wrong, and I discovered there is a website called Course Hero, and there were all the quiz pages.

White: [laughing] All those questions you have slaved over to write.

Clout: So, I'm sort of be running the history of…and then spring forward to COVID-19 online exams, open book, open Internet. There's a lot of chat groups…

White: [laughing] Discord groups?

Clout: And if you only have an honour code in Australia under code doesn't mean anything.

White: So, in terms of technology. And if there was something that could help support you and support students in academic integrity, what would it be?

Clout: My idea at the moment is an Excel spreadsheet that has some macros in it, so students can't copy it too and they can't cut, copy, paste or rename the file and then they upload it. And then if they've uploaded their friends get, "Warning! Warning!" And just so that we can have all the benefits of Excel without that fear that we're getting 500-600,000 copies of the same Excel file.

White: Hmm. I guess one of the key issues with something like Excel and building macros and all these things is you need another skill set to be able to do that. It's programming. And how do you find the time then to try and, you know, I guess for you, you're a researcher and you're a teaching academic and you're a deputy head. How do you find the time to commit to trying to ensure that there's integrity in your assessments?

Clout: Well, yeah it can be difficult, but I think that it's probably… I've come to the conclusion if, let's say recycling my exam as an academic, that's a breach of academic integrity as well. So, it's important to have that commitment and to write those questions, to think about the exam structure, think about the assessment, don't recycle my assignments kind of thing. So, I think that's important. And then also, if I do detect a student doing something, I think there's a moral obligation for me to report it. 'Cause that student could go out into the world and then commit fraud or prepare misleading financial statements. Millions of people could lose their money, so if I don't hold the line, then the capital market won't function. Investors will lose money. That's out of the way I think about it.

White: I think it was a good comment. On Twitter, when I posted a meme about…you, know there's a red flag meme that's going out right now that we've got this risk around recycling. Somebody rightly said, well, you know, another issue is that academics who are recycling assessments are probably under their own set of pressures in terms of workload. And so, it needs to also come down to us in thinking about what is involved in the workload, how much should it be, so that we do have sufficient time to sit down and really think about what goes into the exam and designing new exams. And it can take me usually a couple of days of solid writing to write a whole new case for an audit test or, in an introductory accounting which I know you teach, designing thousands and thousands of questions for a test bank can be really hard. Awesome, fantastic. Well thank you Victoria for sharing your thoughts with us today and being on the podcast.

Clout: Thanks for having me.

Segment 3: The Student Voice: Enablers and Barriers to Your Learning

Sound effect: Phone ringing

Announcer: We spoke with students across Australasia about contemporary issues in tertiary education. This is what they said. This is "The Student Voice".

Welcome to this segment of "The Student Voice". We have asked our students to talk about the barriers and enablers in their studies—those things that institutions could do to assist students in more effectively studying, as well as, what institutions are getting right. We will hear from…

Gayani: Hi I'm Gayani, a doctoral student originally from Sri Lanka.

Zac: Zac, studying a Bachelor of Science Education in my third year with a Chemistry major.

Announcer: First the students talked about the barriers—the things their institutions could improve.

Gayani: If I talk about various to studying effectively, I would be putting a lot of responsibility away from the student, when I'm giving my answers. From my personal experience one of the key things that always come to my mind is the ambiguous expectation of academics around what students need to do and what they're marked for, which can be very inconsistent across different institutions. .Even within the same degree academics would have very ambiguous expectations of preconceived knowledge, what skills are being assessed when they're putting together tasks and students are being mark, and I think that is one of the key barriers that come to my mind—as students not knowing what they're being marked for and the peripheral tasks around an assessment taking the toll on them passing a subject or not. Yes, I acknowledge learning is a differential journey, but we need to at the same time, be realistic when it comes to higher education. Marks matter. The end result that comes up on your transcript matters when you go into the workplace. So, when lecturers and academics in general have very ambiguous expectations around students. Students tend to focus on getting that mark, not actually learning, because at the end that that is where the value is for all the investment, time and money they put together. So, for me, personally, I think that ambiguous expectation is the biggest barrier when it comes to students learning effectively.

Also, I would say lack of direction for students—just letting it loose and academics be like yeah, this is the content to however you please, going back to that ambiguous expectation around how am I being marked on the content that we are weekly going through, because at the end, I need to know how I get marked. Like, we walk off with a degree. If someone else has a better transcript than I am, I don't get the job because, uh, we…
Yeah, again cliches statement. We all do this to have a career out of it when it comes to higher education. If you don't fit into the cream of the crop, highly likely you don't get hired So for me as a student, it was really important to have good direction and boundaries around what the expectation…clear expectations set out so that I know what I am to do, where to invest my time and effort on.

Zac: I think the biggest challenges in learning effectively…It usually does come down to communication. And that's a very big topic. I think one of the biggest ones is how easily can you seek help past the first contact. Say, for example, if you're in a lecture. You are going fine, and then there's something you just don't understand. You've kind of got two options there. Can you just pretend that you didn't understand something, which is eventually going snuggle up to your final exam, or can you just reach out to the lecturer and say, "I didn't understand this. Can you help me?" Getting that communication to the lecturer/whoever is instructing is kind of the barrier for any, like, learning difficulties. The size of that barrier varies massively, depending on who your lecturer is, how that subject is being taught. I mean, online it's a whole another thing that we'll get to, but online that barrier has increased. So, if you're in a face-to-face lecture, the lecture is done. As long as you

don’t have to be somewhere immediately after, you can just go talk to the lecturer for 5 or 10 minutes. Online, depending, you can't do that. So, I think, yeah, communication is the biggest one—how willing are people are able to communicate, or even things like, on the Moodle site, regardless of whether it's online or face-to-face, how clearly something is communicated is so important.

So as an example, I had an essay basically due. There was one very key question that we had to answer, but the question was so ambiguous as to what it was actually asking. And that was not the point of the question. It was meant to be, we later found out, very black and white, but the submissions that my peers and I submitted varied very greatly. And even, like a few days before it was due, we finally got an answer back after lobbying for a little bit, and the answer was not helpful. Like it was, it was basically just the rewording of the question.

And it's those instances, maybe that's another barrier, which is the frustration where you are reaching out…you are trying everything that you can do as a student to get help. You are doing the things the lectures are telling you to do if you need help, and there is still no comprehension. And the kind of, I don't know, because he taught read everyone's minds, but it's kind of like that lack of care. They're like, “Ah, you know, it'll be fine. It's just an essay.” But it's also like, it is just an essay, but when it's worth, like, 40% and where it's 2000 words, do you want us to take this seriously or not? And if you can't answer a question, which is fairly simple, then there might be an issue there.

Gayani: If I expand on another one. One other factor that I would conceive is lack of workplace integration in subjects. I am a huge fan of theoretical study. That needs to be that. I'm not telling that it needs to be workplace oriented 100%, but there needs to be a certain percentage which make the student ready for the life after university. You can't just do book studying and then, like, let everyone out and be like, “Oh, this is the real world. Now go figure it out yourself.” The algebra that you learn might not be practical out there. So, lack of workplace integration, again, would come up really on top of my list as something that's hindering student learning journey.

Announcer: In addition to these recommendations, the students did acknowledge areas in which their institutions were taking positive steps to enable their learning.

Gayani: In facilitating a better or more effective learning environment, I would say multiple delivery modes—lectures being open to navigating away from traditional teaching methods where appropriate. I'm not telling the classroom setting is not working, but it is coming to a time that we need to explore other options. Student needs are very diverse, and also, back in the day, I would say, people who went to higher education institutions were mostly capable. People who were selected, were the cream of the crop at that point of time, but tertiary education has become very accessible over time, Students with diverse needs are going into university. So, we need to really rethink how we deliver content, how we facilitate learning environment in that scenario. So, universities, I would say, really need to think how content is delivered and how subject matter is assessed because, like learning and understanding, shouldn't necessarily be assessed from an essay—your ability to put together words. In academic context, the student might be actually understanding, but they are so bad at writing essays. So that measurement needs to be rethought. I know it's a hard task to be able to have a like, a buffet of options for students, but I think that is the direction we need to head into, at least to strive to give a couple of options, so students at liberty to pick, which ever highlights their strength.

Zac: One of my current chemistry subjects. They, from the very for the very start, they clearly highlighted the basic process to get help or to seek assistance. Basically, there's, like, some forms on the Moodle site. “Put it there,” they will say, “We'll get back to you in a day or two.” And the key thing is that they do get back to you in a day or two, which is very important. So, it's like, you go to

the student discussion first discussion first, then you go to the help desk if the students couldn't get it themselves, and then, they will answer it there. If they can't answer there, then they will email you the solution to it. It's kind of, like, it's a clear, consistent process about how you actually go about things, and the fact that when they say they'll answer in two days, they do. Or if they do take longer, they'll say, “This will take longer.” It's that consistency that builds trust in a way that's really important.

An experience as a student that can sometimes really frustrate me is when we have these clear deadlines and for every day off you can lose ten percent. It's when you need…like, you're desperate for feedback, you need assistance. And they’ll just be like, “Oh calm down. I’ll just be a day, and then it's like five days later.” And I can understand that everyone is incredibly busy, and that's not an issue. The issue is that if you say it's going to be a day, I need to be mentally prepared for that. I know this sounds selfish, but it's kind of just like this is, you know, this is what I need. If he told me it’s going to be a day, I’d expect it in a day. If you told me later, I'll expect it then. Just consistency builds the trust that I need to actually communicate well with a lecturer or anyone really.

Closing

Host: And that’s a wrap for this edition of the ASCILITE Wavelength Podcast. The ASCILITE Wavelength Podcast is produced by the Australasian Society for Computers in Learning in Tertiary Education.

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