Andrew: 00:06 Hello, and welcome to the DLTV podcast. My name is Andrew Williamson.

Melinda: 00:11 And I'm Mel Cashen. This episode is part of a series that focuses on digital learning and teaching across Victoria, Australia and the world, really. We've had some exciting podcasts already in 2017, and we've got a few more things in store for the last little bit of the year coming up. We're going to continue to talk to authors from DLTV journal. We've still got some presenters from DigiCon that we'd like to catch up with, and just finding out what's happening in some of our member schools.

Melinda: 00:43 Now, Andrew, this is our first episode since DigiCon. We've had a little bit of a break, but we're planning to get back at it and talking to people again

Andrew: 00:51 Yes, had a bit of a hiatus. Thanks, and that was partly due to me finishing off my studies. I do apologize to all our listeners out there for the break, but that needed to be my focus so I could get through it, but, yea, I'm done.

Melinda: 01:09 We might have to have you on as a guest one time to hear all about it.

Andrew: 01:14 Oh, yeah, I'm sure it will be a fascinating chat talking about cognitive load theory and inquiry-based learning, be awesome. We've got a special guest with us tonight, it's Paula Christophersen. Welcome, Paula.

Paula: 01:30 Thank you, thank you very much and hello to everyone.

Andrew: 01:34 Now, Paula, it's true that you used to be the Digital Technologies Curriculum Manager at the Victorian Curriculum and Assessment Authority?

Paula: 01:40 That's correct before I, I wouldn't say gracefully retired, but I did retire at the end of last year.

Andrew: 01:50 Also, in recent times you've been very involved in developing the Australian curriculum for both the ICT and the generalist capability, as well as the Digital Technologies. That's quite a significant impact you've been having on our Digital Technologies Curriculum there.

Paula: 02:05 I felt very privileged to be involved in both of them. The ICT one came first and then the Digital Technologies. The Digital Technologies process has been quite a ride and it was a fantastic experience. I'm still pleased to say that the writing team, we get together quite regularly and are still doing bits and pieces around the nation. I've felt very privileged to be able to be involved in both of those pieces of work for ACARA.

Andrew: 02:47 Well, it's certainly a privilege for us to have you here on the DLTV podcast and to get your insights into the curriculum and how it's implemented. But before we tear off into that, I was just wondering, you've been involved in ICT for quite some time. I'm quite interested historically, what was it like in the early days and how has it changed?

Paula: 03:15 I suppose one of the biggest things to start with is that students back in the olden days when it was basically[inaudible 00:03:23] is that Computers Across the Curriculum, and the students were tethered to their desks and chairs because the technology was of a size that wasn't mobile, it was one we shared. The classrooms then would've had Commodores or Apple IIe's and for those schools that were a little bit more advanced, they had those great big Macs that you carried around in a monstrous bag.

Paula: 03:52 It was interesting, in the earlier days when there was that Computers Across the Curriculum was the term, it was text that was primarily being manipulated. This was quite driven by the writing process, the process writing regime and favorite. There was a quite good merge, I think, between writing process and the interaction of computers in the classroom.

Paula: 04:24 Back in those days, most of the focus was about how students were manipulating text in the different learning areas and not very much emphasis on the manipulation of other types of data, such as American image and sound. When things progressed a bit and it really got quite a kickstart with the Curriculum and Standards Framework, it was quite interesting because it was one of the first times that we had seen a curriculum, which actually had a processing process, a thinking process, a problem-solving process associated with ICT, as it then became across the curriculum.

Paula: 05:14 What that also brought with it was that C in between I and T. It was before IT, it then became ICT. We started to see communications being brought into using Computers Across the Curriculum but it was primarily email. Then, it really didn't come on until the [velves 00:05:42] I think, when we saw a significant shift, not only in the types of technology, the availability of the technology, but also the shifting curriculum.

Paula: 05:51 I think that there also was quite a precursor to actually the Digital Technologies Curriculum with a focus on thinking. The visualizing thinking remained, it is strange within the ICT area I think was quite a forerunner. Once we got into those, we then really started to get into students being able to manipulate the range of different data types and we really saw the use of graphics, images, animations; great leaps and bounds in students being able to learn about other learning areas, as well as express their understanding of other learning areas through the use of animation and images, as well as with sound.

Paula: 06:48 I have to say, though, almost, I think it's almost been a little bit worse in the last decade than what it was earlier, the focus on numeric data has been quite low. I think, back in the early days, it was probably a little bit more focused on database and spreadsheets than what there is now.

Paula: 07:13 The impact of social media, the internet, and the mobility, the ubiquity of the technology now means that ICT learning takes place anywhere, anytime. Previously, it was totally assigned to the classroom. It was a shared resource, not a personal resource. I think they have been some of the biggest changes that I've seen over the many decades I've been involved in it.

Melinda: 07:47 That's really interesting. I guess a lot of schools out there are now grappling with the idea of the Digital Technologies Curriculum being a new curriculum and a new area but to think, actually, it's not that long ago that we went through some of these changes before. As an area of IT, it certainly must keep changing so that's reflected with that.

Paula: 08:08 It is.

Melinda: 08:11 Now you were actually presented earlier at our DLTV AGM, and it was great to have you there sharing some of your expertise and thoughts. Your presentation centered around a traffic light metaphor for describing the different stages of implementation of the Victorian Digital Technologies Curriculum. Could you just share with us your idea around that traffic light metaphor and tease that out a little bit for us?

Paula: 08:36 Well, I'll just provide the summary and then I'll take each of them. I took the traffic light metaphor of red, amber and green to basically say, in a nutshell, for schools that are red, classified as red at the moment, they're not going too far, they were basically by standards, that's when I was viewing them, for a range of reasons. Some of them could have been quite legitimate reasons, others might of just been naughty, literally didn't want to move, don't want to embrace it. But for other schools there are a whole range of reasons.

Paula: 09:19 But it was the metaphor to say, I think they were stuck in the ICT route, they are stuck in a crease of time, don't know how to move forward and really couldn't move back. Now suppose I'm saying they almost were not even in the car at the ridge, like they were in the bus shelter, everyone else go about. Some might have been hoping that the right bus was going to come along and take them to the destination without having to do a lot of work. What they, I think, typify is still being very much in the ICT mold.

Paula: 10:07 The amber were the group of people who I think are proceeding with caution. They're dipping their toe in, they're taking a bit of a suck and see approach but they've started. They might not have done a lot of planning, but they have taken some elements, I think, that they might be confident in teaching, and have had a go, have decided to see what part of this curriculum looks like.

Paula: 10:36 There might be some instances where the three strands are overlapping if we look at a Venn diagram approach, but in a way they are passengers, I think, they're not in the driving seat. Proceeding with caution but not necessarily feeling as if they're in control, and might be waiting to see what other people are doing and then joining in on the coattails.

Paula: 11:08 I think part of the amber metaphor, as well, is that they are still quite wedded to the students using other people's digital solutions, rather than the classroom focusing on students being the developers of digital solutions. So that mindset hasn't quite clicked over, hasn't done that 180 degree shift, but the intent, there's a willingness to want to go.

Paula: 11:41 Oh, green, blazing away. The green, I think, have been doing some planning for the last two years, have got some control over the current program and where they're going. I think there's some confidence in what they're doing. I think some schools will be bold enough to even start doing some reviewing, some evaluation of their program at the end of this year.

Paula: 12:07 I think the learning is where, in the Venn diagram, we are actually getting a genuine overlap integration, interconnection between those strands. There is actually, the integrity of each of the content descriptions has been respected, but teachers are feeling quite confident in weaving together those, or grouping together those content descriptions so that the students become willing and excited to develop this sort of curriculum.

Paula: 12:42 I do think the green people have a three-, four-year plan. They know that in three or four years' time that students within their school would have experienced the curriculum for the [bands 00:12:57] and they feel quite confident in where they're going. What we have to do is ensure that we provide support material, best practice examples for people at the amber, who suck and see and just dipping their toe in so that they feel quite confident to move ahead next year.

Paula: 13:24 To the reds, the people still in the bus shelter, I would just think start small, start smart but start. Get out of the sheltered environment and just start. I think that's my take. Innovation is really difficult and I think that notion about being in the crease of time is an interesting one because some schools, some teachers, some school communities find it very difficult for a range of reasons; economic, social, political, sectorial, to actually make that move to get out of that valley and start climbing the next mountain.

Andrew: 14:23 Yes, certainly. I do really like the analogy. I agree, I think it would be fascinating to see where we're at in three to four years' time when past foundation students have experienced the Digital Technologies Curriculum, right through to grade six, and see where schools are at, where we're at in teaching and learning.

Andrew: 14:51 Focusing on this is the primary and to F to 10 areas of the curriculum, I was just wondering if we could also then think about the VCE curriculum. In the past, you've had a lot of involvement with the VCE computing and informatics units.

Andrew: 15:12 I'm fascinated about if you're a beginning teacher going into year 12 or teaching year 11, year 12 VCE and teaching these units for the first time, what advice would you have for them and where would they go if they needed assistance and some support?

Paula: 15:33 I think it's very interesting. When we developed at the current study design, so it was implemented last year and it has a four-year accreditation period, we were of the belief, we had to first start with the implementation of the Victorian Curriculum because of the review. We actually thought that implementation from F to 10 would be two years ahead of where it's at.

Paula: 15:58 The reason I'm saying that is that we actually built into the VCE Curriculum the fundamental concepts of the DigiTECH curriculum about the ways of thinking, so there are the underpinning concepts of computational design in thinking within the VCE computing curriculum.

Paula: 16:21 I'm saying that if you are a VCE teacher next year going into teaching VCE computing for the first year, if you have been teaching Digital Technologies and Aspect of Digital Technologies to begin with, you are already basically putting yourself in the green light position because you come to that study with some underpinning conceptual basis upon which this other VCE curriculum is founded. What we were hoping in this curriculum is that it's a bottom up rather than a top down developed curriculum. It was actually the DigiTECH curriculum, which is hoping to shape the VCE and that had never happened before. Curriculum, really, we talk[at cantervilles 00:17:17] but not a great deal because it was ICD.

Paula: 17:21 That's one thing I'm saying. For VCE teachers, first-time teachers, please if you're not familiar with the DigiTECH curriculum, that would be the first thing that I would go and read because the fundamental concepts are the cornerstone of the VCE curriculum.

Paula: 17:40 My other message, and this is probably me being an absolute purist, purist of the highest order, it's all documentation, documentation. Again this is very interesting, it's one of the sharp contrasts between being involved with a curriculum, which has accreditation for certification for a student. Basically, the student gets a certificate, which is issued centrally. It is a centralized curriculum, and it is assessed partly by the center, and it's benchmarked by the center. While the teacher is charged with the responsibility of implementing the curriculum, at the end of the day, it is the center, which sets the standards.

Paula: 18:34 One is quite different to an F to 10 curriculum when the teacher can stray. The teacher knows the ballpark, basically, but can stray and not necessarily be held accountable publicly. Whereas at the VCE level, if you stray from the official documentation, it's pretty quickly discovered publicly that you have.

Paula: 19:05 My real advice to teachers coming into VCE computing for the first time is just read, read, re-read the study design, understand its construct, understand the relationship between all the components in the curriculum, and understand what you think that looks like. You read the material from the VCAA, there are past exam papers, there are assistance reports, there are reports from audits and that's where the VCAA samples of work that teachers have mapped, and how to look to see whether the tasks that are being set are compliant with the study design. Not what the marks were given, but the tasks, so the teachers are being held accountable all the time.

Paula: 20:02 If you know what is expected of you and you stick to the rules, then you have the freedom to engage in the pedagogy and the learning environment that you want in a classroom but you must operate within a defined edict, basically. If you do that, then you provide your students with the greatest opportunities of succeeding, assuming you apply the right type of pedagogy because you're not going to trick the students up because you haven't taught content that was mandated or you assessed content, which was outside the study design. Or you were too hard or too easy with your assessment, that gets adjusted. What you don't want to see is your marks that you are giving to your students being wildly different to how students performed on the exam.

Paula: 21:08 I'm saying there's a level of support for you. DLTV run days specifically targeted for VCE teachers at the beginning of the year and sometimes at the end of the year. There are always stations at the conference to help you unpack the study design and support you. There's a DLTV set of resources, which are not only teaching and learning resources, but assessment resources that have proven to be extremely successful.

Paula: 21:43 The VCAA website, which is at vcaa.vic.edu.au, select educators, and then select studies, and then select save for computing. You will find all of the formal documentation that you need to be able to implement the study. The other place, which is a good board is the website called edulists.com.au. You can subscribe free and you join a community of practice of likewise teachers.

Paula: 22:33 There is enormous amount of support available to you but just to ensure that people acutely aware, the documentation is critical and it is so important that you are familiar with the documentation. Once you know what you have to do, then you've got all the choice as to how you do it, but you must know precisely what you have to do.

Melinda: 23:02 There's some amazing advice in there, Paula, and what we'll do is we'll make sure that all those links to the things that you've talked about will be shone [inaudible 00:23:13] months. Great. Well I think that's all we've probably got time for tonight, Paula. It was really great, though, hearing looking back at the past, the early days back in the 1900's.

Paula: 23:38 It does beggar belief when you're thinking when I started, why I was very fortunate in that I got a secondment back in the olden days to start a computer education center, and that was really the first time that the education department took onboard and embraced Computers Across the Curriculum. I did feel very honored and very fortunate to be a part of a team there, which were trailblazers. We were the vanguard of what of was happening.

Paula: 24:12 Yes, the technology was weak, clumsy and southward, but the learning was totally restricted to what happened in the classroom. I do think that the mobility, the ubiquity, and the access that teachers and students have now just means that we have to focus more and more on value adding. That's probably the greatest lesson that I've learned for all times out of this. We have to add value. We have to encourage our students to know how to add value to either what they read, what they hear, what they see and attest to the authenticity of the material that they get and the material that they produce.

Andrew: 25:00 Certainly, having our foundation students experiencing Digital Technologies, you would expect that in 11 years' time, the value that will be added to their experiences, these students' experiences, the ones that are starting now by the time they get to year 11 and year 12, their knowledge will be amazing, one would imagine.

Paula: 25:32 I just heard the other day and I thought I'm going to try and do some work on this, talking about a continuum between digital literacy, digital fluency and digital mastery. I thought what a really sweet continuum. I want to try and work out what I think belongs in each of those categories of digital literacy, fluency and mastery.

Paula: 25:54 I think it would be quite a good exercise in also the traffic light judging where we're at and saying we need to be in various positions in what we're doing but, yes, I think there are incredibly exciting times ahead for our young learners. They're in the best of hands, might I add, in the beginning.

Melinda: 26:21 Now, talking about young learners, one of the events that will be coming up at DLTV on the 8th of December is an afternoon with Linda Liukas, who is the founder, and author, and illustrator of the "Hello Ruby" series, which is books and resources to support young learners in coding. If you'd like to be part of that, it's a free event and it will be held at Melbourne University from 5 to 8 p.m. on the 8th of December. Head along to dltv.vic.edu.au to register and to learn more about that.

Andrew: 26:56 Now, Mel, I saw on Facebook tonight that save the date, DigiCon 18, the dates have been released and that there's a call for papers already.

Melinda: 27:08 Yes. Planning has certainly come ahead early this year and we have announced that DigiCon will happen at the Australian Catholic University again on July 26 and 27, 2018. Make sure you put that one in your calendars.

Andrew: 27:24 Put it in, yes. Start putting in the budgets now that you and your team will be attending the DigiCon 18. I do believe that most school councils may have signed off on budgets already, so you might actually have some cash to play around with. If so, book it.

Melinda: 27:45 Yes. It's always a great event and it's something that we look forward to, and it's great to see that we've got those dates all ready to go and we can start planning for the great event.

Andrew: 27:56 Well, thanks, Paula, for coming along tonight. It's been an absolute pleasure hearing your experiences around DigiTECH and we look forward to, perhaps, having you on again to talk more DigiTECH.

Melinda: 28:12 Thanks, Andrew. I'll see you again.

Andrew: 28:12 All right. See you later, Mel.

Melinda: 28:12 Bye, everyone.

Andrew: 28:12 Bye.