Dr Cathy Cupitt transcript - Participation in higher education online: Demographics, motivators and grit

>> Sue Trinidad: Welcome, everyone. I'm Sue Trinidad, the Director for the National Centre for Student Equity in Higher Education, and I welcome you here. And we pay our respects to the Indigenous members of our community by acknowledging the traditional custodians, the Noongars, and pay respect to elders past and present. I'm very pleased to have Cathy present today because she's been working with us just on two years in a post-Doctoral position as a part of the National Centre.

And I first met Cathy back in 2009 when I brought her on-board in the faculty of Humanities to run one of the very large units down there, and what struck me about Cathy was her Creative Doctorate. If you come through and do a Doctorate in Creative Practice - is it a Doctorate in Creative Practice? - you think differently to the average person. And so it's been an absolute pleasure working with Cathy.

So when this opportunity came up for her to spend two years with us just looking at a research position, it was a fantastic opportunity for me to be working with her again as a team but also for Cathy to really be able to expand her research. And this is one of the projects that Cathy's been working on, so she will be taking us through. She's titled it participation in higher education: demographics, motivation, and grit. And every time there's a new finding or something, we always hear about it. The excitement of this project has been absolutely wonderful. So I'll welcome Cathy and hand over to you to take us through the presentation, and thank you.

>> Cathy Cupitt: Thank you much so much, Sue. I feel a bit overwhelmed now. That was such a lovely introduction. Thank you.

This paper's actually a slightly reworked version of a paper I gave at the STARS Conference earlier this year and I need to thank a few people. First of all, Nargess Golshan, who did the number crunching for this paper, so she's really my co-author here, and also David Gibson, the Director of Learning Engagement here at Curtin, who's really been helping us all the way through this project. He's given us a lot of direction, help, and support through every step of the way. He's very expert in looking at this kind of big data and stuff like that.

So with that out of the way, let's get cracking on what I'm going to talk about today. So - just checking that's working. Good. So we've got a few questions we wanted to ask about online education. It's one of the really big growth areas of education and has been for quite a while now. And it's also, we surmise, probably working as an access pathway for equity students. A de facto one; not one of the formal ones. Due to its flexible nature, it means that people who can't necessarily otherwise attend can come through this mode. We know that, anyway, because that's how it's pitched, but we wanted to know who was actually taking it up. And so we had a look at - we did a survey and we had a look at it and I'm going to talk about that.

So there are some problems with the online learning mode or online education. Retention rates. Retention rates is the big one. You're all nodding your heads; you know about this. For fully online programmes, they're generally lower than

comparable campus prep based or blended programmes. And the reasons for that is still not very well understood. We're picking away at it. Some of them are quite well known now, but there's still some pretty big gaps. So we wanted to find out more about what might be causing some of those issues, what was motivating students, what was stopping students from their perspective, plus some demographic data so we could do some correlation work.

So in this presentation, I'll cover the findings from the preliminary analysis of 657 responses to a survey taken by online Curtin students. I'll give a snapshot of the cohort's demographics and then talk about their self-reported motivations for studying, how those motivators correlate to a student's grit, which is their perseverance or their interest in their studies, and I'll also touch on the main stoppers that they identify which makes it harder for them to study in the online mode.

So just a bit of background to start with, in the context of higher education, there is a couple of umbrella terms that are used pretty much interchangeably for this kind of learning. Online education is one or e-learning is another, and it covers quite a few different types of online interaction. There's MOOCs, Massive Open Online Courses, which have obviously been in the press quite a bit lately. They're usually free to attend and have no formal prerequisites, but they also don't tend to have any formal qualifications coming out the other end. There are some exceptions, but that's the general rule. We have Open Universities Australia, or OUA, generally working on a pay-as-you-go model although there is access to Fee-HELP and HECS-HELP available to some students. University enabling programmes are also quite often held online. In this case, we've been looking at Curtin's UniReady and the Indigenous Tertiary Enabling Course, or ITEC. And there's also standard university programmes that are just done in a fully online mode, and here that's known as Curtin Online.

While blended learning's become increasingly important, that's not what this study was focussing on. We were really focussing on students who were studying entirely in the online mode, although that said, how exactly to winnow them out was part of the question. I'm not going to address that in this paper, but if you wanted to ask me about it after, I can talk about it. So we're looking at these four modes, students from these four modes here at Curtin.

The data about online education has been interesting. One of the earlier influential studies was from the U.S. Department of Education and what they found in their very big study, which reviewed all the literature to date, was that outcomes for students were just as good if they completed online even though there was a higher attrition rate. But more recent research has debated that. One I found particular useful was Jager's [phonetic], published in 2014, I recommend it if you're interested in this field. So Jager's found that - they were looking at college courses in America, did quite a big study, and found that online students were quite different to those who enrol face-to-face. They tend to be mature age students. They tend to have dependents.

They tend to have full-time jobs. And we found similar things here, as I'll talk about in a moment.

More interestingly perhaps, Jager's found that all subgroups of online students tended to have lower achievement, lower rate of retention, and lower completion compared to face-to-face students, and this was true even for the same student when comparing their achievement in the different modes. I thought that was a really interesting finding. So there's something about the online mode that makes it difficult for students. Something about the mode itself, it seems.

Compounding disadvantages, Jager's also found, were also widening the achievement gap between online and face-to-face students. So these concepts, these things of, these ideas of attrition and completion are often discussed in terms of students who have experience of disadvantages. It's quite a common approach to take. And if we have a look at the figures, we can see why. Now this is a table I pulled from completion data from the Commonwealth and it showed the students who began in 2005 and how many of them had completed by 2012, and I put this together, and it really paints the picture pretty clearly, I think. You can see - the figure that gets pulled out a lot in conversation is this one that's pretty close to 72% at the top, total domestic completions. You'll see something like that figure in a lot of graphs about how many people complete. But when you break it down, you can see there's a really interesting have and have-not kind of scenario happening here.

Part-time students in this time frame, only 47% completed. External students, even worse, 44%. So they'll mainly they're the students we're talking about, online students, although there'd be some doing it in other modes as well perhaps. For remote students, 58%. Age 25 and older, 57%. To me, at the moment, mature age students aren't a formal equity group, but I've been talking about it with my colleagues quite a bit and, you know, given this kind of data, it does seem as though there is an issue there with them struggling with their higher education.

So for me this raises the question of cause and effect. Are these disadvantaged students less likely to complete because of their circumstances? Because of compounding disadvantages? Or is this something about the university infrastructure or pedagogy which is not serving them well? Or both, of course. How do they interact, those two things?

I looked at Hodges quite a bit because they did a really big study in 2013 of enabling programmes and I saw a lot of similarities between the data that was coming out of our online survey and Hodges' work on enabling programmes. And one of their key findings was that - and now this is a quote, "The demographic factors figuring prominently in discussion of student attrition in undergraduate programmes, including low socioeconomic status, age, gender, status of first in family to attend university, do not have a significant impact on the likelihood of persistence in these enabling programmes." That surprised me. But then they went on to say that early

engagement is key in student persistence. So the answer they're giving there to that question is it's not actually about the cohort, it's about the pedagogy and infrastructure, which, you know, is pretty suggestive.

There are some other sources that talk about similar kinds of things and the interesting one I found was Hanumat [phonetic] et al. of 2008. They looked at online distance education in rural USA in secondary schools and they found that students had a higher rate of persistence and completion when teachers had been trained in learner-centred practices adapted for the online mode. So when there'd been a systemic approach of training the teachers for a student focussed approach, it really paid off for them. So this idea of the persistent student, and particularly the online student whose persistence can be engaged by more effective teaching, is something we wanted to investigate in this study. And we decided to do this using the notion of grit, which is why this paper has that word in its title.

Sorry, I've got a bit of - I should've brought my puffer with me. I have a little bit of asthma and I've been talking enough that I'm a bit breathless.

Grit's a non-cognitive measure of perseverance and passion for long-term goals. So it's those two things: perseverance on the one hand and passion or interest or engagement, if you like, on the other. And it's been found to be an effective indicator of educational attainment. Duckworth et al. in 2007 did a really interesting study where they looked at six different cohorts to develop and measure for grit. And they found, and this is a quote, "grit accounted for significant incremental variance in success outcomes over and beyond those explained by IQ", and it's not positively related to IQ. In other words, grit was found to be a good predictor of student success and more so than grades or IQ was. But best of all, it's a skill that can be learnt because it's non-cognitive, and that means that if students show that they have low grit, that's not the end of it; you can actually do something about it.

So they concluded that achieving difficult goals entails not only talent but the sustained and focussed application of talent over time. And this is particularly interesting for our body of students because so many of them are part-time and they're doing their studies for such a long time. So how do they maintain that interest and passion for all of those years that they're slogging away at their degrees?

Grit's not previously been mapped to online higher education students and we've used in our survey the particular measure developed by Duckworth and her team to find out how gritty our online students were here at Curtin. So [background noise] - so the focus of our survey, which was undertaken jointly by Curtin Teaching and Learning and the National Centre for Student Equity in Higher Education is to understand who's studying online at Curtin, what helps them stay motivated and engaged in their learning, and what perceived stoppers they've identified, and the way these things map to student grit.

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So we've investigated the four cohorts I talked about before - MOOCs, enabling programmes, OUA, and Curtin Online - looking at those particular factors. The survey combined both qualitative and quantitative questions about the students' experience and we invited in students we identified as studying at least one entirely online Curtin unit or slash course with regard to MOOCs in 2014 and 2015, late 2014, early 2015. We invited them by email and got a good response. As I said earlier, there are 657 responses in this preliminary analysis, but since we collected this set of data a further 382 students have taken the survey. So we have over 1,000 responses now and the final report will include the whole cohort. This is just a snapshot early on.

So most of the students we're actually studying in this snapshot were studying from Curtin Online or Open University units with 49 students taking more than one online unit when they completed the survey. That's the breakdown there.

A significant number of these students indicated they belonged to one or more group of groups that were likely to experience social disadvantage, the most common being that they were the first in family to attend university. 43% of them were first in family. Or low socioeconomic status. 28% of them had a low socioeconomic status. Women made up 75% of respondents, so very much skewed female. And also skewed mature age, so it's matching up very well with what Jager's research showed but also what Hodges showed for the enabling programmes. Very similar kind of cohort.

Although this is skewed to the mature aged students in this group as a whole, when you pull out the individual cohorts you start to see a different pattern emerge. It's quite interesting. So with the Astronomy MOOC there, you can see that the spread of ages has kind of a dip in the middle and there's more teenagers and there's more retired people, which is very interesting. It's also 71% men making up that cohort. And this matches up very well with the literature. Emanuel in 2013 reported that MOOCs are commonly used by highly educated men much more so than students from disadvantaged backgrounds, so we're seeing that same pattern emerging here. That was the Curtin Astronomy MOOC.

Compare this to the 52% or 52 students from Curtin's UniReady enabling programme. 75% of them were women and you can see the pattern is much more skewed to under 30. And given the cohort as a whole skews up, that means these two programmes are actually most of the younger people and the people who are doing their courses fully online in Curtin Online or OUA are mostly mature age students.

We collected residential and postcode data as well for the respondents so that we could compare their living arrangements, their location, and their socioeconomic status. The majority of students lived in their own home, as you'd expect from a generally mature aged cohort. 93% of respondents resided in Australia while

studying online. The remaining 7% were overseas. 59% are currently living in the metropolitan area, but there's been a shift because only 41% of respondents reported living in the metropolitan area while they're at primary school, so they've moved as adults into the metropolitan area. Regional students made up 19.2% of all respondents while 2.4% are remote.

But what's more interesting, I think, perhaps is the socioeconomic status data. So 28% of the students online that took our survey were low socioeconomic status. This is based on the West Australian population. We took their postcodes, matched it to that dataset. Nargess used her magic and this is what came out. If we compare to the data that Paul Koshy and Seymour came up in 2014 - hi, Paul! - this is published in 2014 but from the 2013 dataset. Overall, the national representation of students from low socioeconomic background was 17.6. So you can really see that they are, at least at Curtin, taking advantage of this as a pathway into higher education when they're coming from a low socioeconomic background. Parity is 25%, so we actually have a higher than parity's share in this mode.

The data also suggests that there may be a trend within this cohort in gaining vocational education and training qualifications as a pathway to university. I say 'maybe' because we don't know whether they've already had a career and then come on to university and so they've got their VET training for another purpose or whether they got it deliberately to come to Uni. We're going to do some interviews and hopefully we can pull out, tease out, some of those answers from those.

Finally, let's come to grit and talk about that for a bit. So we mapped students' age and gender to their responses about grit using Duckworth's scale, as I mentioned before. There was no correlation between gender and grit, but there was one with age and quite an interesting one. So in Duckworth's study, to give you some background, they found that there was a correlation between grit and age as well. They found that more educated adults were higher in grit than were less educated adults of the same age. But not only that; when they corrected for education level, or controlled for it rather, grit still increased with age monotonically, you know, that kind of pattern. Unlike Duckworth's study, what we found in our Curtin Online students is that the students taking our survey had a negative correlation between age and an individual's grit.

Now, to remind you, grit is passion and persistence in their studies, so this is a bit worrying. Why? We're not entirely sure yet. We're still crunching the data to see if we can find out some more information about it. But this is my thinking so far. Duckworth et al. point out that their focus is on high IQ, high achieving individuals in all six of their studies, which could limit their external validity. They say that in their findings. But they also speculated that the trend of high grit and age could be generational. So rather than consistent, it could be that people who lived through the war maybe had more grit.

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The online cohort we looked at has a really different demographic composition than those in Duckworth's. They're not necessarily high achievers. They're not necessarily high IQ, not that we measured high IQ. Notably, many are returning as mature age students where Duckworth's cohort were either young people who were still studying or they were already in their careers, they were already professionals who had finished most of their substantial education. So one answer here could be that these online students are confirming Duckworth's findings in that these are the less gritty individuals with less education than their age mates. So they're the other side of the coin. If they are, it raises the question of why this online cohort are less gritty than their age mates. Why don't they have high degrees when their age mates do? What's going on? What's stopped them? So we're going to think about that a bit more in the paper as we go, trying to come up with some of those answers.

However, even without knowing the reasons for this negative correlation with age and grit within this particular cohort, it does suggest that mature aged online students are more likely to be struggling to stay engaged with their studies. So they're more likely to be struggling with persevering, perseverance, more likely to be struggling to keep their interest up, especially if they're studying part-time and they have many years ahead of them, because, according to this correlation, as they get older, their grit falls off.

To find out more about what motivated online students to study, we hope that this would give us some answers to find out what they thought about their studies. We asked them to indicate how important 13 potential reasons were in motivating them using a simple three-level Likert scale. They ranked as "not important," "somewhat important," or "very important." We then grouped these motivators into two broad factors. We ranked one as necessity, that is primarily they have an external reason for wanting to do it, or for passion, that is, there's an internal or affective reason for wanting to do it.

Three of the four most commonly chosen motivators were those related to necessity. So if we have a look here, this legend has been slightly simplified so I'll read out the full one. I want to graduate here. Subject is relevant to my academic field of study. No. 3, So that I can undertake a university degree. That one there.

These three motivators - the three motivators commonly considered not important were all related to passion. For a chance to network with other people in the field. Because this course is offered by a prestigious university. I'm curious about what it's like to take an online course.

Now, the thing that really jumps out at me about this is this one here, networking. It ranks as only somewhat important, and that only, you know, just peaks the post of not important at all. And yet, later on when we come to stoppers and what the students said stopped them, one of the biggest ones that so many students identified

is social isolation. So they don't value networking here very much and yet they say that social isolation stops them from being effective in their studies. Interesting.

So again, we calculated for correlation to assess the relationship between grit and these 13 motivational factors using Duckworth's measure again and none of them had a significant positive correlation with grit. However, five of them, including three of those considered very important, are negatively correlated with grit. In other words, the students are more likely to have lower perseverance of effort and consistency of interest if their motivation to study is to improve their knowledge of the subject, which is the second most important thing in the motivators, if it's a relevant subject to their academic field, third most important motivator, proving to themselves they can do it, a chance to network with other people in the field, and if the course is offered by a prestigious university. So some of them are perhaps not that relevant, but certainly improving their knowledge, relevance to the subject, proving to themselves, and a chance to network all seem like pretty reasonable motivators to me. I'm surprised to see them correlated negatively with grit. We can - you know, this is the correlation, not necessarily the cause and effect, but it seems an odd one. Why?

We then model grit against the two broad motivational factors necessity and passion and found that if the motivation for studying stems from necessity, it will have a significant positive correlation to the grit score of individual male students but not for female students. However, in terms of age, if the motivation for studying stems from necessity, it will have a negative correlation to their grit score. So maybe when they're young, they're really fiery and passionate, they don't want to be told they have to do it. And the mature age men, maybe they just want to get their piece of paper and go out to the workforce. That's my entirely anecdotal explanation for that.

How are we doing for time? Plenty of time. Alright. Next slide.

So we also ask them about their motivations in open question just in case we missed something. We took the other ones from the literature, but we wanted to make sure we hadn't missed something so we gave them the opportunity to explain any other factors they thought were really important in keeping them motivated with studying and we found some interesting things, I think. First of all, flexibility ranked quite low and I found that quite surprising given that's one of the key things people say they want out of online education. But actually, nope. All the way down there.

But another thing that I do think is notable and really interesting and potentially much more positive - some good news for a change - is this trend about family. No. 3 here. Is there a little - yeah, here, this one. So let's have a look at what they said about family. I love some of these responses; they're great. "So my mum can be proud of me" "To make a better life for my children and teach them that education and a good career is extremely important in life." That was actually a very common response. "I have two sons and I would like to set a good example for them." "I'm a mother of

three - this one breaks my heart - with an autistic child; I works at McDonald's for a living and I'm still unable to pay for therapy my son requires. I'm doing this so I can not only afford to pay for my son's therapy but as I'm studying laboratory medicine, I'm hoping I can use this to help other autistic children as well." So that kind of affirmative, really passionate response, as I say, was common. They were really invested in their kids, their families, and wanting to make the world better.

And that's supported by the grit score because family as a motivation was positively correlated to a student's grit. We calculated it against two different criteria: parents' education and whether the student was first in family to attend university. We haven't actually put it up against the open questions yet. We'll wait until we have the full dataset for that in the final report. But both of these measures are positively correlated with student grit and that matches up well with the literature.

So one particular interesting report is of course is Gemici et al's 2014 LSAY report, where they look at what influences students to decide to go to university. And they found that parental influence is one of the most important factors in driving aspiration. So why I find this important is because I think our findings suggest that it's not only a parent-child relationship, it's actually a family relationship that lasts whole of life. Family is always an important driver of education and it just flips when you hit a certain age and you have kids and you want to do it for them rather than to make your parents proud. So really important driving factor.

So then we asked about the stoppers. We asked them is there anything which makes studying this online course difficult for you. Now, 53%, over half, just over half who took the survey wrote a response to this question. That's a lot of students with a lot of angst. In comparison, only 27% responded to the one about motivation, do you have additional motivations? So we have the stoppers here that students identified. They map, again, closely to the previous literature and to the stuff that Hodges was saying that I was talking about before. I'll come back to that in a minute because I do think there's a lot in common with this group and enabling students.

So a couple of things of note. Obviously this really enormous struggle with time in terms of work/life balance and studying. Just massive. But here it is, social isolation. Look at that, No. 2. There are also a bunch of other things. Again, the kind of things we expected given the literature. Difficulty navigate - a lot of them kind of were related to technology in one form or another, so it's about the actual accessing of the mode. We actually have things like the online learning system, or Blackboard specifically, which we use here at Curtin, that came up quite a few times. This umbrella technology issue, it was a bit too scatty for me to give individual names, but covers things like poor - oh, here we go. Poor - lack of the Internet, problems, little technical support available, that kind of thing. And then of course right at the end there we have poor online course design, which I think doesn't help when they're struggling with technology and they've got low data speeds and things like that.

So again, this was an open question, so they gave us answers and they tended to be long and they tended to have quite a few different things in them. Here's an example of some of the interesting - I mean, they were all interesting, but the ones that kind of jumped out at me as fairly representative. "Just juggling real-life commitments. I have a child with special needs." That just came up so many times. "I work full-time and my husband works away. FIFO. That came up a lot, too. So sometimes it's hard to find a quiet time to study". "It can be difficult to know what's required of you regarding weekly work and deadlines, plus it feels a little bit isolating." "I find it very difficult to study online; since I don't have classes to attend, I tend to get slack and forget about this unit as a priority." "I prefer asking a teacher a question in class as I'm not good at explaining myself through email." "It's difficult to make friends to study with." That one really catches a lot of the narratives that we had. That real sense of just wanting to have a conversation with someone.

"The lack of understanding for students who are working full-time. Everyone are lumped together as if they were all beginners. The subject matter seems irrelevant and computer prowess matters the most with little consideration to the actual job requirements once completed." So that's a fairly, biting criticism I think. They obviously don't feel very engaged by their study at all. And they don't respect their tutors as experts, either.

So just to return, I'll finish off now with a bit of discussion about this idea of social isolation. It interests me a lot. It was the second most common problem in this list. It just came up over and over and over as affecting their studies. It makes it hard to stay motivated. It stops them. And this is true even though a chance to network with other people in the field was only somewhat important to not important for most of them as a motivator. So what's going on here?

The first thing I thought is this could just be a language issue. It could be that they think of networking as some more formal glorified magical thing. It's not what they actually do with fellow students in their class. Entirely possible. However, even if that is the case, it still leaves the question of what is it about our online classrooms or the students in them that generates this sense of isolation? Especially given that these cohorts are often big and there's a lot of students in those spaces. And, apart from all of that, especially given that social networking's meant to be one of the key features of online interaction. It's meant to bring people close together when it works well. So what's going on?

So I went and had a bit of a look at the literature about social isolation and there's a few different explanations that it offers, or suggests anyway. And it might be to do with the composition of the cohort as much as any kind of alienating affect of the technology or our pedagogy. Chang et al. in 2015 found that there are differences in how people use online social networks such as Facebook depending on their age. So with older people, they're more selective. They have a smaller but more intimate friends network. In other words, they're not focussed on developing the general kind

of social networks that are career-focussed with casual acquaintances rather than intimate friends. So it might be that. It might be that they're looking for friends rather than colleagues in these spaces. Chang also found that having a high proportion of actual friends in your online social network was really good at reducing social isolation, but there's a recent systemic review of the literature by Dickens et al. that was back in, just recently, 2011, and that indicating that social isolation is a growing health concern for older people. So that's generally in the wider community, not just in online spaces. They also found that interventions, no matter the type pretty much, which aim to alleviate social isolation and loneliness tended to be at least moderately effective. So if people were saying that they were socially isolated, there was an intervention intended to work, at least to some extent. And that was quite a bit review of the literature. But, of course, in higher education we also know that social isolation can be linked to gender in some fields, particularly for women in STEM. Now, these students from STEM, they were mostly in Humanities, Nursing, and so on, Business as well, but they were the majority of women in this cohort. In the cases of STEM, when that social isolation has been reported it's usually been linked to being a minority group in most particular cases, so just not the case here. Nonetheless, I think it's interesting because, again, they found that interventions - Walter et al. [phonetic] in 2015 did an intervention with some Engineering women and they found - they tried two different types. And they found it worked really well, but with slightly different ends. So they did a social belonging intervention and that helped women integrate into engineering itself, for instance by increasing their friendships with male engineers. But they also did affirmation training and they found that that helped women develop external resources, deepening their identification with their gender group. So I guess what I'm coming to here is even though I think I need to do a bit more work on this in the larger dataset, it raises such interesting questions but from a practical perspective anyway. The literature seems to indicate that you don't necessarily have to know every reason behind why the social interaction happens because if you do a reasonably well-designed intervention it will work anyway in reducing that sense of isolation. So some conclusions. That's pretty good timing; a little bit over, but not much. So this cohort of students who responded to the survey has a profile that's reasonably consistent with the idea that online education's being used as a gateway for disadvantaged students or students who wouldn't traditionally come to university. The majority of mature aged women, nearly half, were the first in their family to attend. More than a quarter were from low SES backgrounds and almost a quarter from region or remote areas. Demographics of the cohort and the issues they report experiencing have some really strong similarities with those reported by Hodges about enabling programmes. [Inaudible] came up against the echoes of them over and over. And in the discussion, which I highly recommend you read. Hodges is a very interesting report. Underlying problems that were identified in that report which lead to attrition for such students are the students' experience of time pressures, a complex phenomenon with a multiplicity of underlying causes. Lots of events impacting negatively on the capacity of students to cope, especially for the mature aged students who provide the bulk of students in these programmes. A low

rate of awareness and use of student support services and low student engagement with the programme and fellow students. Doesn't that just sound exactly like what I've been talking about? So it really seems to me like this online cohort has a huge amount in common with enabling programme students. They have a lot of the same problems and they're reacting in a lot of the same kind of ways. So I think that we can benefit a bit from knowing that and designing some of our interventions with that in mind. Obviously similar problems to these have also been reported in the literature focussed on online higher education. I talked about Yeager's before and she mentions most of these issues, but along with a couple of others, so a couple of compounding factors, including the digital divide, which I haven't gone into today, and also little accommodation for disadvantaged students of various types. So there are two real patterns emerging that I've talked about today from this data. The negative grit scores associated with key demographic factors for these students, which suggest that one of the interventions we would benefit from trying is helping students develop grittiness. And that, as I said before, is a learnable skill. It's something that we can do. There's a reasonable body of work out there now about it. But the other thing that emerged was both complex narratives related to what they perceived as a lack of institutional support, a lack of understanding that they are struggling with work-life balance, the social isolation, the technical difficulties, all of those kinds of things. But, again, from a practical perspective, it looks as though if we focus on a more student-focussed online pedagogy many of those issues would also be addressed. And I'll leave it there. Thanks very much.

[Applause]

>> Sue Trinidad: Thank you, Cathy, and I'm sure there's plenty of questions. Who would like to go first? Yes?

[Inaudible]

>> The last thing you said was [inaudible] online students and work-life balance, technical difficulties [inaudible] face-to-face student [inaudible]. That's what they say, too. It's not just an online student or students who are struggling. Even our face-to-face students struggle with technology and their work-life balance is always the main reason why they [inaudible] on their exams. I think we have to really look and even do a comparison for the face-to-face [inaudible] to see if there's any real differences or if we're just picking up what's happening in education [inaudible]

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>> Cathy Cupitt: That's very true. Although, as I say, in Yeager's very big study she found that even when you looked at the same student there was a marked difference between what they were achieving in the online and offline modes, which suggests that those problems are exacerbated anyway in the online mode. There's something about the mode that does seem to make it worse. [Inaudible]. Yeah. I think that captures it in a nutshell, if you're not a digital native [phonetic], anyway. I think that's what we're talking about here, too. It might be different if you're a digital native and you're really okay with how to use these networks well. Yeah?

>> I was just going to comment, Cathy, maybe if you are the nature of [inaudible] but the nature of your personality and that you're into the digital [inaudible].

>> Cathy Cupitt: Well, it's interesting because a lot of the students did say that they had real trouble communicating, expressing themselves in a written communication. And then a lot of things came out, I think, that were related to that, too. There were quite a few comments about how they felt frustrated. They tried to get an answer from their tutor. They got one back - you know, two days had gone by and they got one back that didn't answer the question they actually wanted to ask. They'd ask it again, they'd wait another two days, you know, that kind of thing. So there was that real frustration of inability to communicate in that mode. And I know what that mean because in a face-to-face conversation you can often resolve that misunderstanding very quickly. Yeah?

>> Have you actually looked at the current educational attainment of the actual [inaudible]? Even if they are very similar issues that these students are facing, perhaps the ones that are a bit more experienced experience [crosstalk].

>> Cathy Cupitt: We asked the students - rather than making a very long survey, we asked the students for their Student No. And permission to gather some extra data from [inaudible] so that we wouldn't, as I say, get them to do a survey for an hour. So we - it's not in this preliminary report, but we're hoping to be able to do that larger scale kind of number crunching with the additional data in the final report, which is coming soon [inaudible]. So the answer is we plan to, but, yeah, not yet. Yes?

>> Do you also look at, like, what other [inaudible], you know, the teachers [inaudible] providing for these online modes?

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>> Cathy Cupitt: That's a really complex question. I know from my personal experience - I can answer it a bit. The university as a whole has standardised kind of practices and technology in place, but within that there's a wide range of how it's used across faculties but also in individual units. For instance, I really struggled to find any online units at all in Science. They just haven't really gone online much. And my impression was that the ones that had gone online, they just weren't as developed yet because they were newer than some of the very well established courses in Humanities or Business, for instance. They've been online for a very long time. So there's just such a range, and this comes back to my what I said at the very beginning about how it was - actually how to identify students who were an online student. Because students just mix and match and they do all sorts of things. So and even if they're supposedly 100% online, there are additional issues like if they're doing something like teaching, they have to do a placement. Well, they don't come into Curtin necessarily to do it; they might be out in the bush, but they still have to find an actual placement and do it. Does that mean they're online? You see what I'm saying? It's a complex question. And so in the end, we couldn't really answer it and we sent the invitation out to anyone enrolled in the units we identified as fully online. That did include a couple of units that had a prac component because we wanted to gather that insight as well. Really hard question. Worthwhile question to ask, hard question to answer.

>> Because I've been, like, doing the online [inaudible] and it depends on my difference [inaudible] communicate. I can retain [phonetic] the student differently [inaudible] each unit are doing differently [inaudible].

>> Cathy Cupitt: No, and most of the unit coordinators I contacted - they were very kind and generous, actually, and a lot of them gave me access to their Blackboard so I could use the Blackboard's facility to email students, the online ones enrolled in the online mode. And so, of course, I had a bit of a look around. They were all perfectly fine. They were all within a standard of each other. But the approach they all took, very different. Some had almost a step-by-step, do this, do this, do this approach and some had a much more here, come into this Discussion Board to talk about this, much more organic. So and then of course in the comments which I then got, there was a whole range of things. I remember one that really sticks in my mind. They said the tutor always seemed angry; they used exclamation marks a lot. I've seen people with that style; it doesn't necessarily mean they're angry. But I can see how it would seem that way as a student, especially if you haven't actually done a lot of written communication with people in the online mode, you know. [Crosstalk] Shouting. Yeah, Andrea?

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>> I'd just like to make a comment that I've had a lot of spontaneous feedback from my students in OUA that Curtin units are actually much better than other university units offered through OUA, and that's just [inaudible] that they've decided, you know [inaudible]. So I think Curtin is doing pretty well in comparison to other universities, and the standard of our online units are pretty high. So what you're getting from, you know, your research is actually students undergoing good quality online units.

>> Cathy Cupitt: Yeah, and that's the thing. It's their perception, as well. How that actually matches up to what's actually available is a whole other question. Because if they think there's no support just because they don't know where the support is, then that obviously indicates there's a problem there but it's not the one they think it is. Yeah, there's a - when I was looking at these answers, the thing is these students were so generous. And if students are entirely disengaged, they're not generous. And so over 1,000 students took this survey. They often answered at length. To me, that says that for all of their griping, they're actually quite engaged and they want a good education. So, you know, good point, Andrea. It's a real - there's tension there, though. We could still do better. Yeah. Yes?

>> Just coming from my point of view, which is more student, direct kind of student support, not just Curtin, but because of your grit and how you said it was basically to learn, like something that can be learnt, just because, you know, I'm curious in grit now. How did - with research, with all the other research you've done, how did they find that kind of teaching grit? How effective was it? And how [crosstalk].

>> Cathy Cupitt: Yeah, that's the whole thing. I hadn't learnt much about grit before we got into this, but of course I've read quite a bit since, and it's fascinated. There's quite a big report - I can give you my card and if you email me, I can send it to you. But for instance, I've also read some kind of learning practice reports on the Internet, where teachers share their best practice. And they're mostly primary school teachers, actually, who've adopted this in America. And so what they've done is they've encouraged their primary school students to set themselves goals within their year curriculum that are achievable and have step-by-step outcomes that they can do, and then they kind of walk them through how to set that goal and achieving it. And that's how they teach them grit. And so there's some examples of students who then go on and there's this one kid who set up his own maple syrup business. I liked that story. [laughter] You know, he had a goal, he achieved it, and I think, you know, there's obviously some interesting innovation happening there. I don't know that it's made it to the tertiary sector yet.

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>> Yeah, [inaudible] at tertiary and secondary level.

>> Cathy Cupitt: Yeah, but you can see that some of those things would be applicable in the -

>> Yeah, even in small results, it's still considerable enough.

>> Cathy Cupitt: Yeah. Even if you do some envisioning exercises, getting them to - when we ask these motivation questions, I was interested because not many of them were actually career-focussed, the answers. Even in the open ones, they weren't things like I want to be a nurse or I really want to be a doctor or I really want to do this. They were more about I want to prove to myself I can. And to me, it's not that that is a bad motivation, but it's not very concrete. You know, where does it get you really? And so I kind of wonder if part of their problem is they're not envisioning the road they need to travel to get where they're going. And you can see how that's a learnable skill, a simple exercise. Yeah? But if they've never done it - and, see, that's the thing, the difference between the students who have a family history of higher education. I'm wondering if that's just something they're kind of taught. Think about your future. What are you going to do? Compared to the ones who didn't have it, were never asked to think about their future, maybe. It's hard to know from this data. It would be interesting to ask some of those questions in the follow-up interviews and see what comes out. That's a good question. Is it useful, the stuff that I covered today, do you think?

>> I think it is, even if it's just from the support point of view as in [inaudible] students have it, you know, more together in certain ways or have that grit, and also just kind of helping, kind of push students to have it. And all the students I work with are aspirational students from remote regional areas or from certain other economic groupds groups and things like that. Then they also sometimes [inaudible] so sometimes they already do have a lot of grit because they've gotten to the point where they haven't gotten certain scholarships or they haven't gotten into certain educational programmes and it's about maybe knowing that they've got grit to start with and making sure to increase it and use it even to an extent to try and get those students where they want to get to.

>> Cathy Cupitt: The literature actually supports what you're saying. It's interesting. There's kind of a bit of a blip, so the ones who kind of get in to higher education, it

seems to me from what I've read - some of the LSAY reports cover this - the Indigenous students in the tertiary sector tend to have more resilience because they've already done the baptism of fire. [Inaudible] Right, but it's true of low socioeconomic status backgrounds as well. Paul [Koshy], what was that one about the private school kids who didn't do as well? Do you remember that one?

>>Paul Koshy: Yeah, there's a result in a lot of the research that suggests that kids coming from government schools, for similar reasons to Indigenous, actually do better at university. Partly because there's fewer of them, actually, it's tougher to get from the state school system into university, but actually, because they've fewer resources to deal with – in their teen years – coming into a university, they've effectively crossed those hurdles. So that's, that's sort of consistent with what we discussed here.

>> Cathy Cupitt: Yeah, so they've learnt grit somewhere along the way.

>> Yeah, somewhere along the way.

>> Cathy Cupitt: But it's sad for those students who then don't learn it, perhaps, because it means that they're perhaps not finding a pathway that would be useful to them and help them really do something that they could be passionate about, but they just - yeah? John, I think you're first.

[Inaudible]

Well, we haven't pulled that data. That's one of the datasets from Student 1, so we need to -

>> Professor John Phillimore: Did you ask whether they had disabilities when questioning of them?

>> Cathy Cupitt: No, because as I said, we didn't want to cover every demographic field. What we wanted was to be able to ask for their student number. So that we could dig into their deeper demographics in Student 1 if they gave us permission to.

And so it was really hard to decide which things to add in and which things not to, but in the end we took quite basic demographic data. We needed that because of the MOOC students who wouldn't have a student number. But for the more complex demographic data we asked for their student number, and most of them did give it to us and give us permission to use it. So we will look at disability and I'm hoping, too, that - we know some of the students are Indigenous because they were from ITEC, but I think there's some more in there, too, but they haven't - we didn't ask for Indigeneity. So there's a couple of things like that that in the final report it will come out.

>> Professor John Phillimore: Second question, separate question. The online world [inaudible] shifted online world more generally. Of course, it's been accompanied by cultural and criticism saying, they're reducing attention spans; it's making everybody go, gosh, I've got to write six pages? What are you talking about, why can't I do… whatever. So I wondered whether, in your youth, you know, age cohort, if there were correlations that might be explainable that a bit. Native-born digitals might just be less gritty due to not only do they because of this life experience become less gritty but also just they're not there to put up with, you know, long, sustained, sort of studying, as opposed to those who come through the system, you know through a sort of, you know, paper-based background.

>> Cathy Cupitt: That's a complex issue, too, and a valuable one, I think. It suggests a few different things. I've been thinking about that quite a lot because in one way if the language changes and the language of education doesn't, it's a problem anyway. You know, if you're teaching people in a language that isn't taught in everyday life, then how do they apply what they've learned. There is a problem there and it does, you know, the literature is kind of saying that you're absolutely right that they have a different reading pattern. It doesn't necessarily mean that it's a worse one, but it is different. But where the real problem is underlies that. So I'm not necessarily saying that the difference is a problem, but the thing you're picking up on is, have they learnt sustained effort? And I think that could be a big factor, but it's hard to know from this dataset right now. But, yeah, it could be that that's a generational shift in how people do sustained work.

>> Professor John Phillimore: And of course it might also be the assessment patterns might slightly differ in those units where it's all multiple choice and, you know, no essay and, without words, they might stick with those ones where they don't have to do a 3,000 word essay, and say, "Oh my gosh, I can't [inaudible]"

>> Cathy Cupitt: But, see, that comes back to how we're teaching grit again. Because if our assessment methods don't teach it, then why would they learn it? [Laughter]

>> Professor John Phillimore: But also, there's a lot of self-selection going on. Just a bit like, you know the self-selection, you know because they're the ones who had to fight their way through high school… you know, lots of students will say "I chose that unit because no exam." Or, "I chose that unit because there's no essay." Or, "I chose…" So they might find themselves where they want to be.

>> Cathy Cupitt: Yeah. I do take your point and I think that it's a really valuable conversation. But I think we've got time for one more question.

>> My question is kind of a two-part question [crosstalk]. I was really interested in what you were saying in terms of social isolation [inaudible] and stuff like that and the pattern I was particularly interested in was the, I suppose the, [inaudible] not network at home. And Hodges did say [inaudible]. I was just wondering did you think that was down to a lack of having that social capital [phonetic] because if you're from that background, you're probably not networking or probably not understanding that to be the social part. I was just wondering whether your research maybe dipped into that understanding of how they understand [inaudible] is that what they want and the social end of it. You know, the second part of the question I was going to ask is do you believe that university education online is equitable in terms of university education internally? Do we provide the same in an online mode? For example, in terms of a tutorial where you have 20 people having a discussion, do every unit online have a Discussion Board [inaudible] providing that critical [inaudible] counteract the modality there'd typically be being online?

>> Cathy Cupitt: Yeah. They're both really hard questions to answer. The answer to your first one, the short answer is no. We didn't look into that because it's not a psychological study, but the longer answer is one of the things I loved about this research is that it keeps raising questions like that. It's like how much would I love do the survey again but add some questions, because we didn't know what to ask in a way until we'd asked. And so it's one of those Catch-22s, you know. So I think that you're right. Some of those underlying - we can pick up some of them with our deeper aggression analysis. We can come to at least partial answers to some it. But some of it we just can't, not with this dataset.

But I think that you're - there's a lot of literature about things like whether we should think of students in a deficit model or not and you're kind of touching on that there. It's that sense of what are we expecting students to come in the door with and how much of that is class-based or reasonable and how much of that is us being snobby-snobs who are expecting the elite. You know, a bunch of stuff around that. And how much are we really valuing the stuff that the students do have that they come in with that aren't necessarily the mainstream skillset that we are expecting that could enrich things. So there's quite a bit of discourse happening in academia around that topic. It's really a worthwhile one. I'm glad you brought it up. I wish we could answer it in our study, but we're not there. It does raise those questions, though; you're right on the money.

With the second one, is it equitable? I think the short answer to that is no. The slightly longer answer is it really varies a lot from classroom to classroom, faculty to faculty, and even the different online modes. Because, for instance, there's more support for Curtin Online students than OUA students in some ways, although OUA's gotten better over time. But then if you compare them to something like UniReady or MOOCs, it's a completely different answer again. So it really depends. And that's the best answer I can give you for that one. Thank you for asking.

>> Sue Trinidad: Well, we're out of time, sorry. Just to let everybody know, we've got a lot of research coming out of the National Centre now, so if you're not a member of our list, just take one of those cards. All you have to do is put the email in and it will be - what we do is we're pushing out all the latest research and you can see why we've had such an exciting time with Cathy doing this great work that's happening. Join me again just to thank her.

[Applause]