**Transcript – Immersive pedagogy, Virtual reality for student centred learning: Part 1, Bentley Park College**

Welcome to Part 1 of Immersive pedagogy: Virtual reality for student-centred learning. Virtual reality -or VR- has enormous potential to make learning more engaging and to meet the needs of diverse learners. But, not all VR is created equal.

And immersive experiences that simulate real life and provide new and engaging learning opportunities also require an immersive learning pedagogy. So, how can schools make the most of VR by using its full potential to ensure every student is succeeding?

Today, we'll see an example of taking VR from vision to reality.

When we started this program, we realised that we didn't really have the expertise to actually take on the virtual reality project. So we actually reached out to industry. And we were very fortunate that we were able to work with Adrian Rayner, who worked in industry in virtual reality. And we were able to bring him on board with the project and he was able to work with Dr. Susan O'Donnell, who's one of our curriculum leaders in this, and work with her very carefully on how we actually implement virtual reality into the Australian Curriculum and how we bring the learning experiences to life for students.

Well, the beauty of working across the three schools, that's Woree State High School, Bentley Park College, and Gordonvale State High, is that we've been able to tap into the talents of all the teachers in the - especially in junior secondary - across the three schools. We do meet regularly. We've looked at how we can work more closely together. We're all in one in one core area down here on the southern side of Cairns. And we're all working with similar type kids and we've got similar type issues around disengagement. And we identified that as a problem of practise. And we've been able to use that, what we've learned, across the three schools.

So what we do, what we develop, in Gordonvale State High School for instance, we've just done a big unit of work down there on Ancient Rome. All that work can then be used at Bentley Park College and Woree State High School, and that works across all three schools. So, I think the best part of it is that we've been able to tap into the talents of the individual teachers, and each school has got a different strength. And with that, they've been able to bring that to the table. And that's what's been the beauty of the work that we've done across the three schools.

Virtual reality in education requires two elements working together to be successful: the technology and the pedagogy. A common misconception is that all VR is created equal. While mobile and cardboard solutions have their place, what we're trying to do is create a learning solution that goes far beyond just engagement.

All curriculum-aligned software is developed within the Department of Education by educators. Keeping it in-house ensures that development and iteration time is reduced, and ensures our content is relevant for teachers.

Safety is structured in two parts. The virtual part, where every module we release has a safety boundary built in that highlights visually and with audio when the student has left the safe working zone. In the real world, this is matched by the yellow safety learning space. This is a benefit for students collecting data and observing, so they don't get in the way of the user.

We also have 'My Behaviour in Virtual Reality Values' on the walls in all of our VR rooms. This is a set of rules to keep our students safe and designed to make them into great virtual citizens. 'Easy to use' is teachers not having to charge equipment, find locations, set up boundaries, or use complex log-in or start-up systems to get started.

By design, we have limited the VR controls to the same functions or mechanics in all of our modules. For example, every icon that is yellow, students can interact with. This approach is so students do not spend all their time learning VR, but instead learning the subject.

The creation of VR modules fully aligned with the Australian Curriculum. That's what we're about. That's our core purpose.

Immersive pedagogy is really about a partnership between technology, pedagogy and curriculum. We use the curriculum documents almost as our design manual when writing materials, and this ensures that students are fully immersed in all of the key content and the skills for that unit in that subject for that year level. In this sense, the pedagogy reflects that VR and a VR session is a real pivot point of time, which immerses students in learning across the whole unit.

The inquiry-based problem-solving approach to teaching and learning suits best for the use of VR, and this is constantly reflected in our student worksheets and resources.

Intentional collaboration is built into what we do, so that students can help each other and support each other in their shared learning. And this is a big plus, from what students tell us. When teachers are introduced to VR for the very first term, for them it can often be a considerable shift from the way that they normally would teach. However, we want to work with them to make sure that this doesn't become a barrier. We set them up for success by providing them with professional development.

We show them, for example, how the pedagogy of the VR session can change, depending on when the session is scheduled. Another barrier can be teacher anxiety

that using VR will result in an upswing in their workload. Again, we take this anxiety on board and all of our modules are ready-for-use, plug-and-play designed packages

with everything a teacher would need. We're constantly working to improve what we're doing for teaching and learning.

All of this work is to help students find new and exciting ways to learn and achieve. And for teachers to see that they can use technology in ways that they couldn't have imagined.

There is a significant investment in time to develop an immersive pedagogy unit.

And there's lots of opportunities to bring in VR, but we only develop units that can be used by more than one school. I currently have three Japanese language teachers

working alongside Adrian collaboratively to build the new Japanese unit. As a HOD, I really value that deep curriculum knowledge that my team bring to co-developing units of work.

Being able to immerse students in the learning provides the buy-in for teachers to contribute to the design. So for language teachers, imagine being able to take your students on a trip to Japan, and then building on that experience to create teachable moments.

I like to lead by example. I love using immersive pedagogy. And when my staff see that I am committed to making time to help build their capability, they know I value them and their professional journey.

Hi, Adrian.

Hi, Monte. Welcome to the virtual reality hub.

Oh, it looks fantastic. How would a school go about setting up something like this?

Well, there's a number of ways to set up these, but we're using Microsoft: Mixed Reality solution. Would you like to have a go?

Love to!

Today we've seen the value of drawing on industry expertise and collaboration across schools. We've also seen how to set up a VR hub, from vision to implementation, with curriculum alignment at the centre. In the next episode, we'll see the VR hub in action, learn about the curriculum design process, and hear from teachers and students about the outcomes of immersive pedagogy.