# Transcript

**John Hattie and Samantha Rodgers on Leading Engagement**

Duration 1:25:00

SAMANTHA RODGERS: So I'm going to need a little bit of prompting until we hit our slide. So we've just got that there.

KATE MORRIS: Sam, I might launch and welcome everyone.

SAMANTHA RODGERS: Great. Thank you.

KATE MORRIS: Thank you so much for joining us. Sam Rodgers, we know you have done such incredible work all around Australia, but also internationally around the visible learning work, and we're delighted for you to be joining us today. And Professor John Hattie, another great occasion for you to be joining us.

SAMANTHA RODGERS: Here we are.

KATE MORRIS: I'd like to acknowledge that I'm joining you from the land of the Wurundjeri people of the Kulin Nation. I'm also wanting to acknowledge traditional owners and those past, present and emerging and also any Aboriginal colleagues who are joining us today.

I'm joining you from the opening of the Victorian Academy of Teaching and Leadership, a new initiative launched by Minister Merlino today, and he spoke incredibly fondly and with great passion and expertise about teachers and the profession and how important they have been in his life and his world and he spoke in particular about Mr Dent, who he had in great 6, and Mr Desmond, who was his politics teacher in year 12, and he said he was to blame for the fact that he was now Deputy Premier and Minister for Education, but certainly incredible stories about the impact that excellent teaching can have and acknowledgment of your work, John, and yours, Sam, around what I call visible teaching, but I know is visible learning also.

So over to you today, "Leading Engagement Constructively aligning the 6 pillars of lesson design". Really looking forward to hearing from you and continuing my learning and thanks, Maria and the team, for getting us here today. Over to you. Thanks.

SAMANTHA RODGERS: Okay. Thank you very much, Kate. I really appreciate that. Yeah, we want to extend a warm welcome to everyone who's joined us. John and I are very excited to be talking about the six pillars of lesson design and also the importance of being able to constructively align those to get that maximum impact for our learners.

Today, because we have so many people  and thank you very much for joining us. I know it's such a busy time of the term for everybody, so really congratulations for being able to get here with us. We really appreciate it. But we've got this protocol here that will help us really interact and engage with one another because it is such a short session and there are so many of us.

So this is something that John recommended. It's a CIQ protocol. So any time that you hear a connection or you can make a connection between John's research and your own practice, in the chat you're invited to put a "C" and then write down what that connection is so we can see what that is; any time you hear something interesting, again an "I" in the chat and what that point is; and any time you've got a question that you'd like John to refer to or respond to, a "Q" in the chat. And then we'll monitor what that chat is and what those questions are and throughout the session we'll have some moments where we can stop and if John hasn't already answered that question, we can pause and hear those responses throughout the session and also at the end. That's right, John, isn't it? That's how you've used that protocol before?

JOHN HATTIE: Yep, that's right. So the connections and the interesting. It's a good way of communicating to your colleagues what you find interesting and what connections you're making and so trying to make it like you are all sitting next to each other and whispering during the session, let's whisper through the chat.

SAMANTHA RODGERS: Absolutely. In terms of our learning intentions and success criteria for the day, I'll let you read those for yourselves. I just want to make sure we have clarity around what we're doing here and why we're here.

And the other point too is, as Kate was saying, we've got people with vastly different contexts here. So in terms of that learning intention and how we're leading our teams in maximising student engagement, really think about where you are and how you fit into leading teams  is it in the classroom, is it with your teams of teachers, is it in a consulting or an advisory role  and try and adapt and put yourself into that position and think about where you fit in terms of what we're talking about and the role that you particularly play.

But in terms of that first success criterion in defining engagement, let's crack on and get into it and the first part we're going to really think about the prior reading and the pre reading that you received and you may or may not have had a chance to have a look at that, but there were three short readings there. The first one was about engagement and clarity, the second one was a reading by John about the constructive alignment of the six pillars, and the last reading was about Amy Berry's levels of engagement. So we're going to launch a padlet in just a moment for you to think about what's your prior knowledge and your prior learning around engagement so we can start to have that shared language and understanding about what we're talking about here in this session.

So if we could launch that padlet and please, we invite you to write down your understandings of what engagement is and how we're going to refer to it from that pre reading or from your own understandings or if you'd like to just look at what people are writing and thinking about where does that fit in terms of the one that you most closely align to in terms of that.

So do I need to stop sharing, Adriana, or do you are you just going to take over?

ADRIANA CAPPONI: No, that's okay, Sam. The padlet link is in the chat.

SAMANTHA RODGERS: Okay.

ADRIANA CAPPONI: It's been sent from Liz, so if everyone just clicks on to that link.

SAMANTHA RODGERS: Sure. I'll just pull up my chat as well so we can all see that. So I guess everyone just does it themselves.

ADRIANA CAPPONI: Yeah, yep, and then everyone will be able to see that page and add to that page.

SAMANTHA RODGERS: Okay. If you're having trouble getting to that page, I guess you could always put it in the chat if you wanted to.

JOHN HATTIE: It's working. I'm starting to see comments come up in the padlet.

SAMANTHA RODGERS: Yeah. If I stop sharing, we might be able to pull up the padlet here on my page. Maybe not. I'll just have a look.

ADRIANA CAPPONI: Sam, did you want me to share it?

SAMANTHA RODGERS: Yeah, if you could, that would be great. It's just that I'm going to have to get out of my PowerPoint and it might be difficult.

ADRIANA CAPPONI: Sure.

SAMANTHA RODGERS: Yeah, so if you could do that.

ADRIANA CAPPONI: Okay, can everyone see that?

SPEAKER: Yes, we can, Adriana. That's great. Thank you.

SAMANTHA RODGERS: And again, with 300 people joining in, it's going to be great to have a look at. Great. Wow, it's going to be so handy for us to have that and have as one of our little artifacts. Fantastic participation.

For me, I had engagement is the meaningful connection of the learner to the learning. So I can see some very similar comments being made there  "connection with material", "understanding the purpose". Fantastic. I didn't expect to be doing it with 300 people. Woohoo. How does that feel, John?

JOHN HATTIE: (Inaudible).

SAMANTHA RODGERS: It's a first for me. There you go. And I'll definitely be coming back to this after the session because I know there are just going to continue to be more and more added as we go throughout the session.

Okay. What I might do is just share back to my slide share now, Adriana, if that's okay.

ADRIANA CAPPONI: Yeah, that's fine.

SAMANTHA RODGERS: Okay. I think everyone who's wanted to put something up there has had a chance. If not, please continue to put yours up there. We definitely want to keep seeing these. I'm just going to make sure  yep, that's all good.

But what we're going to do now is John is just going to share  we've got here Amy Berry's levels of engagement. If you weren't able to get to that pre reading, here's Amy Berry's research and John is going to spend a couple of minutes talking about this particular piece of research and why he really likes this piece of research.

JOHN HATTIE: Well, interesting watching and reading your comments in that padlet and I saw a lot of participating, being active, there was agency and voice. I was particularly  my eyes lit up when I saw compliance to commitment. But what Amy did, and she was part of our team in our Science of Learning Centre here at Melbourne, is she went out and kind of like you've just done, she asked about 1,000 teachers around Victoria about what their conception of engagement was and the dominant theme was participating. We know kids are engaged when they're doing the tasks, when they complete the tasks.

Now, the sad truth is that in a lot of participating sometimes there can be very little learning. For students and for many teachers participating means compliance to do something. Now, as you're going to see, there's nothing wrong with that in a way, but engagement, as many of you have hinted in the padlet, is a lot more.

If I was now talking to a research community, the dominant argument there is that engagement is about behavioural, social and emotion and there's beautiful scales and lovely factor analysis, but it predicts nothing. And so we didn't want to use the current models out there because whilst they're beautiful and seductive, they don't tell us anything.

So from the work that Amy has been doing, she's developed this model and you can see participating is right there, following instructions, getting done, but then engagement is about moving to that investing and then driving. Some of you I would think would see that in terms of agency and voice, but I struggle with the concepts of agency and voice because it's voice about learning, it's not just voice for the sake of voice, and agency is a bit of a problem because novices need experts to help them. They're not in control of their own learning. They don't have agency and the traditional sense of agency is that you're on your own, you can do it by yourself. I don't think that's what some of you mean, that you do it by yourself, but getting the concepts right is pretty important.

So Amy developed the sixpoint model from the participating, investing and driving and the argument is where is each student now in this lesson? Are they participating and our role is to move them up to investing, to driving. When you look at the three negative sides, it turns out that it doesn't matter whether the student is withdrawn, avoiding or disrupting. Their performance is very similar. They usually opt out of this thing called learning.

So once again, try not to avoid those kids  I shouldn't use the word "avoid". Try not to overlook those kids who happen to be avoiding and withdrawing because some of those kids have got 5 or 10 years of great experience of kidding you that they're participating, investing and driving but they are avoiding and withdrawing, and obviously the disruptive kids are very present. So Amy's model, as you're going to see, is the one that we particularly like because you can do something with it. You can see where the kids are and you can move them through.

SAMANTHA RODGERS: Yeah. And so what we're going to do now is we're going to have a look at a video it's a video from the United States and I've cut it to about 2.5 minutes  where the teacher has given the students that information that you've just seen there and is asking them  they're doing a jigsaw  asking them to have a think about what it means to be in each of those phases and getting them to sort of selfassess what that's like.

So as we're watching this, again, in the chat write down what you notice about the student conversations and what they can say about their behaviours and what they notice about each of those particular phases and once we've done that, John is going to link that to his visible learner model. So let's have a look at what these students have to say. Here we go. (Video played):

Okay? So here's what we got. I'm going to take us through kind of this  like a jigsaw and I want us to get to a point where we can just kind of selfassess ourselves, right?

STUDENT: So when I think of "disrupting", I think of obnoxious behaviour that might disrupt our learning.

TEACHER: What kind of obnoxious behaviour?

STUDENT: So like kind of like what Hayden did earlier when you like tap somebody and you keep tapping them and tapping them, but they don't want to be bothered because they're learning.

TEACHER: What do you think the difference is between "avoiding" and "withdrawing"?

STUDENT: "Avoiding" for me is like purposely avoiding and losing interest. It's just like I don't feel like doing it.

TEACHER: Right, right, right.

STUDENT: Investing looks like

STUDENT: Raising your hand.

STUDENT: participating.

TEACHER: Actively participating?

STUDENT: Actively participating, yes.

TEACHER: Raising your hand.

STUDENT: Taking notes.

TEACHER: Taking notes, good notes. "Feeling like what you are learning is important" why is that like vital?

STUDENT: Because then it will be interesting to you.

TEACHER: Not only more interesting, but you'll be more engaged.

STUDENT: You'll enjoy it more.

TEACHER: What's that?

STUDENT: You'll enjoy it more.

TEACHER: You'll enjoy it more, good. What else? So according to what we see here, "driving" is setting goals, seeking feedback, driving your learning, and tracking your progress, right? How do you do that? How can you ensure that you're driving your learning?

STUDENT: By doing the most you can to learn.

TEACHER: Good, doing the most you can to learn, but what does that look like? Does that look like contacting your teachers?

STUDENT: Yeah, making sure everything is turned in on time, making sure

STUDENT: Checking in when you don't remember.

TEACHER: Checking in. What about when you're absent?

STUDENT: Being prepared.

STUDENT: Catching up.

TEACHER: Being prepared, catching up, good. How do we do that here?

STUDENT: By doing what you need to do. TEACHER: Yeah, but like so when you're absent, where would I tell you to go? STUDENT: To Canvas.

TEACHER: Canvas, right? Everything is on Canvas, right? And then the last one that we talked about, like selfassessing, what does "selfassessing" mean?

STUDENT: Where you're at, like as a

TEACHER: Seeing where you're at.

STUDENT: As a learner, how much you know.

TEACHER: Perfect. That doesn't have to be like a test, right? That can be you just kind of reflecting, just taking a step back.

STUDENT: How well do I know this? What do I need to learn?

TEACHER: Perfect.

STUDENT: We talked about basically "driving" is like it can fall in line with pushing yourself to do better in the classroom  not only a classroom setting but a learning setting, anywhere where you can learn, so yeah. So, for example, a big one for me was the success criteria. If you could leave the classroom knowing that you accomplished and you could put a check by the success criteria, that's a big one for me.

SAMANTHA RODGERS: Okay, so it's a short little video, but what were we noticing about the student conversations and what they were saying? So just take a moment to get something down in the chat if you'd like to and we can have a look at that and then we're going to sort of try and make those links between what they were saying and how that links to engagement and the visible learning model. I love how some people are identifying their own students and children.

JOHN HATTIE: I love Annie's comment there that finding engagement alongside learners is vital for their investment, which is what that teacher was doing. It wasn't just the Amy Berry model in the teacher's mind. It was in the actions and looking at the students.

SAMANTHA RODGERS: Yes, and how they recognise it in one another. I think that's really powerful too, how they're calling out different students and, of course, maybe calling them out in different times. Maybe Hayden disrupts at this point in time, but then maybe Hayden can there's an example of Hayden investing at another time as well. So I think that's really powerful. Okay. Thank you for your comments as well. That's really great.

Okay, so if we think about  John, if you want to now go through in terms of how we maximise engagement and talk through your model, what links are we making there between I guess this is your model here and this is Amy's, some of those higher levels being put in there as well.

JOHN HATTIE: Good time to hand over, Sam, because you're going into submarine mode. As you've noted, the students could articulate the different behaviours and that teacher was trying to get also the students to identify where they were in that particular lesson by the  the worry sometimes is we have a generic concept that a kid is a disrupter or a withdrawer. No, it's in a particular lesson and the teacher having the students identify where they are is one of the first steps to then moving them up to the next level and if you watch more of that teacher's class, he does talk about how our job now is to move up the levels. Not everybody starts at investing and driving. Sometimes the participating is a necessary start.

And so what you see here is the fundamental model of what the visible learner is and starting with that notion in the green there, the goal setting part, and students being able to understand the goals and articulate them. One of our worries in our business is sometimes we as teachers have brilliant success criteria there, but what do the students actually interpret from that and are they interpreting it the same as what you are doing?

And then we move on to the next sections about what you've heard there, the tremendous amount of asking questions and the collaboration and working together and it's fascinating when you look at what employers are asking for now, they want people who can work with others and they can get engaged in activities and feed off each other.

And then we move along to the feedback session, and we want to come back to that, but in terms of how the students actually seek and understand the feedback that's coming from them and that ultimate notion which I was fascinated to see certainly in some of the padlets, comments that you made, about getting students to be curious about what was happening in their work because that surely is the ultimate sign of engagement when they start to ask why questions "Well, why is it so?", "Why is it like this?", and getting beyond the acceptance that it's just information and incoming data. Now, don't get me wrong, there's nothing wrong with learning the data and the ideas and the knowledge because that's the basis for going to that next step of asking questions, asking them how they're going in terms of their progress and really getting them engaged in the work.

When you used the word "agency", I'd say I want to be more curious about what's coming up, where they're moving to. And so that's how this notion about how we want to fit in with this concept of engagement, what we're calling the visible learner. Sam.

SAMANTHA RODGERS: Yeah, thanks. So we're going to launch a poll now and I just want you to think to yourself if you were focusing on maximising engagement now with your learners, what would be the key area that you'd like to focus on? Would it be on, you know, working on the dispositions, the learning dispositions? Would it be on getting them to be able to set their own goals and monitor their own progress? Would it be on those learning processes, asking questions and collaborating? Or would it be that they would be able to seek feedback and act on that feedback?

So if these are the key areas of investing and driving, you know, to maximise engagement, then where would you want your learners to be, you know, starting that improvement of maximising engagement? So just a chance for you to do that.

Okay, so here you should  yeah, there we go, just a chance for you now to click on which one you think you might be the most interested in because throughout this session, I'm going to use an example and it would be great for you to have one of these examples in your mind as we go through the rest of the session.

So as you click on one, you'll get to see what everybody else's response is. So I'm going to click on mine and send mine and you'll get to see where everyone else is thinking, their heads are at the moment. Just again, we won't hold you to it, but it again creates a little bit more interaction with the session. Ah, look at that.

JOHN HATTIE: Yeah.

SAMANTHA RODGERS: Interesting. So we're looking at some  the dispositions are important there, getting some good headway today, and also the collaborative learning and sharing with one another. Oh, no, goal setting  we're getting a tussle there, aren't we? We're getting head to head here. I'll give you a few more moments just to see what's going to be interesting. And again, as we go through the session, when we look at one of the case studies, you can think to yourself well, how would I apply this to the area that I'm most interested in?

JOHN HATTIE: We really do want to turn our students on to our passions, don't we, so 28% curious and interested.

SAMANTHA RODGERS: Absolutely. Just great.

JOHN HATTIE: Not what I picked, though.

SAMANTHA RODGERS: It is not the one that you picked?

JOHN HATTIE: No.

SAMANTHA RODGERS: Oh, what did you pick, John? Tell us, tell us.

JOHN HATTIE: I've been struggling in the last few years, as you know, trying to find ways to do the collaboration and students working in teams and oh my gosh, it's hard.

SAMANTHA RODGERS: Not easy, yeah. Whoever said that teaching and learning was easy, though, John?

JOHN HATTIE: Yeah, one on one I can do it, but getting them to do it in teams and groups and not socialising and sharing credit and coming up with ways to assess the individual's contribution to the group  it's not easy. So that's why I chose that one, but I was kind of delighted because I think that passion of being curious is the essence of moving up the engagement scale.

SAMANTHA RODGERS: Yeah, and suspending judgment and letting curiosity sit there for a while without having to have the answer, that is often a very difficult space for a student to be. Thank you for that.

JOHN HATTIE: You see it in their face with 5 or 6yearolds.

SAMANTHA RODGERS: Yes.

JOHN HATTIE: They lose it when they think their job is engagement is to comply, to sit up straight, watch the teacher work, and so that notion of engagement often is the killer of curiosity.

SAMANTHA RODGERS: Wow, there you go. There you go, straight from John there. Absolutely, I agree.

So what we're going to do now is rather than just tell you about the six pillars, we're also going to look at this sort of impact model, which is a change model. So John, if you want to just quickly tell us what this model is and the fact that we're going to be looking at the first two elements of diagnosis and discovery and intervention today in this session.

JOHN HATTIE: Yeah, this is a model we've been developing and like the question we would ask you is what's your model of implementation, and certainly if we've asked school leavers that, we've struggled to get many answers. There isn't a model. There is a set of activities people do, but there's no underlying model and it's really interesting when you look across the whole of education, there are very, very few.

So we went out to business, to computing, to engineering and to medicine and reviewed about 80 models of intervention and from that developed one that has worked extremely well in those other areas and, as you said, Sam we're going to look at two of the four parts today making sure that before we start we do really good diagnosis and discovery. Too often in education we rush to a toolbox of interventions, or we rush to a lesson plan, or we rush to a teaching method and we don't ask the question what is this teaching method the answer to? So where are the students at the moment, what do they bring to the class in terms of their prior skills, their prior knowledge, their prior dispositions, their prior motivations, so getting that right, and then going on to say let's match the intervention to what the diagnosis was, then we're not going to cover it so much today  looking at specific models of implementation and fidelity and dosage and then evaluation turns out to be the easiest of the lot because if you get discovery right, it's just discovery repeated continuously through the program. But let's just focus today on the first two quadrants, diagnosis and intervention.

SAMANTHA RODGERS: Yeah, okay, so diagnosis and discovery, what's that all about?

JOHN HATTIE: Well, there you see it there, remembering Graham Nuthall's work that 40 to 50% taught in every class the kids know already. No wonder boredom, which is the antithesis of engagement  no wonder boredom is so common for students when they comment about their feelings in classrooms. So how do we get smarter about knowing what students bring to the lesson, how we can capitalise on that with some students knowing some stuff already and some not, and what does it tell us in terms of are we going to have to be fast adapters from our interventions to capitalise on that prior discovery.

And it's not just discovery of their knowledge of content, it's sometimes their conceptions and understandings, which may or may not be right. It's also their motivations, which gets to the heart of engagement  do they want to be there to do that curiosity, to do the things we've just talked about because they have to? Do they want to be there because they just have to complete the work regardless of the standard, which is kind of a participating kind of level.

So what is their dispositions, what is their levels of engagement, and this is one of the reasons why we're so obsessed about telling the students what success looks like upfront because that is a massive way in which they then go on to strive, as they do in their video games, as they do in their sport and their social life. If they know where they're aiming, they're more likely to engage and strive and that's the key part of the discovery and diagnosis phase.

SAMANTHA RODGERS: Mmmhmm, okay. Yeah, absolutely. So if you said  you had an area that you were interested in looking at. So we've got a little case study here that's in your handout. You were given that in the email to start with as we were coming in to the event and I think we can put it into the chat  maybe Adriana will put that in the chat, the link to it  and on page  I think it's page 3 there, it's just a simple little case study just to show you what diagnosis might look like and what it is that you might be needing to think about in terms of those questions that we just had.

So on page I think 2 you've got the die model there, the impact model there, that you can return to and refer to not just today, obviously, but throughout your inquiry looking into student engagement, but I've just got a little case study there that you can have a read of looking  for me looking at collaborative learning and thinking about well, what could be part of my diagnosis, and here it's a little staff meeting looking at some teacher voice about what collaborative learning is looking like and a little bit about the walkthroughs that are being done in terms of what that looks like.

So I'm just going to give you a moment to access that handout and just have a look at that diagnosis/discovery phase in some of the ways that you could go about diagnosing and discovering what element or what area of student engagement might need to be the next focus area.

Adriana has said that the handout is attached to the calendar invite. If you can't find it now, it's not a big deal. You can always have a look at it a bit later on.

The purpose of the case study, of course, is to make sure that you are asking those questions of yourself and you have got that diagnosis correct. So you are trying to have a goal that actually needs intervention.

If you are finished there  I'll leave it a little bit quiet for you so you can finish, but if you are finished, in the chat what tools could you use to diagnose and discover what current student engagement might need to be diagnosed?

Getting some great responses there already. Thank you. Yes, great. John's like what's ghost walk? Come on, Trudy, what's a ghost walk? Tell him.

JOHN HATTIE: Fascinating, yeah.

SAMANTHA RODGERS: I'm looking to see if Trudy is going to tell you what a ghost walk is or not. There you go. Thank you, Trudy.

JOHN HATTIE: Oh, got you. Thank you.

SAMANTHA RODGERS: Yeah, it's looking at the classroom. Fabulous. So diagnosis is key to make sure we are intervening in the right way. But moving on  keep going in terms of sharing your ideas.

JOHN HATTIE: Trudy's ghost walk, I was in a school when I made the comment I made before about young kids asking about why when they come to school they switch to what and the principal got very angry with me or upset with me and we were walking around the corridor, so I moved across to a year 1 class pictures they had up on the wall and it was all curiosity, it was all why, it was whatever. Then we walked across the other side to a year 5 class and it was all content, totally content pictures. I said, "Oh, right", and she was dumbfounded, like, "Oh my gosh, I'd never seen it like that way." I'm going to love this notion of ghost walking.

SAMANTHA RODGERS: Yeah, there you go. You can learn a lot by looking at an empty classroom, that's for sure, absolutely.

Moving on, interventions  tell us a little bit about interventions and then we're going to start looking at those six pillars which are interventions.

JOHN HATTIE: Well, the good thing about interventions is we as educators, we have so many of them. We have so many different ways of teaching, we have lesson planning  you name it, we're good at it  and we put interventions because it's not just the lesson plan, it's what you do in the moment by moment. It's what you do to intervene in the process of learning. And one of our major arguments is how is that aligned with the diagnosis of where the students are at, where do you start with, and how really are you planning those interventions or those strategies in light of what the students are doing in the classroom?

If the first intervention method that you choose doesn't work, how quick are you at changing it to another method? There's no point repeating that method because it didn't work the first time, it's unlikely to work the second. So what are the strategies? And this is where we want to look at a moment looking at that, realising that you already have many kinds of interventions, but how does it align with where we're going?

And this is where this notion of constructive alignment is so powerful in terms of the six pillars of lesson designs, but how are we going to make sure that we've articulated the success criteria, and particularly over the last few years when we were writing our feedback with Shirley Clarke, she took me into some classes where you cannot believe how wonderful the success criteria are that the teachers had  illustrated, beautiful. But then after the lessons we interviewed the kids about what they understood about these success criteria and nearly every kid of every age group it was all about knowing lots, and we related back to the teacher and they said, "Well, that's not what we're aiming for. We just don't want kids to know lots of stuff. We want them to be able to use it, interrogate it, relate it and all that deep stuff that you want to do." So maybe we need to be really smart about success criteria and check, as Corey has just said  check that the students have got the same concept we have, that notion of alignment, making sure that our feedback is at both the content and at the deeper stage, and the same with our assessment.

Now, there's a lot of dispute out there. You know, there's Bloom's taxonomy, Webb's taxonomy, SOLO taxonomy, surface deep. The language that we're using is this knowing that, knowing how and knowing with. The knowing that is what is that what we want the students to know and we see all three parts as critical. It's not an either/or here.

The knowing how is how you use that information, and this is where we look at problem solving, we look at deeper relations, we look at inquiry learning. And then are we going to use that information with a new content theory, the transfer. So in some ways it's the surface deep and transfer, it's the ideas, the relationship and how then you use it out there, but making sure that alignment is there so that the students are very clear that at this part of the lesson it's about knowing that, at this part of the lesson it's about knowing how, and at this part it's knowing with because the default mode for nearly every student after age 8 is knowing that. They think that what you value is lots of information. They look at the assessments and the assignments and the feedback you give them. It's primarily about the content. So they think that's what you want all the time.

So maybe we need to be smarter and I think there's a very simple solution. For example, on assessment, give them at least two questions and tell them, "This question is about the knowing that, this is about the content and the skills I want you to know and this question is about how you're going to use that to relate the ideas and maybe extend them with the knowing with." So let's not confuse the students and ask them to guess what's in our mind. Let's be more clear.

Engagement often starts to slip down to the disrupting and withdrawing when students get confused about what it is you value and what you're wanting to do and they may hear you say, "Oh, I value deep learning", but then they see that what you actually value in your feedback and your questions and your content is, well, do you understand that yet, do you understand that, that, that?"

So how do we get that balance right? When you're first learning something, maybe the balance has to be higher on knowing that and as you start to get some knowledge, sure, we want to go beyond that to the deeper and the transfer side. And the argument is how do we align the assessment of the success criteria along with those three levels so that the students are very clear what the aim is so that they then are more likely to invest and drive towards those sometimes multiple aims.

SAMANTHA RODGERS: So we're going to go through at the moment and look at those content elements and look at assessment success criteria and feedback first and then John is going to be looking at those process elements after that.

JOHN HATTIE: There's some David Clarke on

SAMANTHA RODGERS: There's a quotation from John. You said that.

JOHN HATTIE: Oh, no, but the one in the chat that I'm looking at, which is very similar, is from my colleague David Clarke, who unfortunately passed away recently. I could have said that. I wish I'd said that too. But this is where this concept on the screen of constructive alignment is bringing those parts together so the students  we emphasise that because we as teachers can say it's beautifully aligned, that's great, that's the first start, but do the students? Are they confused or not about their intent of learning? The biggest way to disengage students is to not get that alignment right.

SAMANTHA RODGERS: Mmm. So there assessment.

JOHN HATTIE: As I said, I think there's a simple solution here in assessment. Sometimes we need to be clear to the students about which parts, which focus the various parts of the assessment have. The last 20odd years of my teaching at university, if you've ever done my courses, and some of you may have, you'll know my first assignment is about content. It's knowing that. I want you to know about how to calculate effect sizes, and I'm sure you can get excited about that. I want you to have the skills to do those kinds of things. The second assignment I want you to then go on and make relationships and use it and transfer it to your own circumstance. I want both and I don't want to be unclear to the students about assessment.

And similarly when it comes to the lesson design activities, and we're brilliant at coming up with wonderful activities that engage them and that concept of engagement we don't like, interesting, authentic realworld tasks. Let's get real. Some of the things we ask the students to do are skills and they may not have immediate or even longterm benefits for some of the students. They need it so they can go on to the deeper learning and the passion with the transfer. So how do we connect it to their past life, past understandings, and also make sure that that lesson design is clear about the knowing that, the knowing how and the knowing with.

SAMANTHA RODGERS: Mmm. We also want to make sure with our assessments that we put the assessments first, that we don't think of the content and the task first and then come up with the assessments, that we think about the outcome first and then have our assessments planned and in place and so that we sort of have that backward design model rather than the sort of forward design model.

So here's just a we're going to do a little poll in a little bit in terms of thinking about how balanced your assessments are. So just have a look at this screen and think to yourself well, in what kind of balance do you have your preassessments, your inlearning assessments and your postassessments, because we want to put those in fairly early. So have a look at that and think to yourself preassessments are designed to determine what learners already know by providing information on prior learning so we know what the next steps are.

So read through them and think to yourself where do you put your assessments? Where do you spend most of your time and effort in terms of the assessments that you formulate and give to your learners? Do you spend a lot of time on your preassessments, on your inlearning assessments, or on your postassessments?

So if we launch the poll now and think to yourself if you give it a score of 1, it means that you spend it's only in very small pockets across the school as a regular practice and 10 is it occurs widely across the school in almost all classrooms as a regular practice. Let's have a think to ourselves which gets the most time in your schools, in your classrooms? So happy for us to launch this next poll.

ADRIANA CAPPONI: I'm just clicking through. So at the moment you can see preassessment. I'll click through to the next one. Can everyone see inlearning assessment?

SAMANTHA RODGERS: Yes.

ADRIANA CAPPONI: And then postassessment.

SAMANTHA RODGERS: Yeah, not a surprise really, is it, that we use our postassessments more than our pre and our inlearning assessments, but also something important for us to have a think about. Thank you for that and thank you for bearing with me. I was having a little bit of a moment there with the Webex poll.

ADRIANA CAPPONI: All good. Sometimes it goes hiding.

SAMANTHA RODGERS: Yeah, I just couldn't click on the right thing. Anyway, moving on, we've got to get a wiggle on. Thank you for that. John, talk to us about success criteria.

JOHN HATTIE: Well, this is where we want to make sure that the students understand what success looks like. In many ways, it's like playing video games in Angry Bird, that if you didn't know that there was a next level and if you just went in and kept playing and kept playing, it would be very boring. It's like watching when I first came to Australia and watched an AFL game and didn't know any of the rules. It was not very interesting at all because there was no set progress, there was no set knowing how the team is progressing. Then you start by saying oh, you get so many points for kicking it through that one and so many for that one, what was the goal, what was the purpose of it, and this is why particularly our adolescents are very, very goal driven. And so the degree to which we can have our success criteria articulated, the point we've made so far we want to come back and that we understand how they understand what success looks like.

This is where worked examples can be very powerful. This is why we are advocating here, Sam and I, that success about the content and the knowing how, knowing with, and many times we say maybe we need two success criteria for a lesson. That makes it clear to the students that this is what we value in the knowing with, this is the knowing that and this is the knowing how.

But the other art of success criteria is the Goldilocks principle, the Goldilocks principle of challenge. If you set the goal, a success criteria too high, I set a goal for you now that was so high, like I want you to learn to play canasta in an hour, most of us wouldn't even start. We wouldn't be engaged, we wouldn't be interested, we're out of it. If we thought that in the time we have, the opportunity we have, we're not going to get there, no wonder I withdraw, I avoid, and I can sometimes be disruptive because I'm not going to engage in the activity.

We don't want to make it too easy and I think that's a bigger problem because if Graham Nuthall is right and 40 to 50% of everything taught in every class the kids know already, kids think coming to class is just doing, I'm going to do the work and hand it in. I don't care about the quality. In fact, I don't know, so I'll wait and see because it's random in my mind what the teacher does when they do assessments. And so that easiness is a problem.

But we also don't want it too boring and that's why getting that right level and that's in many ways the art of teaching. One thing we want to emphasise here is we're not recommending you have different success criteria for each student. It's just not manageable. What we are saying is you want to set that success criteria for the class using Goldilocks principle and then have much better understanding of the progress and ways that students get close or attain that success criteria.

What you don't want to happen is the kid gets close to but not there and then tomorrow you move on to something else. Those gaps magnify. So how do you create opportunities for your students so that they all can get to that sense of what you think mastery is, what you think success is.

I know many of you are doing this now in your schools, but we do ask you to think of two extra things: how do your students understand them and is it the same as you; and maybe it might help if you start to split them up, the knowing that and the knowing how.

SAMANTHA RODGERS: Mmm. I've got an example here of a single point rubric and I imagine you can't read that very well, so I've put the full one in your handout so you can read it a little bit better there. And this is a really great example of using success criteria because it's not just to put up at the beginning of the lesson, to put up at the end of the lesson, but it's a living, breathing document where students can actually use it to look at where they've already got strength, their grows, and they can write that down and provide evidence of that and they can also discuss and maybe either peer  you know, use peer feedback or selfassess or even get the teacher to be looking at what they've written down there for their areas of development.

So it's not just a success criteria that gets put up like wallpaper, if you like  you know, it's there at the beginning, it's there at the end  but it's actually a document that can be used students can be looking at it, you know, in a different criteria at different time to other students so they don't just have to tick them off at the same time as others, but they can also be looking at them, as John said  looking at what is the knowing that information that I need to have and what is the knowing how, so where is that sort of the two different levels or phases of learning that you want to share there as well.

So if you're thinking about your use of success criteria, have a look at those three criterion there, success criteria is created and shared with learners before and during, so they know what it looks like, and then the other two criterion there, and think to yourself is that like my school, is it a bit like my school's practice, is it not yet like my school's practice and just have a think about your selfreflection.

I like how some of you are putting it in the chat. You're so brave. Some brave people out there. That's great. Thank you for sharing. Gosh, some of you are fast typers as well. I'll give you a chance just to read through those again. Okay, there we go, good.

JOHN HATTIE: I saw a hint there, Sam, perhaps it's not explicit, that's one of the things that I sometimes see is almost mechanical, we have success criteria, they're up on the wall, and that's obviously what I saw one of the respondents wanting to resist that, it's beyond that. It has to be in the heads of the kids.

SAMANTHA RODGERS: Yeah, they've got to be using the success criteria to maximise their impact and their engagement with them, absolutely.

JOHN HATTIE: One of the recent findings was that across 300,000 people, when we asked them about their feelings for lessons, the dominant feeling was boredom, which is the antithesis of engagement, but 63% of those who did not know the purpose of the lesson and the success criteria had a negative reaction and 63% of kids, the exact same number, liked the lesson when they understood what the purpose was so this is why

SAMANTHA RODGERS: What a surprise.

JOHN HATTIE: Yes. It's really powerful data to show that it's really worth it.

SAMANTHA RODGERS: Yeah, absolutely. So just keep putting some questions in there if you have them, we're getting close to the question section, and then John is going to take us through this notion of feedback.

JOHN HATTIE: Yeah, this is one that's beguiled me for many, many years, since I first discovered the incredible power of feedback, but also the remarkable variability. The same feedback works with one kid doesn't work with another, works with a kid today, doesn't work with that kid next year, tomorrow, and if we don't understand that variability, we're in troubles.

A couple of the ways to sort through that is firstly, as teachers, it turns out that we're very good at giving feedback about where they're going  success criteria, for example. We're brilliant at giving feedback about how they're going. We do that on a very regular basis. But we're not as good, and we don't do it as often, about where to next and it's really interesting when you ask students what their concept of feedback is, almost to a student across all ages they say feedback is one thing, where to next? If you push them, they go a step further and they say, "I want to know where to go next and I want to know how to get there next." They are very future oriented in their feedback.

We've constructed pages, we've constructed two pages of feedback based on where am I going and how am I going and the student sat with me and said with the two pages in their hands, "But sir, I've got no feedback" because their notion was where to next. And then it's a bit like we've been saying with success criteria, did they actually hear it, did they understand it and can they action it because if they can't hear it, understand it and action, the feedback didn't work from their point of view and that's what we want to do.

An interesting exercise to do is after you spend all Sunday writing out your comments, give it back to the students. Wait a day so it's not just shortterm memory, then ask them, "Make some notes about what you understood by that feedback I gave you two days ago." It's really interesting. You'll see if your feedback was heard, you'll see if it was understood and you'll see if the students think it was worthwhile. It's a very powerful exercise. But the point making is that there's nothing wrong with where am I going and how am I going? It's the justification for moving ahead, but the students want you to tell them a lot more about where to next. "How can I go from there to there? Yes, I know I'm here and I know that I've got things to fix up there, but what do I need best to go towards that success criteria?" And this is again this notion of constructive alignment.

SAMANTHA RODGERS: Okay. Just a quickie because we want to get you into a breakout group relatively soon. Just think to yourselves what, again, is the most common or most regular feedback practice in your school. Where do you sit here? And then we'll launch ourselves  we'll just do some quick key messages and then we're going to get you into a breakout group for you to think about what you're thinking about so far, give you a chance to speak to your peers. John, is there any research based on which ones are the most effective there?

JOHN HATTIE: Oh, one screams out in terms of effectiveness and that is student to teacher feedback. The more that you hear, understand an action, the feedback you get, the greater the impact it has on the student. I notice some of you are saying that you're a bit dominant on teacher to student. Now, there's nothing wrong with that, but in proportion, classes need to be dominated by student to teacher feedback.

SAMANTHA RODGERS: Mmm, absolutely, yep. So to sum up our key messages, what are they, John, and then, Maria, if we've got any key questions bubbling to the top there, we'll look at those.

JOHN HATTIE: Well, I think the key message is that getting this notion of engagement from the Amy Berry model, thinking of it moving  participation is the first step and moving beyond that to that investing and that driving and understanding where the students are in terms of the withdrawing and avoiding kids. Surely they're the easiest kids to turn on to learning if only we acknowledged where they were. And we know that the disruptive kids occupy a lot of our time and sometimes they are and other kids allow them to be distractions so that they can avoid and withdraw.

And then it's this way in which we can use that momentum. We saw that teacher's classroom in San Diego. We're moving the students and getting them to understand that we want them to move from participate to investing to driving. We want that constructive alignment so they can get a sense of where they are, where they need to be using that Goldilocks principle. And then, as we were saying, like in the video games, we want them to take that agency to strive and to invest to get to that success criteria and the more we can be clear about that.

SAMANTHA RODGERS: Okay.

JOHN HATTIE: But the mistakes we see is not understanding the students' conception of success criteria. When the students see that our feedback that we give them is predominantly about the content, they think that's what we value. Our assessment's about the content, that's what we value, so how do we align these to really make our classrooms fun?

SAMANTHA RODGERS: And are there any key questions? A couple of questions that are coming up about content at this point in time about assessment success criteria and feedback, or are we good to go to our breakout session?

MARIA ODDO: Sam, there's two questions in the chat and there might be some other people that have got a question and I'm happy to read them out or do we want to go to breakout

SAMANTHA RODGERS: Yes, could you, Maria?

MARIA ODDO: Yes, sure.

SAMANTHA RODGERS: Just to save us time. That would be great.

MARIA ODDO: Yeah, no problem. I just want to find the person's name. We've had two that were asked earlier. One was from Kelly Simmonds: "So how can students decide and reflect on their own success in all areas of learning, like the young person in the first video, not teacher deciding?"

JOHN HATTIE: This is where if you've given the student worked examples, they can do some pattern matching, "how am I going compared to that", and that's a very powerful way to get them to do assessment. I hear the question that sometimes students don't know what they don't know, they don't know how close they are to success, and this is where I think us showing and the levels  that ladder notion that I think one of the other participants put in the room. This is where you are on the ladder. This is why I'm a bit of a fan of data walls and matters of inference. Where are you relative to success?

Another way is to show them other students' work, it doesn't have to be with names on, that this is an example of where we want you to go next. I think that's a very powerful way to get them to move up.

MARIA ODDO: Yeah, thanks, John. And the next question that was in the chat was from Trudy Cook: "Would it be reasonable to think that some students find it difficult to get to the know how part?" Can you talk to that?

JOHN HATTIE: Oh, we all do.

MARIA ODDO: Yep.

JOHN HATTIE: Yes, we all do. You give me any topic and I sometimes sometime actually I'm much happier in the know that stage because it's safe. I know how to do it, I'm very good at memorising things and making connections and using  oh, my gosh, I can do that. It's sometimes a bit of a struggle then to do that hard work in relationship. Like my best example is I can collect data from meta analysis and I do it probably two or three times a week. That's easy. That's nonthinking stuff. It took me 15 years to write the book about the relationship. So yes, it is hard. I think acknowledging that it's hard. Kids know it's hard, we know it's hard. What's wrong with struggle being the most desirable word in learning?

MARIA ODDO: That's great, John. We've got another two questions. One is from AJ: "Do principles for learner engagement change at different ages and stages of the learner, such as adolescence?"

JOHN HATTIE: I think that the no, I don't think Amy's model changes because we've applied it across all groups. I think where the kids come can change and in the earlier years they're much more willing to be compliant and do what we say and certainly in adolescence. Every kid I would argue, particularly in adolescence, comes into the class with incredible motivational resources. They just don't want to put those motivational resources to what we value and I think that's where you get much more of a resistance to moving into the participation stages and it can be harder to get them to engage, but we would argue that it can be done and how we do it is the same across all ages.

But yes, I do think that there are different priorities for kids. We know after COVID that the most dominant mode here in Australia sorry, in Victoria when we asked them about why they want to go back to school is to be with their friends, it wasn't to learn the stuff we teach them. And I think that's something we need to realise, particularly in adolescence, that friendship pattern and reputation enhancement is so powerful. So yeah, I do think there's some different kind of degrees of emphases brought, but the model applies across all ages.

MARIA ODDO: That's excellent, John. We've got a question here about student to teacher feedback. I think that Shelley is sort of asking a question about can you provide some examples of what you mean by that and what you'd recommend, on what sorts of things do you think student to teacher feedback?

JOHN HATTIE: Well, besides the obvious ones of being open and creating opportunities for students to give you feedback on your lessons, looking at exit tickets and many of those things, there has been interestingly in the last particularly five years quite a movement to do more student evaluation of teaching and the classes, obviously with sensitivity and there's obviously lots of issues. In fact, I'm part of a team here in Australia where we've been developing and the Pivot Team have an instrument, there's a stunning instrument coming out of the Netherlands, and so that's certainly in high schools that's becoming more common.

There's also a lot of apps out there and again, I'm not selling you an app here, but just as an illustration. The one that I've done the most work with is the Verso app and that's where at the end  it's the example I gave earlier. At the end of the lesson you can ask the students, "What was your feeling or mood as a consequence of this lesson?", and they can respond. And the other part I like about that app, they can also say and tick a box "Do you want to talk to the teacher about it?", and what I find fascinating is that when you look at the number of kids who want to speak to the teacher  not always about negative emotions, by the way, sometimes it's positive  it's 1 in 5. My question to each of you is do you know that 20% that want to talk to you and given we don't, no wonder they go under the radar.

So those are the apps that I'm talking about. Those are the kinds of things that I think maybe we, as the academy, can spend some time looking at other ways that we can get feedback to teachers from the students.

I think probably the best example I'd ask you to think about what happened during your COVID teaching, your distance learning. I put it to you that you had using social media, like the chat rooms, you had more conversations about what students didn't know, didn't understand, got wrong than you have in the regular classroom where they're terrified of being wrong in front of their peers. I think we've got ways in front of us to do that.

SAMANTHA RODGERS: Absolutely.

MARIA ODDO: Thanks, John and Sam. We do have some questions about which apps you used and I suppose we can put them in the chat and you might want to go to breakout rooms. I'll leave it with you, Sam.

SAMANTHA RODGERS: Yeah, let's go to a breakout room now. John, you can put that in the chat when we all come back, the name of that app. Guys, can I just

JOHN HATTIE: Well, no, I want to be careful. I would rather participants put in the apps they use because I don't want to be seen to be promoting it.

SAMANTHA RODGERS: Oh, okay, yep, fair enough. Yeah, we don't want to use the app name. What has this session made you think about in terms of the content elements and how well does your school align assessment success criteria and feedback?

So you can have a quick look at the intervention element of the case study as you go into your breakout room. Can we have this breakout room for about 4 minutes so people can chat and then we'll come back and have a look at the process elements.

MARIA ODDO: Sure. I'll just set them up now.

SAMANTHA RODGERS: Thank you. Cheers.

(Breakout rooms)

SAMANTHA RODGERS: I hope you had a good chance to be thinking about the alignment in particular and the use of assessment success criteria and feedback. And now we're going to go to the process element of looking at those and so we're now going to be looking at teaching to knowing that, teaching to knowing how, and teaching to knowing with. So here is John to talk you through these three areas, the process elements of lesson design.

JOHN HATTIE: Sure, and this is where looking at the learning model that we have developed that takes us through constructively aligning the strategies that we want students to use at the various phases. Like if you look at the knowing that, the one I want to pick out is outlining and transforming. If students don't know how to outline, take notes and transform, then what they do all day is they just sit there in the incoming, it comes into them, and it doesn't take them long to turn off because to them it's just all content because they have no coat hangers to hang on.

So one of the things we invite you to try is tell the students what you're doing, "I'm going to give you a 10 or 15minute talk on topic X. What I want you to do is to take notes, to make an outline of what I'm going to say. I'll give you some time afterwards to fix up your notes and outlining and I'm going to ask you to hand it in." It's a really powerful way for you to see how students are thinking as you're talking. Some of them will hand in a blank sheet of paper. Some of them, worse, will hand in a verbatim script of everything you said, which means no working memory is going on to connections.

And it's a very powerful way because if you don't know, many of your students are not going to be engaged in any way in your lesson because they have no coat hangers, they have no big ideas to hang all the content and, worse, they'll think that being a good learner is knowing lots and I think that we don't want quiz kids in our classrooms, we want kids that make connections and do the transfer.

And if you look at the consolidating learning, the one that's number one is deliberate practice. Like some of our students just practice, practice, practice, so that often reinforces the very things that we don't want them to know and do. Deliberate practice is with feedback  seeking the feedback, us giving the feedback so that they practise and tweak.

I've spent many years as a cricket coach and I think I'm quite good at stopping them in the practice and tweaking, stopping them and showing them a video of what they should be doing so that they overlearn, because in a game I don't want them to think, I want them to execute a shot that they have deliberately practised, in the same way in our classrooms we actually don't want the kids to think sometimes. We want them to overlearn certain things so they can come on and then use it with the knowing how part.

If we go to the knowing how part, overlearning certain things in that consolidation phase we just talked about is only valuable if we go on to the knowing how. If the overlearning is just to pass a test, you know what happens. The day after you forget it all.

So in this knowing how, this is, for example, strategy monitoring. This is helping the kids monitor the strategy they're using, the learning strategy they're using, to see if it's working and if it's not, you don't want them to keep using it. Some of your students get something wrong. They reapply the same strategy and they wonder why they keep getting it wrong.

Now, this is a really hard ask, but this is where I ask you stop every now and then and let the kids think aloud. Stop every now and then as a teacher and you think aloud to the students, this is how I'm going to solve this, and deliberately make mistakes because that's what kids do. Of course they have to do it because they're at the edge, they're in that zone between what they know and what they don't know, so errors have to be seen as part of success and so that monitoring of strategies.

And the consolidating deep learning, my goodness gracious, this is the time where I want to hear kids talking aloud, thinking aloud, explaining aloud, monitoring aloud, questioning aloud. At the knowing that, that's not the time for kids to talk. As Graham Nuthall showed, at that stage when a kid talks at the knowing that stage and they give another kid wrong information, the kid is more likely to remember it no matter what you say. But at this stage, after they've got the knowledge, after they've started to do some evaluation and some selfregulation, that's when we want them to go to the pit, that's when we want them to do problem solving, that's when we want to do it.

And sometimes we get teachers going to that phase before the kids have the notion. We're suggesting maybe we need a readiness test, how ready are kids to go in to the problem phase, because we know problembased learning has a notorious failure, primarily because too often the kids don't have the content to do the problem solving, so aligning and that constructive aligning to make sure that we deliberately teach the knowing that and we deliberately teach the knowing how and often the same methods don't work for both. So that's our major message here throughout this evening.

SAMANTHA RODGERS: If I think about knowing how, and someone was asking before how do you help students go into the knowing how because it can be really difficult, I often think of the two words self and peers and that's where you're getting  either they're asking themselves questions or they're sort of elaborating to themselves or they're using that discussion and they're asking their peers and going deeper by asking each other questions or themselves questions. So that's what I think of when I think knowing how phase.

JOHN HATTIE: I think of it as a grandad. I've got two threeyearolds at the moment and they're in that why stage and I love that word of interrogation on your screen there because it's the most jargonistic word but simply meaning you're asking the kids why.

SAMANTHA RODGERS: Yeah.

JOHN HATTIE: And at that stage, 3 and 4, they're constantly trying to understand their world  "Why is it so?", "How is this connected?", "Why are the stars up there?" That's what we're talking about at knowing how. Those kids when they're studying filtration or differential equations or jazz and music, this is the phase where you want them to go back to being 3yearolds, allow them to make those connections. It's relating the big ideas.

SAMANTHA RODGERS: Absolutely, and if you ask yourselves to think about a process and you're trying to think of all the steps, it gets pretty clear pretty quickly when you can't remember what comes after, you know, step A and then step 2. If you can't remember it, you know exactly where the learning breaks down and where you've got to go back to. So it's a pretty good mechanism to know what you do know and what you don't know. Anyway, moving on to teaching to knowing with.

JOHN HATTIE: And this is the transfer stage. This is where surely the purpose of teaching anything in school is so that kids can use it in another context and it turns out that history for 150 years we haven't been able to find good ways of teaching it. We often turn it on its head and say the kids who can transfer are the bright ones and I beg that we never say that. It should be the opposite. We need to teach every kid how to transfer.

And one way of doing it, you give a kid a problem. They do the problem, they get it right or wrong. Then you give them another problem. Before they do the second problem, we will say, "Stop. Kid, tell me what the similarities and differences are between those two problems?" You can see the effect size is ginormous. Deconstructing the task, in a sense asking what success means, what is the actual problem asking, and this pattern recognition, constantly looking for patterns. Once again, we're good at doing that with kids at 3, 4 and 5 and then we forget and we think it's about knowing lots. The kids want to see patterns and when they start to see patterns it's how is what you've learnt here, how does it relate to what you're being asked here and how does it not relate? That's how you go about the knowing with part.

SAMANTHA RODGERS: Okay. So if we think to ourselves in terms of reflecting here and we're thinking about how do we constructively align  think to yourselves in the lessons that you see or the lessons that you teach and the lesson plans that you're looking at, where is that balance between the surface deep and transfer or the acquiring the knowledge, you know, the critical content and skills of the knowing that phase? Where do you see the learning developing relationships between those ideas and going into the knowing how phase and where do you see the applying and the transferring of those ideas to those new contexts? So do you have that constructive alignment and that balance when you look at the process of learning.

And then when you're looking at is the right teaching method used at the right time. So if you look at your handout, you've got those knowing that, knowing how and knowing with strategies there and do you see those used at the right time  you know, summarisation being used at the beginning, discussion being used, you know, at the knowing how phase and then, you know, debate or, you know, Socratic seminars being used at that transfer phase if you're using my example of collaborative learning. So a chance now just to reflect on those two questions or one or either of those questions. And I do get it's a big question, or both of them are big questions.

Yep, some good comments there from Trudy and Wendy. Thank you.

I'll give you about 30 more seconds just to have a think about what the learning looks like in terms of the process and, yes, some interesting notes in the chat there, absolutely. I think they're all using a very similar body of evidence.

John, do you want to take us through those key messages and, again, any questions that are coming up because it is getting close to us wrapping up our session tonight.

JOHN HATTIE: The other key message we've been trying to get across is that alignment at those particularly two or three levels. Sometimes the distinction between knowing how and knowing with is not as clear as the distinction between knowing that and knowing how. And then how do we get that clear to the students so that they know what your priorities are, what your values are, they know that this is what you value, both the knowing that and the knowing how and with, and then aligning your teaching and your assessment and your success criteria to those proportions and that the more you can do that, the more we have the chance of moving students beyond those participating stages and engaging in lessons and not saying at the end of the lesson, "That was boredom", which is usually a cry and a scream that they weren't understanding, involved or learning.

SAMANTHA RODGERS: Mmm. And Maria, did we have any questions that were popping up at this point? We can probably, I guess, leave any  if anyone's got any questions, start popping them in the chat for us.

I just want to go through some other points before we do our evaluation and then we can get to those questions. Just to remind you that in terms of the impact model, there's another element which is that implementation phase. So once we have those interventions in place, we've really got to think to ourselves well, how do we successfully implement those and how do we monitor them to make sure we're implementing them in the way that they should be implemented and how we're using our success criteria to make sure that they're implemented well.

I put a little bit in there about these four different areas that you can look up and have a think about in terms of what's the fidelity of the intervention in terms of the delivery of it, the dosage and the adaptation. You want to make sure you don't adapt out the actual, you know, fidelity of the intervention. And also there's that evaluation phase as well and as John said, if you've got your diagnosis done well, your evaluation phase, you're really using the same tools and the same mechanisms to think about the magnitude of your impact in terms of that intervention.

That takes us back to our learning intentions and success criteria and just reminding ourselves today, this is what we were here for. I've had a lovely chat with John and we looked at defining engagement and looking at what you think engagement meant. We've looked and identified what those six pillars are and, more importantly, tried to think to ourselves how do they align in terms of like how do we ensure that learning can  you know, does work together to maximise that student engagement and we've used a couple of John's models in terms of the impact model to think about how we implement change and also his visible learning model to think about well, what are those key components that maximise engagement looking at dispositions, looking at how we set goals, looking at how we have learning processes and thinking about how we monitor and use feedback with our learners.

So, yeah, bringing ourselves back to the questions and do we have any questions there that people really want, and someone is asking about a link to the slides. Yes, apparently, they're going to be emailed to everybody so you've got those. I'm really interested in any further questions. If you don't have any further questions, obviously feel free to leave. It's getting very close to that 6.30 time.

JOHN HATTIE: No, fill in the in the link. In the chat, there's a link to a feedback. So if you've got no questions, we'd love you to go

SAMANTHA RODGERS: Yeah, please fill in the evaluation. We really appreciate it, absolutely. And what's John Hattie's course? What's your course, John? Tell us all about it.

JOHN HATTIE: Well, actually, sorry, Alex, I've retired from the university but they do wheel me out every now and then in the Master of Instructional Leadership and there's some really great people there that have taken over what I used to cover in that course, but I do occasionally get wheeled out again.

SAMANTHA RODGERS: "Wheeled out".

JOHN HATTIE: It's quite interesting in retirement, isn't it? But this is the place to come here in the Academy. We're very proud that we're one of the very first people to offer here in the Academy and I know there's going to be many more other sessions. What a great resource Victorian educators now have.

SAMANTHA RODGERS: Absolutely. And any further questions for those

MARIA ODDO: Yes, Sam, there is one from Corey. It's tips to roll this out across a school or the department. Any comments about that?

SAMANTHA RODGERS: Any tips there, John?

MARIA ODDO: Any tips to roll this out? Your professional learning is all about, you know, thinking about how to actually do this in the school context, how to roll it out in a school.

SAMANTHA RODGERS: In a faculty, Corey has added in a faculty.

MARIA ODDO: Yes.

JOHN HATTIE: Yeah, look, I don't know about the system. I'd talk to Mr Merlino and Mrs Atta. But in your school, all I ask you to do is start exactly where we started today. Start with discovery. Don't assume. Please do not presume. Start with discovery, what are your students thinking. Interview students randomly and say, "What does it mean to be a learner in this class?", and ask them, "Do you come to school to want to learn the stuff the teachers are teaching you? What is your understanding of the success criteria? How do you know you're successful?" Start there. That's the right way to plan to start. Don't presume.

MARIA ODDO: That's great, John. Well, we're right on 6.31, so we might just  you might just want to say goodbye to everybody and if there's anybody that wants to hang around, they can.

SAMANTHA RODGERS: Yes, feel free

MARIA ODDO: But thank you.

SAMANTHA RODGERS: Yes, I think dinner might be ready for a couple of us, so if you've filled in your evaluation and if you don't have any further questions, it was lovely to have you with us for this session. Doesn't time fly when you're having fun? It was really nice to see you all. I'm sure John wants to say goodbye. I'm just always hogging. Tell me to shut up.

JOHN HATTIE: Thank you very much. Thank you and enjoy the same passion that you have that we have about making a better life for kids. Thank you.

MARIA ODDO: And on behalf of the academy, thank you Sam and John for a great session this afternoon and thank you everybody for being with us.

SAMANTHA RODGERS: Yes, lovely to see you all. What I might do is I might not share the screen anymore. Stop sharing, there we go. There we go. I can see you all. Oh, look, and someone is using their emojis. We've got some advanced learners in this group.