

John Hattie (00:00):

I want the knowledge. I want the precious knowledge. But I want also the kids to know what to do when they don't know what to do. I want them to become their own teachers.

Susan Lambert (00:12):

This is Susan Lambert. And welcome to Science of Reading: The Podcast, from Amplify, where the Science of Reading lives. Today, I'm so excited to bring you a conversation with one of the biggest names in education, John Hattie, Emeritus Laureate Professor at the Melbourne Graduate School of Education at the University of Melbourne. Professor Hattie has authored more than 60 books, including 40 on Visible Learning, which we'll talk about in depth. This was an expansive conversation, in which we talked about everything from his meta-analysis research, to the importance of studying excellence, to his thoughts about AI and education. One note before we get started, when we connected with Professor Hattie halfway around the world, it was bright and early in Australia. So, be aware that during the conversation, you might hear the occasional sound of a pooch, who was perhaps eager for his morning breakfast. With that heads up out of the way, here's John Hattie.

Susan Lambert (01:19):

Well, Dr. John Hattie, thank you so much for joining us on today's episode. What an honor!

John Hattie (01:25):

It's good to be here, Susan. Thank you.

Susan Lambert (01:27):

Before we jump into all the fun and fancy of this episode, I wonder if you might introduce yourself to our listeners, and talk a little bit about what motivated you to come into this field of education.

John Hattie (01:41):

<laugh>. Yeah, I was brought up in the south of New Zealand. I now live in Australia. But, when I was a teenager, in a small rural country town, I started an apprenticeship as a painter and paper hanger. After a while, I realized that there wasn't many skills in it. And I didn't even have those. And I worried that the rest of my life would be spent in this small country town. And so, I found out that if you became a teacher, they paid you to be trained. I had no resources otherwise. I thought, "Well, I'll try that." Kind of as an accidental decision. But it worked, obviously, to a point where I was a real teacher for a couple of years. And thoroughly enjoyed it. And I thought, "OK, I'm gonna go on and do my Ph.D. And if doesn't work out, I could always go back to something I really enjoyed." And so that was kind of why I got into education.

Susan Lambert (02:36):

I love that you said, "real teacher." Do you consider yourself not a real teacher now?

John Hattie (02:41):

When you work with real teachers, they make a very big distinction about have you got chalk dust under your fingernails? You know, obviously, I would argue, having been an academic for 50 years, that that involved an incredible amount of teaching. So yeah, I think I'm a teacher. But I do wanna acknowledge

that teaching a group of five-year-olds or 15-year-olds is quite different to teaching a group of 25-year-olds.

Susan Lambert (03:05):

Absolutely. And I think, you know, chalk dust under your fingernails, I don't even know if our new teachers would understand what that is like. So maybe it's whiteboard marker on the end of your fingertips or something.

John Hattie (03:16):

Probably, yes. And I remember my very first week of being a real teacher. I got into a huge coughing fit, 'cause I hadn't been used to the fact that there was chalk dust every minute, every day. And I'm sure no new teacher knows about that. It's the smell of that felt pen that probably upsets them.

Susan Lambert (03:32):

<laugh> Maybe. That's true. For sure. For teachers, and many others, your most well-known book is, "Visible Learning." But before we jump into that work, how many other books have you published? And what's some of the content of some of these books?

John Hattie (03:47):

I'm almost embarrassed to this day and age of climate change, 'cause I've destroyed a lot of trees <laugh>. The answer to your question is 74.

Susan Lambert (03:55):

74 books?!

John Hattie (03:57):

Yeah.

Susan Lambert (03:57):

Wow! And, I know you've done a lot on the Visible Learning content. But what are some of the other content that you've done?

John Hattie (04:04):

It's interesting, Susan. 'Cause Visible Learning was not my career at all. My academic life has been psychometrics, measurements, statistics. That's what I've worked in my whole life. My first book was on three-mode factor analysis. Now, aren't you dying to rush out and buy a book on three-mode factor analysis? What was impressive about it is it stayed in print for 25 years. Now, the reason for that in those days, they printed them and they printed 200, and it took 25 years to sell 200. I've written books on self-concept, on performance-measures, on reputation-enhancement. I worked with a team that had the largest sample of adolescents in prison. And so, I've sort of been in lots of different areas. And Visible Learning was kind of a hobby that I had on the side, for various reasons. And I decided when I moved to New Zealand that I would stop talking about it, but write the book up to get it out of my system.

Susan Lambert (05:01):

There you go!

John Hattie (05:03):

And it took over.

Susan Lambert (05:03):

Yeah, it did.

John Hattie (05:05):

So be it. I'm very grateful. You could be an academic your whole life and no one could care. The fact that people care is honoring. So, thank you.

Susan Lambert (05:13):

We're gonna jump into "Visible Learning," like I said, in a minute. But before we go there, what was your favorite book to actually author?

John Hattie (05:23):

It's probably the third in the series with Gregory Yates on how students learn. I've known Greg for many years, and he wanted to come on sabbatical to where I was at the time in Auckland. And I said, "Well, why don't we do something together?" And he's just a stunning storyteller. He's mesmerizing as a storyteller, but he hasn't written a lot in his career. So I said to him, "Why don't we write up the stories?" And so he spent every morning writing up his stories. We'd meet, and we'd talk about it, we add to it. And that was probably the funnest book of the lot.

Susan Lambert (05:56):

That's great. That's great to hear. We'll link our listeners in the show notes to that, because we're gonna move from that, and really talk about "Visible Learning." How do you feel about the book, "Visible Learning," being the most viral one?

John Hattie (06:09):

It's kind of nice, and I never anticipated that. What it's done, Susan, in my life, particularly as an academic, I now have the world's best critics. And I mean that very, very positively. As an academic, you thrive on the fact that people even care about reading your work, let alone critiquing it. And I've learned a lot from my critics. And I'm very grateful that I'm in that situation. Some of them you just think, "Well, no. They've missed the point completely." But in general, it's been very good. So, thank you for that, critics. Thank you to those who read it and who wanna follow up and know more.

Susan Lambert (06:48):

That's a really good point. We'll come back to some of the details of that. I can't imagine we have any listeners that aren't familiar with this book, "Visible Learning." And we'll talk about the second one that you have too. Can you tell our listeners just a little bit about the content that's in that? And really what the purpose was for you to author that book?

John Hattie (07:06):

Well, when you're in psychometrics, you go into an education department. And you are welcomed. I'm sure that every single person loves doing their courses on measurement, and statistics, and research design. It's just wonderful from my point of view. But, like, you're not a real person, because you don't study kids in classrooms. And so, everybody I met, particularly academics, told me that what I had to study was communication, or technology, or curriculum. And what I thought was, "Isn't it fascinating that everybody knows the answer passionately, and it's all different?" And so, when you talk to teachers ... "Come and watch me. This is how I do it." As if that's generalizable. They're all different! And I never met a teacher, or an academic, who said they were below average in their teaching. I was a kid. I know that's not true, <laugh>. And so I started the research in the area. And this was back in the 1970s, and it's the same message. Every article showed that it worked. And then along came Gene Glass in 1976, my first major conference, where he presented this notion of meta-analysis, the collection of other people's work, asking two questions. What's the magnitude of the effect? How big is the effect and what are the moderators? What makes a difference for that? I thought, "Maybe I could look at that, and see if that could help." And so, obviously, it took me a long time. Many, many years, just collecting data. Being a squirrel. And I played with the data, and looked at it. The thing that really surprised me, and still does to this day, is 95%+ of things that we do to students enhances their achievement. No wonder every teacher can find evidence that what they do works. But, there is a big, normal distribution out there. And it's centered around that effect size of 0.4, which is quite a large effect, actually. And it says, loud and clearly, that as a profession, we have well over half our teachers having what I'd consider a pretty dramatically positive effect on kids. And half that are less than that. So, could I come up with a story that related those effects above the average compared to those below the average, and get away from this notion of bad teaching is those that have a negative effect. Because there's almost no one there. And that was the hardest part, coming up with that story. But, it's fascinating to realize just how many excellent teachers we have. How much expertise we have. And one of my frustrations, Susan, particularly--as I've had a government job here in Australia for the last nine years-- is why as educators, we deny that expertise. We have this false assumption that all teachers are equal. We have this false assumption that ... "Just watch what I do." It's not. It's the incredible thinking that goes on about what they do that makes the difference. And so, if anybody out there is listening or wants to start a career, let me tell you right upfront: Study excellence. Study expertise. There's oodles of it out there. And we aren't very good at that. We're very, very good at finding problems and fixing them. But we're not as good at, and we've not had the courage to, study expertise and scale it up. And that's my mission. Scale up the expertise we have.

Susan Lambert (10:23):

Well, to be fair, in your book, you did find some things that don't have as big of an effect as others, right?

John Hattie (10:31):

There are some negative effects, like labeling. Take two students of the same personality, the same behavior, the same achievement, and you label one -0.6 between those two kids. Because the expectation effect is so dramatically powerful. Not only from the teacher's point of view. But from the kids, and the parents, and the other students. And retention, holding kids back a year. Boredom, one of the biggest emotions in classrooms, -0.4. Yeah, there are negative effects, yes, but not nearly as many. So let's not deny them. But you're right, there's too many effects below 0.4, which quite often dominate the discussions we have in the staff rooms, in the media, amongst the politicians. And they don't have as big of an effect as the expertise of the educators.

Susan Lambert (11:16):

In our pre-call, you said something that we wrote down. You said, "Evidence gets in the way of good opinion." What do you mean by that?

John Hattie (11:25):

It comes back to this notion of my critics. Like, some of the things I've said and found, some of our colleagues do not like. Some of them attack me, personally, some just don't like it, some dismiss the whole work, etc. And I'm saying, "But wait a moment. The evidence says this. You don't have to like it." Take the classic one. Class size. Teacher subject-matter-knowledge. They have very small effects. Now, my argument is: that's the evidence. Let's accept it. And let's ask, "Why is it so low?" And that's when you start to get some answers. You don't have to accept it being low. I don't like it low, like, teacher subject matter knowledge. It doesn't make sense to me! It shouldn't be low! But, if you run ahead, and deny the evidence, then, quite frankly, you're putting your head in the sand. But, if you ask, "Why?" And it's taken me 10, 12, 15 years to work out why subject matter knowledge is such a low effect. And I think now, through our more recent studies, we understand why. And, I talk about it in the sequel, about why it's so small. And, as a consequence, we can improve it. But yeah, some people get very upset. Everybody has an opinion though. The one that I don't like is best practice. And we know that teachers are very generous. And they give away their best practice. They give away their resources. And what they forget is it's the thinking that goes on moment-by-moment in the classroom as they're implementing those resources that make the difference, not the resources.

Susan Lambert (12:49):

Interesting.

John Hattie (12:50):

And that upsets a lot of people. I'm an evidence-based person. Sometimes, I don't like the results. But that doesn't mean you get to deny. But some people wanna deny it. Some people wanna get angry with it. And sometimes evidence does get in the way of a good opinion.

Susan Lambert (13:06):

It's a great statement. And I've thought about it over and over. Before we leave this though, we can't wait until we jump to the second edition to "Visible Learning" to actually answer the question of why is it that you think teacher content-knowledge didn't have an effect?

John Hattie (13:20):

Well, here in Australia, over the last 10 years, we've spent probably a billion dollars on taking teachers outta school and improving their math and science content. And it's made a ZERO difference. And the reason for that is you've got to have, and I introduced this in the sequel, this notion of instructional alignment. You've gotta teach in a particular way. We've done a synthesis of 20,000 teachers classroom observations. And we know that teachers talk 89% of the time. They ask 100 to 200 questions a day that require less than three-word answers, 90% of their feedback, 90% of their content is about the facts. Now, we might not like that, but that's the nature of what kids experience. If that is the nature of your classroom, then all you need to do is be one page ahead of the students. All you need to do is make sure that the students follow your instructions, are compliant, and do what you wish. However, if you had more student questions about their work they don't know. And on average, in any one class, in that first model, they ask two questions a day about their work they don't know. But, if you have more student

questions, if you have more student talk relative to your talk, if you have a better balance of the facts and the knowledge, oh my goodness subject matter knowledge matters! So, when we took all those teachers out, improved their math and science, they went back into the old transmission model, it's no surprise the effect is very small. How does that go, Susan?

Susan Lambert (14:48):

That's really interesting! It makes me think of, and I'm gonna probably get this wrong, but, it makes me think of some of the content area books that you've helped author. So, like, "Visible Learning for Science" and "Visible Learning for Social Studies." There's an instructional model in there. And I remember it as a triangle, right? There's a base level of knowledge that kids need to know. And then they get a little bit deeper in that knowledge. And then they transfer that knowledge. Did I get that right?

John Hattie (15:15):

Perfect. And, in my jargon, I talk about the cognitive complexity going from the facts, to the relating the facts, to the transfer. But, Susan, sometimes it's best to do the other way around and say, "What is it that we want the kids to transfer? What is it we want 'em to deeply know? And then what knowledge do they need to do it?" And you realize about 60% of the stuff you teach is irrelevant. Like, one of our latest books, "Making Room for Impact," and this was one of the hardest ones that I wrote with Arran Hamilton and Dylan William. It's saying, "How do we get teachers and principals to stop doing things that are inefficient?" We realized during COVID teaching that we didn't have to talk 89% of the day. In fact, we couldn't on Zoom. We didn't have to ask all those low-level questions. We had to teach kids to work alone and work with others. And we realized that when the Zoom was over, we could go and have a coffee. We could go walk the dog. We didn't have to have that relentlessness of us being the performer. And if you look at the evidence of COVID, not that I'm saying COVID was a good thing; it wasn't. For meta-analysis, already with an effect size of -0.12, which is unbelievably trivial. And in your country, when I looked at the night results, which everyone got really upset about, the effect size was -0.08. Your country did half of what the rest of the world did in terms of improvement. You did much better. And so, I think we've got a lot to learn from that. Not that I'm arguing that Zoom teaching is necessarily the best, but that balance of the deep and the surface. I think we really gotta get it right.

Susan Lambert (16:47):

Yeah, for sure! I do know that people tend to throw out that base of knowledge of, you know, it's not that the facts aren't important, the facts are important, but you have to build on those facts in order for kids to get the impact.

John Hattie (17:01):

And the argument I put is ... I want teachers to be greedy. I want them to have the facts. You gotta have facts. Why does problem-solving teaching have very low effect sizes? 'Cause, too often, it's taught before the kids have the knowledge and skills to go into it. But when you have both, wow! Makes a dramatically powerful difference.

Susan Lambert (17:17):

For sure. So, at least for me, "Visible Learning" was really a first introduction to both the concept of meta-analysis and effect sizes. And I know there's a lot of conversation about both of those things. But,

why do you think it's beneficial to educators to understand both meta-analysis and effect size? And maybe you can even do your John Hattie definition of what both of those things are.

John Hattie (17:47):

Sure. Someone goes out there and decides to study the difference between, say, two teaching methods, the Jigsaw Method, or the difference between achievement in males and females, or class size, or teacher subject matter knowledge. So they do a study. They publish it. And another one does a study on something, different country, different place, different age group, whatever, let's say, on the difference between boys and girls. And then another one, then another one, then another one. Then along comes a meta-analysis person who says, "Let's collect all those articles. Let's code them." And you can see it's real squirrel-like behavior. Let's code them. What country it was in. What age group? What subject? But, the key thing is we're also gonna code how big was the effect? Like, the magnitude, the size, like, how damaging was the earthquake. We want a magnitude effect. And they work out what that magnitude effect of the difference between males and females. And then they say, and the second question's pretty important, "Does it differ?" Males versus females in math, in English, in five-year-olds, in 15-year-olds, in New Mexico, where you are, in Melbourne, Australia, where I am? And all those things we look at. And that's what a meta-analysis is. Now, what I do is I come along and I do a meta-analysis of the meta-analysis.

Susan Lambert (19:02):

Wow! Mind blowing!

John Hattie (19:04):

That's how I can get, you know, up to about 400 million kids is by building and standing on the shoulders of others and asking these questions. And I ask about the relative effects. So, when you look at something like gender, the difference between males and females is about 0.04. It's tiny. And, we all know that the difference between boys is ginormous. The difference between girls is ginormous. The average effect is very small. Anyway, that's another one that a lot of people get upset about, 'cause they have an opinion that males and females learn differently. There's no evidence for that at all. But people get upset with that. But, put that aside. So, I come along as the meta-meta-analysis, and I'm very grateful to Gene Glass from Colorado, who put all this together and made it possible to do this. And so, you can start to see that you have this sort of high-level, spaceship view of all the research to see what things have the biggest effects, what have smaller effects. But we mustn't forget those moderators, because every teacher in the world says to me, "Context matters. My class is different. This school is different." You talk to a teacher, the first thing they want to tell you is about their school. Now, here's a hard one, Susan. I struggle to find any moderators that make a difference. It doesn't matter. Of course it matters for the teacher in the classroom; but, in terms of what makes the biggest difference to five-year-olds, and 15-year-olds, and 25-year-olds, males and females, people in the U.S., people in Australia, that isn't hardly an effect at all. We do have a Science of Teaching. We do know a lot about how to be great at teaching, and it doesn't differ. Now, I wanna jump a little bit here, Susan, and I'll take the blame for this. One of the mistakes I made is not being more clear that what I talk about are probabilities. If you use this high-effect size, it's a high probability. What matters, Susan, is how you implement it in your class. Hence, the argument, know thy impact. I got in the early days, teachers say, "Oh, the Jigsaw Method, incredibly high effect size. I'm gonna use it." It didn't work. Well, let's talk about your implementation. And I'm not sure we're as good at talking about our implementation as teachers and educators as we are talking about this is how we teach. So a lot of our more recent work has been looking at that nature of that implementation. The quality of it. About helping teachers understanding

what their impact is. So, my work is kind of pre-that. Yeah, I'd like teachers to use high-probability interventions, but you've gotta implement it well with fidelity, with appropriate dosage, with appropriate quality.

Susan Lambert (21:42):

Educators don't like the word "fidelity." It's the "F" word, right? In education.

John Hattie (21:46):

Yes, yes, yes. But, I'm sorry, if you implement it poorly, you gotta expect you're gonna get poor results.

Susan Lambert (21:53):

We'll be right back. It's November. So it's the perfect time to show our appreciation for a special group of Science of Reading champions. We recently asked the finalists for the 2023 Science of Reading Star Awards to offer some of their thoughts on the importance of knowledge-building. We'll be sharing some of what they had to say on upcoming episodes of the podcast. First, here's Javonna Mack, winner of the grand prize. The 2023 Change Maker Award. Javonna is a lead content teacher from Louisiana, and we asked her how knowledge and knowledge-building helped her district shift to the Science of Reading.

Javonna Mack (22:34):

When we first began our journey into CKLA, and shifted to the Science of Reading, we really didn't appreciate the importance of the knowledge strand and how it could impact student learning. As a matter of fact, I feel that we kinda shied away from it initially. However, as time progressed, and the needs for our K–2 students have grown, we now understand the importance of it. And how to use that portion of the lesson to help build students background knowledge. To comprehend a story of text, our lower elementary students really needed a threshold of knowledge about varying topics. And we have our tough state standards that we have to also be mindful of. So with that increased demand for our students to have prior knowledge about varying content, we really had to give them a platform to grow from, and that was the knowledge strand. So through knowledge-building, students are better able to comprehend text and apply it to their real life. Just recently, I was in a kindergarten classroom, and the students were engaged in the knowledge portion of the lesson about Humpty Dumpty. I could hear the students making up their own rhymes and just being completely engaged in the lesson. Lessons, like the one that I witnessed in that kindergarten classroom, really help to prepare students using the knowledge stream for that next phase of their literacy journey.

Susan Lambert (23:50):

That was Javonna Mack, lead content teacher with Caddo Parish Public Schools, Louisiana. Find more information on the Science of Reading Star Awards at amplify.com/soar-star-awards. And now back to our conversation with John Hattie.

Susan Lambert (24:13):

Going back to a meta-analysis, what do you think is lost in the work of a meta-analysis? What do we lose there?

John Hattie (24:22):

Well, the best criticism I've ever received was from many years ago from my colleague Alison Jones. She listened to me give a presentation, and then she said, in her unbelievably interesting way, "John, I'm impressed that you know what happens in classrooms to the second decimal point." <Laugh>. And she's got it right. Like, it's all that nuance of what happens in the classroom. And, you know, that's why I spent some time trying to look at classroom observation. And my partner, Janet Clinton, developed this app that we used for many years. It's on your iPhone where you turn it on, you teach your lesson, you turn it off, and then you get a transcript, a 99% accurate one, of what happened in your classroom. You get it automatically coded through artificial intelligence. And we stopped just about three or four years ago, 'cause the cost of updating it started to go into the millions. And there are groups around the U.S. Now that are that close to breaking through an automatic coding of classrooms. That's gonna add an incredible richness.

Susan Lambert (25:20):

Oh, I bet!

John Hattie (25:20):

Oh yeah! So that detail of what happens in the classroom, that's not really captured that well in meta-analysis.

Susan Lambert (25:26):

Yeah. Well, for me, I think about "Visible Learning," the first edition. I see educators really using this as a resource book, right? And so, they look at it when they're trying to focus on improvements. How do you think educators can best make use of that content? And, in relation to that, what cautions do you have about using that content?

John Hattie (25:49):

Well, again, in the early days, I had a ranking of all the influences. And that probably led to more misinterpretation than anything. And about six years ago, we decided to abandon that and never use it again, and we haven't. 'Cause people were looking at it and saying, "I'm gonna do these things at the top. I'm not gonna do these things at the bottom." And one of the things that I've also, as I've worked on this explanation, I have a good colleague, Michael Scriven, who I've worked with for many years who unfortunately passed away, and he kept saying to me time and time again, "It's all about explanations. It's all about the story." And that's the hard part. So I've spent a lot more time on the story. And one of the things that's come out, Susan, is it's not what educators do that matters. It's how they think about what they do that matters. And spending a lot more time looking at that thinking, those ways of thinking, what I call the Mindframes. And take one very powerful Mindframe about expectations. If teachers have low expectations of what their students can do, they tend to have it for all their students, and they're unbelievably successful at not having growth. The average effect of low expectation teachers is 0.06. But when you have teachers with high expectations, they tend to have it for all the students. That other argument that they have it for males and females, and African-Americans, yeah, it's in there. And their effect size is 0.96. Now, do they do different? Yes and no. If you just took a video of their classroom with the sound off, took a transcript, you wouldn't find much difference. But when you actually look at how they think, it's dramatically different. Like, take differentiation. Low-expectation teachers think differentiation is different activities for different students.

John Hattie (27:39):

High-expectation teachers resist the word "differentiation." They say, "No, I expect all my students to be successful, but I allow different ways in different times to get there." And if you read Carol Ann Tomlinson, for example, that's exactly what she says differentiation is. But that different grouping, I think, is just a disaster those expectations. And so, that way of thinking about expectations is very, very powerful. And it's above what teaching method should I use, what lesson plan should I use. And that's why this notion of how teachers think, and that's why when we work with schools, and ... you know, that's the other thing that's happened in my life over the last 10 years is, as a team now, we go into about 10,000 schools around the world over a year, working with those schools. And it's very much focused on how they think; and getting them away from, "This is what I do. You can have my resources. Come and watch me teach." I don't wanna watch a teacher teach! I wanna watch the impact of teachers on kids. And that's a massive Mindframe difference. It's this notion that I'm trying to keep pushing: know thy impact. It's how do you, Susan, use the test scores, the assignments you give the students, the artifacts of the students' work, your noticing in the classroom, and the student's voice about learning? How do you triangulate those to make the best decision about where to go next? And then go to an effect size, like teacher collective efficacy, which is a really tough one, but a very powerful one. How do you get other teachers to question and critique your interpretation and hear their interpretation based on the same evidence? Now that's when you start to see massive acceleration. It's when we start to critique each other's interpretation. Let's go back to that low-expectation teacher. They say, "Oh yeah, but the kids, they're not the right kids. You need to understand their poverty. You need to understand they're a second-language student." They come up with 53 reasons why they can't be successful. Why don't they keep teachers down the corridor. That's exactly the same different way of thinking. Incredibly powerful. It's how we think. And understanding what that is.

Susan Lambert (29:37):

So how do you give advice then to either teachers or maybe more importantly building leaders, or any kind of leaders to, "Let's work on changing thinking. Or think about the thinking for teaching." What does that advice look like?

John Hattie (29:51):

Well, firstly, with your sentence there, Viviane Robinson, my colleague has told me for many, many years, "Don't ever ask about changing a teacher." In every school we've ever worked in, everywhere around the world, we've found pockets of excellence. You don't wanna change them. Every teacher wants to improve. So we're in an improvement model, not a change model. And a lot of professional learning works on the assumption, Susan, that you come to my session and you listen to me as if you came into the room with nothing. You have a very strong theory of teaching. I have to respect that by understanding your way of thinking about your teaching. So what we do when we start is we have this notion of a school capability assessment. One of the things we know from the research is that when teachers and school leaders choose professional learning, they tend to choose that which they're already pretty good at. So let's look at what we're good at, what we're not so good at. Let's look about where there's pockets of success and there's pockets of problems. And let's help the school leader, the building leader, to have the courage to call that. Let's work on a coalition of the success, and invite the others to join. Let's have a common language about learning in the school. Let's hear the student's point of view. Now, one of the things we do is we ask the teachers, what does it mean to be a good learner in the school? And we get very rich descriptions. We ask the students--and more times than not, the students thinks a good learner is someone who comes along, sits up straight, and watches the teacher work. Compliance. And when you put that up in front of teachers, they're shocked! "That's not what happens in my class!" Well, actually, that's what your students are saying. And so then you've got the

momentum to start listening different. To start critiquing different. And it's not easy. Now, a lot of people say, "Well, does it change the math and reading scores? Yeah, it does! And we've got a lot of evidence for that. But, it often takes two to three years to see that difference. Now, a lot of school leaders say, "We're not prepared to wait two or three years." Well, we have ways to show you that we can get gains in the first six weeks. But, if you want long-term, systematic change, you have to have a whole way of thinking across the school that is common about how we think about our students. We need a climate and a culture that's inviting. And, let's be clear, Susan, you ask the students, "Do you want to come to school to learn the stuff the teachers teach you?" And 95% of five-year-olds say, "Yes." By the end of elementary, start of high school, four outta 10 say, "Yes." We know in COVID, all the research we did in COVID, why do kids wanna go back to school? To be with their friends. They didn't say to be with you. We need to be a lot more inviting. Like, the biggest predictor of adult health, wealth, and happiness is not achievement at school. It's the number of years of schooling. That changes dramatically how we think about our school. Like, we're the only people paid. Kids compulsory have to be there. We have to make it inviting for them. So that culture across the school, and what keeps me going, Susan, I see so much success. I see so many great schools. I come across your country. I'm there in a couple of weeks. You cannot believe how much excellence we have. But you'd never know that from the media. You'd never know that from the educators themselves. We have incredible success and our job is to scale that up.

Susan Lambert (33:06):

That's a really good point. You use that word "impact" often. I hear it. I see it in your writing. Every time you're interviewed, you use that word, "impact." Talk to me about why that's the number one word in your vocabulary, or at least from my point of view.

John Hattie (33:22):

Yeah, it is! I think it's the case that every one of us that came into schools, everyone came in for one reason: to have an impact on kids. So all I'm doing is reminding teachers why they chose to be there. I also wanna have a dialogue with you, and with anyone, about what we mean by "impact." Like, high achievement, yeah that's a nice end. But it's an end, not a beginning. And both our countries, we're a bit obsessed about high achievement. And I think it leads us down the wrong path. If you have a high-achieving school, where all the kids are cruising, and not making at least a year's growth for a year's input, that's not a good school. If you're in a low-achieving school, where all the kids are making more than a year's growth, that's a brilliant school. What do I care about? My argument is. I want to know about your impact on the climate. Is it inviting, so that you teach the learning strategies so that kids can progress towards achievement? And it's that direction that I care about. And you can see I do care about climate. I do care about where the kids feel they belong in the classroom. I do care about how they think about what learning is, what strategies they have. I do care that they're able to work alone and with each other. Respect for self and respect for others. One of the misunderstandings, and it probably hasn't helped from my overzealous discussion about this, is that impact isn't just test scores. It's not just achievement. It's part of it. Remember, I'm greedy. I want all of it. It's all that information that comes together. And I think that when you ask teachers, when they walk into a room, and when a building leader walks into a staff room, I want 'em to say, "My job here today is to evaluate my impact." And all good things follow. So, we work with schools to get a better, clearer understanding of what impact is. Another thing is, shadow a student during the day, particularly in high school. They walk into the first class. Teacher says, "This is what we care about in this school. This is how we do it." You walk into the next class, this teacher, "This is how we do it in this school. This is what ..." and it's dramatically different. And the kids are used to it. They know it doesn't matter. That's not good enough. What do we

stand for here in terms of learning? And my critics say, "Yeah, but learning is always about something. You ignore knowledge." No, I don't. Precious knowledge is really critical in this, and like we talked before, I want the knowledge. I want the precious knowledge. But I want also the kids to know what to do when they don't know what to do. I want them to become their own teachers. Five-year-olds can do it. Go into a class of five-year-olds, they're brilliant at teaching each other. They're brilliant at teaching themselves. They're brilliant at asking questions, open questions. They're brilliant at seeking help. Go into a class of nine-year-olds. They sit there and wait.

Susan Lambert (35:59):

Why? Why do you think that is?

John Hattie (36:02):

Our way of thinking what teaching is and what learning is. It's easier for me to talk to the kids, and if they don't get it to tell 'em again. It's much easier to be that transmission teacher. We are performers. Again, go back to COVID. We couldn't be a performer. We had to get the kids to be performers. And it's that release of responsibility. I'm not a fan of things like student control of learning, 'cause you know, novices don't know what they don't know. They need us. My notion is I want students to learn how to be their own teachers. And if you're your own teacher, and you're a teacher, Susan, you know, when you don't know how to get help. You know where to go. You know, to do, what error management is. When you make mistakes, and you stop and say, "No, that's not right, I'm gonna go back." A lot of those students think it's a massive mystery. Like, when you ask students, they don't care less about how you teach. They care about how you learn. And, like, when we looked at that 20,000 hours of teaching transcripts and asked, we wanted to find examples of when a teacher thought aloud, or when a teacher asked a student to think aloud. And in 20,000 hours, we've had exactly zero. Learning is a massive mystery; and it shouldn't be. Hence, the ocean. I wanna make that learning visible. Is it visible? No, it's hard. Most learning is invisible. But it shouldn't be such a mystery. Like that kid sitting in your class saying, "How did you do that? How did you do that?" They wanna know that.

Susan Lambert (37:26):

You just said something really interesting about the title of the book, both "Visible Learning" and then in a minute we'll talk about that second edition. But, the focus on "Visible Learning" edition number one, was it on learning or was it on teaching?

John Hattie (37:43):

Well, the irony is the first book, I'm embarrassed to say this, I never had a chapter on learning. I made up for it in the sequel. I actually, in the early days, didn't want to talk about teaching. I wanted to talk about the impact of teaching. And that changes things dramatically. We've had lots of debates out there about what good teaching and what good teachers are. And my argument is simple: good teaching is that which has the maximum impact on the students. And we know how to do that. We know how to recognize those teachers. We know who they are. It's not difficult, but unfortunately most of our dialogue has been about how we do it. You look at the models of teaching, you know, you do this and you don't do this. Well, that's not my argument at all.

Susan Lambert (38:28):

It's interesting, because it circles back to what you said about, "Here's a great resource that I used. I created this resource. I did this great thing. My students learned so much from it. Here you go teacher,

you try this too." But it really isn't the resource, it's the thinking. So, that sort of goes back to this teaching and impact kind of idea, doesn't it?

John Hattie (38:51):

Totally. Like, if it was as you said, every teacher would be brilliant, 'cause now, with ChatGPT and Claude and all these other things, they can create a lesson plan in an instant. They're actually very, very good. If it was as simple as that, we don't need teachers. But we do need teachers, because it's their interpretation of that. It's their implementation. It's how they make those decisions, moment by moment, to do this rather than that. That makes the difference.

Susan Lambert (39:15):

That's really interesting. Alright, so we've gotten through this word "impact." What about "Visible Learning" edition number two? What's new and different? Why the new edition? Did you ever think you'd do it? Wow, I have all the questions, <laugh>.

John Hattie (39:30):

Well, I've resisted doing a second edition. Part of it is, you know, you write a book that did have some interest out there, and you said, you know, "What's a second edition? It's just gonna be tweaking the edges. It's gonna be adding more data." So I said to Bruce, my editor, I said, "No, I don't wanna do it." Anyway, he pressured and pressured, and I resisted and resisted, and I said, "Look, what I care about is the story. I'm gonna do a second one, but I'm not gonna call it second edition. I'm gonna call it a sequel." Kind of "Star Wars"-like. The first book was about, here is a lot of data and, therefore, there's a story. The second is about, here is a story and there's the data. Like, in the second book, I don't have as much data. About six years ago, I decided, like one of my observations is, you know, I've been doing this work now for a number of years and no one, no one has come up with a different explanation. Now, I understand it's tough, 'cause it's a lot of data in there. So about six years ago, I said to the team, "Let's release all the data." So we've got a free website, called MetaX, that's got all the data in it. Updated it quite recently. So anybody who wants to collect all ... you don't have to spend 40 years collecting it like I did. I'm giving it away free. There it is. And so in the new sequel, the data's not there. You can go get it on MetaX; it's free. I spent a lot more time upfront on the story. I look also at the work we've done with many hundreds of thousands of teachers over the last 10 years of implementing it in schools. We include some of that in it. So I'm spending a lot more time on the sequel, on the story, on the big messages, and using the data to buttress it. Rather than, as I did the first book, put it upfront. And here's another problem, Susan. Even my best friends, my closest colleagues, get really upset when a new meta-analysis comes along and it changes the average effect size from 0.64 to 0.62. How can it be different? Which was right? Which was wrong? And, like, obviously if you have a meta-analysis based on 10 studies, and you have a new meta-analysis come along, it's gonna change. And so I didn't want to get into that whole debate about, "Oh, which one do we believe? Was the first book right or the second book?" So that's why I said, "No. Of course it's gonna change when you add--and I add a new measure into the new book called robustness, which gives an indication on a one to five scale. If the effects has a robustness of one, expect it to change when new data comes. The other thing, no surprise, is that research didn't stop in 2008. People have produced more meta-analysis <laugh>, and they still are since the book last March. And I do keep up-to-date with those things. And so, I've gone from 800 to 2100. But, here's the good news, Susan. There won't be a third edition.

Susan Lambert (42:12):

<laugh>. You say that now <laugh>.

John Hattie (42:16):

No. I'm going to take what I did on MetaX and put it all online, and let others take it over and add to it. 'Cause I want the story contested a lot more.

Susan Lambert (42:26):

You actually have talked about that a couple of times. Inviting the critics. Inviting the skeptics. "Come look at it. Help me dig into this a little bit deeper." How many people have you had take you up on that offer?

John Hattie (42:40):

Oh, I've got plenty of critics. In terms of new explanations, as I say at this stage, no one. Some have taken it, like my good colleague Russell Bishop, and applied it principally with minority students. And he's developed his story, which resonates very closely with mine. But, I really do welcome any others who want to take it. Now what has happened since. Is a lot more people are looking at meta-analysis of meta-analysis. Like, we've done it in achievement. We've done it in learning strategies. We've got one coming out on self-concept and self-efficacy. Others have looked at in motivation. And so that's been a very healthy development. And, obviously, I welcome that. So it has moved that on. And a lot of criticism of the work. Criticism isn't always a negative thing. It's, like, could you do this better? Or how could you do this? And, as I said, and I talk about it in chapter two in the book, what I've learned from my critics, And I have learned a lot from them. Now, some of 'em, like the ones that attacked me personally, that goes straight into the rubbish. But, you know, I learned years ago that in academia you attack ideas, you don't attack people. But, unfortunately, some people still wanna attack. You know, we talked about evidence gets in the way of a good opinion. People wanna dismiss it. They pick up one thing, usually it's class size, or he doesn't understand class size. Well, I think I actually do understand class size. It does have a small positive effect. It is a positive effect, but they don't wanna go to that next step to understand why it's so small. So they dismiss the whole thing. Well, that's their right. It's sad. I would be horrified if they then walked into a class and dismissed their kids' critique. And occasionally I get, ironically, I usually get it in a handwritten letter of vicious vitriol that comes. Now, obviously, I rip that up and throw it away. But, you know, my despair is that teacher walks into a classroom. What if a kid disagreed with them? That's scary. Now there's not many of those. But yeah, I welcome the criticism. I welcome the critique. 'Cause that's how you grow.

Susan Lambert (44:36):

That data that you've put online. Has anybody tapped into that to extend your research or do anything with that?

John Hattie (44:42):

Yeah, a lot of people have. I gets a 100,000+ hits a year. A lot of teachers and educators do it to look up. We're always looking around for philanthropy funds to improve it. So, if anyone's out there who wants to help us improve it, we've got big plans to improving it. But, it's not cheap to improve those kind of things. But it works okay. It works very well; and it's used quite a lot, yes.

Susan Lambert (45:05):

That's great. We'll link our listeners in the show notes to that so that they can get access to it as well. Are you working on a new book at all? Do you have another book in you?

John Hattie (45:15):

Oh, dear. I feel guilty that I'm destroying too many trees, Susan. But I retired four years ago from academia. I retired from my government job the 1st of July. So I do have time on my hands. I do spend a lot of it with my grandkids. But yeah, I have got some other books. We've just produced one on Visible Learning for English-as-second-language learners. We're looking at one on special education and new teachers. Working on my second book with my son, on what it means to be a learner in a classroom. We are finishing off a book at the moment on 10 Mindframes for culture and climate. So I'm still pretty busy. I still enjoy it. The other thing that's happened to me is, in the early days, a lot of the books I wrote were by myself with a few colleagues. Since then, I have broadened dramatically the number of colleagues I've written with. And that quite frankly brings an incredible richness to me and I hope to the book. So working with others is a really fun thing to do.

Susan Lambert (46:13):

Earlier in the podcast, we were talking about the "Building to Impact" book that you wrote with several other authors. We had Doug Reeves on an episode talking about that book and actually talking a lot about de-implementation. But I will say that Doug Reeves also mentioned, maybe not on the podcast, but maybe in the pre-call, how great it was to work together with you. So that's really amazing.

John Hattie (46:36):

He's also pretty amazing to work with. You know, he was an author on that book; and I've known him for many, many years. And, it's kind of, like, with Michael Fullan and Doug Reeves, their obsession is about implementation. And one of the things that fascinates me is as I go around schools and ask school leaders, what's their model of implementation? They don't have one. Hope. I'll monitor it. Now, if you were setting up a local coffee shop from day one, you would worry about your implementation. You worry about scaling up your success. And so what we did, with Doug and some other co-authors, is looked at all the implementation models and their effect sizes in business, and computing, and policy. Like, if you went into the government here in Australia and you didn't know PRINCE Methodology for implementation, you wouldn't be employed if you didn't know about, in health, about getting to outcomes. If you didn't know about Agile methods. Implementation is it. Why is it that in education, we've hardly got anyone. Like Tony Bryk has a very good model of implementation out in California. Michael Barber has one of the best in Deliverology. I'm struggling. But every day, every educator, their fundamental purpose is implementation. And that's where Doug Reeves is so powerful is that all his work, when you listen to him, it's about how you implement this. It's not talking about this, it's how you implement it. And that's really, really powerful.

Susan Lambert (48:02):

That's a really, really good point. You've talked a little bit about some books that you have. What about any other concepts, Ideas that you're tracking as we look, maybe, beyond 2023?

John Hattie (48:16):

Two revolutions that are hitting us now is--one, I think's gonna come within the next two or three years, and that is the automatic coding of classroom observation. Across your country, around the world that's working on it. We worked on it for about seven or eight years. We were quite successful in what we

were doing. But, over the last three or four years, it's exponential in growth. And I think that's gonna open up now. It's got some incredible negatives. When we did it, for instance, in one country we got into big trouble, because the parents insisted on finding out how many minutes each teacher spent with their kid. Some states in your country banned what we were doing, because they said you'll have evidence of incompetence, and it'll be misused against teachers. It has got some downsides. But it's also massive upsides, in terms of better understanding what happens in those classes. I think it's gonna be a massive revolution for the good, but with some problems. And obviously the artificial intelligence engines that are now upon us, the ChatGPTs, the Claude's. We've just actually written a paper, which, again, it's open and free and I'll send it to you if you wanna put it as a link. If you think it's a problem now, it's got a growth that's dramatic over the next two or three years. I'm using it now to create lesson plans. I use it to code various things. I'm using it for lots of different ways of doing it. And, like, in my country, most states have banned it. Now, we know in education, every time you ban something, it's gonna have a dramatically revolutionary positive effect. So I'm pleased they banned it. It's gonna have effect. It's gonna have some downsides. We're gonna have to change how we think about what we do. Do you remember those 21st-century skills everyone talked about?

Susan Lambert (49:58):

Oh yeah. People still talk about them, <laugh>.

John Hattie (50:01):

I know we're a quarter way through and we still haven't got 'em, right? And our argument in the paper is that the 21st-century skills now are gonna include things like probative questions. We're gonna have to teach our students to ask questions, 'cause that's what these things depend on. You ask the wrong question, you get the wrong answer. And I saw an ad in your country about a month ago, which I was quite excited about. The first time someone's advertising for a probative engineer in the engineering business. They want people who can ask the questions better.

Susan Lambert (50:29):

That's great!

John Hattie (50:30):

You're gonna have to do assessment credibility. And we know with all your fake news, etc., you're gonna have to teach the students what's right, what's wrong. You can't just believe it, 'cause it came off the internet. <laugh>, You're gonna have to teach them evaluative thinking. And the one that I think is the big difference is that if you go onto chatGPT, like, I did it about a month ago, to teach me and update my Spanish. And it was really, really good. And I said, "I'm struggling with this." And it came up with a lesson. But the thing it did at the end, which really stunned me, is I said, "I don't know what to do next. What do I do next?" And it said, "Well, given you've done this, this, this, and this, this is what you do next." Now, that, if you're a teacher, is a massive threat to our business. So my argument is the fourth skill is wise choices. We're gonna have to teach--now sometimes on those systems, they come up with crazy choices or not so good choices. So we're gonna have to teach our students how to make wise choices, how to evaluatively think, how to assess credibility, and how to ask the right questions. Now, go back to those old 21st-century skills. They seem so dated <laugh>.

Susan Lambert (51:36):

Oh, that's so true. Anything else you wanna tell our educators out there? You've given us so much good advice. So much good information. Anything else you have for our listeners?

John Hattie (51:48):

I think it's that courage for school leaders to focus on scaling up the success that you have. It's one of the hardest things to do, but it's the right thing to do for those teachers. Stop talking about your teaching. Start talking about what do you understand by learning, and then ask, "What's the optimal teaching, depending on where the kid is in the learning cycle?" Listen to your students thinking aloud. You think aloud. Make what they care about, every day, how do I go about learning this? Make that your day job. Make mistakes. And show the students that mistakes are opportunities to learn, not embarrassments. Ask your kids. Make your class inviting. And remember notions like engagement, inviting. Follow learning. Don't precede it. Don't come up with real-world, interesting, authentic tasks. Teach the kids to learn. And that's what turns them on to the engagement and the invitation of learning. And it's that notion of, let's get out there as a profession and say, "We have expertise. You just can't take a person and dump them in a classroom and expect them to have the kind of impact that many of the teachers are having now. How do we turn down parents? How do we send kids home every afternoon to talk about learning at home? Not, as most parents ask at the tea table, "What did you do today?" Tell me about a frustration. Tell me about a learning activity. And how do we get our kids advertising that schools are exciting places to come to learn, because, quite frankly, if they're not, they need to be. And right across your country, there are stunning instances of it. So, you can see my passion is that it is that expertise we have. If I have any influence at all, on anyone, I want to reintroduce that word "expertise."

Susan Lambert (53:36):

Well, thank you for that, Dr. John Hattie. It was such an honor to have you on today. And I know our listeners are going to enjoy this. And I love ending with the word "expertise." So thank you very much!

John Hattie (53:48):

I love talking about this stuff, so thank you!

Susan Lambert (53:53):

Thanks so much for listening to my conversation with John Hattie, Emeritus Laureate Professor at the Melbourne Graduate School of Education at the University of Melbourne. We certainly won't be able to link all of them, but check out the show notes for links to some of Professor Hattie's books, including "Visible Learning: The Sequel." We'll also have links to other resources, including his Visible Learning website. We'd love to hear what you thought of this episode. Share your thoughts in our Facebook discussion group, Science of Reading: The Community. Science of Reading: The Podcast is brought to you by Amplify. For more information on how Amplify leverages the Science of Reading, go to amplify.com/ckla. Next time on the show, we're bringing you another great conversation about the critical role of knowledge and knowledge-building with Dr. Margaret McKeown. Dr. McKeown helps us rethink some common practices for vocabulary instruction and offers a vision for effective vocabulary development.

Margaret McKeown (55:02):

I think, unfortunately, for a lot of kids, vocabulary is just, "I gotta memorize these definitions." And somehow these definitions are, you know, the real thing, somebody sent them down from Mount

Olympus, and I just have to learn them. Instead of, you know, your language is something that you use and manipulate.

Susan Lambert (55:22):

That's coming up. Don't miss any upcoming episodes by subscribing to Science of Reading: The Podcast, wherever you find your podcasts. And please, do us a favor, and consider rating us and leaving us a review. It will help more people find the show. Thank you again for listening.