Pedagogy Matters: Episode 1 Transcript

Welcome to the first episode of Pedagogy Matters. Within this

podcast, we're really exploring snippets of pedagogy, what it

means in practice for Fe lecturer, and then how we

incorporate this in our practice in both face to face, but

predominantly within our online delivery right now, 10 months

and or pandemic. I'm delighted to be welcome to our joined

today by Mickey Riddell, so make your delzer individuals being in

the sector for 17 years.

Crossover of colleges and his current role as head of

Teaching learning assessment. At Joseph Chamberlain Sixth

form, college. So Mickey welcome. How are you? I'm very

well how are you Sir? Yes great thank you, know great hope you

adapted to the to the online way of working. How's that

going for you?

We don't have a college, so we've managed to kind of went to

kind of half timetable, so half class in half class learning

online. So we started that from September and that it works OK.

But I missed the classroom.

In front of the students, could you pick up so much more? The

kind of unconscious cues of kind of understanding, getting

knowledge and you can pick up so much more rather than just

looking at kind of blank squares of initials on the on teams? Or

zoom or or Google Meats and stuff, so it's been tough, but

we're probably 2 three weeks behind on the curriculum.

So not too bad, but I'd say a lot of that is because we had

a lot of review time and ironically retrieval practice

which we're going to talk about today. So every Monday

was essentially a kind of weaker retrieval practice.

Going through any misconceptions and kind of really trying to

build out their knowledge so it's been good offense that's

really interesting. That's a nice segue, really into in

today's topic. You know we got on retrieval practice and try

and really breakdown what it what it means in layman's terms.

So yeah, so retrieval practice. What does it mean that you are

kind of? What's your views around it? OK, so essentially

retrieval practice is practice. Bringing information to mind

into the working memory.

They the now so the students.

Can then use that and apply that to even new knowledge

or an application in what they kind of do.

And that's the current definition from the learning

scientists, which is an excellent kind of website with

lots of free material. One there if you wish to kind of

go there. So I think how we we should break this down.

First, talk about kind of memory. Very briefly talk about

the forgetting curve. Talk about kind of different ways of

retrieval practice and then talk about kind of theories or or

possible ways of doing it online. If you're happy with

that. No, that sounds fantastic. So memory, I guess you could

break it down into kind of working memory or short term

memory and long term memory. So I guess in your view what's

meant by those terms on one of the key bits we should be aware

of? Or canoe in relation to those types of memory.

So essentially the working memory is your you kind of

conscious thought right now. And as we know we we can only really

focus on very small amounts of information. Yeah, in terms of

the working memory, but the more advanced should be coming in a

practice or doing something. A lot of it becomes kind of

unconscious so so take driving a car for example.

When you first start to drive a car, the working memory is

overloaded. You're driving down a Rd, you got all the road

signs. You've got all the passengers, you got. The other

cars you got people to pedestrians. Your working memory

is overloaded and then you try and change your gear. But you

forget how to do it because you then consciously trying to

remember right what I do through the clutch and gears or anything

else. So when we become more advanced it we built up a schema

for the kind of basics we can drive down the road and we can.

Forget about changing gear. the Reds of the engine 'cause we're

aware of that because we're used to it, we had that knowledge so

we don't have to think about and use working memory too much and

then working memory just jumped on that. So typically as

different research out there last for around 30 seconds. Is

that right? That information to around 30 seconds and again,

different research conflict? But I think the average is around 5

to 8 different bits of information there, so within

driving a car analogy, whether that's passengers, indicator,

speed, gears. Brakes pedals know, so trying to juggle all

these bits of information are definitely, um, yeah. It so much

that I was that kind of old quiz show where you had the fluffy

Bagration game. That's it. Yeah, I thought I need remember that

big after me.

It's more swiftly 20 items and they always struggled to

remember, but I think it's we've kind of evolved on now. It's

essentially we've got kind of like four blocks, and this is

only caviar Lee. Kind of. He's done a lot of research into

this, so we've got one block which we need to actually

compute and do something with it. And then we got kind of free

other blocks and what he's saying is that there's a lot of

things about working memory and kind of visual.

Yep and auditory loops and kind of what that means is that less

games kind of dual coding information to try and support

them, which is another whole kind of podcast. Yeah, there's

actually an ironically, but essentially the working memory.

It doesn't last long. You've gotta keep the attention, but

the the thing that we need to know about educators is the

environment out there. Have got lots of different things that

they could focus their attention on, so our job should be to keep

it short. Keep it simple. Keep it clear for that attention.

So the idea being we're really trying to kind of focus their

minds on onto one topic, one issue. So what we want to do

is to voice ankle cognitive overload. So essentially

that's giving too much information, just like the

analogy of driving down the road, there's too much going

on, so it could be. For example, you've got a diagram

and then you've got a footnote with all the keys on it, so

that splits attention 'cause they've gotta move their eyes

from one to the other.

So the idea being is if it's that important to have the label

there, put the label next or whatever it is. Keep it nice and

concise. If it's not, then it's redundant because the mind

splitting the attention to it. So really try and kind of work

to keep things concise.

Chunt and car.

That sounds great and I just kind of summarize the key

concepts there. You know, short term memory in the key

bit is to include this information into long term

memory.

You touch one reading this weather in terms of schema. So

again schema WhatsApp Mickey. What do you mean by that? OK so

schema think about when you see children when I start to learn

to walk. There's lots of things that are happening for you to

learn to walk same way driving a car, but never analogies. It's

like a kind of a new housing

development. Where there's couple random houses are being

kind of the footings have been laid out. Maybe a couple

houses start at the kind of 1st floor is being built an

and you got these random bits of information about, and then

there's kind of these gravelly tracks which are going between

them so that I do that is it's new new memory, new knowledge.

You've got these kind of tenuous links for the students, so they

they can kind of see, but it hasn't been kind of embedded.

But the more you keep building it and adding things to it, IE

knowledge and links with it, then the more that the the

gravel tracks get turned into. Kind of nice, beautiful tarmac

so it becomes.

Reading grains and there's a real solid link between those two topics items, whatever it might be and then.

That first part of the schema.

It could be how to how to use tools and how to kind of hold a trial. For example, could be hard to use a screwdriver battery gun saw. Then you add that building development into the next phase. He then start to build up some. Right now. This is how that's user, different types of source. So you've got the basics. Now the different types of stores and then start to build out on the housing development is getting bigger and bigger and bigger, and the more you practice, the more the roads go from gravel to kind of tarmac. I think it's fantastic analogy. Another way of looking up there is, you know, once those links have been tarmacked, let's call it a phrase right now. Once once those links have been tarmacked, that's an effective learners ability to apply that skills or those skills rather. All that knowledge in different contexts.

They are confident that they are competent and they can apply that. So definitely summarizes back to initially initial conversations. What we can do is put the information in short-term memory, initially encoded into long term memory, being mindful of that Overlord providing too much information, but then really developing those links for learners to master

that knowledge, nor skills definitely and give them time to

practice. I think that's the kind of key thing.

But fell into practice, they need the right information to

mind at that point in time, and that's where retrieval practice

comes in, so.

You kind of seconds part of the memory is the forgetting curve.

So students forgetting information is a good thing.

So they have to forget things because to get better links to

tarmac roads, the students need to forgotten it.

I need to work hard to go and retrieve it.

To kind of get that tarmac laid on there. So you've got

ebbinghouse is forgetting curve from 1885, which basically

describes a decrease in the ability of the brain to retain

memory overtime. So essentially, what what is

suggests is after 20 minutes of knowledge

information being given to a student.

That knowledge will go down to 60%.

Memory retention, yeah. After one day you can go down to 45%

memory attention. After 30 days you can go down to 25% memory

retention. So after 20 minutes in your lesson they've really

lost 40% of the information knowledge you've kind of spoken

to them about not to read innocent men. Especially when

you look at that overtime. You know at a significant loss of

learning, a lot of knowledge within a month.

Absolutely hence the need for for the kind of the retrieval practice and this is the point where you know, I've worked with before making sure you have the kind of see a term Lake Retrieval practice. You know straight away. That kind of put him off now. I'm going to say it's a sciencey word you know, I'm.

So that's kind of right thing to see or not, but I think it's really useful to can really break it down. It's just practicing retrieval information practice. Bringing that information to mind is what you said before, absolutely. So yeah, so it's it's the same way. Any lecture in any subject you have six weeks off.

I did not picked up the tools. Yeah, are you brilliant at it first time? If you're a novice, probably not. The more experience you are the you might kind of start to remember what you're doing. All it is is just keep practicing.

Technology yeah, absolutely yeah. At first you might be a bit shaky, but the more you built up those.

The kind of foundations in the long term memory with the tarmac in the easy. It will be to kind of pick it up.

I think that's great, I think, so there will not be kind of

signs by hanging in terms of the memory insurance for 4th and why

it's important to kind of start to look back. So I guess the

next step now is kind of keep the key principles when

implementing ritual practice good. How do we do it? OK, so

initially got started lessons is checking knowledge checking

understanding so it could be simple Q&A could be using mini

whiteboards for example. There's lots of ways of doing it, just

we're at it. Let's let's throw in a couple of other.

Scientifically terms as well. So you got tranquil space practice.

So essentially, space practice means you should be checking

knowledge and learning over or from a period of time. So for

example, all of my quizzes that I set and all the ones that I

suggest for my kind of stuff is have some questions on the

previous day. Have some questions from the previous

week's topic. Have some questions on the previous months

topic. If you do that, start of every lesson and randomize it.

If you build up like a Google forms or Microsoft forms or kind

of something with quiz form which is multiple choice, this

becomes really easy and it's not very burdensome, But the idea

being is don't just check what they did yesterday or earlier in

the lesson check did last week 'cause remember we want to be

building those tarmac in the roads, the knowledge, the

schema. Between different topics, particularly now when

the the subjects have a lot of kind of end of topic, synoptic

questions where they really bringing all of the content into

play where previously just tend to be kind of unit base. Yeah,

apprenticeship wise as well, you've got the kind of end of

end point assessments where it's kind of. You know the same for a

year, two years. Now show me an so bye bye spacing the practice

out and making sure you cover different topics and that really

helps. And the second one as well, is kinda interleaving, so

this is a little bit more about kind of how we we teach it in

the curriculum delivery. Essentially a lot of teachers

and done it myself as well. There's a spec, right? I'm going

to start it up and went away down to the bottom, yeah.

But the what they suggest, then, is by the time we get to the

bottom, they haven't had enough time to really ingrain that into

long-term memory. So I've got the exam in May and I just

started teaching in April. I've only had six weeks to try and

ingrain this into long-term memory, and it's just not long

enough. So rather than thinking about kind of delivery pattern

of AAAA BBB CCC.

Can we split it up so can we do ABCCABBCA so we get chunks

of different information and then the students get more

time so really encoded in the long term memory and then

practice retreiving 'cause that's the key thing I've

got. see I think the key point there is is then that

practice and of the application so yeah.

Moving the different bits of knowledge at former unit, module

topic or even a course and look at how they're linked together,

'cause I've done it before. Again talk program with 18

units. You do 12345678. Yeah, actually, there's been some

really fantastic work crossword book called Just Gotten On

Project based learning around carelessly thrown up in the air,

thinking right. Actually water line of best fit here. How we

can make a more rounded learner. And that's exactly what it is.

And it's about then, as you kind of alluded to, with

interleaving. It's about looking at those different blocks of

learning and how they linked

together. Keep on reading just quizzing the learners and

checking and drawing out that information from either the

short term or long term, and ingraining it definite and

couple of analogies you got there. One is take the

sportsperson footballer for example so they don't just spend

six weeks working on strength and nothing else and then spend

six weeks on speed, six weeks on TV. They will have kind of

majors and minor focuses in those weeks, but they're still

cover strength, speed, CV.

Technical tactical stuff in those weeks? Um, another analogy

as well. It's almost like this come from a an off state

inspector has so they do say some useful things which was

looking at the curriculum is essentially like a a TV series

where you've got lots of intertwined plots coming along.

By the time we get to the end it all kind of makes sense. Yeah,

so that's how we really should be. Kind of teaching is like how

old is plotlines coming together? How do these

characters all interlink? And then as the server get into the

curriculum, the term towards the end, it all starts to make sense

and the and the kind of overview like you say, now about the kind

of project based really come becomes clear. So I don't know.

Yeah, I think you're right that it's interesting that you picked

up on a couple of different methods there. And again, I

think the key bit and this isn't Christmas teachers. Teachers

often want the answer, so this is what it is. How do I do it?

Well actually one for this

doesn't in particular. You're probably doing it already, you

know. So reflect on your own practice and why you're doing

this. The next step is and I think actually, how can I do it

in a more conscious way? And then what are you doing with

that information you know, for example, things like Mozart

forms, cahoots operatives, and in all the different quizzing

tools are fantastic. But I've seen many teachers. I've done my

quiz that may done well, actually not. It's more than

that. That's how we're going to end up with your students, so I

guess where I'm going with this is what are the different

methods? Are different examples of of tools of doing this that

you've seen done well? Mickey or going anywhere but advice there?

Exactly, we said there is. Number one is. If you're going

to ask a question what you gonna do with the answer? If you can

do nothing really answer then don't bother asking the question

'cause it's just redundant. So the idea of doing this is to

either confirm they know what they're doing so you can

progress on or two.

Check for misunderstandings or misconceptions which

particularly Start learning with novices. You can get a kind of

some blurry lines where they think they've made some links.

Yeah, but they're kind of incorrect, so you need to then

spend that time because the longer they they think that's

correct along with it, it's in the long term memory turn, so

the quicker we can affect change and kind of get in there, and so

we're actually now. This is what I can see where you're coming

from, but This is why.

X&Y is important versus what you're kind of telling me, so

that's number one, so essentially retrieval practice

shouldn't be too burdensome for

the teacher. Um, it should involve everyone so kind of

single Q&A's.

Take too long, so by the time you get round 10.

Fifteen 2025 people you probably forgot on what was

going on and a lot of people say they not know what's going

on. So think about kind of quick fire quizzes which could

be teacher paste. It could be multiple choice questions on

board. It could be using forms or whatever it might be your

kind of quizlets quite good.

But you gotta do and give that immediate feedback. So right,

five of you at 15 thought this was the answer.

Why was that so? You need to go to a next level so it's not just

surface level knowledge. I'm going to check the understanding

so Tom Sheraton talks a lot about this in some of his talks

is you wanna get into the full process of the student, not the

answer. So even if they are correct, it might be worth

asking so. So how we got to that answer? Talk me through that

particular must problem isn't, and I'm sure like many others

I've been doing home schooling with my with my daughter. They

get the answer. Great hope you got there right. Is it the right

method or is it a bit of a guess? So I think it's really

interesting and fundamental. Point there in the key, but you

mentioned about going back and correcting it, going back to the

memory side. I'm right, there is going to re encoding. You know

you are going to correct it and then effectively trying to re

encode that information. In the long term, absolutely yeah.

Absolutely, absolutely. So we've all got habits lately that the

older we get and where you always go back to your innate

habits. So we're trying to do is trying to break habits and we're

trying to stop habits from forming. That's the kind of key

thing and keep it there is. In order to do that, you've got a

new about the habits you got. Another reason understanding the

rationale so ghastly. Obviously I'm not going to actually

unconsciously. We haven't talked about how you do this in a

remote world, and I think I'm not sure what your views are.

But may not actually it seems to be doing the face to face

world. You know you have your question, your quizzes, many

different tools out there, whether it could simply be

creating an amazing map. Write it down here. You know right

now what you know, create a mind map and start forming

those things. So again, for listeners.

And and I know again, there's a perception of we've gotta use

technology. We've gotta use these different methods.

Absolutely not. But in the same breath as a lecture as a

teacher, it can save you a hell of a lot of time if you become

more fair with some of the technological self marking

tools, because then it could be really efficient, as you alluded

to there, which is one of your key points absolutely. And also

within there you can. You can add in city on Google forms. We

use Google quite a lot. You can

add incorrect answer. Well done, you got it right. Check this

link just to confirm if he wants to, but also in the the kind of

wrong answers you can put. Yeah, this is a common misconception

because we don't use a 5050 sense of mix in this scenario

because of this. So you can kind of add in that little bit extra

and the key thing about it. Yeah, there's a lot of work

upfront. Fish compared to normal, but it's always there.

So I've created banks of quizzes and questions that I keep going

back to know. I create them 1015 years ago 'cause that's all it

is. Yeah simple, just same skills. The content doesn't

change much. When you're asking the kind of basic, so I'll give

you a couple more as well, fantastic. You've got kind of

self check quiz in which could be right there. This is a

diagram. Label it, so give him five minutes and then kind of

you take a picture of it and upload it. Or it could be just

upload the work and then you can kind of share that amongst

everyone or definitions. Write down some definitions so the

idea being behind that is is they've got a kind of blank

template. They've gotta start

applying there. The knowledge then obviously thinking about

vocational world demonstrate or perform it. Just show me do it.

There's a plug, rewire it or there's this have a guard it

right? You've got these tools how you gonna build this.

Which is which is brilliant from I could be that kind of

reductionist. OK, there's a. There's a row of tools here.

Which one are you missing for

this job? After that, yeah.

Yeah, so you're right. Going up into the understanding so right

knowledge is right. I need a hammer and Bolt on a chisel or

need this. I need that, but OK. Well I've taken two things out

what? What two other things Tool did you use for this job to kind

of finish it off? So that's kind of higher order stuff but and

that's where you're hoping that the schema, their knowledge that

housing estate is already being kind of developed and all you're

doing is really kind of concrete over cementing. Sorry tarmac in

there those roads that I'm making sure their solid not.

No, that's up to you, right? So you gotta do and then two hours

is summarized which I love to use myself. So either so how we

develop college. We use lots of work books, so we have kind of

topic workbooks and I've been actually superb. So we talk

about earlier about distance learning. All the workbooks were

kind of written, developed, and workbooks. Yet once again they

do take time. But all day or just a collection of worksheets

that I've developed overtime and in the in those work packs I've

I put retrieval practice in there could be multiple choice

questions it could be.

To answer questions in class, I can just walk around and

have a quick look but also have little summary boxes. So

I'm teaching nutrition at the moment, right? We've gone

through carbohydrates all the science behind it benefits

etc. Right now, let's write a good 45 paragraph summary and

so it then starts to bring it all together and they've got

it. Then go back and start looking at all the key info.

So write summaries is very good. I know on on teams

and on Google Classroom you got those little kind of.

Question sections where all students can write a paragraph

and everyone else can kind of read it. And then there's

another little check for you. So write getting to do that at the

end of the lesson starting next lesson, right? I want you to

read this one. What's wrong with it? What's right with it and

then give some feedback. So you you started to kind of get a bit

of peer review in there as well? Yeah, no no. It's really

interesting that I think what I'm surmising again from

aspects, you're seeing a fundamental part within all

these is routine build whatever method you apply, whatever you

choose, any routine, whether that be the first 5 minutes or

less and or the last five minutes every lesson or however

you wish to do it, or whatever method you choose. Well, it's

quizzes, paper based, or

anything else. It's just a routine. It's a habit.

Again, as a lecturer teacher, just build this into your

routine when delivering your students and again get them in

the habit of going through this process and if you are doing it

great, just make sure it's in a conscious decision from yourself

and your learners, and kind of that awareness. Absolutely you

come to everyone in my classes and it will be the same

structure for all of it. There's no fancy gimmicks, they come in,

they get their work backs out, will be doing a quiz or some

sort of retrieval. So all of my

sessions are. In my role city for new teachers, since you go

back to the kind of birds, so break your lesson down into

thirds. First bit is retrieval practice. What do you want them

to remember or to be knowing

about now? Because you think you're retrieval practice and

there might be a lot of misconceptions, so it might take

1520 minutes for you to do a little kind of mini reteach, but

I want that solid and secure before I can move on. Just

there's misconceptions. Then there's no point moving on

because all I'm doing is is kind of putting more bricks on a

wobbly foundation building. Little analogy for you. There's

a theme in this podcast.

And then the next part is new knowledge how we're going to

get information across. How do I do that? And then final part

is that kind of what we're going to do with it, how we

then either going to make links we're going to apply it to

something we're going to do something with it. So everyone,

every lessons is basically free free blocks.

I'll tell you now we have our lessons so it kind of fits

nicely and obviously it's fluid. It might be a right. They've all

got it right. That's five minutes while this crack onto

the new knowledge or just spend longer at the end. Kinda in the

application of it. So then final one out of five is you could.

I'd like to just start kind of topics is write write down

everything you know. Yeah, it's a massive sheet of paper.

City when we get home from school and it's like, oh.

They didn't teach much science in school. Did they put together

at useful for you as a teacher or lecturer? What you working

with you know you've got only got starting points and then you

can build that in from learning other retrieval in a different

box of learning and so on and so forth there as well. And also do

the same at the end of topics. OK, and then what I want to do

is to actually we've got schemas in our head as teachers so we

know the links and it's not visual to them. So what I want

them to do is to show me what links are they made.

So write down the kind of almost like a spider diagram. All these

different links between different topics, right? So how

did that lead with that and then get him to write down what the

links are, and that really gets to show the understanding and

their longer term memory? And I basically visualize their schema

and then we can start to work with that as well. No, that

sounds fantastic. Another point I picked up there actually is a

lot of what you're talking about is you're applying it to their

vocation. You know, again, it's not a conscious thing, it's

just. That's how it should be, and that's absolutely right. You

know all these key points to try and green and long-term memory

to try and keep the engaging all learners? Is all of these

elements are linked to how they're going to use it in

practice and in the real world without being apprenticeship at

the job or career, you know. Again, I think that's something

that. Is he the taken for granted? Again, we either do it

without realizing, or maybe in some cases we don't do it as

well as we could do, and it's just it's really important to

make a second nature and what we do there as well, absolutely.

And what you want them to be confident in their own knowledge

and and what I found is an outside. I tell the students at

the start when I first serious is, I'm going to be quizzing you

every lesson and it's going to

be relentless. Sometimes you know the answer, that's fine by

we're gonna get there, but there's there's kind of no,

there's no opt out. You will get a question or you're gonna have

to summarize something for me and it gets such into the habit

of it. By the time we get to the kind of the assessments and

they're so confident. In order different kind of subjects,

topics that we've covered and that comes back. The routines

doesn't comes out there seems so concert Aimachi. Think again, we

can talk all day about this, but it's been some really, really

fantastic points. I think what I'd be keen for you to read.

Focus is kind of either summarize what we've talked to,

summarize some of the fundamentals within. I'm going

to say 10 seconds, you know, or what are the what is retrieval

practice to you? What does it mean in simple terms, so

retrieval practices is bringing to the conscious mind

information that you want to work with there and then?

And the key thing about it is to making sure that knowledge

or information is is correct and is secure in the mind of

the learner. If it's not our teacher role is to correct it

before we can move on. Fantastic, not quite a 10

seconds. I'll let you off.

It's 8:00 o'clock, sorry.

Mickey, that's been absolutely fantastic. Really interesting to talk to you, and also it's a topic that you're very passionate about, but I think that it's really clear that it's a fundamental impact of what we do as learning professionals with our students to try and help them retain this information. Help them no more help them apply it and help them become really effective within the application of this knowledge. In these skills, absolutely, and there's lots of there's loads of information out there which is really readily available and really easy to read as well, so.

Thankfully, there's people out there who have taken all the signs and put it into a kind of one page information sheet, so I'm sure you you link to them. The learning scientists. I'm showing some rosenshine, muscle level, etc. So yeah, the real kind of one page infographic to help us 'cause I get it. Brick layers don't want to be reading kind of Seminole papers, but also doing that's up that's only two stereotypical there. Alright most support teachers. Yeah, well supported just may be good but I would totally agree but I

think. I guess there's some really interesting points that actually this is a new concept. You know you talked about curve

from from 18 eighteen 80s, you know, so it's nothing new. It's just an acknowledgment around the importance of this within our practice. And I think you mentioned as well in the one thing we got some technology that can help us out with it. So multiple choice quizzes. You write them once. You can always go back to them, know fantastic Mickey. Thank you very much. It has been applied so good luck.