

Episode 18

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jarrod@thepegeek.com

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00:29 Speaker 1: Hello, everyone, and welcome to episode 18 of the PE Geek Podcast. And as always, it's a real pleasure to be here particularly at this time of the year when I've basically finished all of my workshops and conferences for the year, and it gives me really good opportunity to dive into the blog and more podcast episodes, and more importantly, actually getting out a couple of the apps that I've had working in the background that need a little bit more time and attention. And I've basically got that now to go crazy with. So, really looking forward to the next month off before I dive back into a workshop tour in India, which will be the first time I've ever been over to that part of the world, and then ending up into Hong Kong before heading back into the new school year. So, really excited to be sharing with you all of those happenings in the next month or so, including lots of new content on the blog.

01:28 S1: Now, today's episode is really interesting for me in that it's actually one of the very first tools that I ever used in a classroom. And this dates right back to 2009 in January when I first discovered that these things actually existed and was immediately transfixed as to how they could be used in education. And back then, it was so difficult to actually use them. I mean, it was so hard, really, really difficult. However, we had lots and lots of fun using them in those early days, and since then, I've been blogging about them regularly and included them in my workshops. And they've actually grown to be something that I used really widely across PE classrooms and throughout all sort of educational platforms as well. So, if you haven't worked it out already, I am talking about QR codes, and QR codes are those little, tiny squares that you've probably seen on packaging, and labels, and marketing, that when scanned by mobile devices, enables you to be hyperlinked or interact with some sort of digital content. And basically, QR codes mean Quick Response. So it's all about trying to speed up the time it would take to go from a physical world item, such as a poster or a worksheet, billboard, etcetera, and connect you to that digital item. And when used, I mean, that does happen. That's exactly what they do. They do make that particular process so much more faster than saying "Hey, visit this hyperlink," and having people type it in.

03:11 S1: Now, they started in 1990 in Japan for vehicle tracking, and it wasn't until many years after that that people started to pick them up and use them for marketing, and people started to then think about how they could be used educationally. And there was some really good stuff coming out of the University of Bath in the early 2000s about how they could be used. And when I started using them in 2009 in my classes, things were very different. There was no iPhones. There was no real smart phones. There were just mobile devices that had cameras, and we could scan them. And in fact, some of my earliest scans of QR codes actually happened from laptops, and I mean that was just... Think about how difficult that was. It was really, really hard. So, this episode is gonna focus in on why I found these to be really good additions to not my own teaching, but just to workshops and everything that I do in the PE classroom. And also, we're going to look at what the next style of technology is that basically takes the similar concept of QR codes and makes it even more interactive, and by that, we're talking about augmented reality. So, let's dive into the content.

04:23 S1: Now, in early 2009, as I mentioned, this was the first time I ever discovered a QR code. And I was sitting at a bus stop in the Gold Coast, Australia on holidays and glanced over and saw this really weird looking square and thought, "What is that all about?" I had no clue. But upon reading the little caption underneath it, I worked out that they were called QR codes and they could be scanned for more information. And that got me intrigued, and throughout the rest of that trip, I

was just thinking about, "Well, if they can be used and created like I'm imagining they can by anyone, then the possibilities for them in the classroom are quite immense." So in those preceding years, I started to think about how they could be used in the classroom. And the first choice for me was to actually connect them to worksheets. Now, some of the early worksheets that I sent out in that year actually had QR codes on the bottom right hand corner. And the basic premise was that when they were scanned, they basically revealed even more content than what was contained on that worksheet. For example, in some case, it was even a video of myself explaining in more depth the actual requirements of that task.

05:40 S1: That there is something that is absolutely really easy to do in today's day and age, and it's just a matter of producing a video and storing it somewhere online, copying the link for that video, and then turning it into a QR code. Now, you may be wondering where do you create QR codes? And there's a myriad of places that will enable you to do this and if you just search QR code generator on the internet, you'll see where.

06:05 S1: However, my favourite by absolute miles is qrstuff.com. Now, QR Stuff is a QR code generator, like they all are, and as soon as you get to that page, you basically have the option to create QR codes in a series of different formats. And the first choice that you have is to create a QR code using a website URL. Now a URL is just the link to that particular page or that website or that document or that video or whatever it may be. So the first step for me was to produce a video, which I did and stored on YouTube, and I copied that YouTube link, and then I turned it into a QR code. And then downloaded the QR code and then pasted it onto my worksheet where I printed it out. And then upon printing it, handed it out to my students, and they knew that they could click on that particular QR code. Not click, but scan that QR code, and they could see that video which was an in depth look at what I was basically teaching them how to do. So lots of opportunities for QR codes on worksheets for sure, if you think about what you can extend it to, further information, and so on.

07:20 S1: Now, from that, I actually branched out into the use of some sort of orienteering style activities, so producing QR codes that didn't need to be connected to the internet, that when scanned revealed text. And at QR Stuff, you can do this as well. You just basically select the plain text option at QR Stuff, paste in your text that you would like to be contained within the QR code, and then when scanned, it basically reveals that text for the people to interact. Now, for me, I actually set up a bit of a revision scavenger hunt throughout our school for our senior students, and it was a bit of fun, and a bit of a fun way to get them moving and that blog post still exists on the blog. If you search under the QR codes category, which is pegeek.com/qrcodes, and you can see a list of all the posts I've ever done related to QR codes. And when they did this, they arrived at the destination of a QR code which was affixed to a cone that was placed in our school. They scanned it. They were given a question and they had to answer that question and then move onto the next code.

08:31 S1: And it was sort of like doing a test, but it was doing it in a practical way, which we had a prize and competition and stuff that went with it, and the kids absolutely loved it. It was just a very different way to revise for some of the things that we were already doing. So QR code orienteering is still one of the must have uses for QR codes. We've done them at our school for orientation days for new students. We've done them for a bike ride which was a scavenger hunt throughout our town. Now, the easiest way to create a scavenger hunt for QR code style scavenger hunt is at the website classtools.net/QR. Now, at that particular page, you simply have to type in the questions that you want and the answer, and then you hit generate, and it makes all the QR codes for you, and you can

simply print them out and then go and fix them to the particular items that you want. A really good way to get people moving and excited and as a bit of a brain break activity or as some sort of facilitation for something else that you're doing, lots of fun.

09:42 S1: Now, the next step that I basically use QR codes for was to create task cards. And the whole notion of task cards really intrigued me. This idea that you can have a task, you can have it down on a piece of paper or in any other format, and students have to independently work through that and interpret what the task is. So they're independently completing the particular activity rather than having the teacher assist them in that. Now, which that's really powerful when you're trying to get them to work as individuals on those particular processes. So, imagine this task card that, basically, when scanned, shows a video of someone performing a particular task. Now, that could be a particular drill in basketball. It could be some sort of discrete skill in badminton. It could be anything that you're trying to teach. Now, think of these task cards being placed all around the gymnasium and, literally, students moving around the gym and scanning them independently of one another and completing that task based on the video or the text or whatever it is that they're basically scanning.

10:53 S1: What I love about this is that you as the teacher are automatically differentiating the class and differentiating the instruction by sort of flipping the instruction over to someone who is more... Maybe more highly trained than you. But you get the option to have them teach the part that is replicable, and you as the teacher get to do the stuff that isn't replicable. And every opportunity I've had to do QR code task cards, they've always been a major hit.

11:23 S1: Now, Joey over at thephysicaleducator.net has produced a series of QR code task cards, and these are exceptionally high quality, encompassing volleyball and basketball and a couple other sports that he's pieced together, and I highly recommend going and checking those out because you can literally just press print and then start to use them immediately in your classroom for that differentiated style instruction.

11:50 S1: Now, one of my other favourite ideas for using QR codes is basically to use them as part of teaching anatomy or teaching particular machinery or anything that has instructions about that particular item. So, for example, in a weights room or in a circuit training center or anything like that where you've got equipment, and you need people to be safe with that equipment, a QR code affixed to say a bench press that when scanned actually shows people how to do that bench press and use it safely means that, that instruction has always been given to that message or that option for that instruction is always there. So a really good exercise that you can have your students do is "Alright, we're gonna, as part of our assessment for these things that we're learning in the fitness room, we're going to produce these instructional videos for the machines and the equipment that we have, put them into a QR code, and we're going to fix them to that particular spot." And then, essentially, the students then end up teaching the next year's students, and these resources become really powerful for making sure that everyone does follow the rules and follow the procedures of that particular place.

13:09 S1: That wouldn't just work for... For weights room. It could work for science labs or any other sort of place where there's specific rules that need to be followed and specific things that need to be done. You can even use it for your... If you wanted to, you can have a QR code that scans, that you scan in your equipment room that tells people where stuff needs to go. If you've got footballs, they go to the left corner. I don't know. You can do anything with a QR code, and it's about giving

information really quickly to people. And on that note, one of my favourite things I've ever done is to put QR codes onto a skeleton. And the skeleton was when we were learning about the skeletal system in anatomy and so on, and each bone had a QR code on it, and when scanned, it basically revealed the name of that bone, but more importantly, it actually had links to further information about animations and so on of that particular bone. So, people would get this really big, interactive experience that started in the physical sense and ended up in a digital sense, and the context was sorta kept as they moved between both.

14:16 S1: So, QR codes are great. They're really easy to implement and use. I mean, you can create a QR code in about 10 seconds. I know people have said that for many, many years that they are fading out, and they're going to be disappeared and replaced by what I'm about to talk to you next. However, I mean, that may be case, but they're still widely used because they're still so easy to use, and the time is now to go ahead and try and see how that can fit in to your practise because I guarantee that they will find a really good place, and that they could be a really good addition to many other things that you're already doing. Okay, so we're gonna jump in and look at augmented reality now, which is sort of that next generation of information being triggered by items and sort of linking the physical and digital worlds together. Now in 2010, the Horizon Report indicated that augmented reality would be something that we could expect to have in our classrooms for mainstream use within the sorta three to five year periods.

15:22 S1: Now, that is pretty much on the mark in that it's actually starting to appear in classrooms, around the planet, augmented reality has lots of mobile applications that are using it to help teach fundamental concepts that we all teach, particularly, things like the 4D Anatomy app, which I've spoken about here before. That's augmented reality. If you've never seen it, go and check out the app 4D Anatomy at the pegeek.com/4d and basically for free, it lets you scan these pieces of paper that you print from inside the app. And, you basically then it brings to life the piece of paper with a model of the heart and a model of the human body, and you can interact with it and use it however you see fit. But, that idea that they would be available for mainstream use is probably not quite hit the mark. Now, sure, they predicted within sort of three to five years, which could put us in 2015, but it's probably more likely to be another couple more years before we're really starting to see augmented reality as something that a lot of teachers and the average teacher begins to use in their practise.

16:36 S1: And, when this actually does happen, we're gonna be seeing an enormous amount of real world application and learning opportunities coming from the role of augmented reality. Now, if you're unfamiliar with this term "augmented reality," basically, it is defined as using technology to combine real world elements with sort of computer generated imagery. So, for example, if you're looking at, a through your phone that is, looking at the pyramids, let's say, and over the top of the pyramids, you can see information that shows maybe the dates and the times and how long they've been around for. And maybe there's like animation that's happening in sync with the actual real world picture that basically shows them being made. That would be an example of augmented reality. It's this whole idea of being able to look at information in a real setting and have this digital information, which is improving your understanding of something or your experience, being overlaid at the top. Another example would be looking at a restaurant from outside on the street and being able to see the menu pop up onto your screen or looking at a historic old building, and you can see who it was built by and when it was built by. The opportunities are immense particularly for tourism and for teaching people about these sort of historical items and those sorts of things.

18:04 S1: But it really does have massive application in education as well, and you need not look any further than by typing in, "augmented reality" into the app store, and just seeing a myriad of augmented reality style apps that are really quite mainstream, in terms of people downloading them, and using them. There's a number of toy companies that are bringing out these sort of augmented reality style experiences for kids. So, it's only a number of years before we're gonna see a myriad of opportunities here in this space... I mean, textbooks that are augmented reality included into maybe, the experience so that when you scan pages, information is popped to life, and is overlaid over the textbook... I mean, you can do that now, but you're gonna find commercial uses of that even more so, but if you were really interested in diving in and creating these sort of experiences for yourself, then you may want to go and check out the app called, "Aurasma," which is, A-U-R-A-S-M-A.

19:03 S1: Now, with Aurasma, you can create your own augmented reality style experiences. Now, a couple of years ago, I blogged about using Aurasma, to scan a soccer ball that is in a gymnasium. And basically, that soccer ball triggered a video being played over the soccer ball or on one side of it, showing a person how to actually kick that particular ball. And that's a really simple use of augmented reality, but that whole concept is really easy to do. It was just a matter of taking and moving through the steps in Aurasma to create these experiences. Now, thinking about all the things that we spoke about regarding QR codes... I mean, these are all possible with augmented reality and inside of the Aurasma app. You could create a really interactive anatomy experience that is basically without QR codes, so when a particular bone is scanned, an animation of that particular bone is represented on your screen for you to look at, so augmented reality is particularly exciting. It is here. It is something that you can go and get access to right now, and commercial options exist on the app store, e.g. The 4D anatomy app.

20:21 S1: It's probably a couple years away before we really start to see it being used in some really powerful ways. However, if you're interested, I'd definitely recommend going and checking out Aurasma. Another app that does a very similar thing is Layar, L-A-Y-A-R. However, it's a little bit more premium in that you have to... You're only getting a limited amount of free augmented items that you can actually produce. This year, our school magazine, which I'm involved in creating is actually going to have some augmented reality elements to it. And quite simply that will be, you scan the front cover of the magazine with Aurasma, and you, basically, see some overlaid imagery over the top of that particular item, meaning that it becomes quite exciting. We can share a video, welcoming people to the magazine and saying from the people who actually made it. The opportunities are endless there... I mean, we could do that with the QR code too, but this even removes the friction of that even more so, so that the experience is even more fluid and even more connected to the actual item that you're interacting with.

21:27 S1: So, go and check it out. Go and jump on there and download Aurasma and see how it could potentially work, and then, no doubt, you'll start to see how these are being applied in real world settings now for promotion and commercials. You'll be able to get an understanding of where it's headed, so that brings us to the end of episode 18, "Looking at QR codes and Augmented Reality." I hope you found it useful, and I hope you can dive away, and maybe try out some of these things in your own classroom. Now, if you ever have a question for me regarding physical education and technology, or anything else for that matter, then make sure you visit thepegeek.com/voicemail. When you hit that particular page, you can leave me a voicemail question of up to one minute. I get those quite frequently. Every couple of days, I have voicemail messages coming through, and I respond to the people, sometimes via email and store them up, occasionally, and use them in episodes. So, if you've got something that I haven't answered before or a particular

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problem, or a particular question that you just can't get an answer for anywhere, then please go ahead and leave a question.

22:42 S1: Another thing that I'm gonna be offering at the present and in the next few months is, the ability to schedule an appointment with me. Now, they're 20-minute slots, and if you're interested in going and booking a 20-minute conversation with me, 100% for free, surrounding anything you like, then you can head to the thepegeek.com/20min. And it will bring up my schedule and my time table where you can book in your time slot. We have the chat via Skype about anything you like to do with physical education and technology, and that whole 20 minutes is designed around your problems and my solutions to those problems. So, hoping that it would be... We'll have blog post soon that basically explains more about this, but if you wanted to jump in now, and visit thepegeek.com/20min... 20-M-I-N, then you can book your spot and be one of those first people to join it. So thank you for joining me, and until next time, keep learning and if you have any questions, you know where to go. See you later, bye.

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