Program: Professional Graduate Certificate in Education (PCET)
Module: Digital Innovation and Professional Practice
Module code: ECPT6006
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Word count: 4646

There will be three sections to this written portfolio. Firstly, there will be a literature review which focuses on the combining of technology and pedagogy in the educational setting and the positives and the negatives of this. Then I will move on to the justification of technology and how I will use PowerPoint and Kahoot! To optimise the combination of technology and pedagogy, with the aim of delivering an efficient and engaging lesson. This will also include a lesson plan with aims and planned outcomes. The last section will be a reflective account which focuses on the lesson which was taught based on the justification of the tools I used and provides me to go over the positives and negatives and produce professional development goals that I can work on so that the students can reach their full potential.

The complementary Relationship between digital technology and Pedagogy in Further education learning environments.

In educational settings, the blending of technology and pedagogy has grown in popularity. Innovative technology should always be used in a university setting to further educational objectives and enhance the learning experience (Bransford, J.D. et al., 2000) whereas Pimmer (2018) argues that technology can disrupt students' attention as the presence though things other than educational technology like games, social media can be a distraction (Pimmer. C, et al, 2013). The combination of technology with pedagogy has the potential to improve students learning skills and has more positive outcomes than negative when combining both pedagogy and technology and using digital innovation. This literature review will explore and critically Analyse the combination of pedagogy and technology and aim to provide an analysis that shows whether the advantages or disadvantages outweigh the other in combined with pedagogy.

There are standards like Professional standards created by the Welsh Government in place to make sure that the educators and students are both achieving their highest standards. (TDA, 2007). These are important to take into consideration when combining technology with pedagogy as the educators. Both professional and digital standards offer guidelines for educators to follow to establish an effective classroom. The set of traits that educators should try to achieve, such as good communication, topic knowledge, and classroom management skills, is generally included in Professional standards for teachers. These Professional standards are made to ensure that educators are able to teach students efficiently and help educators concentrate on their leadership, work pedagogy, collaboration skills, professional learning and innovative thinking (OGL, 2019).

Digital standards are also then in place for education to build on the skills and knowledge that educators need to successfully use technology in their teaching methods. These standards cover abilities including the use of technology to improve student learning, communicating with students and utilising digital assessment tools to evaluate student development (Williams. K, et al, 2019). Laurillard (2012) emphasises that technology cannot replace or fully serve the needs of education in the classroom (Cited by Beetham. H et al, 2020) but Educators who use these standards and adapt their educational set of skills are better equipped to improve lessons for their students although these standards do not need to be used in a prescriptive way and more to be applied in suited teams, Individuals, or roles (Welsh Government, 2019). Educators have the option to add in numerous interactive ways to integrate digital innovation into lessons, such as online quizzes, game-based exercises, simulations, audience responses, video and audio visual aids, and effective presentation skills (Steinert.Y et al. 1999) but Ertmer (2019) argued that as educators have had to develop such skills and adapt them into their lessons, which can require time and could be difficult at

times, especially if the educator struggles with technology themselves especially if there has been a lack of training or inadequate training (Lynch.M, 2021).This can result in poor integration and unwillingness to make adjustments to their sessions, which can create a lack of support and direction (Ertmer. P. A, 2019) Alongside this Lawless and Peregrine (2007) believe that technology, like computers, phones or tablets or interactive whiteboards, do not help with educators' pedagogical approach (cited by Tonduer, J et al, 2017, p.556).

Access to information and resources in higher education settings has increased. Students are given access to resources outside of their traditional classroom settings such as online search tools, libraries, and learning resources. This lets students conduct independent research and develop their information literacy skills and critical thinking abilities (Tondeur .J et al., 2017). Liaw and Huang (2003) also argue technology and e-learning promotes the chance for students to cooperate, communicate, and also have control over their learning (Perrin, D.G. et al.2015. p30), Educators took on this and are provide online materials, encouraging students to take responsibility for their own learning by providing them with pre-recorded lectures, which they can watch at their own pace while using class time for interactive activities (Jia, M, 2023). Al-Kamaim, Alhazmi, Mohammws, Gazem, Shabbir and Fazea (2021) argue that the biggest negative impact from technology within education is that there is an information overload when students have online lessons (Al-Kamaim. N.H, et al, 2021) and this can also be due to always having accessibility to different online learning platforms and having to deal with them all can increase the stress students have (Al-Kamaim. N.H, et al, 2021).
This also relates to Lessons that became online, more so during COVID 19 as it was leading to Student not having the chance to establish relationships with both their teachers and other students through face-to-face interaction and instruction as all the materials online (Febiz. S metal, 2021). Watson (2010) noted, it can be challenging for students to understand messages or information when there aren't any body movements, facial expressions, or body language

(cited by Arkortinal. V et al. 2015, p35). This results in a lack of clarification and explanations which decreases lack of understanding and motivation. In contradiction with this Al- Imran, Elsheif and Shaalan (2016) conducted a study and the outcome from this was that the use of technology in the classroom promotes a closer collaboration between educators and students (cited by Ashour. S, 2020). This can also increase fast networks for communication, and more technological advances in communication can lead to strong virtual learning environments when online education is used as an alternative model of learning (Peterson.A., et al, 2018). But as Peterson also pointed out that this could cause 'a delay of hours or days between a question or comment and a response to it from the instructor or another student' (Peterson. A., et al, 2018, p477). Continually improving the student experience and learning, educators must continue to question, criticize, and thoughtfully assess their teaching strategies. (Bostock, 2019) Teachers who are aware of the needs of students with additional learning needs (ALN) are better prepared to apply approaches that will produce the beneficial results that the students need.

When educators use diverse pedagogical approaches, such as using technology to help their role, it allows educators to access a wealth of data and analytics that can inform their teaching strategies, track student progress, and adjust lesson plans as needed (Peterson.A., et al, 2018). This ultimately leads to the educators catering their lessons with technology to help the students get skills ready for out of university as "opportunities for agency" (Peterson. An et al 2018) have grown but with this comes a demand for new set skills that are related to both personal and social competence (Peterson.A et al, 2018). There are a couple frameworks in place that educators can use to focus on using technology in their lessons. The main framework that should be considered to use such as TPACK, this stands for "technology, pedagogy and content knowledge', (PowerSchool, 2020) This framework helps educators to stay current with the advances in the technological world and evaluate them to decide if they

would be appropriate for their practice (Maor. D, 2016). The RAT model and SAMR framework are also frameworks that are used within educators practice, both of these frameworks are similar (Stokes. G,202). RAT stands for 'Replacement, Amplification, and transformation' (Hughes. SAMR stands for 'Substitution, Augmentation, Modification, and Redefinition' (Puentedura.R, 2013, cited by Romrell. D et al, 2014. P.1). These both help how educators should be using technology in a meaningful way. Although these are used frameworks, SAMR comes with a lot of critique especially from Lindoroth who holds a PHD in pedagogy questions the lack of study to the framework (cited by Love.C, 2015), this lacks in relation to any skills and does not deliver the higher order of skills included in Blooms taxology (Love. C, 2015), especially since Puenteruras 'believed that SAMR is coupled with Blooms Taxonomy' (Stoke. G, 2020 cited Ny Love.C, 2015).

Despite the main difficulties the benefits of combining technology and education outweigh the disadvantages. The integration increases options for collaborative education, access to information, and engagement. It enables unique and customised instruction, enhancing each student's educational growth but Technology and pedagogy collaboration should not be limited to choosing an educational setting that best supports technology use or deciding if a particular teaching method best supports effective technology use. Thus, before deciding which are the most beneficial digital learning innovations, educators must take into account the objectives they have set and the assignments they have given to their students. A teacher's ability to use technology should enhance their interactions with students, not make them a better teacher, according to Roblyer (2014) meaning when incorporating technology and e-learning into a lesson, pedagogical factors must always be considered. Thus, for successful integration, finding a balance between educational concepts and the effective use of technology in the classroom is essential. (Roblyer. M.D et al., 2014).

Justification on technology

The decision to use technology was inspired by the research I have done around how technology and pedagogy could be used in unison and if it has more of a positive outcome or negative outcome when used together and is important to look into this as teacher as I want to be able to encourage and maximize my students learning experience and this can be done by combining content knowledges, technology and pedagogy; TPACK (Maor. D, 2016) and using the RAT model (Hughes.J., et al, 2006).

For my lesson I have decided on using PowerPoint and Kahoot! as my digital tools
Using Multimodality allows me to have "the ability to construct meanings through reading, viewing, understanding, responding to and producing, and interacting with multimedia and digital texts" (Walsh., 2010, p. 213) cited in Almumen. H, 2023. P746.). Along with this PowerPoint presentations are an integral part of academic life and have started to become more popular than the chalk and talk method in the traditional sense of writing the lesson on a chalk board (Feng. D.W, 2021) and this has shown to more beneficial.

I will use Google slides to create a PowerPoint. The PowerPoint will be set out like an iPad, and it will take you to a home screen where there are apps which are hyperlinked to each slide so that it looks like the app works. There is an option to press the "home button" on the iPad on the slide to then take you back to the home screen with the apps on. This brings in the Creative element as this audience directed design which allows the self-selection when I allow the students to choose which topic/ app they would like to go over, and this then brings more student interaction and an element of choice within a format which is recognisable. Using this PowerPoint, it helps me look into the pedagogical design and it allows me to consider the "butterfly defect" (Kirshner. P.A et al. 2013, P.171). This term characterises the behavior of students, which resembles that of butterflies fluttering around information

displayed on a screen. So, when the students are picking and choosing which slide, they would like to look at to see the information their brain is flittering around, and this allows them to rapidly establish connections between different fragments of information (Peterson. An et al, 2018).

Following the combined professional standards 'V1- Respect individual learners and diverse learning communities' and 'A4- Develop effective learning environments and approaches to student support and guidance' (Advanced HE, 2023), let me discover that apps are an effective learning tool for students and that taking notes on tablets rather than on paper and ink has been successful. (2021; FutureLearn) To organise their notes, timetable, and other academic obligations, they can utilise this. I wanted to present PowerPoint as an iPad to ensure the cognitive thinking of the students would identify it as being useful. The visuals and illustrations on the PowerPoint can create an engaging atmosphere and improve the learning experience for the pupils.

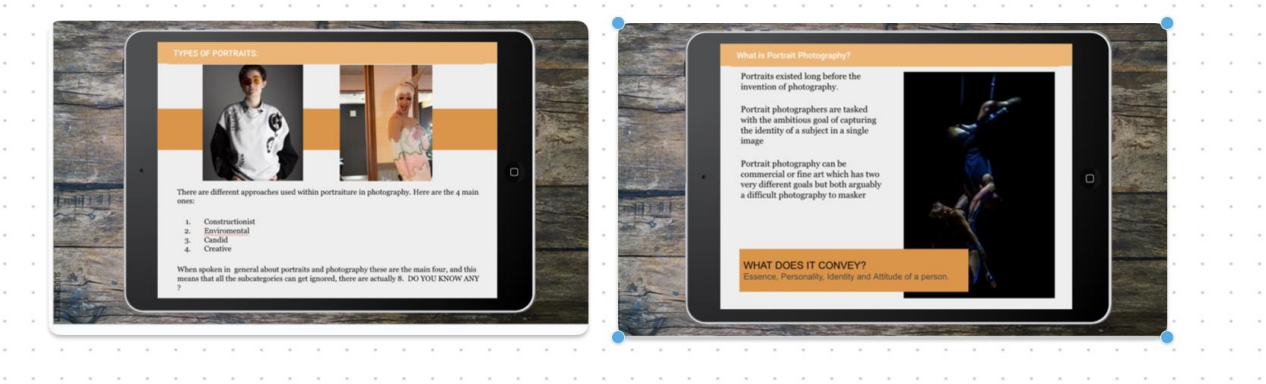
Educational research has shown that incorporating interactive quiz games in the classroom can greatly enhance the interaction between teachers and students, resulting in increased engagement and active participation (Aktekin. N et al., 2012), I want to include a Kahoot! as a tool in the lesson. In the quiz, students must answer questions that are displayed from the educator's computer on the board. With their individual devices, like mobile phones or laptops, students can submit responses (Golubeva, D 2021). This Then allows me to keep track of the student's development in real time as the tool includes performance charts which show nicknames and scores and Recognising that Kahoot! Using this tool is a helpful way to wrap up a lesson while reinforcing and pointing out the important elements of the lesson. It will be used as a closing activity at the end of the class (Aktekin, N. et al., 2018).

The use of the RAT model fits in with the use of the PowerPoint presentation, as the RAT model stands for 'Replacement, Amplification and Transformation' (Hughes.J et al, 2006). The use of the digital white boards to show images, information and quizzes which relay information replaces the students having to learn via textbooks or methods like 'Chalk and talk'. Both tools have the opportunity to transform the lesson and get the students to engage with the information on get involved. Ultimately creating a more immersive and engaging learning environment.

Using both of these digital tools to help collaborate technology and pedagogy successfully into my classroom is from Malone's (1981) (Aktekin, N. et al., 2018) theory where there should be three categories that can make the lesson more engaging; 'Challenge, Fantasy and Curiosity" (Aktekin, N. et al., 2018, P719). The challenge in my lesson is to challenge the students on their knowledge throughout the lesson with PowerPoint, with The Kahoot! Quiz links in with the 'Curiosity' category as it involves images and allows the students to solve the questions. This helps the students become more motivated, leading to higher cognitive process (Aktekin, N. et al., 2018).

Application of the chosen learning tool(s)

My First slide of the PowerPoint looked like an iPad screen with different apps that hyperlinked to slides so that the students can pick on which artists or techniques they want to us. This also included the lesson aims for the session. This will help students Make notes and have clear meaning for the lesson.



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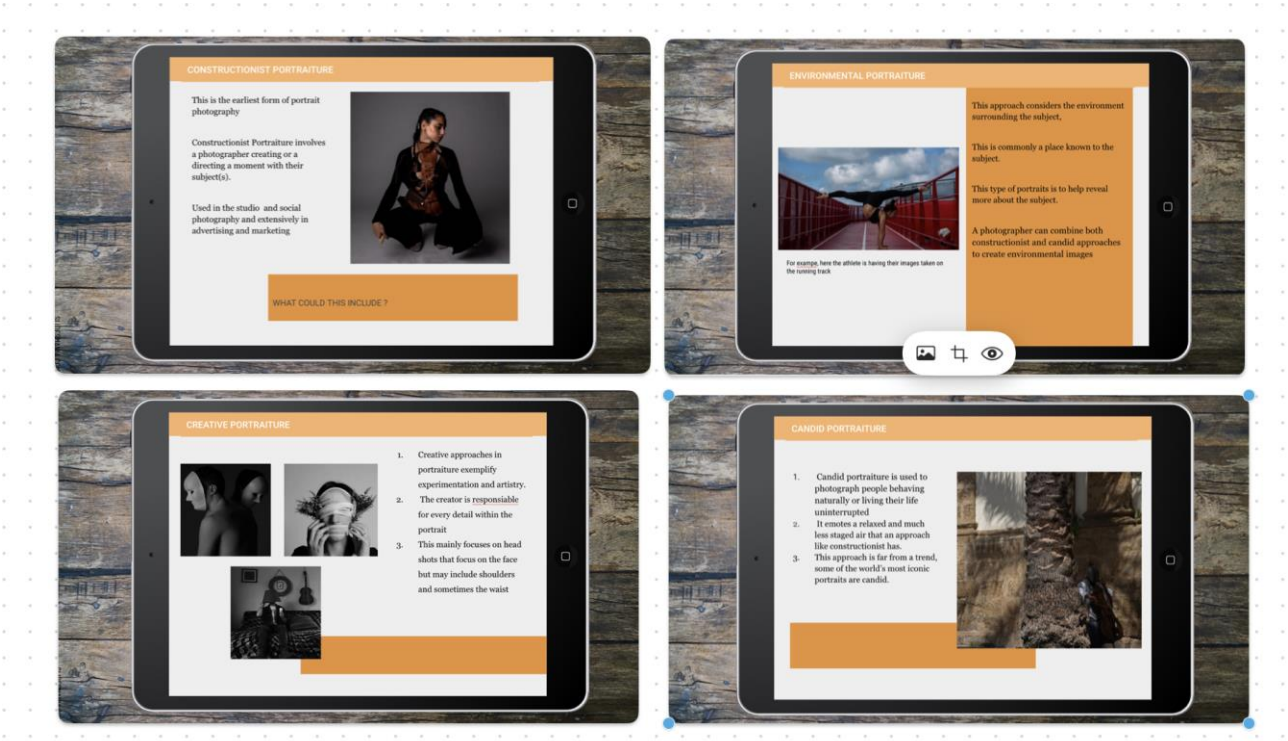
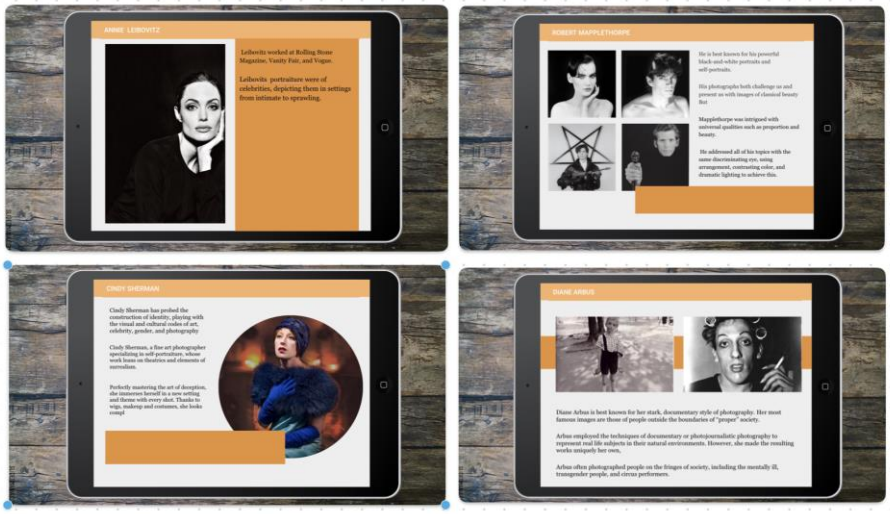
The first two apps on the screen were hyper linked to the second and third slides which had an overview on what portrait photography is and then different types of Portrait photography.



Once done with each slide, the student can then press on the home button to take back to the first slide with all the apps one. The next 4 apps included hyperlinks to the four main Portrait styles, which included Constructionist, Environmental, Creative and Candid.

I read the information to the students so that it was easier for them to remember the information. I also told the customers more information whilst I gave them the opportunity to write down the information on the slides. I did it this way so that the slides were not overcrowded, leaving the students to be overwhelmed. I also asked the students questions about the styles to get them engaged and talking.

I then took the students back to the first slide and let them choose which artist they would like to look at and let one of the students press on the app.

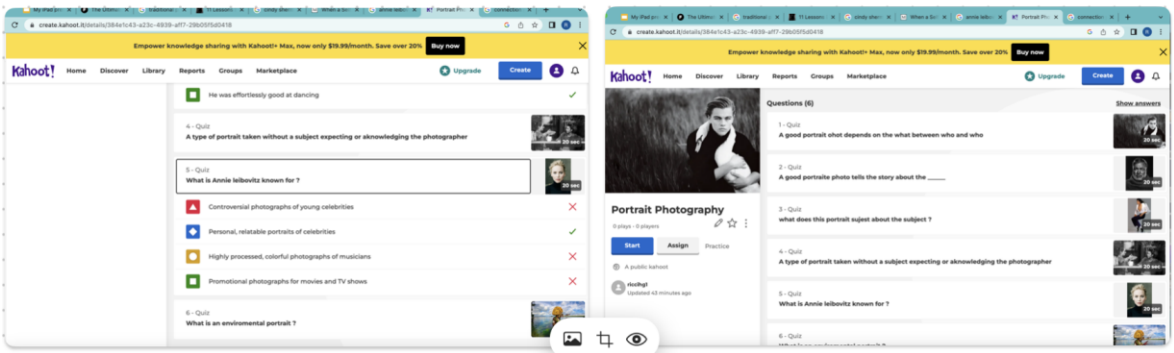


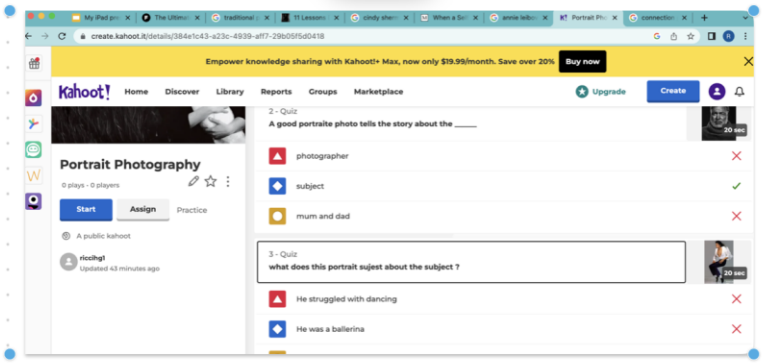
I went into detail about each artist, so that the students could get an idea of each Portrait style, I gave the students time to read over the information on the slides whilst I read them out to the students and then added in information as the information on the slides were kept basic.

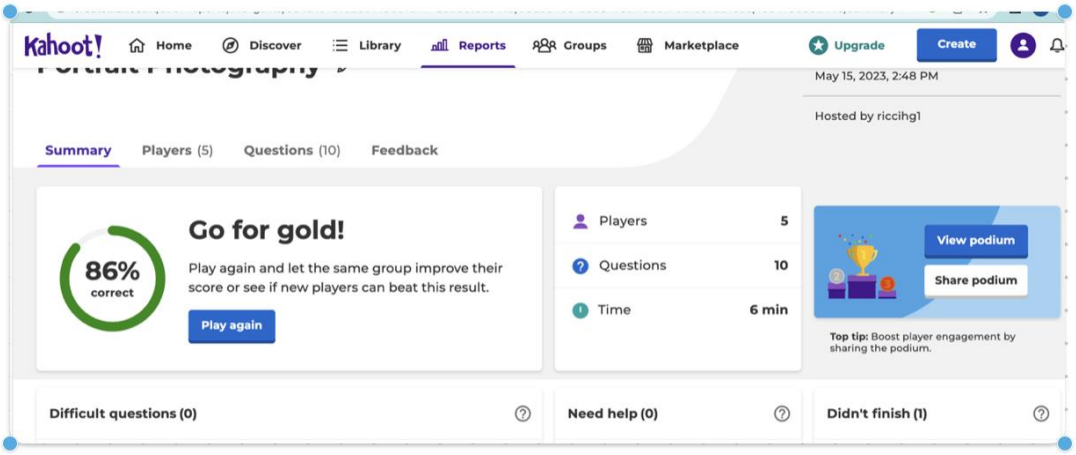
I lastly took the students back to the first slide with the different apps on and let the students pick in whichever order they wanted on what technique to look over to help create a good portrait photograph.

I told them verbally about each technique and do believe that some of the students started to lose a little bit of concentration, however I do also believe it may have been due to me speaking quickly as I was nervous about running out of time.

After this I wanted to test the students' knowledge on what they had just learnt so I did a Kahoot! quiz with ten questions on Portrait Photography so that all the students could log on with either laptop or phone and have a healthy bit of competition whilst letting me look at how the session went and how much they took in of it







I am Happy with the outcome of my session as I believe the students had enjoyed the lesson and were well engaged throughout. One of the students struggled to access Kahoot! as their phone was not working but we got them set up on another device. The Wi-Fi in the classroom can sometimes not be the strongest connection so this was a concern of mine.

The students also filled out a feedback form to let me know how they found the lesson and the use of technology and if this helped engage the students more or distract them more.

Feedback form:

https://docs.google.com/forms/d/e/1FAIpQLSdnYgIsjxamNgYgcCAePmjJ1Z3D5uLquJ8AvB2O4ZXDQoSjtw/viewform?usp=sf_link\

Lesson Plan Template (233 words)

PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

Topic: Portrait photography **Class: PCET Part time students.**

Date: 15/05/2023 **Length of lesson: 20 ins** **Number of students 5**

Resources required:
Classroom with a projector and board, laptop, Power point and Kahoot

Aim of Lesson: Students should be able to understand what portraits photography I and the basics about what type of portraits there are, have an understanding about what techniques can help within Portrait photography

Learning Outcomes – The Learners Should Be Able To:

- **know the different types of portrait photography and the difference between them**
- **Understand the elects to create a portrait photograph, such as lighting and angles**

Previous student knowledge required for the session: Basic understanding about portraits and photography

Anticipated difficulties (if applicable):
Not all students having access to the internet within the session
The students already know this and the lesson being too simple.

Technology might not work properly students' technology doesn't work - the technology I am using doesn't work

Professional Standards (where are these being met within the session)

- Fosters dynamic approaches to teaching and learning through creativity, innovation and continuous development in diverse academic and/or professional settings
- Acknowledges the variety and quality of teaching, learning and assessment practices that support and underpin student learning
- The use and value of appropriate learning technologies
- Methods for evaluating the effectiveness of teaching - *feedback*
- Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices. *using the mixture of technology and pedagogy*

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Lesson Detail:

Stage	Focus	Strategy	Time

Introduction	**What we will be covering within the lesson**	**First page of the PowerPoint**	**1 minute**
Development	**Go over the different types of portraits photography there is**	**PowerPoint and discussion/ chalk and talk**	**8 minutes**
	Artist and techniques	**PowerPoint and discussion /chalk and talk**	**8 minutes**
Plenary/conclusion	**Feedback**	**Kahoot quiz**	**3 minutes**

Assessment Strategies: when and how are they included in the lesson? To demonstrate the students understanding of the topic in the lesson there will be a kahoot quiz to see who can remember the information and through the discussion in the lesson

Informal reflection (to be completed after the session)

- The lesson went well as the students clearly engaged and demonstrated their understanding of the lesson with the answers in the kahoot quiz.

1. The class was quiet and well behaved, showing that the students were paying attention and had a good repour with the students.
2. The students weren't as responsive as I would have liked them to be which at times made it hard to tell how much the students were paying attention and made it difficult when trying to have a discussion with the students to move on to the next topic
3. The students enjoyed getting up and touching the white board to change the topic even if this didn't work 100% … the board did to seem to work when the students tapped the screen so as they pressed the app I clicked on it on my screen so that it meant the students can still get up and active - they did this and this calmly but there was a couple of students that didn't want to get involved - Helped some of the students who struggle with staying still or have a hard time concentrating - it seemed to engage the students.
4. I had to much planned for the lesson and was over planned - this meant the session was a lite rushed specially through some parts of the PowerPoint - meaning I couldn't explain fully the topics on the slides

5. I was nervous and this caused me to panic and sometimes found it hard to elaborate or ask questions and would move onto the next slide. - I got stuck at times and needed to look at my notes but I did seem to know what I needed to say and managed to get back on topic without panicking for too long

6. Have feedback from the students and they found the layout of the PowerPoint fun and inclusive and managed to follow along.

<u>Reflective writing</u>

Experience

For this reflective piece of writing, I will be using the ERA reflective cycle. This cycle has three parts: Experience, reflection and action (Cambridge University Library, No date.) I decided to use this reflective cycle as it focuses on helping me have understanding of the lesson (University (University of Hull, 2022) and reflecting on the session I taught. This will then allow me to move on to further my practice in the future and help identify if the combination of pedagogy and technology can work well in my lessons.

The session I thought was with a handful of the Part time PCET students on a Monday afternoon which included a short lecture and a quiz, I welcomed the students to my session and explained to the students we would be discussing and learning about the basics of portrait photography. I let the students know the lesson outcomes and started the session by asking what the students think of when they hear portrait photography.

This lead on nicely to starting the lesson and using my PowerPoint. The PowerPoint was set out like an iPad with “apps” which were hyperlinked to a different slide which had information on, and this was in place to make sure the lesson was interactive but also so that the student could make notes whilst the PowerPoint was up. The students paid good attention to the PowerPoint and enjoyed getting to pick which “app” they wanted.

There was a good discussion throughout the class of different artists and the styles of portrait photography. I encouraged the students to discuss the topics by asking them questions throughout the PowerPoint but at times were not as responsive as other parts.

The session ended with a Kahoot! quiz, there were some difficulties with one of the more mature students as they could not understand how to connect to Kahoot! on their phone, I helped the student out which took a little bit of the time but got the student connected to Kahoot! and then we started the quiz. The students did well with this and remembered the information that was taught in the session.

Reflection

My session has made me feel positive about my understanding of using technology and pedagogy combined, even though it did not go as smoothly as wanted the feedback received from the students confirmed the lesson had the intended effect of causing better concentration and participation, Alongside this issues with technology are a high possibility as it may not work at times, but all of this can lead to better professional growth. I was unprepared for when the PowerPoint hyperlinks would not work as the touch on the digital whiteboard would not function with Google sliced. I handled this positively and calmly so that the lesson could still be interactive, so the students came up to the board and as they picked which hyperlink, they wanted, I clicked it from my screen to give the illusion that the PowerPoint was working. The students reacted well with this and still feedback to me that this was a fun and interactive way to have their session.

Using the PowerPoint presentation with hyperlinks and the kahoot quiz, I have acknowledged the positive impact they have had on the students. By combining text and visual aids along with the PowerPoint being interactive allowed the students the ability to capture and maintain their attention and although PowerPoints can have their limitations and when over loading information on the slides ,this can result in more of a passive learning experience as the students become less responsive and this results in the students being less active when participating in the lesson (Hallewell. M. J et al, 2018). This is why I limited the information on my PowerPoint slides and used bullet points to break up the information.

It is essential that I strike a balance between both and avoid over-reliance on these tools. Incorporating active learning strategies with digital innovations and diverse assessment methods can further enhance learning experience, critical thinking, collaboration, and creativity. It serves as a means to deliver information in a structured and visually engaging manner.

A professional standard that has been related to my practice in this session is "K4 appropriate

use of digital and/or other technologies, and resources for learning" (Advance HE, 2023). As I want my practice to be entertaining and engaging for the students, this would include games and interactive sessions that all students can participate in while making it not overwhelming for those students who might struggle with their reading skills, have dyslexia or have visual impairments.

Action

Moving forward, I believe that embracing a blended approach, combining traditional teaching methods, interactive activities and technology, can offer the most comprehensive and effective learning experience. The strengths and weaknesses of PowerPoint presentations are that they have creative elements and digital quiz games like Kahoot! can help me develop my practice for creating an engaging and inclusive environment that promotes deep understanding and higher participation in the lesson but for this to be effective I need to also focus on is my self-confidence as this tends to get in the way of me delivering the lesson and then thinking it didn't do well when in reality the lesson went better then thought and the students gave positive feedback and engaged the whole time.

I want to be able to develop digital pedagogies based on innovative learning principles, use these to choose when and how to use innovative technology, and think about the objectives of doing so in connection to lessons and student assessment which can then lead my professional practice towards; 'Engage in continuing professional development in subjects/disciplines ' and 'Pedagogy, incorporating research, scholarship and the evaluation of professional practice' (Advanced HE, 2023).

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